

**WESTERN WATER COMPANY  
2018 WATER QUALITY REPORT**

**IS MY DRINKING WATER SAFE?**

Water quality is the first priority at Western Water Company. Constant testing by the dedicated staff of certified operators and laboratory personnel ensure the highest standards for drinking water quality are being met at all times. The test results for 2018 show Western Water Company's water to be of the highest quality. If you have any questions about water quality, please contact Jim Swearingen at the Water Treatment Plant, weekdays at (513)899-3211 between 8:00 A.M. and 5:00 P.M.

**WHAT IS THE SOURCE OF MY WATER?**

Western Water Company's water comes from an aquifer along the Little Miami River in Warren County. Western Water also purchases water from other water systems and then distributes the various supplies to their customers.

|                          | <b>Percent</b> | <b>Source</b>                               |
|--------------------------|----------------|---|
| Western Water Company    | 59%            | Little Miami River Aquifer<br>Warren County |
| Cincinnati Water Works   | 40%            | Ohio River, and Great Miami<br>Aquifer      |
| Brown County Rural Water | 1%             | Ohio River Valley Aquifer                   |

**WHY ARE THERE CONTAMINANTS IN MY 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 Safe Drinking Water Hotline at (800)426-4791.

**WHAT ARE SOURCES OF CONTAMINATION TO DRINKING WATER?**

The sources of drinking water both tap and bottled water includes rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surfaces of the land or through the ground, it dissolves naturally occurring minerals and in some cases radioactive materials. The water can also 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 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.

### **SUSCEPTIBILITY ANALYSIS**

The aquifer that supplies drinking water to Western Water Company has a high susceptibility to contamination, as indicated by the presence of nitrates in the treated water in 1994 and 1996. The high susceptibility is due to the sensitive nature of the aquifer in which the drinking water wells are located. These wells are near existing potential contaminant sources which have been identified. Further nitrate testing since 1996 has indicated very low levels of nitrates in the finished water. These results are listed in this report and previous Consumer Confidence Reports, you the customer have received over the past few years. Although the aquifer is susceptible to contamination, our testing indicates nitrates are at very low levels in the finished water.

### **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 chemo therapy, 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 microbial contaminants are available from the Safe Drinking Water Hotline at (800)426-4791.

### **IS OUR WATER SYSTEM MEETING OTHER RULES THAT GOVERN OUR OPERATIONS?**

The Ohio EPA requires us to test our water on a regular basis to ensure its safety. Western Water Company had no violations to report for the 2018 sampling. In 2018 Western Water Company had an unconditional license to operate our water system.

### **TURBIDITY**

Western Water Company purchases water from other water systems as explained in the source water section. Two of these are required to monitor for turbidity so we are required to show these results on our report. Turbidity does not present any risk to your health. They monitor turbidity, which is a measure of cloudiness of water, because it is a good indicator that filtration systems are functioning properly.

### **HOW CAN I GET INVOLVED?**

Our Water Officials will meet to answer questions each month at the Treatment Plant. Please feel free to participate. Call Jim Swearingen for dates and times at 1-513-899-3211.

### **LEAD CAN CAUSE SERIOUS HEALTH PROBLEMS**

“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. Western Water Company 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 thirty seconds to two 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. A list of laboratories certified in the State of Ohio to test for lead may be found at <http://www.epa.state.oh.us/ddagw> or by calling 614-644-2752. 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 800-426-4719 or at <http://www.epa.gov/safewater/lead>".

**2018 Western Water Company Water Quality Data Sheet**

| CONTAMINANTS  | YEAR SAMPLE | DETECTION LEVEL | MCL          | MCLG         | RANGE OF DETECTION | VIOLATION | SOURCE OF CONTAMINANTS  |
|---|-------------|-----------------|--------------|--------------|--------------------|-----------|---|
| <b>INORGANIC (REGULATED) CONTAMINANTS</b>   |             |                 |              |              |                    |           |   |
| FLUORIDE  | 2018        | 1.13 mg/l       | 4.0 mg/L     | 4.0 mg/L     | .89 to 1.27 mg/l   | NONE      | EROSION OF NATURAL DEPOSITS WATER ADDITIVE WHICH PROMOTES STRONG TEETH DISCHARGE FROM FERTILIZER AND ALUMINUM FACTORIES |
| NITRATES  | 2018        | <.50 mg/l       | 10.0 mg/L    | 10.0 mg/L    | n/a                | NONE      | RUNOFF FROM FERTILIZER USE, LEACHING FROM SEPTIC TANKS, SEWAGE, EROSION OF NATURAL DEPOSITS                             |
| LEAD  | 2018        | <5.0ug/l        | AL=15.0 ug/l | AL=15.0 ug/l | n/a                | NONE      | CORROSION OF HOUSE-HOLD PLUMBING SYSTEMS  |
| Zero out of 30 samples was found to have lead levels in excess of the lead action level of 15ppb  |             |                 |              |              |                    |           |   |
| COPPER  | 2018        | 768 ug/l        | AL=1300 ug/L | AL=1300 ug/L | n/a                | NONE      | CORROSION OF HOUSE-HOLD PLUMBING SYSTEMS  |
| Zero out of 30 samples was found to have copper levels in excess of the copper action level of 1.3 ppm                                  |             |                 |              |              |                    |           |   |
| TOTAL COLIFORM  | 2018        | 0.00%           | 0            | 0            | 0                  | NONE      | Naturally present in the environment  |
| TOTAL CHLORINE  | 2018        | 1.20 mg/l       | MRDL=4.0     | MRDL = 4.0   | .60 to 1.50 mg/l   | NONE      | WATER ADDITIVE TO CONTROL MICROBES  |
| BARIUM  | 2016        | 45.0 ug/l       | 2 mg/l       | 2 mg/l       | n/a                | NONE      | Erosion of natural deposits, Discharge from drilling wastes and metal refineries  |
| <b>ORGANIC CONTAMINANTS (REGULATED)</b>   |             |                 |              |              |                    |           |   |
| HALOACETIC ACID 5   | 2018        | <6.0 ug/l       | 60 ug/L      | N/A          | <6.0 ug/l          | NONE      | BY PRODUCT OF DRINKING WATER CHLORINATION   |
| THM5  | 2018        | 37.5 ug/l       | 80 ug/L      | N/A          | 29.4 to 37.5 ug/l  | NONE      | BY PRODUCT OF DRINKING WATER CHLORINATION   |
| <b>KEY TO ABBREVIATIONS</b>   |             |                 |              |              |                    |           |   |
| MCL - MAXIMUM CONTAMINANT LEVEL - THE HIGHEST LEVEL OF CONTAMINANT ALLOWED IN DRINKING WATER  |             |                 |              |              |                    |           |   |
| MCLG - MAXIMUM CONTAMINANT LEVEL GOAL - THE LEVEL OF CONTAMINANT IN DRINKING WATER BELOW WHICH THERE IS NO KNOWN RISK TO HEALTH         |             |                 |              |              |                    |           |   |
| AL - ACTION LEVEL - THE CONCENTRATION OF A CONTAMINANT WHICH TRIGGERS A TREATMENT OF OTHER REQUIREMENT WHICH A WATER SYSTEM MUST FOLLOW |             |                 |              |              |                    |           |   |
| MGL - MILLIGRAMS PER LITER (PPM)  |             |                 |              |              |                    |           |   |
| UG/L - MICROGRAMS PER LITER (PPB)   |             |                 |              |              |                    |           |   |
| N/R - NOT REGULATED   |             |                 |              |              |                    |           |   |
| PC/L - PICO CURIES PER LITER, A MEASURE OF RADIOACTIVITY IN WATER   |             |                 |              |              |                    |           |   |
| MREM/YR. - MILLIREMS PER YEAR, A MEASURE OF RADIATION ABSORBED BY THE BODY  |             |                 |              |              |                    |           |   |
| ND - NOT DETECTABLE AT SAMPLE TIME  |             |                 |              |              |                    |           |   |
| NA - NOT APPLICABLE   |             |                 |              |              |                    |           |   |
| MRDLG - MAXIMUM RESIDUAL DISINFECTION LEVEL GOAL  |             |                 |              |              |                    |           |   |

2018 CCR Data for GCWW Wholesale Customers

Regulated Contaminants<sup>1</sup>: Contaminants subject to a Maximum Contaminant Level (MCL), Action Level (AL) or Treatment Technique (TT)<sup>2</sup>

| Substance            | Unit | Maximum Allowed (MCL, AL, TT) <sup>2</sup>        | MCLG* | Miller Water                      |                     |           | Bolton Water |                                   |                     | Typical Source of Contamination |           |   |  |
|----------------------|------|---|-------|-----------------------------------|---------------------|-----------|--------------|-----------------------------------|---------------------|---------------------------------|-----------|---|--|
|                      |      |   |       | Highest Compliance Level Detected | Range of Detections | Violation | Year Sampled | Highest Compliance Level Detected | Range of Detections |                                 | Violation | Year Sampled  |  |
| Fluoride             | ppm  | 4   | 4     | 0.87                              | 0.88-0.98           | No        | 2018         | 0.88                              | 0.70-0.99           | No                              | 2018      | Additive which promotes strong teeth. May come from erosion of natural deposits.            |  |
| Nitrate              | ppm  | 10  | 10    | 1.04                              | 0.40-1.04           | No        | 2018         | 1.24                              | nr                  | No                              | 2018      |   |  |
| Turbidity            | NTU  | TT1 < 1 NTU Max and TT2 < 0.3 NTU 95% of the time | na    | 0.25                              | 0.03-0.25           | No        | 2018         | nr                                | nr                  | No                              | na        |   | Runoff from fertilizer use, leaching from septic tanks, sewage, erosion of natural deposits. Soil runoff |
| Total Organic Carbon | ppm  | TT <sup>2</sup>                                   | na    | 2.07                              | 1.85-3.34           | No        | 2018         | nr                                | nr                  | No                              | na        |   | Naturally present in the environment.  |
| Barium               | ppm  | 2   | 2     | 0.032                             | na                  | No        | 2018         | 0.013                             | na                  | No                              | 2018      | Erosion of natural deposits; Discharge of drilling wastes; Discharge from metal refineries. |  |

Unregulated Contaminants<sup>1</sup> for which EPA requires monitoring to determine where certain substances occur and whether it needs to regulate those substances.

| Substance            | Unit | MCLG* | Miller Water           |                     |           | Bolton Water |                        |                     |           |              |
|----------------------|------|-------|------------------------|---------------------|-----------|--------------|------------------------|---------------------|-----------|--------------|
|                      |      |       | Average Level Detected | Range of Detections | Violation | Year Sampled | Average Level Detected | Range of Detections | Violation | Year Sampled |
| Chloroform           | ppb  | 70    | 3.80                   | na                  | na        | 2018         | 1.11                   | na                  | na        | 2018         |
| Bromodichloromethane | ppb  | 0     | 5.01                   | na                  | na        | 2018         | 2.97                   | na                  | na        | 2018         |
| Dibromochloromethane | ppb  | 80    | 5.94                   | na                  | na        | 2018         | 5.52                   | na                  | na        | 2018         |
| Bromoform            | ppb  | 0     | 1.11                   | na                  | na        | 2018         | 4.15                   | na                  | na        | 2018         |
| Sulfate              | ppm  | na    | 57                     | 49 - 87             | na        | 2018         | 49                     | 48 - 51             | na        | 2018         |
| Chlorate             | ppb  | na    | 24                     | nd - 41             | na        | 2013         | nd                     | na                  | na        | 2013         |
| Hexavalent Chromium  | ppb  | na    | 0.058                  | 0.048 - 0.068       | na        | 2013         | 0.205                  | 0.200 - 0.210       | na        | 2013         |
| 1,4-Dioxane          | ppb  | na    | 0.328                  | nd - 0.575          | na        | 2013         | 0.545                  | 0.276 - 0.814       | na        | 2013         |
| Molybdenum           | ppb  | na    | 1.6                    | 1.2 - 2.5           | na        | 2013         | 4.2                    | 3.5 - 4.9           | na        | 2013         |
| Strontium            | ppb  | na    | 205                    | 190 - 220           | na        | 2013         | 170                    | 160 - 180           | na        | 2013         |
| Vanadium             | ppb  | na    | 0.20                   | nd - 0.56           | na        | 2013         | 0.66                   | 0.60 - 0.72         | na        | 2013         |

<sup>1</sup>Detected contaminants from the plant tap

<sup>2</sup>The value reported under "Highest Compliance Level Detected" for Total Organic Carbon (TOC) is the lowest ratio between percentage of TOC actually removed to the percentage of TOC required to be removed. A value of greater than one (1) indicates that the water system is in compliance with TOC removal requirements. A value of less than one (1) indicates a violation of the TOC removal requirements.

Results of GCWW Voluntary Monitoring for Cryptosporidium:

GCWW has tested for Cryptosporidium (Crypto) in treated waters and has never detected it. Crypto is a microscopic microorganism that, when ingested, can result in diarrhea, fever and other gastrointestinal symptoms. GCWW also tested for Crypto in the Ohio River surface water and it was found in 2 of 12 samples during 2018. The organism is found in surface waters and comes from animal and human wastes which enter the watershed. Crypto is eliminated by an effective combination including sedimentation, filtration, and disinfection.

**Sodium:** GCWW has tested for sodium in treated water as it leaves the treatment plants and has found 20 mg (milligrams) per liter in the Miller water and 30 mg per liter in the Bolton water. There are approximately 4 cups in a liter.

**Turbidity:** We are required to report on the turbidity as an indication of the effectiveness of our filtration system. Turbidity is a measure of the cloudiness of water. The turbidity limit set by the EPA is 0.3 NTU in 95% of the samples analyzed each month, and shall not exceed 1 NTU at any time. As reported in the table above, GCWW's highest recorded turbidity result for 2018 was 0.25 NTU (Miller Water) and the lowest monthly percentage of samples meeting the turbidity limits was 100%.

GCWW has a current unconditioned license to operate our water system. GCWW was in compliance with all state primary drinking water rules during 2018.

The Miller Treatment Plant uses the Ohio River as its source water. As with all surface waters, the Ohio River has classified the Ohio River as highly susceptible to contamination. The Ohio EPA has also classified the portion of the Great Miami Aquifer that supplies water to the well fields for the Bolton Treatment Plant as highly susceptible to contamination. It does not have an overlying protective clay layer, the ground water has low levels of nitrate, and there are potential sources of contamination nearby.

Abbreviations

ppb: parts per billion or micrograms per liter.  
 ppm: parts per million or milligrams per liter.  
 na: not applicable.  
 NTU: Nephelometric Turbidity Unit, used to measure clarity in drinking water.  
 nd: not detectable at testing limits.  
 nr: not regulated.

\*Definitions

**Maximum Contaminant Level Goal or MCLG:** 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.  
**Maximum Contaminant Level or MCL:** 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.  
**Action Level or AL:** The concentration of a contaminant, which, if exceeded, triggers treatment or other requirements which a water system shall follow.  
**Treatment Technique or TT:** A required process intended to reduce the level of a contaminant in drinking water.  
 The < symbol: A symbol which means less than. A result of <5 means that the lowest level that could be detected was 5 and the contaminant in that sample was not detected.

## Table of Detected Contaminants

Listed below is information on those contaminants that were found in the **Brown County Rural Water** drinking water.

### TABLE OF DETECTED CONTAMINANTS

| Contaminants (Units)           | MCLG      | MCL      | Level Found | Range of Detections | Violation | Sample Year | Typical Source of Contaminants   |
|--------------------------------|-----------|----------|-------------|---------------------|-----------|-------------|--|
| <b>Residual Disinfectants</b>  |           |          |             |                     |           |             |  |
| Total Chlorine (ppm)           | MRDLG = 4 | MRDL = 4 | 0.92        | 0.85 - 0.99         | No        | 2018        | Water additive used to control microbes.   |
| <b>Inorganic Contaminants</b>  |           |          |             |                     |           |             |  |
| Nitrate (ppm)                  | 10        | 10       | 0.31        | 0.31                | No        | 2018        | Runoff from fertilizers, erosion of natural deposits.  |
| Fluoride (ppm)                 | 4         | 4        | 0.91        | 0.86 - 0.95         | No        | 2018        | Water additive required by the State of Ohio E.P.A.  |
| <b>Disinfection Byproducts</b> |           |          |             |                     |           |             |  |
| Total Trihalomethanes (ppb)    | 0         | 80       | 35.7        | 28.1 - 35.7         | No        | 2018        | By-product of drinking water chlorination.   |
| Haloacetic Acids (ppb)         | na        | 60       | <6.0        | Nd                  | No        | 2018        | By-product of drinking water chlorination.   |
| <b>Unregulated</b>             |           |          |             |                     |           |             |  |
| Chloroform(ppb)                | Na        | Na       | 2.6         | 1.8-2.6             | No        | 2018        | EPA regulations required us to monitor these contaminants while EPA considers setting limits on them. The contaminants are by-products of drinking water chlorination. |
| Bromoform(ppb)                 | Na        | Na       | 10.7        | 8.8-10.7            | No        | 2018        |  |
| Bromodichloromethane(ppb)      | Na        | Na       | 7.8         | 5.8-7.8             | No        | 2018        |  |
| Dibromochloromethane(ppb)      | Na        | Na       | 14.6        | 11.7-14.6           | No        | 2018        |  |

| <b>Lead and Copper</b> |      |     |                             |                               |                     |           |             |  |
|------------------------|------|-----|-----------------------------|-------------------------------|---------------------|-----------|-------------|--|
| Lead and Copper        | MCLG | AL  | 90 <sup>th</sup> percentile | # of sites found above the AL | Range of Detections | Violation | Sample Year | Typical Source of Contaminants           |
| Lead (ppb)             | 0    | 15  | <5.0                        | 1-30                          | Nd - 50.6           | No        | 2017        | Corrosion of household plumbing systems. |
| Copper (ppm)           | 1.3  | 1.3 | <0.05                       | 0-30                          | Nd - 0.266          | No        | 2017        | Corrosion of household plumbing systems. |