

2006 Annual Drinking Water Quality Report

Ann Arbor Charter Township Utilities Department

Our Most Valuable Resource: Drinking Water

Ann Arbor Charter Township Utilities Department presents its 7th Annual Drinking Water Quality Report. The United States Environmental Protection Agency (USEPA) and the Michigan Department of Environmental Quality (MDEQ) require us to report to you the quality of your drinking water. Although a statutory requirement, Ann Arbor Charter Township considers it also a priority to inform you, our customers, about the safety of the water you drink and the importance of protecting our water supply. We are excited and proud to bring this report to you and feel that the information we are providing is important. Included in this report are details and other information about where your drinking water comes from, what it contains, how it compares to standards set by regulatory agencies and the risks our water testing and treatment are designed to prevent. The staff members of the Ann Arbor Charter Township Utilities Department are strongly committed to providing you with the safest, most reliable water supply available.

We are committed to providing you with information about your water supply, because customers who are well informed are our best allies in supporting improvements necessary to maintain the highest drinking water standards. Sound water management is a critical component to sustainable economic growth and improved quality of life in the Ann Arbor region. Protection of water resources and maintaining our excellent water quality are essential to public health and well-being.

We take great pride in not only meeting all federal and state drinking water regulations, but in reaching higher goals. We participate in voluntary programs which improve our organization and establish more stringent water quality goals. Our monitoring programs far exceed those required to assure the quality of your drinking water. This report records the hard work by our employees to bring you water that is absolutely safe.

Ann Arbor Charter Township receives its water supply from the City of Ann Arbor, and in turn delivers a portion of the water supply to Superior Charter Township. The City of Ann Arbor water supply is comprised of both surface and ground water sources. About 85% of the water supply comes from the Huron River. The remaining 15% is from multiple wells located south of Ann Arbor. The water from the sources is blended at the treatment plant. Since the City of Ann Arbor uses a surface water supply, the Huron River, USEPA and MDEQ regulations require it to be treated, filtered and disinfected to ensure that any harmful substances are removed. When the treatment is complete in the City of Ann Arbor, the water is pumped to Ann Arbor Township, where we pump the water to homes, schools and businesses in Ann Arbor Township and a portion of Superior Township.

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 and through the ground, it dissolves naturally occurring minerals, and in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity.

Contaminants that might be expected to be in source water - untreated water - include: microbial contaminants, such as viruses and bacteria; inorganic contaminants, such as salts and metals; pesticides and herbicides; organic chemical contaminants; including synthetic and volatile organic chemicals; and radioactive contaminants, which can be naturally occurring.

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. 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 EPA Safe Drinking Water Hotline at (800) 426-4791.

Water Quality Concerns for Certain Individuals

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 persons and infants can be particularly at risk from infections.

These people should seek advice about drinking water from their healthcare providers. Environmental Protection Agency / Centers for Disease Control guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Water Drinking Hotline: (800) 426-4791.



The Utilities Director, Rick Judkins, regularly attends scheduled Board of Trustees meetings where the department water system is occasionally discussed. The public is welcome and encouraged to attend to learn more about their water system or to discuss any concerns they may have.

The Ann Arbor Charter Township Board of Trustees meets on the third Monday of each month. The meetings are open to the public, and unless announced otherwise, are at 7:30 PM in the Ann Arbor Charter Township Hall located at 3792 Pontiac Trail.

Cryptosporidium

Cryptosporidium is a protozoan parasite that is too small to be seen without a microscope. It is sometimes found in some surface waters, especially when the waters contain a high amount of fecal waste from run-off or other activities. Those who are infected with this parasite can experience gastrointestinal illness.

USEPA and the Center for Disease Control have published guidelines on ways to reduce the risk of Cryptosporidium infection. The guidelines are available from the Safe Water Hotline at (800) 426-4791.

Huron River samples and drinking water samples collected during 2006 had no detectable levels of Cryptosporidium.

Providing Input

The USEPA requires water utilities departments to provide certain information within this report. This information is generic and may or may not apply to Ann Arbor drinking water. It is very important to us that this report is clear, easy to understand and provides the information that our customers find useful. Therefore, your input is appreciated. If you have any comments or ideas, we would love to hear them. You may contact us at (734) 663-3418 or email rjudkins@aatwp.org

Notice of Violation

On July 17, 2006 around 11:00 pm, a problem occurred with the treatment system due to an electrical power outage. Turbidity standards were exceeded at the water treatment plant for two hours. Turbidity is a measure of the cloudiness of water. Bacteriological testing of water samples indicated that the safety of the Township's drinking water was not jeopardized during the event. A notice of this incident was mailed to customers on August 10, 2006. We will continue to provide safe drinking water for you and your family.

IMPLEMENTATION OF PUBLIC NOTICE

TO ANN ARBOR CHARTER TOWNSHIP PROPERTY OWNERS OR OCCUPANTS: If you experience an overflow or backup of the sewage disposal system or storm water system, you must file a written claim with Ann Arbor Charter Township within 45 days after the overflow or backup was discovered. Notice must be mailed to the Utilities Department Supervisor at 3792 Pontiac Trail, Ann Arbor, Michigan 48105, (734) 663-3418. Failure to provide the required notice will prevent recovery of damages. Contact Ann Arbor Charter Township immediately upon discovery of an overflow or backup to obtain a claim form. However, you do not need to use the Township's form to file a written claim. The written claim should include your name and address, the address of the affected property, the dates of the overflow or backup, the date the backup or overflow was discovered, and a brief description of the overflow or backup.



Safeguarding Your Family

The Ann Arbor Charter Township Utilities Department in cooperation with the City of Ann Arbor Water Plant conducts extensive routine monitoring of water quality. Our testing program far exceeds requirements and we are vigilant against potential threats to our water system. In addition, we have taken steps to enhance the physical security of our water system. We are following recommendations made by our local police, our state regulatory agency, the American Water Works Association and others. We will continue to work to protect the Charter Township of Ann Arbor and its customers from potential threats to the drinking water. Complying with the Bioterrorism Act of 2002, an extensive analysis and vulnerability assessment of your drinking water system was completed in March of 2003. As a result of this assessment, a number of recommendations have been implemented and additional items are currently underway.

Ann Arbor Charter Township Utilities Department has highly trained staff members that hold many licenses and certifications issued by the State of Michigan. In addition our Utilities Department staff are active members in the following associations:

American Water Works Association (AWWA)
AWWA Research Foundation
Michigan Rural Water Association

We also share affiliations and partnerships with
Michigan Coalition for Clean Water
Water Environment Research Foundation

Water Quality Test Results

The following regulated substances were detected in some samples

This report is a summary of the quality of water provided to you last year. Included are details about what the water contains, and how it compares to standards set by regulatory agencies. In coordination with the City of Ann Arbor we monitor for approximately 280 different substances and contaminants in the drinking water and the vast majority of these **were not detected in your water**.

Results were gathered from tests performed by the City of Ann Arbor Water Utilities certified lab.

Please note that some substances, such as monochloramine and fluoride, are added to the water to improve health. All the detected substances are well within stringent Federal and State limits.

Definitions: The following tables contain scientific terms and measures, some of which may require explanation

AL	Action Level: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
ALG	Action Level Goal: The level of a contaminant in drinking water below which there is no known or expected risk to health. ALG's allow for a margin of safety.
AVG	Average: Regulatory compliance with some MCLs are based on running annual average of monthly or quarterly samples.
MCL	Maximum Contaminant Level: The highest level of a contaminant that is allowed in drinking water. MCL's are set as close to the Maximum Contaminant Level Goal as feasible using the best available treatment technology.
MCLG	Maximum Contaminant Level Goal: The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLG's allow for a margin of safety.
mg/l	milligrams per liter or parts per million – or one ounce in 7,350 gallons of water.
µg/l	micrograms per liter or parts per billion – or one ounce in 7,350,000 gallons of water.
MRDL	Maximum Residual Disinfectant Level: the highest level of disinfectant allowed in drinking water.
MRDLG	Maximum Residual Disinfectant Level Goal: the level of disinfectant in drinking water below which there is no known or expected risk to health. MRDLG's allow for a margin of safety.
na	not applicable
NTU	Nephelometric Turbidity Unit: a measure of light scattered from particles in the water.
Turbidity	A measure of cloudiness of water. The Ann Arbor Water Treatment staff monitors it because it is a good indicator of the effectiveness of the filtration system. Turbidity must be less than 0.3 NTU in at least 95% of the measurements taken throughout each month. It must never exceed 1.0 NTU.
TT	Treatment Technique: A process intended to reduce the level of a contaminant in drinking water.

Regulated at the Water Treatment Plant

Regulated Substance	Highest Level Detected	Range of Individual Samples	MCL	MCLG	Source of Contamination
Fluoride	1.13 mg/l	0.57 – 1.13 mg/l	4 mg/l	4 mg/l	Added to water to promote strong teeth. Erosion of natural deposits. Discharge from fertilizer factories
Nitrate	0.99 mg/l	0.02 – 0.99 mg/l	10 mg/l	10 mg/l	Run-off from fertilizer use. Leaching from septic tanks, sewage. Erosion of natural deposits
Nitrite	31.5 µg/l	6.2 – 31.5 µg/l	1000 µg/l	1000 µg/l	Run-off from fertilizer use. Leaching from septic tanks, sewage. Erosion of natural deposits
Bromate	3.5 µg/l avg	2 – 7 µg/l	10 µg/l	0 µg/l	By-product of ozone disinfection of drinking water
Total Organic Carbon	27% Removal ¹	27% - 57% Removal	<25% Removal (TT)	na	Naturally occurring
Arsenic	0 µg/l	0 µg/l	10.0 µg/l	0 µg/l	Erosion of natural deposits
Barium	24 µg/l	0 – 24 µg/l	2000 µg/l	2000 µg/l	Erosion of natural deposits
Chromium	6.4 µg/l	0 – 6.4 µg/l	100 µg/l	100 µg/l	Erosion of natural deposits

¹ Poorest removal corresponds to highest concentration

Monochloramine - Regulated at the Water Treatment Plant

Regulated Substance	Highest Level Detected	Range of Individual Samples	MRDL	MRDLG	Source of Contamination
Monochloramine	2.44 mg/l avg	2.39 – 2.76 mg/l	4 mg/l	4 mg/l	Disinfectant added at Water Treatment Plant

Turbidity - Regulated at the Water Treatment Plant

Regulated Element	95th Percentile TT achieved (max)	95th Percentile TT required	95 th Percentile TT voluntary goal	Lowest % of Samples within requirements	Single highest measurement	Source of Contamination
Turbidity	0.11 NTU	0.3 NTU	0.1 NTU	*	4.99 NTU	Soil Runoff

* All samples with the exception of one sample were within requirements

Water Quality Test Results

The following regulated substances were detected in some samples

Copper and Lead – Regulated at the Customer’s Tap –Zero of 5 at-risk homes that were sampled exceeded the lead or copper action level. At-risk homes are defined by the USEPA as homes with cooper plumbing installed between 1982 – 1988 using lead solder. Lead levels can easily be eliminated by flushing the cold water prior to use.

Regulated Substance	Detection Level at the 90 th Percentile	AL	ALG	Source of Contamination
Copper – 2002 Customers plumbing	22 µg/l	1300 µg/l	1300 µg/l	Corrosion of household plumbing systems. Erosion of natural deposits.
Lead – 2002 Customers plumbing	1.5 µg/l	15 µg/l	0 µg/l	Corrosion of household plumbing systems. Erosion of natural deposits.

Regulated in the Distribution System

Regulated Substance	Highest Level Detected	Range of Individual Sample	MCL	MCGL	Source of Contamination
Total Coliform	Detected in 0.71% of all samples taken in January	0 – 0.71%	Detected in not more than 5% of samples taken monthly	0 %	Naturally occurring in the environment
Total Trihalomethanes	4.7 µg/l avg †	1 – 6 µg/l	80 µg/l	0 µg/l	By-product of drinking water disinfection
Total Haloacetic Acids	6 µg/l avg †	3 – 12 µg/l	60 µg/l	0 µg/l	By-product of drinking water disinfection

† Highest running annual average of last four quarters

These tests also showed the following characteristics in our water. Federal and State standards have yet to be established and all results are well within limits accepted by most public health officials.

Non-regulated Substance	Average	Range of Individual Samples	Source of Contamination
Hardness	143 mg/l	100 – 198 mg/l	Naturally occurring minerals; controlled by water treatment process
pH – acidity	9.3	8.1 – 9.5	Controlled by water treatment process
Aldehydes	8 µg/l	0 – 33 µg/l	By-product of drinking water ozonation
Ammonia	0.12 mg/l	0.04 – 0.26 mg/l	Naturally occurring, added to water to form disinfectant
Methyl t-butyl ether (MTBE)	0 mg/l	0 mg/l	Gasoline additive
1,4-Dioxane	0 mg/l	0 mg/l	Groundwater contamination from manufacturing process and landfills
Perchlorate	0 mg/l	0 mg/l	Groundwater contamination from manufacturing process

Unregulated contaminants are those for which the USEPA has not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist the USEPA in determining the occurrence of unregulated contaminants in the drinking water and whether future regulation is warranted. Only one unregulated contaminant was detected.

Non-regulated Substance	Average	Range of Individual Samples	Source of Contamination
Sodium	59 mg/l	48 – 71 mg/l	Naturally occurring minerals; run-off of road salt into surface water

Additional Information and Contacts

To receive additional copies of this report or if you have any questions about this report or would like to know anything further about your water and/or water utilities please feel free to call us:

**Rick Judkins, Utilities Director
(734) 663-3418
rjudkins@aatwp.org**

In the event of an emergency, such as water main breaks, emergency water turn-offs and sanitary or storm sewer back-ups, please call:

AFTER HOURS EMERGENCY: (734) 663-0995

<http://www.aatwp.org>