

ANNUAL
DRINKING WATER
QUALITY REPORT
FOR 2004



AKRON PUBLIC UTILITIES BUREAU
Akron Metropolitan Service Area





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Annual Drinking Water Quality Report for 2004

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. For more information, call 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.

National Primary Drinking Water Regulation Compliance

Tier 3 Monitoring Violation: The City of Akron regularly monitors its drinking water for Total Organic Carbon (TOC). TOC naturally occurs in water and is removed in the treatment process. While Akron reported TOC sample data for the period from January 1, 2002 to May 2004, Ohio EPA determined that the data was not acceptable since Akron's water treatment plant laboratory, which performed the analysis, did not maintain a valid laboratory certificate for TOC analysis. While data gathered during this timeframe cannot be accepted under Ohio EPA's rules, there is no reason to believe that the data is not accurate. The City of Akron's water treatment plant laboratory was surveyed for TOC analysis by Ohio EPA's Laboratory Certification Section on July 22, 2004 and Akron successfully completed the survey and was issued new certifications. 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 on September 1, 2004.

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

— continued on page 3

WATER QUALITY TABLE

Contaminant	Date Tested	Unit	MCL	MCLG	Detected Level	Range	Major Source	Violation
Inorganic Contaminants								
Fluoride	2004	ppm	4	2	1.31	0.06 to 1.31	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories	NO
Nitrate	2004	ppm	10	10	1.46	0.01 to 1.46	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits	NO
Chlorine, Free Residual	2004	ppm	0.20 min	n/a	4.14	0.20 to 4.14	By-product of drinking water disinfection	NO
Chlorine Dioxide	2004	ppm	0.8	n/a	0.53	0.01 to 0.53	By-product of drinking water disinfection	NO
Chlorate	2004	ppm	n/a	n/a	1.00	0.05 - 1.00	By-product of drinking water disinfection	NO
Chlorite	2004	ppm	1.0	n/a	1.13 ¹	0.04 to 1.13	By-product of drinking water disinfection	NO
Microbiological Contaminants								
Turbidity ²	2004	NTU	TT	n/a	0.34	0.04 to 0.34	Soil runoff	NO
Turbidity % mtg std	2004	NTU	TT	n/a	98.8%	98.8 to 100%	Soil runoff	NO
Disinfection By Products								
HAA5 Five Haloacetic Acids	2004	ppb	60	n/a	46.4	31.0 - 46.4	By-product of drinking water disinfection	NO
TTHMs (Total Trihalomethanes)	2004	ppb	80	n/a	49.5	42.3 - 49.5	By-product of drinking water disinfection	NO
Volatile Organic Chemicals								
Bromodichloromethane	2004	ppb	n/a	n/a	4	4	By-product of drinking water disinfection	NO
Chloroform	2004	ppb	n/a	n/a	7	7	By-product of drinking water disinfection	NO
Dibromochloromethane	2004	ppb	n/a	n/a	1	1	By-product of drinking water disinfection	NO

Water Quality Table Footnotes:

1. A single chlorite sample is not a violation because chlorite levels at 3 different distribution sites are averaged and compared to the MCL of 1.0 mg/L.
2. 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 2004 was 0.34 NTU, and the lowest monthly percentage of samples meeting the turbidity limits was 98.8%.



Acron's state-of-the-art chemical building went online in 2004.



Required Additional Health Information *cont'd.*

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 2004 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.

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
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	79 mg/L	48 to 102 mg/L
Hardness	116 mg/L	80 to 148 mg/L
pH	7.35 units	7.04 to 7.83 units
Phosphate	0.82 mg/L	0.56 to 1.34 mg/L
Total Organic Carbon	2.99 mg/L	2.45 to 3.70 mg/L
UV 254 Absorbance	0.050 cm-1	0.041 to 0.054 cm-1