



# City of Tallmadge Utilities Bureau

## Annual Drinking Water Quality Report for 2008

This report is provided to you, the consumer, on the quality of our drinking water. Included is an explanation of where our water comes from, general health information, water quality test results, as well as tips on how to interpret the data.

*We're proud to share the results with you. Please read them carefully.*

### Water Source

Surface water is taken from the Upper Cuyahoga River via three impounding 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. Tallmadge has the water pumped through two force mains to our pump station at 29 Northeast Avenue, and then distributed to over 7,000 customers.

### What are sources of contamination to drinking water?

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, in some cases, 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:

- Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations and wildlife;
- Inorganic contaminants, such as salts and metals, which can be naturally-occurring or result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining or farming;
- Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban storm water runoff, and residential uses;
- Organic chemical contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff, and septic systems;
- 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 limits 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.

### 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 (1-800-426-4791).

### Who needs to take special precautions?

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 infection. 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 and other microbial contaminants are available from the Safe Drinking Water Hotline (1-800-426-4791).

### How do I participate in decisions concerning my drinking water:

Public participation and comments are encouraged at committee meetings of the City Council, which meets the Monday prior to the 2<sup>nd</sup> and 4<sup>th</sup> Thursday of each month, as posted in the Tallmadge Express or on the worldwide web at [www.tallmadge-ohio.org](http://www.tallmadge-ohio.org).

# How to Read These Tables

This report is based upon tests conducted in the year 2008 by Akron Public Utilities Bureau, as well as the monthly bacteria and disinfection by-product samples for 2008, conducted by the City of Tallmadge. Terms used in the Water Quality Table and in other parts of this report are defined here.

Definitions of terms contained within this report:

**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 which a water system must follow.

**Maximum Residual Disinfectant Level (MRDL):** The highest Level of a disinfectant allowed in drinking water. There is Convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

**Maximum Residual Disinfectant Level Goal: (MRDLG)**  
The level of drinking water disinfectant below which there is no known or expected health risk. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contamination.

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

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

**Detected Level:** The average level detected of these levels could be the highest single level average of values depending on the contaminant.

**Parts Per Million (ppm):** units of measure for disinfectant level allowed concentration of a contaminant. A part per million corresponds to one second in approximately 11.5 days

**Parts per Billion (ppb):** units of measure for concentration of a contaminant. A part per billion corresponds to one second in 31.7 years

## Not Under Ohio EPA Regulation But of General Interest

| Contaminant             | Detected Level         | Range                        |
|-------------------------|------------------------|------------------------------|
| Alkalinity              | 76 mg/L                | 35 – 109 mg/L                |
| Hardness (metric units) | 113 mg/L               | 54 – 152 mg/L                |
| Hardness English units) | 6.95 grains per gallon | 3.2 to 8.9 grains per gallon |
| pH                      | 7.30 units             | 6.95– 7.82 units             |
| Total Organic Carbon    | 2.70 mg/L              | 1.79 – 3.51 mg/L             |

For more information, call City of Tallmadge Water/Sewer Department at (330) 633-0851. This report is also available on the World Wide Web at [www.tallmadge-ohio.org](http://www.tallmadge-ohio.org)

PWS #OH7704703

*We're proud to share the results with you. Please read them carefully.*

## 2008 Water Quality Table

| Year Sampled | MCLG | MCL | Level Found | Range of Detections | Typical Source Of Contaminant | Violation |
|--------------|------|-----|-------------|---------------------|-------------------------------|-----------|
|--------------|------|-----|-------------|---------------------|-------------------------------|-----------|

### Inorganic Contaminants:

|  |      |     |                    |                            |                |   |    |
|--|------|-----|--------------------|----------------------------|----------------|---|----|
| Barium (ppm)   | 2008 | n/a | 2                  | 0.044                      | N/A            | Discharge of drilling wastes; metal refineries; Erosion of natural deposits   | NO |
| Chlorite (ppm), avg of 3 samples in distribution system  | 2008 | 0.8 | 1.0                | 0.620                      | 0.285 to 0.620 | By-product of drinking water chlorination   | NO |
| Copper (ppm)   | 2008 | 1.3 | Action Level = 1.3 | .148<br>90 <sup>th</sup> % | ..5 to .244    | Corrosion of household plumbing systems   | NO |
| Zero out of 30 samples were found to have copper levels in excess of the copper action level of 1.3 ppm. |      |     |                    |                            |                |   |    |
| Fluoride (ppm)   | 2008 | 4   | 4                  | .96                        | 0.073 to 1.11  | Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories | NO |
| Lead   | 2008 | 0   | Action level = 15  | Less than 5.0              | N/A            | Corrosion of household plumbing systems   | NO |
| Zero out of 30 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 |

### 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 |

### Volatile Organic Chemicals (Stage 1 – tested by Tallmadge)

|            |      |   |                        |       |               |   |    |
|------------|------|---|------------------------|-------|---------------|---|----|
| HAA5 (ppb) | 2008 | 0 | 60 running annual avg. | 46.96 | 11.49 – 81.71 | By-product of drinking water disinfection | NO |
| TTHM (ppb) | 2008 | 0 | 80 running annual avg. | 53.11 | 26.0 – 88.4   | By-product of drinking water disinfection | NO |

### \*\*IDSE Standard Monitoring (Stage II Disinfectant Byproduct – by Tallmadge)

|                        |      |     |     |       |            |   |    |
|------------------------|------|-----|-----|-------|------------|---|----|
| TTHM (ppb)             | 2008 | N/A | N/A | 42.0  | 9.00-93.04 | By-product of drinking water chlorination | NO |
| HAA5 (ppb)             | 2008 | N/A | N/A | 45.0  | 15.0-89.09 | By-product of drinking water chlorination | NO |
| Bromodichloromethane   | 2008 | N/A | N/A | 9.55  | 2.14-18.0  | By-product of drinking water chlorination | NO |
| Chloroform             | 2008 | N/A | N/A | 30.36 | 5.72-74.2  | By-product of drinking water chlorination | NO |
| Dibromochloromethane   | 2008 | N/A | N/A | 2.10  | 0.00-3.54  | By-product of drinking water chlorination | NO |
| Bromochloroacetic Acid | 2008 | N/A | N/A | 2.21  | 0.00-16.7  | By-product of drinking water chlorination | NO |
| Dibromoacetic Acid     | 2008 | N/A | N/A | 5.21  | 0.00-14.8  | By-product of drinking water chlorination | NO |
| Dichloroacetic Acid    | 2008 | N/A | N/A | 21.63 | 8.60-49.6  | By-product of drinking water chlorination | NO |
| Monobromoacetic Acid   | 2008 | N/A | N/A | 1.58  | 0.00-2.80  | By-product of drinking water chlorination | NO |
| Trichloroacetic Acid   | 2008 | N/A | N/A | 17.73 | 4.50-33.5  | By-product of drinking water chlorination | NO |

\*\*Under the Stage II 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 II 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.

### 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 (ug/l) | 2008 | MRDLG=800 | MRDL=800 | 320  | 0 to 320     | Water additive used to control microbes   | NO |

### Unregulated Contaminants

|                            |      |     |     |       |             |   |    |
|----------------------------|------|-----|-----|-------|-------------|---|----|
| 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 | 82.89 | 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 |

### Radioactive Contaminants

|   |      |   |                 |     |     |  |    |
|---|------|---|-----------------|-----|-----|--|----|
| Alpha emitters (picocuries per liter)       | 2004 | 0 | 15              | 1.4 | NA  | 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 |

### 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 | <b>NO</b> |
|-------------------------------------|--------------|-----|-----|-------|------------|------------------------------|-----------|

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. However, immuno-compromised people are at greater risk of developing life-threatening illness. We encourage immuno-compromised 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.