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What’s the Source of Your Drinking Water?

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What’s the Source of Your Drinking Water?

The MCWD receives its drinking water from the City of Zanesville. The Zanesville water supply is extracted from wells drilled in the eastern flood plain of the Muskingum River along Lewis Drive (S.R. 666). This location is better known in present times as Riverside Park. This source was first developed in 1917, and has been their only source ever since. The water plant is located adjacent to the well field. The Ohio Environmental Protection Agency, on behalf of the State of Ohio, has issued to the Muskingum County Water Department a current, unconditional license for the operations of this system.

For more information on the City of Zanesville’s Drinking Water, please contact Paul Mills, Water Superintendent, at (740) 455-0631.

The Ohio EPA recently completed a study of the City of Zanesville’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 City of Zanesville has a high susceptibility to contamination. 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, (c) the presence of significant contaminant sources in the protection area, and (d) the past presence of manmade contaminants in treated water.

This susceptibility means that under currently existing conditions, the likelihood of the aquifer becoming contaminated is relatively high. This likelihood can be minimized by implementing appropriate protective measures. More information about the source water assessment or what consumers can do to help protect the aquifer is available by calling the Environmental Protection Agency’s Safe Drinking Water Hotline at 1-800-426-4791.

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.

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
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](http://www.epa.gov/safewater/lead).

**Sampling Requirements and Results**

The EPA requires regular sampling to ensure drinking water safety. The MCWD is required to conduct 1 bacteria sample a month, which equals 12 samples a year. In 2010, 18 bacteria samples were collected and all tested negative for coliform bacteria. The chlorine residual for disinfection is also checked daily throughout the system. The supplier is responsible for all other testing required by the EPA.

The Ohio EPA requires the water supplier to monitor for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of the data, though accurate, is more than one year old.

**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.

**MAXIMUM RESIDUAL DISINFECTANT LEVEL (MRDL):** The highest level of a disinfectant allowed in drinking water. There is convincing evidence that the addition of a disinfectant is necessary to control microbial contaminants.

**MAXIMUM RESIDUAL DISINFECTANT LEVEL GOAL (MRDLG):** The level of drinking water disinfectant below which there is no known or expected risk to health. MRDLG’s do not reflect the benefits of the use of disinfectant to control microbial contaminants.

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

**HAA5:** Haloacetic Acids, A by-product of drinking water chlorination.
### Water Monitoring Results (PWS: 6002903)

<table>
<thead>
<tr>
<th>Contaminants (Units)</th>
<th>MCLG</th>
<th>MCL</th>
<th>Level Found</th>
<th>Range of Detections</th>
<th>Violation</th>
<th>Sample Year</th>
<th>Typical Source of Contaminants</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Inorganic Contaminants</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fluoride (ppm)*</td>
<td>4</td>
<td>4</td>
<td>1.0</td>
<td>1.0-1.0</td>
<td>No</td>
<td>2012</td>
<td>Erosion of natural deposits: Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories</td>
</tr>
<tr>
<td>Barium (ppm)*</td>
<td>2</td>
<td>2</td>
<td>0.0507</td>
<td>NA</td>
<td>No</td>
<td>2012</td>
<td>Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits</td>
</tr>
<tr>
<td>Nitrate (ppm)*</td>
<td>10</td>
<td>10</td>
<td>0.29</td>
<td>NA</td>
<td>No</td>
<td>2011</td>
<td>Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits</td>
</tr>
<tr>
<td>Lead (ppb)</td>
<td>0</td>
<td>AL=15</td>
<td>&lt; 5.0</td>
<td>NA</td>
<td>No</td>
<td>2012</td>
<td>Corrosion of household plumbing systems; Erosion of natural deposits</td>
</tr>
<tr>
<td>Copper (ppm)</td>
<td>1.3</td>
<td>AL=1.3</td>
<td>0.469</td>
<td>NA</td>
<td>No</td>
<td>2012</td>
<td>Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives</td>
</tr>
</tbody>
</table>

Zero out of 5 samples was found to have lead levels is excess of the Action Level of 15 ppb

Zero out of 5 samples was found to have copper levels in excess of the Action Level of 1.3 ppm

| Volatile Organic Contaminants | | | | | | | |
| Trihalomethanes (ppb)*       | NA  | 80  | 73.6       | NA                 | No        | 2012        | By-product of drinking water chlorination |
| Haloacetic Acids (ppb)*      | NA  | 60  | 20.9       | NA                 | No        | 2012        | By-product of drinking water chlorination |

Initial Distribution System Evaluation (IDSE) testing for this system has been waived and no further testing is required at this time.**

| Disinfectant Residuals | | | | | | | |
| Total Chlorine Residual (ppm) | 4  | 4  | 1.75 | 0.70 – 2.20 | No | 2012 | Water additive used to control microbes |

*Denotes monitoring results collected by the City of Zanesville

**Under the Stage 2 Disinfectants/Disinfection Byproducts Rule (D/DBPR), our public water system was required by USEPA to conduct an evaluation of our distribution system. This is known as an Initial Distribution System Evaluation (IDSE), and is intended to identify locations in our distribution system with elevated disinfection byproduct concentrations. The locations selected for the IDSE may be used for compliance monitoring Stage 2 DBPR, beginning in 2012. Disinfection byproducts are the result of providing continuous disinfection of your drinking water and form when disinfectants combine with organic matter naturally occurring in the source water. Disinfection byproducts are grouped into two categories, Total Trihalomethanes (TTHM) and Haloacetic Acid (HAA5). USEPA sets standards for controlling the levels of disinfectants and disinfectant byproducts in drinking water, including both TTHMs and HAA5s.

### Advisory Board Meetings

The Muskingum County Water and Sewer Advisory Board meet bimonthly, in the lower meeting room of the Welcome Center (Zanesville-Muskingum County Convention & Visitors Bureau). The Welcome Center is located at 205 N 5th Street, Zanesville. Meetings start at 4:00. Public participation and comments are encouraged. For more information on your drinking water, please contact Debbie Ralph, Water Plant Supervisor, at 740-674-6614.