

2016 WATER QUALITY REPORT FOR THE HIGHFIELD WATER SYSTEM PWSID # 0210001

Is my water safe?

Last year, as in years past, your tap water met all U.S. Environmental Protection Agency (EPA) and state drinking water health standards. The Washington County Department of Water Quality vigilantly safeguards its water supplies and once again we are proud to report that our system has never violated a maximum contaminant level or any other water quality standard.

Do I need to take special precautions?

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the Safe Water Drinking Hotline (800-426-4791).

Where does my water come from?

The Highfield System utilizes three wells as its primary water source. This water is pH adjusted; fluoridated; and chlorinated prior to entering the distribution system. During periods of low water table conditions, water can be purchased from the Washington Township Municipal Authority. Washington Township Municipal Authority uses three springs and three wells as their water source. No water was purchased from Washington Township Municipal Authority in 2016.

Source water assessment and its availability

The Maryland Department of the Environment's Water Supply Program (WSP) conducted a Source Water Assessment for the Highfield Water System in 2004. The required components of this report as described in Maryland's Source Water Assessment Program (SWAP) are 1) delineation of an area that contributes water to the source, 2) identification of potential sources of contamination, and 3) determination of susceptibility of the water supply to contamination. Recommendations for protecting the drinking water supply conclude this report.

The sources of Highfield's water supply are three wells, a fourth well indicated in this report is no longer in use. These wells draw from an unconfined fractured rock aquifer. The Source Water Assessment area was delineated by the WSP using EPA approved methods specifically designed for this source type. Point sources of contamination were identified within the assessment area from field inspections, contaminant inventory databases, and previous studies. The Maryland Office of Planning's 2000 digital land use map for Washington County was used to identify non-point sources of contamination. Well information and water quality data were also reviewed. An aerial photograph and maps showing potential contaminants sources and land use within the Source Water Assessment area are included in this report.

The susceptibility analysis is based on review of the existing water quality data for the Highfield Water System, the presence of potential sources of contamination in the source water assessment area, well integrity, and the inherent vulnerability of the aquifer. It was determined that Radon-222, a naturally occurring contaminant, may pose a risk to the Highfield water supply. The water supply is not susceptible to contamination by inorganic compounds, other radionuclides, volatile organic compounds, synthetic organic compounds, or microbiological contaminants.

Why are there contaminants in my drinking water?

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's (EPA) Safe Drinking Water Hotline (800-426-4791).

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity: microbial contaminants, such as viruses and bacteria, that may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife; inorganic contaminants, such as salts and metals, which can be naturally occurring or result from urban stormwater runoff, industrial, or domestic wastewater discharges, oil and gas production, mining, or farming; pesticides and herbicides, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses; organic chemical contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, and septic systems; and radioactive contaminants, which can be naturally occurring or be the result of oil and gas production and mining activities. In order to ensure that tap water is safe to drink, EPA prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

How can I get involved?

For more information on getting involved, please contact our main office at (240) 313-2600.

Water Quality Data Table

In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of contaminants in water provided by public water systems. The table below lists all of the drinking water contaminants that we detected during the calendar year of this report. Although many more contaminants were tested, only those substances listed below were found in your water. All sources of drinking water contain some naturally occurring contaminants. At low levels, these substances are generally not harmful in our drinking water. Removing all contaminants would be extremely expensive, and in most cases, would not provide increased protection of public health. A few naturally occurring minerals may actually improve the taste of drinking water and have nutritional value at low levels. Unless otherwise noted, the data presented in this table is from testing done in the calendar year of the report. The EPA or the State requires us to monitor for certain contaminants less than once per year because the concentrations of these contaminants do not vary significantly from year to year, or the system is not considered vulnerable to this type of contamination. As such, some of our data, though representative, may be more than one year old. In this table you will find terms and abbreviations that might not be familiar to you. To help you better understand these terms, we

	MCLG or	MCL, TT, or	Your	Range		Sample		
<u>Contaminants</u>	<u>MRDLG</u>	<u>MRDL</u>	<u>Water</u>	<u>Low</u>	<u>High</u>	<u>Date</u>	<u>Violation</u>	<u>Typical Source</u>
Disinfectants & Disinfectant By-Products								
Chlorine (ppm)	4	4	1.16	0.48	1.83	2016	No	Water additive used to control microbes
TTHM's [Total Trihalomethanes] (ppb)	NA	80	5	4.75	4.75	2015	No	By-product of drinking water disinfection
Haloacetic Acids (HAA5) (ppb)	NA	60	1	1.4	1.4	2015	No	By-product of drinking water disinfection
Not all sample results may have been used for calculating the highest level detected because some results may be part of an evaluation to determine where compliance sampling should occur in the future.								
Inorganic Contaminants								
Nitrate [measured as Nitrogen] (ppm)	10	10	2	1.8	2.21	2016	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Flouride	4	4.0	0.79	0	0.79	2016	No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories.
Sodium (optional) (ppm)		MPL	14.9	7.3	14.9	2013	No	Erosion of natural deposits; Leaching
Chromium (ppb)	100	100	4	0	4	2013	No	Discharge from steel and pulp mills; Erosion of natural deposits

Radioactive Contaminants								
Radium (combined 226/228) (pCi/L)	0	5	0.8	0.8	0.8	2011	No	Erosion of natural deposits

<u>Contaminants</u>	<u>MCLG</u>	<u>AL</u>	<u>Water</u>	<u>Date</u>	<u>Exceeding AL</u>	<u>AL</u>	<u>Typical Source</u>
Inorganic Contaminants							
Copper - action level at consumer taps (ppm)	1.3	1.3	0.28	2015	0	No	Corrosion of household plumbing systems; Erosion of natural deposits; leaching from wood preservatives.
Lead - action level at consumer taps (ppb)	0	15	3	2015	0	No	Corrosion of household plumbing systems; Erosion of natural deposits

Additional Information for Lead

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. Highfield is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at <http://www.epa.gov/safewater/lead>.

Additional information for Sodium

The presence of sodium in your water is attributed to the composition of the aquifer. Sodium is a contaminant which is not subject to any proposed or promulgated national primary drinking water regulation by EPA or MDE, but is analyzed and reported for individuals who are on a sodium restricted diet. Sodium is an essential nutrient which FDA reports the average person receives all that is required on a regular diet

Unit Descriptions	
Term	Definition
ppm	ppm: parts per million, or milligrams per liter (mg/L) or one ounce in 7,350 gallons of water.
ppb	ppb: parts per billion, or micrograms per liter ($\mu\text{g/L}$) or one ounce in 7,350,000 gallons of water.
pCi/L	pCi/L: picocuries per liter (a measure of radioactivity)
NA	NA: not applicable
ND	ND: Not detected
NR	NR: Monitoring not required, but recommended.

Important Drinking Water Definitions	
Term	Definition
MCLG	MCLG: Maximum Contaminant Level Goal: The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.
MCL	MCL: Maximum Contaminant Level: The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.
AVG	Regulatory compliance with some MCLs are based on running average monthly samples.
TT	TT: Treatment Technique: A required process intended to reduce the level of a contaminant in drinking water.
AL	AL: Action Level: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
Variations and Exemptions	Variations and Exemptions: State or EPA permission not to meet an MCL or a treatment technique under certain conditions.
MRDLG	MRDLG: Maximum residual disinfection level goal. The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

MRDL	MRDL: Maximum residual disinfectant level. The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.
MNR	MNR: Monitored Not Regulated
MPL	MPL: State Assigned Maximum Permissible Level

Results of voluntary monitoring

The Washington County Department of Water Quality conducts routine testing of your water system that is not included in the Water Quality Data Table. MDE has also completed testing that is not included in the Water Quality Data Table. A list of these parameters and their results are located in the Table of Results of Customer Interest below.

TABLE OF RESULTS OF CUSTOMER INTEREST

PARAMETER	LEVEL/RANGE DETECTED	UNIT OF MEASUREMENT
pH	6.0 to 8.37	Standard Unit
Turbidity	0.05 to 0.92	NTU

**For more information on the
 Highfield Water System contact
 Mr. Kim L. Bowers
 at 240-313-2600**