



AKRON WATER SUPPLY BUREAU

# DRINKING WATER CONSUMER CONFIDENCE REPORT

FOR 2017

DANIEL HARRIGAN  
MAYOR, THE CITY OF AKRON



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## SAFE WATER IS OUR PRIORITY

### National Primary Drinking Water Regulation Compliance

Water provided by the Akron Water Supply Bureau meets the current United States Environmental Protection Agency (USEPA) and Ohio Environmental Protection Agency (OEPA) regulatory requirements by a wide margin.

### Water Source

Three impounding reservoirs take surface water from the Upper Cuyahoga River. Water is stored and released from Wendell R. LaDue Reservoir and East Branch Reservoir, both in Geauga County. These reservoirs supplement Lake Rockwell, located in Franklin Township, Portage County, 2.5 miles north of Kent, Ohio. Water from Lake Rockwell is treated at the nearby water supply plant, pumped 11 miles to Akron through three force mains into equalizing reservoirs and distributed to more than 80,000 households. Because 21 percent of the system is at higher elevations, eight districts are supplied by additional pump stations and tanks.

### Source Water Contamination

While the source water for the City of Akron Public Water System is considered susceptible to contamination, historically, the City of Akron Public Water System has effectively treated this source water to meet drinking water quality standards.

Potential sources of contamination include agricultural runoff, failing on-site wastewater treatment systems (septic systems), municipal wastewater treatment discharges and non-point sources. In addition, the source water is susceptible to contamination through derailments, motor vehicle accidents or spills at sites where the corridor zone is crossed by roads and rail lines, or at fuel storage and vehicle service areas located adjacent to the corridor zone.

Please note that this assessment is based on available data and may not reflect current conditions. Water quality, land uses and other potential sources of contamination may change over time.

For more information about the source water assessment program, go to [www.epa.ohio.gov/ddagw/swap.aspx](http://www.epa.ohio.gov/ddagw/swap.aspx).

For further information regarding Akron's source water assessment, please write to Akron Water Supply at 1570 Ravenna Road, Kent, OH 44240-6111.

### Required Health Information

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 animal or 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.

### Turbidity

Turbidity is a measure of the cloudiness of water and is an indication of the effectiveness of our filtration system. The turbidity limit set by the EPA is 0.3 NTU in 95% of the samples analyzed each month and shall not exceed one NTU at any time. The Akron Water Supply's highest recorded turbidity result for 2017 was 0.12 NTU and lowest monthly percentage of samples meeting the turbidity limit resulted in 100% compliance.



## KNOW YOUR WATER

In order to ensure that tap water is safe to drink, the U.S. EPA prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. 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 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 Federal Environmental Protection Agency's Safe Drinking Water Hotline, 1-800-426-4791.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised people such as people with cancer undergoing chemotherapy, people 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. USEPA/Centers for Disease Control and Prevention (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.

## Three Reasons You Can Count on the Akron Water Supply Bureau for Fresh, Clean Water

# 1

### Watershed Protection

Our experts routinely inspect the water source to help ensure the water supply is clean and safe.

# 2

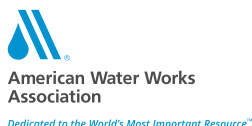
### Water Treatment

Our certified operating professionals provide an ample supply of high-quality drinking water while striving to exceed all regulatory requirements.

# 3

### 24/7 System Maintenance

A skilled team is available days, nights, weekends and holidays to maintain the water mains and reservoirs so you have water when you need it.





# DEFINITIONS OF SOME TERMS CONTAINED WITHIN THIS REPORT

This report is based on the most recent testing done in accordance with the regulations by the Akron Water Supply Bureau. Terms used in the Water Quality Table and in other parts of this report are defined here.

**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 a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

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

**Maximum Residual Disinfectant Level Goal (MRDLG):** The level of residual 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.

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

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

**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.

**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.

**NTU (Nephelometric Turbidity Unit):** The units of measurement for turbidity in water as determined by the degree light is scattered at right angles when compared to a standard reference solution.

**Picocuries per liter (pCi/L):** A common measure of radioactivity.

**Contact Time (CT)** means the mathematical product of a "residual disinfectant concentration" (C), which is determined before or at the first customer, and the corresponding "disinfectant contact time" (T).

**Microcystins:** Liver toxins produced by a number of cyanobacteria. Total microcystins are the sum of all the variants/congeners (forms) of the cyanotoxin microcystin.

**Cyanobacteria:** Photosynthesizing bacteria, also called blue-green algae, which occur naturally in marine and freshwater ecosystems, and may produce cyanotoxins, which at sufficiently high concentrations can pose a risk to public health.

**Cyanotoxin:** Toxin produced by cyanobacteria. These toxins include liver toxins, nerve toxins, and skin toxins. Also sometimes referred to as "algal toxin."

## NOT UNDER OHIO EPA REGULATION BUT OF GENERAL INTEREST

	Average Detected Level	Range
Alkalinity	77 mg/L	38 - 105 mg/L
Hardness (metric units)	109 mg/L	58 - 146 mg/L
Hardness (English units)	6 grains per gallon	3 - 9 grains per gallon
pH	7.3 units	7.0 - 7.7 units
Sodium	41 mg/L	NA, one test, in 2017
Temperature (metric units)	14.1° C	2.1° - 26.0° C
Temperature (English units)	57° F	36° - 79° F
Total Organic Carbon	2.72 mg/L	2.10 - 3.39 mg/L
Total solids	208 mg/L	NA, one test, in 2017

## UNREGULATED CONTAMINANT MONITORING RULE 3

Contaminants (units)	MCLG	MCL	Level Found	Range of Detections	Violation	Year Sampled
Chlorate (ppb), plant tap	NA	NA	318	20 - 517	NO	2013-14
Chlorate (ppb), distribution system	NA	NA	537	420 - 854	NO	2013-14
Chromium (total) (ppb), plant tap	NA	NA	0.24	0.20 - 0.29	NO	2013-14
Chromium (total) (ppb), distribution system	NA	NA	0.29	0.20 - 0.35	NO	2013-14
Chromium-6 (ppb), plant tap	NA	NA	0.046	0.034 - 0.056	NO	2013-14
Chromium-6 (ppb), distribution system	NA	NA	0.088	0.056 - 0.13	NO	2013-14
Strontium (ppb), plant tap	NA	NA	80.8	70.0 - 96.3	NO	2013-14
Strontium (ppb), distribution system	NA	NA	80.9	66.4 - 99.4	NO	2013-14
Vanadium (ppb), plant tap	NA	NA	0.88	0.20 - 1.6	NO	2013-14
Vanadium (ppb), distribution system	NA	NA	0.88	0.20 - 1.8	NO	2013-14

## About Unregulated Contaminant Monitoring Rule 3

Our utility is committed to protecting public health and meets or surpasses all state and federal health standards for tap water. To help advance the science of drinking water, the rule was enacted January, 2013 and we collected data for the EPA in 2013 and 2014. Collecting information about the occurrence of these compounds in water supplies is the first step in the EPA's efforts to determine whether they should be regulated. The presence of a compound does not necessarily equate to a health risk; the concentration of a compound is a far more important factor in determining whether there are health implications. We will closely monitor both the concentrations of these compounds and the EPA's health studies and will keep you informed of any developments. Should the EPA ultimately determine that regulation is warranted, we will take whatever steps are necessary to protect the health of our customers.

The EPA requires regular sampling to ensure drinking water safety. The City of Akron Water Supply Bureau conducted sampling for bacteria, microcystins, inorganic, radiological, synthetic organic, and volatile organic contaminants in 2017. Samples were tested for 101 different contaminants, most of which were not detected in the Akron 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, are more than one year old.

Listed below is information on those contaminants detected.

The complete listing of "2017 All Water Tests" performed on Akron drinking water is available at <http://www.akronohio.gov/cms/Water/CCR/index.html> or call 330-678-0077.

## TABLE OF DETECTED CONTAMINANTS FOR 2017

Contaminants (units)	MCLG	MCL	Level Found	Range of Detections	Violation	Year Sampled	Typical Source of Contaminants
<b>Microbiological Contaminants</b>							
Turbidity (NTU)	NA	TT	0.12	0.03 - 0.12	NO	2017	Soil runoff.
Turbidity (% meeting standard)	NA	TT	100.0%	100% - 100%	NO	2017	
Total Organic Carbon (compliance ratio)*	NA	TT	1.51	1.24 - 1.76	NO	2017	Naturally present in the environment.

\* The value reported under "Level Found" for Total Organic Carbon (TOC) compliance ratio is the lowest running annual average ratio between the 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 indicates a violation of the TOC removal requirements. The value reported under the "Range" for TOC is the lowest monthly ratio to the highest monthly ratio.

<b>Radioactive Contaminants</b>							
Alpha emitters (picocuries per liter)	0	15	3.6	NA	NO	2016	Erosion of natural deposits.
Combined Radium-226/228 (picocuries per liter)	0	5 combined	2.0	NA	NO	2016	Erosion of natural deposits.

<b>Inorganic Contaminants</b>							
Barium (ppm)	2	2	0.033	NA	NO	2017	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits.
Chlorite (ppm), avg. of 3 samples in the distribution system	0.8	1.0	0.70	0.07 - 0.75	NO	2017	By-product of drinking water chlorination.
Copper (ppm), plant tap	1.3	TT	0.017	<0.010 - 0.123	NO	2017	Erosion of natural deposits.
Fluoride (ppm)	4	4	1.04	0.75 - 1.18	NO	2017	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories.
Nitrate (ppm)	10	10	0.46	0.02 - 0.46	NO	2017	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits.

<b>Volatile Organic Chemicals</b>							
Haloacetic Acids HAA5 (ppb)	No goal for the total	60	37.7	13.0 - 52.9	NO	2017	By-product of drinking water chlorination.
Total Trihalomethanes TTHMs (ppb)	No goal for the total	80	67.7	22.0 - 101.0*	NO	2017	By-product of drinking water chlorination.

\* The maximum Range of Detections is not a violation because individual samples are averaged with other samples before being compared with the maximum contaminant level.

<b>Residual Disinfectants</b>							
Total Chlorine (ppm)	MRDLG = 4	MRDL = 4	0.99	0.64 - 1.27	NO	2017	Water additive used to control microbes.
Chlorine Dioxide (ppb)	MRDLG = 800	MRDL = 800	200	20 - 200	NO	2017	Water additive used to control microbes.

Contaminants (units)	Action Level	Individual Results over the AL	90% of test levels were less than	Violation	Year Sampled	Typical Source of Contaminants
<b>Lead and Copper</b>						
Copper (ppm), customers' taps	1.3 ppm	0.188	NA	NO	2015	Corrosion of household plumbing systems. Erosion of natural deposits.
	Zero out of 50 samples were found to have copper levels in excess of the copper Action Level of 1.3 ppm.					
Lead (ppb), routine compliance, at consumers' taps	15 ppb	27.7, 87.3	9.8	NO	2015	Corrosion of household plumbing systems. Erosion of natural deposits.
	2 out of 50 samples were found to have lead levels in excess of the lead Action Level of 15 ppb.**					

\*\* All homes with initial results above the lead Action Level were properly retested and confirmed to be less than the lead Action Level of 15 ppb.

In 2017 we had an unconditional license to operate our water system.

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 Akron Water Supply Bureau 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 1-800-426-4791 or at <http://www.epa.gov/safewater/lead>.

Public participation and comments are welcome at Akron City Council ward meetings with the schedule available at [http://www.akroncitycouncil.org/ward\\_meetings/](http://www.akroncitycouncil.org/ward_meetings/) or phone 330-375-2256. You are welcome to contact Akron Water Supply regarding information in this report or other water questions using the email [AkronWaterSupply@akronohio.gov](mailto:AkronWaterSupply@akronohio.gov) or by a phone call to the Akron Water Plant at 330-678-0077.

Photo: East Branch Reservoir



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