

AKRON PUBLIC UTILITIES BUREAU 2008 DRINKING WATER QUALITY REPORT

DONALD L. PLUSQUELLIC, MAYOR, THE CITY OF AKRON



THREE REASONS YOU CAN COUNT ON THE AKRON PUBLIC UTILITIES BUREAU FOR FRESH, CLEAN WATER.

- 1 Watershed Rangers** – our experts routinely inspect the water source to help ensure the water supply is clean and safe for you to use.
- 2 Hydrant Flushing** – this helps clean the water pipe system, keeps valves working properly and ensures hydrants will function properly in the event of a fire.
- 3 24/7 Repairs** – a skilled team is available days, nights, weekends and holidays to fix water main breaks so you have water when you need it.



AKRON
PUBLIC UTILITIES BUREAU
Your Clean Water Resource.

THE CITY OF AKRON
PUBLIC UTILITIES BUREAU
P.O. Box 3665
Akron, Ohio 44309-3665



YOUR WATER, PROVIDED BY THE AKRON PUBLIC UTILITIES BUREAU, MET ALL OHIO EPA STANDARDS.

National Primary Drinking Water Regulation Compliance.

Water provided by the Akron Public Utilities Bureau meets the current USEPA and OEPA regulatory requirements by a wide margin. The City of Akron Public Water System met all regulations for treating, testing and reporting the quality of its drinking water in 2008.

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 to equalizing reservoirs and distributed to over 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 data available 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.state.oh.us/ddagw/pdu/swap.html. For further information regarding Akron's source water assessment, please write to Akron Water Supply at 1570 Ravenna Road, Kent, Ohio 44240-6111.

Additional Required Health Information.

Drinking 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. For more information about contaminants and potential health effects, call the Environmental Protection Agency's Safe Drinking Water Hotline at 1-800-426-4791.

Sources of tap and bottled drinking water include rivers, lakes, streams, ponds, reservoirs, springs and wells. As water travels over land or through the ground, it dissolves naturally occurring minerals and radioactive material, and can pick up substances from animal or human activity. Contaminants that may be present in source water include:

- (A) Microbial contaminants (such as viruses and bacteria) that may come from sewage treatment plants, septic systems, agricultural livestock operations and wildlife.
- (B) Inorganic contaminants (such as salts and metals) that 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 from a variety of sources such as agriculture, storm water runoff and residential uses.
- (D) Organic chemical contaminants, including synthetic and volatile organics that 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 the result of oil and gas production and mining.

To ensure tap water is safe to drink, the EPA has regulations which limit the allowable contaminants in water provided by public water systems.

Some people may be more vulnerable to contaminants in drinking water than the general population. Persons such as chemotherapy or organ transplant recipients, people with HIV/AIDS or immune system disorders and some elderly adults and infants can be particularly at risk from infections. These people should seek advice about drinking water from their healthcare providers. EPA/CDC guidelines for lessening the risk of infection are available from the Safe Drinking Water Hotline at 1-800-426-4791.



HOW TO READ THE FOLLOWING TABLES

This report is based upon tests conducted in 2008 by the 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 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.

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

NOT UNDER OHIO EPA REGULATION BUT OF GENERAL INTEREST

Contaminants	Average Detected Level	Range
Alkalinity	76 mg/L	35 to 109 mg/L
Hardness (metric units)	113 mg/L	54 to 152 mg/L
Hardness (English units)	6.6 grains per gallon	3.2 to 8.9 grains per gallon
pH	7.30 units	6.95 to 7.82 units
Suspended solids	283 mg/L	283 mg/L
Temperature	12.8 °C	1.3 to 26.2 °C
Total Organic Carbon	2.70 mg/L	1.79 to 3.51 mg/L



The EPA requires regular sampling to ensure drinking water safety. The Akron Public Utilities Bureau conducted sampling for bacteria as well as inorganic and volatile organic contaminants in 2008. Samples were collected for a total of 90 different contaminants, most of which were not detected in the Akron water supply. Akron tap water met all EPA drinking water regulations. The EPA approves the City of Akron to operate a public water system under License #7700011-686907-2009.

Information on contaminants detected is listed below.

The complete listing of all tests performed on Akron drinking water is available at www.ci.akron.oh.us/PubUtil/pdf/2008allwatertests.pdf or by calling 330.678.0077.

WATER QUALITY TABLE FOR 2008

	Year Sampled	MCLG	MCL	Level Found	Range of Detections	Typical Source of Contaminants	Violation
Microbiological Contaminants							
Total Coliform Bacteria (% detected per month)	2008	0	5%	0.5%	0% to 0.5%	Naturally present in the environment	NO
Total Organic Carbon (compliance ratio)	2008	N/A	TT	1.412	1.388 to 1.727	Naturally present in the environment	NO
Turbidity (NTU)	2008	N/A	TT	0.117	0.043 to 0.117	Soil runoff	NO
Turbidity (% meeting standard)	2008	N/A	TT	100%	100%	Soil runoff	NO
Inorganic Contaminants							
Barium (ppm)	2008	N/A	2	0.044	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	2008	0.8	1.0	0.620	0.285 to 0.620	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)	2008	4	4	0.96	0.73 to 1.11	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)	2008	10	10	1.03	0.28 to 1.03	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits	NO
Residual Disinfectants							
Total Chlorine (ppm)	2008	MRDLG = 4	MRDL = 4	1.42	1.10 to 1.79	By-product of drinking water chlorination	NO
Chlorine Dioxide (ppb)	2008	MRDLG = 800	MRDL = 800	320	0 to 320	Water additive used to control microbes	NO
Volatile Organic Chemicals (Stage I)							
Haloacetic Acids HAA5 (ppb)	2008	0	60 running annual avg.	33.4	6.6 to 56.1	By-product of drinking water chlorination	NO
Total Trihalomethanes TTHMs (ppb)	2008	0	80 running annual avg.	52.6	10.9 to 106.3*	By-product of drinking water chlorination	NO

* The maximum range of detections for total trihalomethanes is not a violation because individual samples are averaged with other samples before being compared with the maximum contaminant level. All water system averages were below the Ohio EPA's limits for these averages.

Radioactive Contaminants							
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
Unregulated Contaminants, Stage I							
Bromodichloromethane (ppb)	2008	N/A	N/A	20.2	3.8 to 20.2	By-product of drinking water chlorination	NO
Chloroform (ppb)	2008	N/A	N/A	82.8	5.7 to 82.8	By-product of drinking water chlorination	NO
Dibromochloromethane (ppb)	2008	N/A	N/A	3.3	1.3 to 3.3	By-product of drinking water chlorination	NO
IDSE Standard Monitoring (Stage II)**							
Haloacetic Acids, HAA5 Running Annual Average (ppb)	2008	N/A	N/A	25.7	N/A	By-product of drinking water chlorination	NO
Total Trihalomethanes, TTHMs Running Annual Average (ppb)	2008	N/A	N/A	47.6	N/A	By-product of drinking water chlorination	NO
Bromodichloromethane (ppb)	2008	N/A	N/A	10.8	1.9 to 23.2	By-product of drinking water chlorination	NO
Chloroform (ppb)	2008	N/A	N/A	34.6	3.2 to 76.7	By-product of drinking water chlorination	NO
Dibromoacetic acid (ppb)	2008	N/A	N/A	1.9	<1 to 9.9	By-product of drinking water chlorination	NO
Dibromochloromethane (ppb)	2008	N/A	N/A	2.2	0.6 to 5.0	By-product of drinking water chlorination	NO
Dichloroacetic acid (ppb)	2008	N/A	N/A	15.7	<1 to 27	By-product of drinking water chlorination	NO
Trichloroacetic acid (ppb)	2008	N/A	N/A	9.0	4.5 to 16.8	By-product of drinking water chlorination	NO

** Under the Stage II Disinfectants/Disinfection By-products 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 by-product concentrations. The locations selected for the IDSE may be used for compliance monitoring under Stage II DBPR, beginning 2012. Disinfection by-products 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 by-products are grouped into two categories, Total Trihalomethanes (TTHM) and Haloacetic Acids (HAA5). USEPA sets standards for controlling the levels of disinfectant by-products in drinking water, including both THMs and HAAs.

Raw, Untreated Water for LT2 Rule							
Cryptosporidium (oocysts per liter)	2006 to 2008	N/A	N/A	0.157	0 to 1.000	Human and animal fecal waste	NO

The Akron Public Utilities Bureau monitored for Cryptosporidium in the raw, untreated water in Lake Rockwell from 2006 through 2008. Cryptosporidium was detected in 4 samples of the 24 collected. Cryptosporidium is a microbial parasite found in surface water throughout the U.S. Although filtration removes Cryptosporidium, the most commonly used filtration methods cannot guarantee 100% removal. Monitoring of the source water indicates the presence of these organisms in the untreated water. Current test methods do not enable us to determine if the organisms are dead or if they are capable of causing disease. Symptoms of infection include nausea, diarrhea, and abdominal cramps. Most healthy individuals can overcome the disease. However immunocompromised people are at greater risk of developing life-threatening illness. We encourage immunocompromised individuals to consult their doctor regarding appropriate precautions to take to avoid infection. Cryptosporidium must be ingested to cause disease, and it may be spread through means other than drinking water.

Effective treatment for the removal of Cryptosporidium from drinking water includes specific filtration equipment. The Akron Water Supply Plant presently has treatment facilities that are considered effective by the EPA. The Akron Water Supply Plant will continue to operate the filtration equipment properly to ensure the most effective removal of Cryptosporidium as possible. This includes the continual monitoring of filter effectiveness.