

# O'FALLON WATER DIVISION WATER QUALITY REPORT 2010 OR CONSUMER CONFIDENCE REPORT

This year, as in years past, your tap water was monitored for compliance with USEPA and state drinking water health standards. We and our bulk water provider vigilantly safeguard the water supply, and we are able to report that the O'Fallon Water Division had no violation of a contaminant level or of any other water quality standard in the previous year. This report summarizes the quality of water that we provided last year, including details about where your water comes from, what it contains, and how it compares to standards set by regulatory agencies. We are committed to providing you with information because informed customers are our best allies.

If you have any questions about this report or concerning your water system, please contact Heide Bell in the Public Works Department at 618-624-4500 ext. 3. We want our valued customers to be informed about their water quality. If you would like to learn more, please feel welcome to attend any of our regularly scheduled Public Works Committee meetings held at City Hall on the 4th Monday of each month at 7:00 P.M.

Our source of treated water comes from Illinois-American Water Company (IAWC). Their East St. Louis Treatment Plant receives surface water for treatment from two intakes in the Mississippi River. The Mississippi River is subject to a variety of influences including agricultural, municipal, and industrial activities. Farm chemicals may be seasonally elevated in the river. Extensive monitoring and treatment ensure high quality finished water regardless of variations in the source water.

The source water assessment for our supply has been completed by the Illinois EPA. If you would like a copy of this information, please stop by City Hall or call our department at the number listed above.

Illinois EPA considers all surface water sources of community water supply to be susceptible to potential pollution problems; hence, the reason for mandatory treatment of all surface water supplies in Illinois. Mandatory treatment includes coagulation, sedimentation, filtration, and disinfection. Within the Illinois portion of the Mississippi River Watershed, many commodities, including manufactured goods, petrochemicals, and pesticides are transported along the river system. The production, storage, and transportation of these commodities are a major concern, especially when occurring near surface water intakes. In addition, agricultural runoff within the Illinois portion of the Mississippi River Basin contributes to the contaminant susceptibility of the IAWC-East St. Louis intakes. With high flow rates and long distances of travel on the Mississippi River, critical areas can be extensive. Some people may be more vulnerable to potential

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 and U.S. Department of Health and Human Services Center for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the USEPA's Safe Drinking Water Hotline **(1-800-426-4791)**.

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. Again, more information about contaminants and potential health effects can be obtained by calling the USEPA's Safe Drinking Water Hotline **(1-800-426-4791)**.

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 can dissolve naturally occurring minerals and radioactive material, and can pick up substances resulting from the presence of animals or from human activity. Possible contaminants consist of:

- **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 can also come from gas stations, urban stormwater runoff and septic systems;
- **Radioactive contaminants**, which may 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, USEPA prescribes regulations that limit the amount of certain contaminants 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.

# O'FALLON WATER DIVISION WATER QUALITY REPORT 2010 OR CONSUMER CONFIDENCE REPORT

In addition to the informational section of the Water Quality Report, we have included two tables which will give you a better picture of the contaminants that were detected in your water. The first table, below, contains the results of testing by our source water supplier (Illinois-American Water Company). The second table, on page 3, includes testing results for our O'Fallon distribution system. These "Water Quality Data" tables list all state and federally regulated contaminants detected during the Consumer Confidence Report (CCR) reporting year and also include some unregulated contaminants detected for your information.

On page 3, we have also collected a list of definitions, abbreviations, and information about the data to aid your understanding of the information included in these tables and this report.

## 2009 Water Quality Data Illinois-American Water Company (IAWC) (Source Water Supply)

### Regulated Substances (Measured in the water leaving the treatment facility)

| Substance (units)               | Year Sampled | MCLG | MCL | Amount Detected | Range of Detections | Compliance Achieved | Typical Source   |
|---------------------------------|--------------|------|-----|-----------------|---------------------|---------------------|--|
| Arsenic (ppb)                   | 2009         | 0    | 10  | 2               | S                   | Yes                 | Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes |
| Atrazine (ppb)                  | 2009         | 3    | 3   | 0.3             | ND-1.2              | Yes                 | Runoff from herbicide used on row crops  |
| Barium (ppm)                    | 2009         | 2    | 2   | 0.070           | S                   | Yes                 | Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits             |
| Fluoride (ppm)                  | 2009         | 4    | 4   | 1.1             | 0.9-1.2             | Yes                 | Water additive that promotes strong teeth  |
| Nitrate (ppm)                   | 2009         | 10   | 10  | 5.1             | 1.5-5.1             | Yes                 | Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits            |
| Selenium (ppb)                  | 2009         | 50   | 50  | 3               | S                   | Yes                 | Discharge from petroleum and metal refineries; Erosion of natural deposits; Discharge from mines       |
| Combined Radium 226/228 (pCi/L) | 2008         | 0    | 5   | 0.35            | S                   | Yes                 | Erosion of natural deposits.   |
| Gross alpha emitters (pCi/L)    | 2008         | 0    | 15  | 0.58            | S                   | Yes                 | Erosion of natural deposits.   |

### Other Compounds (Measured in the distribution system or in the water leaving the treatment facility)

| Substance (units)                           | Year Sampled | MCLG/ MRDLG | MCL/ MRDL             | Amount Detected | Range of Detections | Compliance Achieved | Typical Source                       |
|---|--------------|-------------|-----------------------|-----------------|---------------------|---------------------|--------------------------------------|
| TOC [Total organic carbon] (removal factor) | 2009         | NA          | TT Removal $\geq$ 1.0 | 1.1             | 2.3                 | Yes                 | Naturally present in the environment |

### Turbidity – (Measured in water leaving the treatment facility)

| Substance (Units)          | Year Sampled | MCLG | MCL          | Amount Detected | Range of Detections | Compliance Achieved | Typical Source |
|----------------------------|--------------|------|--------------|-----------------|---------------------|---------------------|----------------|
| Turbidity (NTU) (<0.3 NTU) | 2009         | NA   | TT           | 100%            | 100%-100%           | Yes                 | Soil runoff    |
| Turbidity (NTU)            | 2009         | NA   | TT=1 NTU max | 0.13            | NA                  | Yes                 | Soil runoff    |

### State Regulated Substances

| Substance (Units) | Year Sampled | MCLG | MCL  | Amount Detected | Range of Detections | Compliance Achieved | Typical Source  |
|-------------------|--------------|------|------|-----------------|---------------------|---------------------|---|
| Sodium (ppm)      | 2009         | NA   | NA   | 22              | S                   | Yes                 | Erosion of naturally occurring deposits; Byproduct of home water softening. |
| Zinc (ppb)        | 2009         | NA   | 5000 | 2               | S                   | Yes                 | Naturally occurring; water treatment additive                               |

### Unregulated Substances

| Substance (units)                    | Year Sampled | Amount Detected | Range of Detections | Typical Source   |
|--------------------------------------|--------------|-----------------|---------------------|--|
| N-nitroso-dimethylamine (NDMA) (ppb) | 2009         | 0.023           | 0.010-0.036         | Nitrosamines can form as intermediates and byproducts in chemical synthesis and manufacture of rubber, leather, and plastics; can form spontaneously by reaction of precursor amines with nitrosating agents (nitrate and related compounds), or by action of nitrate-reducing bacteria. Foods such as bacon and malt beverages can contain nitrosamines; there is also evidence that they form in the upper GI tract. |
| Sulfate (ppm)                        | 2009         | 41.6            | S                   | Erosion of naturally occurring deposits  |

**2009 Water Quality Data**  
**O'Fallon Public Works Department**  
**(Water Distribution System)**

| Detected Contaminants<br>(unit of measurement) | MCLG    | MCL    | Level Found | Range of Detections | Violation | Date of Sample | Typical Source of Contaminant   |
|--|---------|--------|-------------|---------------------|-----------|----------------|---|
| <i>Microbial Contaminants</i>                  |         |        |             |                     |           |                |   |
| TOTAL COLIFORM BACTERIA (%pos/mo)*             | 5%      | 5%     | nd          | nd                  | No        |                | Naturally present in the environment.                                 |
| <i>Inorganic Contaminants</i>                  |         |        |             |                     |           |                |   |
| Asbestos                                       | 7       | 7      | .03         | 0.3 - 0.3           | No        | 12/8/02003     | Decay of asbestos cement water mains; Erosion of natural deposit.     |
| Copper (ppm)                                   | 1.3     | AL=1.3 | 0.117       | 0 exceeding AL      | No        | 8/19/2008      | Corrosion of household plumbing systems; Erosion of natural deposits. |
| Lead (ppb)                                     | 0       | AL=15  | 1           | 0 exceeding AL      | No        | 8/19/2008      | Corrosion of household plumbing systems; Erosion of natural deposits. |
| <i>Disinfectants/Disinfection By-Products</i>  |         |        |             |                     |           |                |   |
| TTHMs [TOTAL TRIHALOMETHANES] (ppb)*           | n/a     | 80     | 17          | 13.1-18.5           | No        |                | By-product of drinking water chlorination.                            |
| HAAS [HALOACETIC ACIDS] (ppb)                  | n/a     | 60     | 20          | 4.9-26.8            | No        |                | By-product of drinking water chlorination.                            |
| Chlorine (ppm)                                 | MRDLG=4 | MRDL=4 | 3.5         | 0.1-3.5             | No        |                | Water additive used to control microbes                               |

See "About the Data" section below for additional information on those items marked with an asterisk (\*).

**Definitions:** **MCLG (Maximum Contaminant Level Goal):** 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. **MCL (Maximum Contaminant Level):** 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. **AL (Action Level):** the concentration of a contaminant which, when exceeded, triggers treatment or other requirements which a water system must follow. **TT (Treatment Technique):** a required process intended to reduce the level of a contaminant in drinking water. **S: Single Sample.** **MRDL (Maximum Residual Disinfectant Level):** The highest level of disinfectant routinely allowed in drinking water. Addition of a disinfectant is necessary for control of microbial contaminants. **MRDLG (Maximum Residual Disinfectant Level Goal):** The level of drinking water disinfectant below which there is no known or expected risk to health. **MFDLGs** do not reflect the benefits of the use of disinfectants to control microbial contamination.

**Abbreviations:** **nd** – not detectable at testing limits. **n/a** - not applicable. **ppm** – parts per million or milligrams per liter. **ppb** – parts per billion or micrograms per liter. **NTU** – Nephelometric Turbidity Unit, used to measure cloudiness in drinking water. **% < 0.3 NTU** – Percent samples less than 0.3 NTU. **mrem/yr** – millirems per year, used to measure radiation absorbed by the body. **pCi/l** – picocuries per liter, used to measure radioactivity. **# pos/mo** – number of positive samples per month. **% pos/mo** – percent positive samples per month. **USEPA/CDC** – United States Environmental Protection Agency/Center for Disease Control. **CCR** – Consumer Confidence Report, or Water Quality Report. **FDA** – Food and Drug Administration.

In most cases, the "**Level Found**" column represents an average of sample result data collected during the CCR calendar year. In some cases, it may represent a single sample if only one sample was collected. **Range of Detections:** The range of individual sample results, from lowest to highest, that were collected during the sample period. **Date of Sample:** the Illinois EPA requires monitoring for this contaminant less than once per year because the concentrations do not frequently change.

**About the Data:**

**TURBIDITY:** Turbidity is a measure of the cloudiness of the water. It is monitored because it is a good indicator of water quality and the effectiveness of the filtration system and disinfectants. The treatment technique requires that at least 95% of routine samples are less than or equal to 0.3 NTU, and no sample exceeds 1 NTU. We are reporting the percentage of all readings meeting the standard of 0.3 NTU, plus the single highest reading for the year.

**SODIUM:** There is not a 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.

**ZINC:** This contaminant is not currently regulated by USEPA. However, the state has set an MCL for zinc and therefore, monitoring is required.

**TTHMs [TOTAL TRIHALOMETHANES]:** The maximum contaminant level (MCL) for TTHM and HAAS is 80 ppb and 60 ppb respectively. Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous systems, and may have an increased risk of getting cancer.

**TOC [TOTAL ORGANIC CARBON]:** Total organic carbon (TOC) has no health effects. However, TOC provides a means for the formation of disinfection by-products. One way to minimize disinfection by-product formation is to remove a specific percentage of the TOC present in the source water. The numbers in the Amount Detected and Range columns are the TOC removal factors, where the removal factor is defined as the actual percent TOC removal divided by the required percent removal. A value of 1.0 or greater in the Amount Detected column indicates that compliance with the removal requirement was achieved.

**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.

**Nitrate:** The value in the "amount detected" column is the maximum detected for the year. Nitrate in drinking water at levels above 10 ppm is a health risk for infants less than 6 months of age. High nitrate levels in drinking water can cause blue baby syndrome. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. If you are caring for an infant, you should ask advice from your health care provider.

**N-nitroso-dimethylamine (NDMA) (ppb) & N-nitroso-pyrrolidine (NPYR) (ppb):** A maximum contaminant level (MCL) for this substance has not been established by either state or federal regulations, nor has mandatory health 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. For the N-nitroso-dimethylamine and the N-nitroso-pyrrolidine, in the "amount Detected" column we are reporting the average, and in the "Range of detections" column we are reporting the lowest and Highest Individual Readings.

**<<< DID YOU KNOW? >>>**

An approved backflow prevention device is required for each sprinkler system or additional consumer water system. If you have a lawn irrigation system, please see a Cross Connection Control Device Inspector (CCCDI) to have a backflow prevention device installed. An annual inspection of the device by a Cross Connection Control Device Inspector (CCCDI) is required by the State of Illinois Plumbing Code. Please call the Engineering Group at 618-624-4500 ext. 91210 if you have any questions regarding this issue.