



## City of Union

# Drinking Water Consumer Confidence Report for 2018

The City of Union has prepared the following report to provide information to you, the consumer, on the quality of our drinking water for testing year 2018. 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. This report has been prepared as part of state and federal requirements to inform the consumer as mandated by the Safe Drinking Water Act. We welcome the opportunity to inform residents and business owners of our high water quality. We have a current, unconditioned license to operate our water system.

### **Source water information.**

Union receives its drinking water from the Great Miami Buried Valley Aquifer using four groundwater production wells. Wells 2 and 3 pump directly to Union's Iron Removal Water treatment facility where the water is aerated to oxidize and precipitate iron. Iron is then removed by anthracite (activated carbon) and sand filtration. Chlorine is injected to provide for disinfection, and fluoride is added for dental benefits.

The treated water is pumped to Union's two water towers, which together have a total water-storage capacity of 1 million gallons. From these towers, water is distributed throughout Union to 2,760 service connections via approximately 37.5 miles of pipe varying in diameter from 4 inches to 20 inches. Union pumped 158 million gallons of treated water in 2018. Union has a waterline connection with the City of Englewood, which can be opened if a water-related emergency should ever occur (for Englewood's report call 836-5106).

The 1996 amendments to the Safe Drinking Water Act established the federal Source Water Protection and Assessment Program, which required that a “source water assessment” be completed for all public water systems by May 2003. Source water assessments are nearly identical to wellhead protection plans, requiring a delineation of the protection area and a potential contaminant source inventory. However, a source water assessment additionally requires a susceptibility analysis. To fulfill the requirements of the Federal Source Water Assessment and Protection Program, Ohio EPA completed a study of Union’s source of drinking water to determine its susceptibility. According to this study, the aquifer that supplies water to Union has a high susceptibility to contamination. This determination is based primarily on the lack of a protective layer of clay overlying the aquifer and the shallow depth (less than 15 feet below ground surface) of the aquifer. Nitrates have historically been detected in the treated water at concentrations well below the federal and state drinking water standards of 10 mg/L.

The termination of farming practices in the vicinity of the wellfield has caused the nitrates to be substantially reduced below concentrations of concern. EPA notes that Union has worked very hard to develop and implement a comprehensive wellhead/source water protection plan to help prevent contamination from entering the aquifer. The protection plan contains an education component, source control strategies, an emergency response plan, and groundwater monitoring strategies. Copies of the Drinking Water Source Assessment are available by contacting the City of Union at 937-836-8624.

### **What are sources of contamination to drinking water?**

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 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, USEPA 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 the water poses a health risk. More information about the contaminants and potential health effects can be obtained by calling the Federal 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 populations. 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 infection. These people should seek advice about drinking water from their health care providers. EPA/CEDD 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)

### **About your drinking water.**

The EPA requires regular sampling to ensure drinking water safety. The City of Union conducted sampling for bacteria; inorganic; radiological; synthetic organic; volatile organic during 2018. Samples were collected for a total of fifty-four different contaminants, most of which were not detected in the City of Union water supply. 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, is more than one year old.

The City of Union provides safe and aesthetically pleasing drinking water to its residents, businesses, and visitors. The underground water supply is of high quality, and Union has worked hard to protect this valuable water resource. In order to supply you with the safest possible water product, Union chlorinates the water to control viruses and bacteria. Fluoride is also added to enhance dental protection. The levels of these two additives are monitored daily to ensure proper dosages are maintained. Iron is an abundant and widespread mineral found in the rocks and soils of Ohio. Iron is not a health risk but rather an aesthetic issue because of the discoloration it can cause in water. At high-enough concentrations, iron can affect the taste of water and other beverages. Iron also can stain laundry, plumbing fixtures, and porcelain. Manganese, while less abundant, can cause similar problems and leave a bitter taste in the water. Manganese also can leave visible black specks in ice cubes. To minimize effects of these naturally occurring minerals, Union operates a water treatment facility to reduce the iron and manganese concentrations that come out of the tap. Listed in this publication is information on those substances that were found in Union's drinking water.

For more information and to participate in decisions concerning your drinking water: Public participation and comments are encouraged at regular Union City Council meetings. These meetings are held the second and fourth Monday of each month at 7:30 pm. in City Hall, 118 North Main St. Please contact City of Union offices at 836-8624 for more information.

### **Table of Detected Contaminants**

The EPA requires regular sampling to ensure consumers receive safe drinking water. Listed below is information on these contaminants that were found in the City of Union drinking water.

### **Contaminants can include:**

- Micro contaminants, viruses and bacteria that may come from septic tanks, wastewater treatment plants, livestock, and wildlife.
- Inorganic contaminants, salts and metals that can be natural or result from stormwater runoff, wastewater discharges, and farming.
- **Pesticides and herbicides** that can come from a variety of sources such as agriculture, stormwater runoff, and residential uses.

- Organic chemical contaminants that originate from agriculture, industrial processes, petroleum production, gas stations, stormwater runoff, and septic systems.
- Radioactive contaminant substances that can be naturally occurring or the result of oil and gas production and mining activities.
- Lead, if present, which 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. The City of Union 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. A list of laboratories certified in the State of Ohio to test for lead may be found 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 Web site at <http://www.epa.gov/safewater/lead> and their phone number is 800-426-4991.

#### **Definitions of some terms contained within this report:**

- **Maximum Contaminant Level Goal (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 (MCL):** The highest level of contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.
- **Parts per Million (ppm) or Milligrams per Liter (mg/L)** are units of measure for 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)** are units of measure for concentration of a contaminant. A part per billion corresponds to one second in 31.7 years.
- **Action Level (AL):** The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.
- **The “<” Symbol:** The symbol that means “less than.”

If a paper copy of the Consumer Confidence Report is desired, call 937-836-8624 and one will be provided.

## 2018 CCR REPORT FOR UNION, OHIO

CONTAMINANTS ( UNITS)	MCLG	MCL	LEVEL FOUND	RANGE OF DETECTIONS	VIOLATION	SAMPLE YEAR	TYPICAL SOURCE OF CONTAMINANTS
<b>BACTERIOLOGICAL</b>							
Total Coliform Bacteria	0	1*	0	0 – 1	No	2018	Naturally present in the environment.
<b>INORGANIC CONTAMINANTS</b>							
Fluoride (PPM)	4.0	4.0	1.12	0.89 – 1.12	No	2018	Natural geology and supplement.
<b>VOLATILE ORGANIC CONTAMINANTS</b>							
<b>SYNTHETIC ORGANIC CONTAMINANTS INCLUDING PESTICIDES AND HERBICIDES</b>							
<b>RADIOLOGICAL CONTAMINANTS</b>							
CONTAMINANTS (UNITS)	MCLG	MCL	LEVEL FOUND	RANGE OF DETECTIONS	VIOLATION	SAMPLE YEAR	TYPICAL SOURCE OF CONTAMINANTS
<b>REGULATED IN THE DISTRIBUTION SYSTEM</b>							
<b>Lead and Copper</b>							
Contaminants (Units)	Action Level AL	Individual Results over the AL	90% of test levels were less than	Violation	Year Sampled	Typical Source of Contamination	
Lead (PPB)	15 PPB	127.0 and 565.0	8.32	No	2018	Corrosion of household plumbing systems.	
	2 out of 20 samples were found to have lead levels in excess of the lead action level of 16 ppb						
Copper (PPB)	1.3 PPB	N/A	0.355	No	2018	Corrosion of household plumbing systems.	
	0 out of 20 samples were found to have copper levels in excess of the copper action level of 1.3 (PPB)						
Total Chlorine	MRDL-4	MRDL-4	0.79	0.44 to 0.79	No	2018	Water Additive used to control microbes
Haloacetic Acids 5-(PPB)	N/A	60 <sup>4</sup>	<1.00 – 2.511	4.017 – 5.016	No	2018	By-products of chlorination
Trihalometanes (PPB)	0	80 <sup>4</sup>	1.220 – 7.040	15.25 – 22.30	No	2018	By-products of chlorination
<b>UNREGULATED COMPOUNDS</b>							
Bromodichloro-methane (PPB)	N/A	N/A	6.600	4.80 – 6.600	No	2018	By-products of drinking water chlorination.
Bromoform (PPB)	N/A	N/A	2.060	1.120 – 2.060	No	2018	By-products of drinking water chlorination.
Chloroform (PPB)	N/A	N/A	6.600	4.910 – 6.600	No	2018	By-products of drinking water chlorination.
Dibromochloromethane (PPB)	N/A	N/A	6.600	4.320 – 6.600	No	2018	By-products of drinking water chlorination.

SECONDARY DRINKING WATER STANDARDS							
Iron P.P.M.		0.3	0.01	<0.01 – 0.01	No	2018	Erosion of natural deposits
Manganese P.P.M.		0.05	0.06	<0.001 – 0.060	No	2018	Erosion of natural deposits

\* MCL: presence of coliform bacteria in greater than or equal to 5 percent of monthly samples. Copper and lead results were within compliance for sample analysis. 20 samples are taken for copper compliance and 20 samples are taken for lead compliance.

Two lead samples were high due to property owner’s error in sampling technique.  
Resampled (1) 565.0 µg/L - after 5.52µg/L  
(2) 127.0 µg/L – after 2.62

2018

1. Total water samples taken for year, 1239
2. Total water samples taken for iron, Manganese 52 each
3. Total water samples taken for total coliform and e-coli were all negative. Total samples: 87
4. Highest running annual average: 0.65 mg/L

“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. The City of Union 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>.”

The City of Union has a current, unconditioned license to operate our water system.

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City of Union License to Operate 5702512-1204048-2018