Buckingham Township Mill Creek Water System
2022 Annual Drinking Water Quality Report - PWSID #1090164

Spanish (Español)

Este informe contiene información muy importante acerca de su agua potable. Haga que alguien lo traduzca para usted, ó hable con alguien que lo entienda. (This report contains very important information about your drinking water. Have someone translate it for you, or speak with someone who understands it.)

Is my water safe?

Last year, your tap water met all U.S. Environmental Protection Agency (EPA) and state drinking water health standards. Buckingham Township vigilantly safeguards its water supplies and we are proud to report that our system did not violate any maximum contaminant levels in 2022.

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/CDC guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbiological contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

Where does my water come from?

Our water source is from two groundwater wells FG-1 (source 001) and FG-2 (source 002) located in Phase 2 of the Mill Creek Ridge.

Water System Information

If you have any questions about this report or concerning your water utility, please contact Stephen Clark (215-794-8834). We want our valued customers to be informed about their water utility. We want you to be informed about your water supply. If you want to learn more, please attend any of our regularly scheduled meetings. Upcoming meeting dates are listed on the Township website at www.buckinghampa.org.

Source Water Assessment and its availability

Source water assessment was completed by the Penn State Environmental Resource Research Institute and received from PA DEP in June of 2007. Copies of the complete report are available for review at the PA DEP Southeast Regional office, Records Management Unit at (484) 250-5910.

Water Conservation with an Instant Benefit

As concerns with water supplies across the country rise, we as good residents need to start looking at things around the home that can improve our use of this precious resource. Since all of the water in Buckingham Township is provided by groundwater wells located around the Township, it should be looked upon as a local resource that needs to be protected. Through water-saving technologies and simple steps that can be taken around the house, we can help ensure reliable water supplies today and for future generations.

Anyone who showers first thing in the morning may be familiar with the waiting period for hot water to reach the fixture. Depending on where the hot water heater is located and where the shower is, it can take up to 90 seconds for the hot water to arrive.

Hot water recirculation pumps are a convenient option that allows you to benefit from an immediate supply of hot water to all of the faucets in your home. This immediate availability can help you conserve water. Instead of having to wait for the water to heat up every time you take a shower, wash your hands, or do the dishes, these unique systems will pump hot water through the hot water piping system and back to your heater.

In most cases, the hot water recirculation pump has a motion sensor located near each water fixture in your home. This sensor activates the circulation pump each time you turn the water on. The system includes temperature sensors and a check valve that prevents water from going back into the return plumbing line. The recirculation pump actually moves water in the line back to the water heater, thus reducing the amount of time needed for hot water to reach your faucet. It is estimated a hot water recirculation pump can save 11,000 gallons per year in a four-person household.

An on-demand hot water recirculation pump offers consumers an opportunity to maximize water conservation and energy efficiency. Unlike recirculation systems which run constantly or operate on a timer, the on-demand systems are button-activated and function only when needed. This option gives the consumer maximum control over their investment.

A recirculation pump may be a successful approach to water conservation in your home, office or business. If you are interested in obtaining more information about this technology, please contact a local, licensed plumber.

WATER QUALITY DATA

The Mill Creek Water System is routinely monitored for constituents in your drinking water according to Federal and State laws. The following table shows the results of our monitoring for the period of January 1st to December 31, 2022**.** However, the state allows us to monitor for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of our data is from prior years in accordance with the Safe Drinking Water Act. The date has been noted on the sampling results table. Samples collection and testing was conducted by Analytical Laboratories, Inc. (215) 723-6466 during 2022.

CHEMICAL CONTAMINANTS

Contaminant	MCL in CCR Units	MCLG	Level Detected	Range of Detections	Units	Sample Date	Violation Y/N	Sources of Contamination
Chlorine (as CL2)	MRDL=4	MRDLG=4	1.82	0.27-1.82	ppm	2022	N	Water additive used to control microbes.
Nitrate	10	10	0.71	0.64-0.71	ppm	2022	N	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Haloacetic Acids (HAA5)	60	N/A	7.2	0-3.8	ppb	2022	N	By-product of drinking water chlorination.
Monochloroacetic Acid (HAA)	N/A	N/A	0	0	ppb	2022	N	*Some people who drink water containing Haloacetic acids in excess of the MCL over many years may have an increased risk of getting cancer.*
Dichloroacetic Acid (HAA)	N/A	N/A	3.8	ND-3.8	ppb	2022	N	*Some people who drink water containing Haloacetic acids in excess of the MCL over many years may have an increased risk of getting cancer.*
Trichloroacetic Acid (HAA)	N/A	N/A	1.2	ND-1.2	ppb	2022	N	*Some people who drink water containing Haloacetic acids in excess of the MCL over many years may have an increased risk of getting cancer.*
Monobromoacetic Acid (HAA)	N/A	N/A	0	0	ppb	2022	N	*Some people who drink water containing Haloacetic acids in excess of the MCL over many years may have an increased risk of getting cancer.*

Dibromoacetic Acid (HAA)	N/A	N/A	2.3	ND-2.3	ppb	2022	N	*Some people who drink water containing Haloacetic acids in excess of the MCL over many years may have an increased risk of getting cancer.*
Total Trihalomethanes (TTHMs)	80	N/A	27.3	18.1-27.3	ppb	2022	N	By-product of drinking water chlorination.
Chloroform (THM)	N/A	N/A	8.4	3.6-8.4	ppb	2022	N	*Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous systems, and may have an increased risk of getting cancer.*
Bromoform (THM)	N/A	N/A	2.5	2.1-2.5	ppb	2022	N	*Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous systems, and may have an increased risk of getting cancer.*
Bromodichloro-methane (THM)	N/A	N/A	9.0	6.2-9.0	ppb	2022	N	*Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous systems, and may have an increased risk of getting cancer.*
Chlorodibromo-methane (THM)	N/A	N/A	7.4	5.9-7.4	ppb	2022	N	*Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous systems, and may have an increased risk of getting cancer.*

Contaminant	MCL in CCR Units	MCLG	Level Detected	Range of Detections	Units	Sample Date	Violation Y/N	Sources of Contamination
Arsenic	10	0	3.0	0.0 – 3.0	ppb	2022	N	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes
Barium (2021)	2	2	0.15	0.14 - 0.15	ppm	2021	N	Discharge of drilling waste, Discharge from metal refineries; Erosion of natural deposits

ENTRY POINT DISINFECTION RESIDUAL

Contaminant	MinRDL	Lowest Level Detected	Range of Detections	Units	Sample Date	Violation Y/N	Sources of Contamination
Chlorine	0.40	1.00	1.00-2.80	ppm	2022	N	Water additive used to control microbes.

LEAD AND COPPER

Contaminant	Action Level (AL)	MCLG	90th Percentile Value	Units	Sample Date	# of Sites Above AL of Total Sites	Violation Y/N	Sources of Contamination
Copper	1.3	1.3	0.032	ppm	2022	0 out of 5	N	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives.
Lead	15	0	0	ppb	2022	0 out of 5	N	Corrosion of household plumbing systems; Erosion of natural deposits.

RADIOACTIVE CONTAMINANTS

Contaminant	MCL in CCR Units	MCLG	Level Detected	Range of Detections	Sample Date	Units	Violation Y/N	Sources of Contamination
Combined Uranium	30	0	13.9	11.5-13.9	2022	µg/L	N	Erosion of natural deposits

Testing was conducted for a broad range of contaminants in 2022 which were <u>not detected</u> in our samples, including regulated volatile organic contaminants, radium-226, radium-228, nitrite, total coliform presence, lead, asbestos and silver.

Unit Descriptions	
<u>Terms</u>	**<u>Definitions</u>**
ug/L	Number of micrograms of substance in one liter of water
ppm	Parts per million (ppm) or Milligrams per liter (mg/l)
ppb	Parts per billion (ppb) or micrograms per liter (µg/l)
pCi/L	Picocuries per liter – a measure of radioactivity.
NA	Not applicable
ND	Not detected
NR	Monitoring not required, but recommended.

Important Drinking Water Definitions	
Term	**Definition**
MCLG	Maximum Contaminant Level Goal – The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLG's allow for a margin of safety.
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.
TT	Treatment Technique – A required process intended to reduce the level of a contaminant in drinking water.
AL	Action Level - The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
Variances and Exemptions	State or EPA permission not to meet an MCL or a treatment technique under certain conditions.
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.
MinRDL	Minimum Residual Disinfectant Level – The minimum level of residual disinfectant required at the entry point to the distribution system.
MRDL	Maximum Residual Disinfection Level – The highest level of a disinfectant that is allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.
MNR	Monitored not regulated
MPL	State assigned maximum permissible level

Secondary Contaminant Testing

EPA has established National Secondary Drinking Water Regulations (NSDWRs) that set non-mandatory water quality standards for 15 contaminants. EPA does not enforce these "secondary maximum contaminant levels" (SMCLs). They are established as guidelines to assist public water systems in managing their drinking water for aesthetic considerations, such as taste, color, and odor. These contaminants are not considered to present a risk to human health at the SMCL. The table below summarizes selected testing for Secondary Contaminants which has been performed on your water.

Contaminant	Detected Level	SMCL	Noticeable Effects above SMCL
Sulfate (2020)	32.7 ppm	250 ppm	salty taste
Zinc (2020)	0.031	5 ppm	metallic taste

Information about Arsenic
Some people who drink water containing arsenic in excess of MCL over many years could experience skin damage or problems with their circulatory system, and may have an increased risk of getting cancer.

Information about Nitrate
Infants below age of six months who drink water containing nitrate in excess of the MCL could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue baby syndrome.

Information about Copper
Copper is an essential nutrient, but some people who drink water containing copper in excess of the action level over a relatively short amount of time could experience gastrointestinal distress. Some people who drink water containing copper in excess of the action level over many years could suffer liver or kidney damage. People with Wilson's Disease should consult their personal doctor.

Information about Uranium
Some people who drink water containing uranium in excess of the MCL over many years may have an increased risk of getting cancer and kidney toxicity.

Information about 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 form materials and components associated with service lines and home plumbing components. When you 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 drinking 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.

Educational Information
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 human activity.

Other Violations
We are required to monitor drinking water for disinfection byproducts on a regular basis. Results of regular monitoring are an indicator of whether or not our drinking water meets health standards. During 2022, we were late in reporting Nitrite and Nitrate samples during the first quarter. Compliance for this violation was achieved. All results of samples taken were below the allowable level; you do not need to take any actions at this time.

We are required to monitor drinking water for disinfection byproducts on a regular basis. Results of regular monitoring are an indicator of whether or not our drinking water meets health standards. During the first quarter of 2022, we failed to provide the required public notice for detected levels of Radium-226, Radium-228, and Combined Uranium. Compliance for this violation was achieved. You do not need to take any actions at this time.

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.

Contaminants that may be present in source water include:

- Microbial contaminants, such as viruses and bacteria, which 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 run-off, 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 run-off, 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 run-off, and septic systems.
- Radioactive contaminants, which can be naturally occurring or be the result of oil and gas production and mining activities.

In order to assure that tap water is safe to drink, EPA and DEP prescribe regulations which limit the amount of certain contaminants in water provided by public water systems. FDA and DEP regulations establish the limits for contaminants in bottled water which must provide the same protection for public health. Drinking water, included bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline (800-426-4791).