

## The water you drink

To make certain America's drinking water is safe and reliable, the U.S. Congress passed the Safe Drinking Water Act (SDWA) in 1974. The SDWA and its subsequent amendments established national standards for drinking water purity. Strict regulations at the federal and state levels ensure public water supplies meet these standards.

We are pleased to report that during the past year, the water delivered to your home or business complied with, or was better than, all state and federal drinking water requirements. For your information, we have compiled a table showing what substances were detected in your drinking water during 2007. Although all of the substances listed are under the Maximum Contaminant Level (MCL) set by the U.S. Environmental Protection Agency (USEPA), we feel it is important that you know exactly what was detected and how much of the substance was present in the water.

## Sources of water

Tuscola receives water solely from the Champaign Division of Illinois-American Water Company (IAWC). In 1994, a new 750,000 gallon water tower was built replacing the two old smaller towers. At that time a 14" water main was laid from Champaign to Tuscola. Upon completion of the new system, Tuscola began receiving water from IAWC. Subsequently, the old local wells which had supplied the City for years, were capped off as per Division of Mining regulations.

The source of supply for the Champaign County District is groundwater. Twenty-one wells deliver water for treatment to two lime-softening plants: the East Plant, located in Urbana, and the West Plant, located in Champaign. The wells are primarily located in two areas. The north well field taps the Glasford Aquifer and consists of 7 wells that supply the East Plant. The west well field consists of 14 wells that draw from the Mahomet Sands Aquifer and supply water to both the East and West Plants. An aquifer is

a porous underground formation (such as sand and gravel) that is saturated with water. The wells range from 150 to 366 feet in depth and are protected from surface contamination by geologic barriers.

A new treatment plant to be completed by late 2008 will draw its source of supply from the same Mahomet Sands Aquifer currently supplying much of our water, although through a new well field at a different location within the aquifer.

A source water assessment for the Champaign County system has been completed by the Illinois EPA. The report indicates that the wells supplying Champaign County are not geologically sensitive. If you would like a summary of the information contained in this report contact Anthony Hall at 217-373-3232 or email at Anthony.hall@amwater.com.

## Information about *all* drinking water

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs and groundwater wells. As water travels over the surface of the land or through the ground, it can acquire naturally occurring minerals and, in some cases, radioactive material, and substances resulting from the presence of animals or human activity.

Substances 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 stormwater 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 stormwater runoff and residential uses.
- Organic chemical contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and may also come from gas stations, urban stormwater 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, the United States Environmental Protection Agency (USEPA) prescribes regulations limiting the amount of certain substances in water provided by public water systems. U.S. Food and Drug Administration (FDA)

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 the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the USEPA's Safe Drinking Water Hotline (1-800-426-4791).

## Lead

Infants and young children are typically more vulnerable to lead in drinking water than the general population. It is possible that lead levels at your home may be higher than at other homes in the community as a result of materials used in your home's plumbing. If you are concerned about elevated lead levels in your home's water, you may wish to have your water tested and flush your tap for 30 seconds to two minutes before using tap water.

## Radon

IAWC has monitored for radon for years. Radon is a radioactive gas that has been linked to lung cancer. The contribution from drinking water is usually small compared to normal indoor levels. The Champaign County wells and finished water were sampled for radon in 2004. Finished water levels ranged from 0-100 pCi/L, with an average of 100 pCi/L, less than the limit currently proposed by the USEPA (there is presently no Federal limit on radon in drinking water). For information on radon in indoor air, call your local health department or the National Radon Hotline at 1-800-SOS RADON.

## Important Health Information

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. USEPA/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, 800-426-4791.

## A Message for People with Severely Weakened Immune Systems

Cryptosporidium is a protozoan found in untreated surface waters throughout the United States (the organism is generally not present in a ground water source). Although filtration removes cryptosporidium, the most commonly used filtration methods cannot guarantee 100% removal. Ingestion of Cryptosporidium may cause cryptosporidiosis, an abdominal infection. Symptoms of infection include nausea, diarrhea, and abdominal cramps. Most healthy individuals can overcome the disease within a few weeks. However, people with severely weakened immune systems have a risk of developing life-threatening illness. We encourage such people to consult their doctors regarding appropriate precautions to take to avoid infection. Cryptosporidium must be ingested to cause disease, and it is spread through means other than drinking water. For additional information regarding cryptosporidiosis and how it may impact those with weakened immune systems, please contact Anthony Hall at (217) 373-3232 or speak with your personal health care provider.

## Your questions are welcome.

If you have any questions, please call Drew Hoel at City Hall at 253-2112. City Council meetings are held on the 2<sup>nd</sup> and 4<sup>th</sup> Monday of each month. Information about contaminants and other water quality issues can be obtained by calling the USEPA's Safe Drinking Water Hotline, 800-246-4791.

## How to Read the Following Table

Both IAWC and Tuscola Water Department conduct extensive monitoring to ensure that your water meets all water quality standards. The results of our monitoring are reported in the data tables. While most monitoring was conducted in 2007, certain substances are monitored less than once per year because the levels do not change frequently. For help with interpreting these tables, see the "Table Definitions" section and footnotes.

2007 Water Quality Summary – This section provided by IAWC						
Contaminant (Units) Typical Source	Amount detected	Range of detections	MCL	MCLG	Compliance Achieved	Date of Sample
<i>Regulated Substances (Measured in the water leaving the treatment facility)</i>						
<b>Arsenic (ppb)</b> * Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes	1	1-1	10	n/a	YES	2007
<b>Barium (ppm)</b> Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.	0.075	0.056-0.075	2	2	YES	2007
<b>Beta/Photon Emitters (pCi/l)</b> * Decay of natural and man-made deposits	3	2-3	50	0	YES	2003
<b>Fluoride (ppm)</b> * Water additive that promotes strong teeth	1.0	0.9-1.1	4	4	YES	2007
<i>State Regulated Substances</i>						
<b>Sodium (ppm)</b> Erosion of naturally occurring deposits; Byproduct of home water softening	31	27-35	n/a	n/a	YES	2007
<i>Unregulated Substances</i>						
<b>Dichloroacetic Acid (ppb)</b> By-product of drinking water disinfection.	1.4	1.4-1.4	n/a	n/a	n/a	2007
<b>Chloroform (ppb)</b> By-product of drinking water chlorination.	1.1	1.1-1.1	n/a	n/a	n/a	2007
<i>Bacteria Results</i>						
<b>Total Coliform Bacteria</b> Naturally present in the environment	Highest % detected 2%		5%	0	YES	2007
<b>The next section provided by the City of Tuscola Water Department</b>						
<b>Copper (ppm)</b> Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives.	Copper 90 <sup>th</sup> percentile 0.22 ppm	0 exceeding AL	AL=1.3	1.3	NO	12/31/05
<b>Lead (ppb)</b> Corrosion of household plumbing systems; erosion of natural deposits	Lead 90 <sup>th</sup> percentile <5ppb	0 exceeding AL	AL=15	0	NO	12/31/05
<i>Disinfectants/Disinfection By-Product</i>						
<b>Total Haloacetic Acids (HAA5) (ppb)</b> By-product of drinking water chlorination.	2.9	n/a	60	n/a	NO	6/19/2006
<b>TTHMs [Total Trihalomethanes] (ppb)</b> By-product of drinking water chlorination.	1.7	n/a	80	n/a	NO	6/19/2006
<b>Chlorine (ppm)</b> Water additive used to control microbes	2	1.6-2	MRDL=4	MRDLG=4	NO	12/31/2007

#### -Footnotes-

**Arsenic**-Under the revised Arsenic Rule new MCLG and MCL values will be effective January 23, 2006. The new values are 0 ppb and 10 ppb respectively. Until then, the MCL is 50 ppb and there is no MCLG.

**Beta/Photon emitters**- The MCL for Beta/Photon emitters is written as 4 millirem/year (measure of rate of radioactive decay). EPA considers 50 pCi/L as the level of concern for beta emitters.

**Chlorine and Chloramines** are disinfecting agents added to control microbes that otherwise could cause waterborne diseases or other water quality concerns. Most water systems in Illinois are required by law to add either chlorine or chloramines. Levels well in excess of the MRDL could cause irritation of the eyes or nose in some people. The values reported reflect multiple locations in the service area.

**Fluoride**- Fluoride is added to the water supply to help promote strong teeth. The Illinois Department of Public Health recommends an optimal fluoride level of 0.9 mg/L to 1.2 mg/L.

**Coliforms** are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful, bacteria may be present. Coliforms were found in more samples than allowed and this was a warning of potential problems.

**Lead & Copper**- Compliance with the Lead and Copper Rule (LCR) is determined by the levels of lead and copper found in samples taken from customers' taps. LCR requirements are met if the 90<sup>th</sup> percentile of all samples taken does not exceed the action level of 15 ppb for lead or 1.300 ppm for copper. The "amount detected" reported in the data table refers to the level at the 90<sup>th</sup> percentile sample.

**Sodium**- There is no state or federal MCL for sodium. Monitoring is required to provide information to consumers and health officials that are concerned about sodium intake due to dietary precautions. If you are on a sodium-restricted diet, you should consult a physician about this level of sodium in the water.

**Unregulated Contaminants**- A maximum contaminant level (MCL) for this substance has not been established by either state or federal regulations, nor has mandatory health effects language. The purpose for monitoring this substance is to assist USEPA in determining the occurrence of unregulated contaminants in drinking water, and whether future regulation is warranted.

#### -Definition of Terms-

**Maximum Contaminant Level Goal (MCLG):** The level of a contaminant in drinking water below which there is no known 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 level of disinfectant allowed in drinking water.

**Maximum Residual Disinfectant Level Goal (MRDLG):** 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.

**Amount Detected:** Unless otherwise noted in the footnotes, an average of all sample result of the year, or results from a single sample if only one was collected. If multiple entry points exist, the data from the entry point with the highest value is reported.

**Range of Detections:** The range of individual sample results, from lowest to highest that were collected during the sample period.

**Compliance Achieved:** Indicated that the levels found were all within the allowable levels as determined by the EPA.

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

**Ppb or ug/l- Parts per billion or micrograms per litre:** one ounce in 7,350,000 gallons of water

**ppm or mg/l- Parts per million or milligrams per litre:** one ounce in 7,350 gallons of water

**PCi/l – Picocuries per liter, Measurement of the natural rate of disintegration of radioactive contaminants in water (also beta particles)**

**nd:** Not detected.

**n/a:** Not applicable.

**NOTE:** Copies of this report will not be mailed to individual customers this year. Copies are available to be picked up at Tuscola City Hall, 214 N. Main, Tuscola, IL.

# 2007 WATER QUALITY REPORT

## CITY OF TUSCOLA



214 N. Main  
Tuscola, IL 61953  
217-253-2112