

# Muskingum County Water Department

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2017

*Drinking Water*

*Consumer Confidence Report*

*- Southeast System -*

The Muskingum County Water Department (MCWD) 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, and how to participate in decisions concerning your drinking water and water system contacts.

In 2015, a major capital improvement of the distribution system began involving the installation of a water line for the North River Road/North Linden Road area, which included a river crossing, facilitating a direct connection of our north system to our own water treatment plant. Partial separation of the north system from the City of Zanesville went live in July of 2017. After the installation of a pressure vault at the end of August, the final separation of a common county/city water line near Maple Avenue completed the project. Completed waterline extensions for 2017 include Westcrest Road, Bald Hill Road, Pine Lake Road and Rural Dale.

## ***What's the Source of Your Drinking Water?***

The MCWD water supply is located one mile north of Duncan Falls on State Route 60 along the Muskingum River floodplain. The source water is extracted from a buried valley sand and gravel aquifer (underground source of water) by four self-supporting wells. From there, it is pumped to our treatment plant, which is located at 3830 Wayne Ridge Road. The treatment plant, put into operation in February 1998, utilizes a treatment process that includes filtration for removal of iron & manganese, fluoridation to support dental health, and chlorination for disinfection. The Ohio Environmental Protection Agency has issued to the Muskingum County Water Department a current, unconditional license for the operations of this system.

**Protecting our drinking water source from contamination is the responsibility of all area residents. Please dispose of hazardous chemicals in the proper manner and report polluters to the proper authorities. Only by working together can we ensure an adequate safe supply of water for future generations.**

The MCWD has implemented a program required by the EPA, called "*THE WELLHEAD PROTECTION PLAN*". The Ohio EPA has completed a study of Muskingum County's source of drinking water, to identify potential contaminant sources and provide guidance on protecting the drinking water source. According to this study, the aquifer that supplies water to the MCWD has a high susceptibility to contamination. To date, no contamination event has occurred within the MCWD wellhead protection area. This determination is based on the following: (a) the lack of a protective layer of clay/shale/or other impervious materials overlying the aquifer, (b) a shallow depth (less than 20 feet below ground) of the aquifer and the ground surface and any contaminants placed on the ground surface could move downward into the source of drinking water for MCWD. Through this study some potential sources of contamination have been identified; including agricultural, light industrial, septic systems and State Route 60. Because of these potential sources of contamination that exists within the wellhead/source water protection area, and the sensitive nature of the aquifer, the Muskingum County Water Department's wellfield is considered to be susceptible to contamination. Protective strategies have been implemented, and MCWD will work with all agencies to develop a zoning overlay that sets specific standards for chemical storage, handling of waste materials, and other source control strategies to reduce the risk of ground water contamination in the wellhead/source water protection area.

The MCWD has in place back-up connections with the City Of Zanesville near Richards Road, Wayne Avenue, Fairview Road and Rehl Road for use in the event of an emergency. This report does not contain information of the water quality that may be received from the City of Zanesville. A copy of their consumer confidence report may be obtained by contacting Paul Mills, Water Superintendent, at 740-455-0631.

## ***What Are Sources of Contamination to Drinking Water?***

The sources of drinking water both tap water and bottled water includes 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.

Contaminants that may be present in source water include: (A) Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations and wildlife: (B)

Inorganic contaminants, such as salts and metals, which can be naturally occurring or result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming; (C) Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban storm water runoff, and residential uses; (D) 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 storm water runoff, and septic systems; (E) 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 which limit the amount of certain contaminants in water provided by public water systems. FDA 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 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 Safe Drinking Water Hotline (1-800-426-4791).

### ***Who Needs 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 for infection. 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 microbial contaminants are available from the Safe Drinking Water Hotline (1-800-426-4791).

### ***Lead in your Drinking Water***

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. Muskingum County Water 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 at <http://www.epa.gov/safewater/lead>.

**Customers who wish to check their homes for lead exposure:**

**Lead testing sample kits are available at our main office at a cost of \$13 per test to cover lab fees. Samples will be analyzed by an independent laboratory in Dublin, Ohio. Call our office at 740-453-0678 for more information.**

### ***Sampling Requirements and Results***

The EPA requires regular sampling to ensure drinking water safety. MCWD conducted sampling for inorganic contaminants, nitrates, radium and volatile organic contaminants. **Contaminants detected can be found in the chart included in this report.** The Ohio EPA requires MCWD to monitor for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some data, though accurate, is more than one year old. .

The MCWD is required to conduct bacteria samples monthly, which increased from 10 to 20 after the complete separation of the north system from the City of Zanesville. In 2017, 192 Total Coliform Bacteria samples were collected, all negative for bacteria. In addition to the required monthly and annual sampling, the water is tested daily for iron, manganese, fluoride and chlorine at the treatment plant and throughout the distribution system by state certified lab analysts to assure water quality.

***In the fourth quarter of 2017, 1 of the 4 required sample requirements exceeded the MCL for TTHM (trihalomethane), a bi-product of chlorine used in the disinfection of drinking water. As a result, a public notice was issued to all customers. To be proactive in reducing the level of TTHM, all storage tanks have been drained and refilled with fresh water as well as extensive flushing of the distribution system. 1<sup>st</sup> quarter 2018 sampling found all TTHM levels are well below the Maximum Contaminant Level of 0.080 ppm with an average of 0.031ppm.***

**Water Monitoring Results (PWS: 6000412)**

Contaminants (Units)	MCLG	MCL	Level Found	Range of Detections	Violation	Sample Year	Typical Source of Contaminants
<b>Inorganic Contaminants</b>							
Fluoride (ppm)	4	4	1.11	0.24 - 1.23	No	2017	Erosion of natural deposits: Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Barium (ppm)	2	2	0.0506	NA	No	2015	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Nitrate (ppm)	10	10	0.48	NA	No	2017	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Lead (ppb)	0	AL=15	<5	NA	No	2017	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives
	Zero out of 30 samples was found to have lead levels in excess of the Action Level of 15 ppb						
Copper (ppm)	1.3	AL=1.3	0.250	NA	No	2017	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives
	Zero out of 30 samples was found to have copper levels in excess of the Action Level of 1.3 ppm						
<b>Volatile Organic Contaminants</b>							
Trihalomethanes (ppb)	0	80	81.1	27.1 – 97.8	Yes	2017	By-product of drinking water chlorination
Haloacetic Acids (ppb)	0	60	22.5	7.1 – 21.6	No	2017	By-product of drinking water chlorination
<b>Disinfectant Residuals</b>							
Total Chlorine Residual (ppm)	4	4	1.73	1.01 - 1.93	No	2017	Water additive used to control microbes

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. The use of alternative water sources are not necessary but if you have health concerns, please consult with your physician.

Public participation and comments are encouraged. For more information on your drinking water, please contact Don Madden, General Manager or Debbie Ralph, Water Plant Supervisor, at 740-453-0678.

**DEFINITIONS OF SOME TERMS CONTAINED WITHIN THIS REPORT:**

**The “<” symbol:** A symbol which means less than the detectable level.

**ACTION LEVEL (AL):** The concentration, which, if exceeded, triggers treatment or other requirements, which a water system must follow.

**MAXIMUM CONTAMINANT LEVEL GOAL (MCLG):** The level of a contaminant in drinking water below, which is no known or expected risk to health. MCLG’s allow for a margin of safety.

**MAXIMUM CONTAMINANT LEVEL (MCL):** The highest level of a contaminant that is allowed in drinking water. MCL’s are set as close to the MCLG’s as feasible using the best treatment available.

**PARTS PER MILLION (ppm) OR MILLIGRAMS PER LITER (mg/L):** Unit of measure for the concentration of a contaminant. A part per million corresponds to one second in a little over 11.5 days.

**PARTS PER BILLION (ppb) OR MICROGRAMS PER LITER (µg/L):** Unit of measure for the concentration of a contaminant. A part per billion corresponds to one second in 31.7 years.

**TTHM:** Trihalomethanes, A bi-product of drinking water chlorination.

**HAA5:** Haloacetic Acids, A by-product of drinking water chlorination.