

CITY OF O'FALLON WATER DIVISION

2018 ANNUAL WATER QUALITY REPORT

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 draws surface water for treatment from 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. To view a summary version of the completed Source Water Assessments, including: Importance of Source Water; Susceptibility to Contamination Determination; and documentation / recommendation of Source Water Protection Efforts, you may access the Illinois EPA website at <http://www.epa.state.il.us/cgi-bin/wp/swap-fact-sheets.pl>.

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.

2017 Water Quality Data

Illinois-American Water Company (IAWC) - (Source Water Supply – PWS: IL1635040)

2017 Regulated Substances Detected – Measured in the water leaving the treatment facility

The next several tables summarize contaminants detected in your drinking water supply.

Inorganic Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Arsenic	2017	1	0 - 1	0	10	ppb	No	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes.
Fluoride ¹	2017	0.7	0.67 – 0.75	4	4.0	ppm	No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories.
Nitrate (measured as Nitrogen) ²	2017	5	1.29 – 5.16	10	10	ppm	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
Sodium ³	2017	18	16.7 – 17.9	N/A	N/A	ppm	No	Erosion from naturally occurring deposits; Used in water softener regeneration.

1 Fluoride is added to the water supply to help promote strong teeth. The Illinois Department of Public Health recommends a fluoride level of 0.7 mg/L.

2 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.

3 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.

Radiological Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Combined Radium 226/228	2014	0.9	0.9 – 0.9	0	5	pCi/L	No	Erosion of natural deposits.
Beta/photon emitters ⁴	2014	4.4 pCi/L	4.4 – 4.4 pCi/L	0	4	mrem/y	No	Erosion of natural deposits.
Gross Alpha emitters	2014	1.5	1.5 – 1.5	0	15	pCi/L	No	Erosion of natural deposits.

4 The MCL for Beta/photon emitters is 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.

Turbidity				
	Limit (Treatment Technique)	Level Detected	Violation	Likely Source of Contamination
Lowest Monthly % Meeting Limit	0.3 NTU	100%	No	Soil Runoff
Highest Single Measurement	1 NTU	0.21 NTU	No	Soil Runoff

Turbidity is a measure of the cloudiness of the water caused by suspended particles. We monitor it because it is a good indicator of the effectiveness of our filtration system, water quality, 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.

Total Organic Carbon
The percentage of Total Organic Carbon (TOC) removal was measured each month and the system met all TOC removal requirements set by IEPA. TOC has no health effects but contributes to the formation of disinfection by-products. Reduction of TOC can help to minimize disinfection by-product formation.

Note: The state requires monitoring of certain contaminants less than once per year because the concentrations of these contaminants do not change frequently. Therefore, some of this data may be 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 2017, our monitoring of the Mississippi River raw untreated water indicated the presence of this organism. The Mississippi River *cryptosporidium* levels at our East St. Louis raw water source ranged from not detected to 0.091 oocysts/L, with an average of 0.03 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.

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2017 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 Copper⁵(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	2017	1.3	1.3	0.298	0	ppm	N	Erosion of natural deposits; Leaching from wood preservatives; Corrosion of household plumbing systems.
Lead ⁶	2017	0	15	1	0	ppb	N	Corrosion of household plumbing systems; Erosion of natural deposits.

5 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.

6 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 ⁷	12/31/2017	2.4	1 – 4	MRDLG – 4	MRDL – 4	ppm	N	Water additive used to control microbes
Haloacetic Acids (HAAs)	2017	44	14.8 – 62.7	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)	2017	58	15.9 – 96.9	No goal for the total	80	ppb	N	By-product of drinking water chlorination.

7 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.

About the Data:

Definitions: **AL (Action Level):** the concentration of a contaminant that, if exceeded, triggers treatment or other requirements that a water system must follow. **Compliance Achieved:** Indicates that the levels found were all within the allowable levels as determined by the USEPA. **Highest Level Detected:** In most cases this column is the highest detected level unless compliance is calculated on a Running Annual Average or Locational Running Annual Average. If multiple entry points exist, the data from the entry point with the highest value is reported. **Level 1 Assessment:** A Level 1 assessment is a study of the water system to identify potential problems and determine (if possible) why total coliform bacteria have been found in our water system. **Level 2 Assessment:** A Level 2 assessment is a very detailed study of the water system to identify potential problems and determine (if possible) why an E. coli MCL violation has occurred and/or why total coliform bacteria have been found in our water system on multiple occasions. **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. **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. **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. MRDLGs 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): One part substance per million parts water, or milligrams per liter. **ppb** (parts per billion): One part substance per billion parts water, 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/year** – millirems per year (used to measure radiation absorbed by the body). **pCi/L** – (picocuries per liter): Measurement of the natural rate of disintegration of radioactive contaminants in water (also beta particles). **TT (Treatment Technique):** a required process intended to reduce the level of a contaminant in drinking water. 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.