



# ANNUAL DRINKING WATER QUALITY REPORT FOR 2003



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



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## Akron Metropolitan Service Area

### Annual Drinking Water Quality Report for 2003

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 Akron Public Utilities Bureau meets or exceeds established water quality standards.***

This report is also available on the World Wide Web at: [www.ci.akron.oh.us](http://www.ci.akron.oh.us). For more information, call Akron Public Utilities Bureau at: (330) 375-2651.

#### 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 and East Branch, 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.

#### National Primary Drinking Water Regulation Compliance

**Tier 2 Treatment Technique Violation:** On May 23, 2003, an equipment malfunction at the Akron Water Plant caused the rate of

chlorine feed to the finished water to be substantially reduced for a period of approximately twenty minutes, which caused the CT result to drop below minimum CT value for that day. The nature of this violation did not require immediate public notification; customers did not need to boil their water. The City of Akron prepared the required public notice, it was mailed to each customer with their water bill and it was posted on the City's Internet website during June and July 2003.

**Tier 3 Monitoring Violation:** On September 22, 2003, for a period of fourteen hours, the water system did not adequately monitor for the presence of turbidity in four of the twenty-five filters due to a malfunction in a component of the water plant's computer system. The City of Akron prepared the required public notice, it was mailed to each customer with their water bill and it was posted on the City's Internet website during August 2003.

**Tier 3 Monitoring Violation:** In 2003 the Akron water system did not monitor for the presence of the chemicals Atrazine, Alochlor, and Simazine during two of the six periods that were required by Ohio EPA regulations. The City of Akron prepared the required public notice, it was mailed to each customer with their water bill and it was posted on the City's Internet website during August 2003. Subsequent sampling results met Ohio EPA regulations.

**Boil Water Alert:** On August 24, 2003, water plant operations were shut down for twelve hours after the filter building basement was flooded due to automatic valve equipment malfunctions. On August 25 Ohio EPA ordered Akron to issue a precautionary boil water advisory until water samples representative of the entire water system could be tested for the presence of bacteria. The sample results were negative and the boil water advisory was lifted on August 26.

#### 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).

— continued on page 3

# WATER QUALITY TABLE

Contaminant	Date Tested	Unit	MCL	MCLG	Detected Level	Range	Major Source	Violation
<b>Inorganic Contaminants</b>								
Copper <sup>1</sup>	2003	ppm	1.3 Action Level	1.3	0.230 90th% level	<0.010 - 0.460	Corrosion of household plumbing system; Erosion of natural deposits; Leaching from wood preservatives	NO
Fluoride	2003	ppm	4	2	1.32	0.84 - 1.32	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories	NO
Lead <sup>2</sup>	2003	ppb	15 Action Level	0	3.6 90th% level	<2.0 - 9.6	Corrosion of household plumbing systems; Erosion of natural deposits	NO
Nitrate	2003	ppm	10	10	1.87	0.02 - 1.87	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits	NO
Chlorine, Free Residual	2003	ppm	0.20 Minimum Level	n/a	4.02	0.11 - 4.02	By-product of drinking water disinfection	NO
Chlorine Dioxide	2003	ppm	0.8	n/a	1.81	0.02 - 1.81	By-product of drinking water disinfection	NO
Chlorate	2003	ppm	n/a	n/a	0.45	0.10 - 0.45	By-product of drinking water disinfection	NO
Chlorite	2003	ppm	1.0	n/a	1.12	0.23 - 1.12	By-product of drinking water disinfection	NO
<b>Microbiological Contaminants</b>								
Turbidity <sup>3</sup>	2003	NTU	TT	n/a	0.86	0.03 - 0.86	Soil runoff	NO
Turbidity (% samples meeting standard)	2003	NTU	TT	n/a	99.92%	99.92 - 100%	Soil runoff	NO
<b>Disinfection By Products</b>								
HAA5 Five Haloacetic Acids	2003	ppb	60	n/a	47.16	31.53 - 47.16	By-product of drinking water disinfection	NO
TTHMs (Total Trihalomethanes)	2003	ppb	80	n/a	51.28	39.45 - 51.28	By-product of drinking water disinfection	NO
<b>Volatile Organic Chemicals</b>								
Bromodichloromethane	2003	ppb	n/a	n/a	5.8	5.8	By-product of drinking water disinfection	NO
Chloroform	2003	ppb	n/a	n/a	12.2	12.2	By-product of drinking water disinfection	NO
Dibromochloromethane	2003	ppb	n/a	n/a	1.1	1.1	By-product of drinking water disinfection	NO

Water Quality Table Footnotes:

1 No sample of 52 tested exceeded the current action level of 1.3 ppm for copper.

2 No sample of the 52 tested was above 15 ppb for lead.

3 Nephelometric Turbidity Units or turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of the effectiveness of our filtration system. The turbidity limit set by EPA is 0.3 NTU in 95% of the daily samples and shall not exceed 1 NTU at any time. As reported above, Akron's highest recorded turbidity result for 2003 was 0.86 NTU, and the lowest monthly percentage of samples meeting the turbidity limits was 99.92%.

For more information, call Akron Public Utilities Bureau at (330) 375-2651. This report is also available on our web site at: [www.ci.akron.oh.us](http://www.ci.akron.oh.us)

PWS #: OH7700011



## Required Additional Health Information *cont'd.*

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).

## HOW TO READ THESE TABLES

This report is based upon tests conducted in the year 2003 by Akron Public Utilities Bureau. Terms used in the Water Quality Table and in other parts of this report are defined here.

**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.

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

**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

AL = Action Level  
MCL = Maximum Contaminant Level  
MCLG = Maximum Contaminant 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  
"<" = a symbol which means less than

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

Contaminants	Average Detected Level	Range
Alkalinity	74 mg/L	41 - 103 mg/L
Hardness	116 mg/L	56 - 182 mg/L
pH	7.33 units	6.95 - 7.79 units
Phosphate	0.88 mg/L	0.075 - 2.238 mg/L
Total Organic Carbon	3.10 mg/L	2.61 - 3.92 mg/L
UV 254 Absorbance	0.054 cm-1	0.044 - 0.070 cm-1