



ANNUAL  
**Drinking Water  
Quality Report**  
FOR 2007



**AKRON PUBLIC UTILITIES BUREAU**  
Akron Metropolitan Service Area

# AKRON PUBLIC UTILITIES BUREAU

## Akron Metropolitan Service Area

### Annual Drinking Water Quality Report for 2007



This brochure explains how drinking water provided by Akron Public Utilities Bureau meets by a wide margin the current USEPA and OEPA regulatory requirements. Included is a listing of results from water quality tests as well as an explanation of where our water comes from and tips on how to interpret the data. We are proud to share our results with you. Please read them carefully.

## We are proud to report that the water provided by the Akron Public Utilities Bureau met all Ohio EPA standards.

This report is also available on the World Wide Web at: [www.ci.akron.oh.us/pubutl.html](http://www.ci.akron.oh.us/pubutl.html). For more information, call the City of Akron Public Utilities Bureau at: (330) 678-0077.

### Water Source

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

For the purposes of source water assessments, all surface waters are considered to be susceptible to contamination. By their nature surface waters are accessible and can be readily contaminated by chemicals and pathogens, with relatively short travel times from source to the intake. The drinking water source assessment for the City of Akron indicates that the source water is susceptible to potential contamination. Potential sources of contamination include agricultural runoff, failing on-site wastewater treatment systems (septic systems), municipal wastewater treatment plant 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.

It is important to note that this assessment is based on available data, and therefore may not reflect current conditions in all cases. Water quality, land uses and other activities that are potential sources of contamination may change with time. 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.

For further information about the source water assessment program, contact OEPA at [www.epa.state.oh.us/ddagw/pdu/swap](http://www.epa.state.oh.us/ddagw/pdu/swap). For further information regarding Akron's source water assessment, please forward written requests to Akron Water Supply at 1570 Ravenna Road, Kent, Ohio, 44240-6111.

### National Primary Drinking Water Regulation Compliance

The City of Akron Public Water System had no violations of drinking water regulations in 2007. The Akron Water System met all regulations for treating, testing, and reporting the quality of its drinking water.

### Required Additional Health Information

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 (800-426-4791).

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 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 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, stormwater runoff, and residential uses.
- (D)** Organic chemical contaminants, including synthetic and volatile organics, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater 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.

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 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* are available from the Safe Drinking Water Hotline (800-426-4791).



The EPA requires regular sampling to ensure drinking water safety. The Akron Public Utilities Bureau conducted sampling for bacteria, inorganic, and volatile organic contaminants in 2007. Samples were collected for a total of 96 different contaminants and water quality parameters. Most of the contaminants were not detected in the Akron water supply and those that were detected were all within EPA limits, resulting in no violations. Listed below is information on those contaminants with EPA limits that were detected. A complete listing of all chemicals and parameters tested is available at [www.ci.akron.oh.us/PubUtil/pdf/2007allwatertests.pdf](http://www.ci.akron.oh.us/PubUtil/pdf/2007allwatertests.pdf) or call 330.678.0077.

## Water Quality Table

	Year Sampled	MCLG	MCL	Level Found	Range of Detections	Typical Source of Contaminants	Violation
<b>Microbiological Contaminants</b>							
Total Organic Carbon (compliance ratio)	2007	N/A	TT	2.550	1.82 to 3.25	Naturally present in the environment	NO
Turbidity (NTU)	2007	N/A	TT	0.222	0.042 to 0.222	Soil runoff	NO
Turbidity (% meeting standard)	2007	N/A	TT	100%	100%	Soil runoff	NO
<b>Inorganic Contaminants</b>							
Barium (ppm)	2007	N/A	2	0.045	N/A	Discharge of drilling wastes discharge from metal refineries; Erosion of natural deposits	NO
Chlorite (ppm), avg. of 3 samples in the distribution system	2007	0.8	1.0	0.733	0.219 to 0.733	By-product of drinking water chlorination	NO
Copper (ppm)	2006	1.3	Action level = 1.3	0.246	N/A	Corrosion of household plumbing systems	NO
Zero out of 50 samples were found to have copper levels in excess of the copper action level of 1.3 ppm							
Fluoride (ppm)	2007	4	4	1.06	0.07 to 1.26	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories	NO
Lead (ppb)	2006	0	Action level = 15	less than 5.0	N/A	Corrosion of household plumbing systems	NO
Zero out of 50 samples were found to have lead levels in excess of the lead action level of 15 ppb							
Nitrate (ppm)	2007	10	10	0.71	0.47 to 0.71	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits	NO
<b>Residual Disinfectants</b>							
Total Chlorine (ppm)	2007	MRDLG = 4	MRDL = 4	1.32	1.28 to 1.32	By-product of drinking water chlorination	NO
Chlorine Dioxide (ug/l)	2007	MRDLG = 800	MRDL = 800	530	0 to 530	Water additive used to control microbes	NO
<b>Volatile Organic Chemicals</b>							
Haloacetic Acids HAA5 (ppb)	2007	0	60	40	11.4 to 77.5*	By-product of drinking water chlorination	NO
Total Trihalomethanes TTHMs (ppb)	2007	0	80	51.8	11.4 to 141.8*	By-product of drinking water chlorination	NO
*These maximum samples for HAA5 and TTHM are not violations because they are each averaged with other samples before being compared with the maximum contaminant level. All water system averages were well below the Ohio EPA's limits for these averages.							
<b>Synthetic Organic Contaminants including Pesticides and Herbicides</b>							
Atrazine (ppb)	2007	3	3	0.37	less than 0.3 to 0.37	Runoff from hebicide used on row crops	NO
<b>Radioactive Contaminants</b>							
Alpha emitters (picocuries per liter)	2004	0	15	1.4	N/A	Erosion of natural deposits	NO
Beta/photon emitters (picocuries per liter)	2004	0	Action level = 50	3.8	N/A	Decay of natural and man-made deposits	NO
<b>Unregulated Contaminants</b>							
Bromodichloromethane (ppb)	2007	N/A	N/A	5.5	N/A	By-product of drinking water chlorination	NO
Chloroform (ppb)	2007	N/A	N/A	7.9	N/A	By-product of drinking water chlorination	NO
Dibromochloromethane (ppb)	2007	N/A	N/A	2.2	N/A	By-product of drinking water chlorination	NO
<b>IDSE Standard Monitoring**</b>							
Haloacetic Acids HAA5 (ppb)	2007	N/A	N/A	30.6	9.1 to 30.6	By-product of drinking water chlorination	NO
Total Trihalomethanes TTHMs (ppb)	2007	N/A	N/A	71.6	12.1 to 71.6	By-product of drinking water chlorination	NO
Bromodichloromethane (ppb)	2007	N/A	N/A	17	less than .5 to 17	By-product of drinking water chlorination	NO
Chloroform (ppb)	2007	N/A	N/A	50.5	less than .5 to 50.5	By-product of drinking water chlorination	NO
Dibromoacetic Acid (ppb)	2007	N/A	N/A	2.9	less than 1 to 2.9	By-product of drinking water chlorination	NO
Dibromochloromethane (ppb)	2007	N/A	N/A	4.1	less than .5 to 4.1	By-product of drinking water chlorination	NO
Dichloroacetic Acid (ppb)	2007	N/A	N/A	18	less than 1 to 18	By-product of drinking water chlorination	NO
Trichloroacetic Acid (ppb)	2007	N/A	N/A	10.2	less than 1 to 10.2	By-product of drinking water chlorination	NO

\*\* "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 under Stage 2 DBPR, beginning 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 Acids (HAA5). USEPA sets standards for controlling the levels of disinfectant byproducts in drinking water, including both THMs and HAAs."

## HOW TO READ THESE TABLES

This report is based upon tests conducted in the year 2007 by Akron Public Utilities Bureau. Terms used in the Water Quality Table and in other parts of this report are defined here.

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

**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.

**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 Residual Disinfectant Level or MRDL:** The highest residual disinfectant level allowed.

**Maximum Residual Disinfectant Level Goal or MRDLG:** The level of residual disinfectant below which there is no known or expected health risk.

**Detected Level:** The average level detected of a contaminant for comparison against the acceptance levels for each parameter. These levels could be the highest single measurement, or an average of values depending on the contaminant.

**Range:** The range of all values for samples tested for each contaminant.

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

### Key to Tables

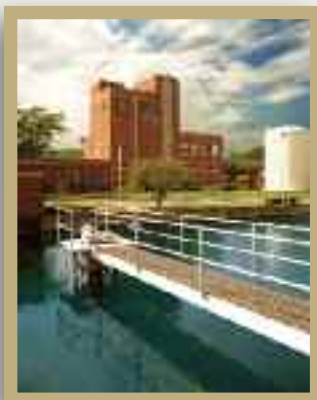
<b>MCL</b>	=	Maximum Contaminant Level
<b>MCLG</b>	=	Maximum Contaminant Level Goal
<b>MRDL</b>	=	Maximum Residual Disinfectant Level
<b>MRDLG</b>	=	Maximum Residual Disinfectant Level Goal
<b>NTU</b>	=	Nephelometric Turbidity Units
<b>ppm</b>	=	parts per million, or milligrams per liter (mg/L)
<b>ppb</b>	=	parts per billion, or micrograms per liter (µg/L)
<b>TT</b>	=	Treatment Technique
<b>N/A</b>	=	not applicable

### Not Under Ohio EPA Regulation but of General Interest

Contaminants	Average Detected Level	Range
Alkalinity	77 mg/L	34 to 108 mg/L
Hardness (metric units)	117 mg/L	52 to 152 mg/L
Hardness (English units)	6.8 grains per gallon	3.0 to 8.9 grains per gallon
pH	7.34 units	7.01 to 7.80 units
Orthophosphate	0.889 mg/L	0.489 to 1.550 mg/L
Total Organic Carbon	2.55 mg/L	1.82 to 3.25 mg/L



Association of Metropolitan Water Agencies



Water Supply Plant  
north of Kent, Ohio



Water Distribution  
Johnston Street, Akron, Ohio