



VILLAGE OF MALVERN

Water Department

PWS ID #OH1000112

Annual Drinking Water Quality Report
- 2018

The Malvern Water Department has prepared the following report to provide information to you, the consumer, on the quality of our drinking water. Included within this report is general health information, water quality test results, how to participate in decisions concerning your drinking water and water system contacts.

The Malvern Water Department system operates 2 wells that pump approximately 300,000 gallons of water per day from an aquifer (water rich zone) within the Sandy Creek Buried Valley aquifer system.

IS MY WATER SAFE?

We are pleased to present our Annual Water Quality Report (Consumer Confidence Report) covering all testing performed between January 1 and December 31, 2018 as required by the Safe Drinking Water Act (SDWA). This report is designed to provide details about where your water comes from, what it contains, and how it compares to standards set by regulatory agencies. This report is a snapshot of last year's water quality. We are committed to providing you with information because informed customers are our best allies.

For more information about this report, or for any questions relating to your drinking water, please call the Water Department at (330) 863-1316 or email malvernwater@villageofmalvern.net.

How much water can be lost from a leak?

A toilet running continuously amounts to the following amount of wasted water:

- 210 gallons per hour
- 5,040 gallons per day
- 35,280 gallons per week
- 141,120 gallons per month

Check your toilets for leaks by putting a few drops of food coloring in the tank. After 15 minutes, check the bowl to see if the color has appeared and if so, your flapper in the bottom of the tank is leaking and needs cleaned or replaced.

Take care of your water supply!

The main shut off valve inside your home is your responsibility to maintain. To avoid an emergency turning into a disaster, always exercise your main shut off valve at least annually so it works when you need it. A good way to remember to do that is to turn your water valve off and on a couple times whenever you change batteries in your smoke detectors.

Source Water Information

The EPA requires regular sampling to ensure drinking water safety. The Malvern Water Department conducted sampling in 2018. The Ohio EPA requires 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, though accurate, are more than one year old. The Malvern Water Department works hard to maintain our system in order to provide high-quality water to help keep you and your family healthy. To protect the Village groundwater, we have an emergency contingency plan in effect and we are implementing the drinking water assessment program provided to us by the EPA.

Important Health Information

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised 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 may be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. The U.S. EPA/CDC (Centers for Disease Control and Prevention) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and

Important Health Information Continued

other microbial contaminants are available from the Safe Drinking Water Hotline at (800)426-4791 or at <http://water.epa.gov/drink/hotline>.

The susceptibility of the aquifer (source of drinking water) to contamination was determined by evaluating (1) site-specific and regional information (i.e., aquifer material, topography, soils, rate of ground water recharge, etc.), (2) pollution potential rating of the drinking water source protection area, (3) available ground water quality data and (4) potential contaminant sources that were identified within the drinking water source protection area. The results of this evaluation indicate that the aquifer within that protection area has a high susceptibility because of the following reasons:

- Available regional geologic and ground water information suggest no significant low permeability protective layer between the aquifer and the ground surface and also that the sand and gravel aquifer has a shallow depth to water; and
- Potential significant contaminant sources exist within the protection area.

A high susceptibility rating of the aquifer does not imply that the wellfield will become contaminated. It only means that the existing/known aquifer conditions are such that ground water within the aquifer could become impacted if the potential contaminant sources are not appropriately managed.

As in the past, we are committed to delivering the best quality drinking water. To that end we remain vigilant in meeting the challenges of source water protection, water conservation, and community education while continuing to serve the needs of all our water users.

Please help us to protect our water supply by reporting any suspicious activity that you might see in or around our water plant to the local law authorities. For more information about this report, please contact the Malvern Water Department from 8:00 AM to 4:00 PM, Monday thru Friday at (330) 863-1316.

Water Efficiency, Human Health and the Environment

Depleting reservoirs and groundwater aquifers can put water supplies, human health and the environment at serious risk. Lower water levels can lead to higher concentrations of natural contaminants, such as radon and arsenic or human pollutants, such as agricultural and chemical wastes. Using water more efficiently helps maintain supplies at safe levels, protecting human health and the environment. Also, when we use water more efficiently we reduce the need for costly water supply infrastructure investments and new wastewater treatment facilities.

Substances That Could be in Water

To ensure that tap water is safe to drink, U.S. EPA prescribes regulations limiting the amount of certain contaminants in water provided by public water systems. U.S. Food and Drug Administration regulations establish limits for contaminants in bottled water, which must provide the same protection for public health. Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of these contaminants does not necessarily indicate that the water poses a health risk.

The sources of drinking water (both tap and bottled) include rivers, lakes, streams, ponds, reservoirs, springs and wells. As water travels over the surface of the land or through the ground, it can acquire naturally occurring minerals, in some cases, radioactive material; and substances resulting from the presence of animals or from human activity. Substances 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, or wildlife.
- Inorganic Contaminants, such as salts and metals, which can be naturally occurring or may result from urban storm water 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 storm water runoff, and residential uses.
- Organic Chemical Contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and may also come from gas stations, urban storm water runoff, and septic systems.
- Radioactive Contaminants, which can be naturally occurring or may be the result of oil and gas production and mining activities.

For more information about contaminants and potential health effects, call the U.S. EPA's Safe Drinking Water Hotline at (800) 426-4791.

The Village of Malvern has current, unconditioned licenses to operate our water system.

Definitions

AL (Action Level): The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

Action Level Goal (ALG): The level of a contaminant in drinking water below which there is no known or expected risk to health. ALGs allow for 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.

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.

MRDL (Maximum Residual Disinfectant Level): The highest level of a disinfectant allowed in drinking water. There is convincing evidence that additional of a disinfectant is necessary for control of microbial contaminants.

MRDLG (Maximum Residual Disinfectant 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.

N/A: Not applicable

ND (Not detected): Indicates that the substance was not found by laboratory analysis.

≤: Less than. For example a result of a <5 measurement means that the lowest level that could be detected was a 5 and the contaminant in that sample was not detected.

ppb (parts per billion): Micrograms per liter or parts per billion – or one ounce in 7,350,000 gallons of water.

ppm (parts per million): milligrams per liter or parts per million – or one ounce in 7,350 gallons of water.

TT (Treatment Technique): A required process intended to reduce the level of a contaminant in drinking water.

Lead in Home Plumbing

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. Malvern Water Department 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 www.epa.gov/safewater/lead.

The Table below lists all 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 this 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.

Disinfectants and Disinfection By-Products							
<i>Contaminant (Units)</i>	<i>Collection Date</i>	<i>Level Detected</i>	<i>Range of Levels Detected</i>	<i>MCLG</i>	<i>MCL</i>	<i>Violation (Y/N)</i>	<i>Likely Source of Contamination</i>
Chlorine (ppm)	2018	0.8	0.4-1.0	MRDLG =4	MRDL = 4	N	Water additive used to control microbes
Haloacetic Acids (HAA5) (ppb)	2018	1.5	<1.00-1.5	NA	60	N	By-product of drinking water chlorination
TTHMs (Total Trihalomethanes) (ppb)	2018	9.48	9.25-9.71	NA	80	N	By-product of drinking water chlorination

Inorganic Contaminants						
<i>Contaminant (Units)</i>	<i>Collection Date</i>	<i>Level Detected</i>	<i>MCLG</i>	<i>MCL</i>	<i>Violation (Y/N)</i>	<i>Likely Source of Contamination</i>
Barium (ppm)	2017	0.085	2	2	N	Discharge of drilling wastes, discharge from metal refineries; and erosion of natural deposits
Fluoride (ppm)	2017	0.258	4	4.0	N	Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories
Nickel (ppb)	2017	2.63	NA	100	N	Pollution from mining and refining operations; natural occurrence in soil

Lead and Copper							
<i>Contaminant (Units)</i>	<i>Collection Date</i>	<i>90th Percentile</i>	<i># of samples over AL</i>	<i>MCLG</i>	<i>Action Level (AL)</i>	<i>Violation (Y/N)</i>	<i>Likely Source of Contamination</i>
Copper (ppm)	2017	0.1324	0	1.3	1.3	N	Erosion of natural deposits; Leaching from wood preservatives; Corrosion of household plumbing systems
Lead (ppb)	2017	0	0	0	15	N	Corrosion of household plumbing systems; Erosion of natural deposits

***0 out of 11 samples exceeded the action level for lead. 0 out of 11 samples exceeded the action level for copper.

Unregulated Contaminants					
<i>Contaminant (Units)</i>	<i>Collection Date</i>	<i>Level Detected</i>	<i>MCL</i>	<i>Violation (Y/N)</i>	<i>Likely Source of Contamination</i>
Chloroform (ppb)	2018	4.42	70	N	By-product of drinking water disinfection
Bromodichloromethane (ppb)	2018	2.23	NA	N	By-product of drinking water disinfection
Dibromochloromethane (ppb)	2018	1.73	60	N	By-product of drinking water disinfection