

CITY OF O'FALLON WATER DIVISION 2016 ANNUAL WATER QUALITY REPORT 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 system 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 concern about the water system, please contact Heide Bell in the O'Fallon 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 the Public Safety Building usually 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.

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 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 disorder, 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

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. 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, as well as pick up substances resulting from the presence of animals or 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. FDA regulations establish limits for contaminants in bottled water, which must provide the same protection for public health.

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. The City of O'Fallon is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at <http://www.epa.gov/safewater/lead>.

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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 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. 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.

2015 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
Beta/photon emitters (pCi/L) ¹	2014	0	50	3.5	S	Yes	Decay of natural and man-made deposits
Fluoride (ppm) ²	2015	4	4	0.98	0.71 – 1.12	Yes	Water additive that promotes strong teeth
Nitrate (ppm)	2015	10	10	3.51	2.62 – 5.0	Yes	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits

¹The MCL for Beta/photon emitters is often written as 4 millirem/year (measure of rate of radiation absorbed by the body). Laboratory results are reported in pCi/L as we have on the table above. EPA considers 50 pCi/L as the level of concern for beta emitters.

²Fluoride 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.

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
Chloramines (ppm) ³	2015	4	4	2.9	2.0 – 3.0	Yes	Water additive used to control microbes
TOC [Total organic carbon] (removal factor) ⁴	2015	NA	TT Removal ≥ 1.0	1.5	0.7 – 1.9	Yes	Naturally present in the environment

³Chlorine 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.

⁴Total 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 1.00 or greater in the Amount Detected column indicates that compliance with the removal requirement was achieved.

Turbidity ⁵ – (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)	2015	NA	TT	100%	100% - 100%	Yes	Soil runoff
Turbidity (NTU)	2015	NA	TT=1 NTU max	0.241	NA	Yes	Soil runoff

⁵Turbidity 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 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.

State Regulated Substances

Substance (Units)	Year Sampled	MCLG	MCL	Highest Level Detected	Range of Detections	Compliance Achieved	Typical Source
Manganese (ppb) ⁶	2015	150	150	20	15 – 20	Yes	Erosion of naturally occurring deposits
Sodium (ppm) ⁶	2015	NA	NA	17	16.8 – 17.0	Yes	Erosion of naturally occurring deposits; Byproduct of home water softening.

⁶There 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 Substances

Substance (Units)	Year Sampled	Highest Level Detected	Range of Detections	Typical Source
Sulfate (ppm) ⁷	2015	38.1	37.4 – 38.1	Erosion of naturally occurring deposits

⁷A 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.

The IEPA requires Illinois American Water to monitor for certain contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of the data in the table above, though accurate, is more than one year old.

Cryptosporidium

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.

USEPA issued a new rule in 2006 that requires systems with higher *Cryptosporidium* levels in their source water to provide additional treatment.

In 2015, Illinois American Water monitoring of the Mississippi River raw untreated water indicated the presence of this organism. The Mississippi River cryptosporidium levels ranged from not detected to 0.698 oocysts/L, with an average of 0.078 oocysts/L. Although this organism is present, it is at levels low enough that no supplemental treatment is required by our facility per USEPA standards.

2015 Water Quality Data
O'Fallon Public Works Department
(Water Distribution System)
PWS. ID: IL1631100

Coliform Bacteria

Maximum Contaminant Level Goal	Total Coliform Maximum Contaminant Level	Highest No. of Positive	Fecal Coliform or E. Coli Maximum Contaminant Level	Total No. of Positive E. Coli or Fecal Coliform Samples	Violation	Likely Source of Contamination
0	5% of monthly samples are positive	1.9	None	0	N	Naturally present in the environment.

Lead and Copper⁸ (Collected at customers' taps)

Lead and Copper	Date Sampled	MCLG	Action Level (AL)	90 th Percentile	# Sites Over AL	Units	Violation	Likely Source of Contamination
Copper	2014	1.3	1.3	0.46	0	ppm	N	Erosion of natural deposits; Leaching from wood preservatives; Corrosion of household plumbing systems.
Lead ⁹	2014	0	15	1	0	ppb	N	Corrosion of household plumbing systems; Erosion of natural deposits.

⁸ 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 90th percentile of all samples taken does not exceed the action level of 15 ppb for lead or 1.300 ppm for copper.

⁹ 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 levels of lead 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. Additional information is available from the EPA's Safe Drinking Water Hotline 800-426-4791.

Other Compounds (Measured in the distribution system)

Disinfectants/Disinfection By-Products	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Chlorine ¹⁰	12/31/2015	2.2	1 – 3	MRDLG – 4	MRDL – 4	ppm	N	Water additive used to control microbes
Haloacetic Acids (HAAs)	2015	39	13.2 – 89.6	No goal for the total	60	ppb	N	By-product of drinking water chlorination.
Not all sample results may have been used for calculating the Highest Level Detected because some results may be part of an evaluation to determine where compliance sampling should occur in the future.								
Total Trihalomethanes (TTHM)	2015	35	13.6-73.9	No goal for the total	80	ppb	N	By-product of drinking water chlorination.

¹⁰ 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.

TTHMs & HAAs: 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.

The IEPA requires us to monitor for certain contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of the data in the table above, though accurate, is more than one year old.

About the Data:

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 that triggers treatment or other required actions by the water supply. **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 a drinking water disinfectant allowed in drinking water. There is convincing evidence that 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 (mg/l). **ppb** – parts per billion or micrograms per liter (ug/l). **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 (a measure radioactivity). **# pos/mo** – number of positive samples per month. **% pos/mo** – percent positive samples per month. **ppt** – parts per trillion, or nanograms per liter. **ppq** – parts per quadrillion, or pictograms per liter. **USEPA/CDC** – United States Environmental Protection Agency/Center for Disease Control. **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:** Some Contaminants are sampled less frequently than once a year; as a result, not all contaminants were sampled for during the CCR calendar year. If any of these contaminants were detected the last time they were sampled for, they are included in the table along with the date that the detection occurred.

<<< **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. 8751 if you have any questions regarding this issue.