

# Consumer Confidence Report

## Annual Drinking Water Quality Report

FAYETTE WATER COMPANY

IL0510010

Annual Water Quality Report for the period of January 1 to December 31, 2017

This report is intended to provide you with important information about your drinking water and the efforts made by the water system to provide safe drinking water.

The source of drinking water used by FAYETTE WATER COMPANY is Ground Water and Purchased Surface Water.

For more information regarding this report contact:

NICK VAUGHN at 618-347-2430

Este informe contiene información muy importante sobre el agua que usted bebe. Tradúzcalo ó hable con alguien que lo entienda bien.

### Source of 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 pickup 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.

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 EPA's Safe Drinking Water Hotline at (800) 426-4791.

In order to ensure that tap water is safe to drink, EPA prescribes regulations which 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.

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. 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 (800-426-4791).

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. We 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>.

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 meetings. 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 the Office or call our water operator at 618-347-2430. 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>.

### Source Water Information

<u>Source Water Name</u>		<u>Type of Water</u>	<u>Report Status</u>	<u>Location</u>
CC01-CONNECTION TO GATEWAY	FF IL0270040 TP01	SW	A	800N & 1100E
CC02-CONNECTION TO LAKE VANDALIA	FF IL0510350 TP01	SW	A	Zent Drive, Vandalia
CC03-CONNECTION TO EJ WATER	FF IL0790010 TP03	SW	A	ILL RTE 128 & 2800N
WELL 2 (01013)		GW	A	Sefton Twp
WELL 3 (01014)		GW	A	Sefton Twp
WELL 4 (01015)		GW	A	Sefton Twp
WELL 5 (01533)	1850 feet South of Well 2	GW	A	Sefton Twp
WELL 6 (01818)	Well #6	GW	A	Fayette Co., Sefton Twp., SE1/4, NW1/4, SW1/4, Section 32, T8N, R2E
WELL 7 (01858)		GW	A	Sefton Twp

### Source Water Assessment

Source of water: **FAYETTE WATER COMPANY** To determine Fayette Water Company's susceptibility to groundwater contamination, a potential source inventory done by Illinois Rural Water Association was reviewed by the Illinois EPA. Based on the information contained in this document, no potential sources of groundwater contamination are present that could pose a hazard to groundwater pumped by the Fayette Water Company community supply wells. The Illinois EPA has determined that Fayette Water Company Wells #2, #3 and #4 are susceptible to IOC, VOC and SOC contamination. This determination is based on a number of criteria including: agricultural land use; monitoring conducted at the wells; monitoring conducted at the entry point to the distribution system; and the available hydrogeologic data for the wells.

Source of water: **GATEWAY REGIONAL WATER COMPANY** Illinois EPA considers all surface water sources of a community water supply to be susceptible to potential pollution problems, hence, the reason for mandatory treatment for all surface water supplies in Illinois. Mandatory treatment includes coagulation, sedimentation, filtration, and disinfection. Primary sources of pollution in Illinois lakes can include agricultural runoff, land disposal (septic systems) and shoreline erosion.

## 2017 Regulated Contaminants Detected

### Lead and Copper

**Definitions:**

**Action Level Goal (ALG):** The level of a contaminant in drinking water below which there is no known or expected risk to health. ALGs allow for a margin of safety.

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

Lead and Copper	Date Sampled	MCLG	Action Level (AL)	90th Percentile	# Sites Over AL	Units	Violation	Likely Source of Contamination
Copper	9/28/2015	1.3	1.3	0.641	0	ppm	N	Erosion of natural deposits; Leaching from wood preservatives; Corrosion of household plumbing systems.

## Water Quality Test Results

**Definitions:** The following tables contain scientific terms and measures, some of which may require explanation.

**Avg:** Regulatory compliance with some MCLs are based on running annual average of monthly samples.

**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.

**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.

**Maximum Contaminant Level Goal 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 residual disinfectant level goal or MRDLG:** The level of a 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 contaminants.

**Maximum residual disinfectant level or 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.

**Water Quality Test Results (Continued)**

na: not applicable

mrem: millirems per year (a measure of radiation absorbed by the body)

ppb: micrograms per liter or parts per billion - or one ounce in 7,350,000 gallons of water.

ppm: milligrams per liter or parts per million - or one ounce in 7,350 gallons of water.

Treatment Technique or TT: A required process intended to reduce the level of a contaminant in drinking water

**2017 Regulated Contaminants**

Disinfectants and Disinfection By-Products	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Chlorine	12/31/2017	2.2	1.5 - 2.6	MRDLG = 4	MRDL = 4	ppm	N	Water additive used to control microbes.
Haloacetic Acids (HAA5) *	2017	28	4.3 - 28.1	No goal for the total	60	ppb	N	By-product of drinking water chlorination.
Total Trihalomethanes (TTHm) *	2017	54	2.3 - 54	No goal for the total	80	ppb	N	By-product of drinking water chlorination.

2017 Regulated Contaminants (Continued)

Inorganic Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Barium	2017	0.0695	0.0695 - 0.0695	2	2	ppm	N	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.
Fluoride	2017	0.56	0.56 - 0.56	4	4.0	ppm	N	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories.
Iron	2017	0.241	0.241 - 0.241		1.0	ppm	N	This contaminant is not currently regulated by the USEPA. However, the state regulates. Erosion of natural deposits.
Manganese	2017	42.5	42.5 - 42.5	150	150	ppm	N	This contaminant is not currently regulated by the USEPA. However, the state regulates. Erosion of natural deposits.
Sodium	2017	27.5	27.5 - 27.5			ppm	N	Erosion of naturally occurring deposits; Used in water softener regeneration.

Radioactive Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Combined Radium 226/228	10/28/2014	0.65	0.65 - 0.65	0	5	pCi/L	N	Erosion of natural deposits. Used in water softener
Gross alpha excluding radon and uranium	10/28/2014	0.83	0.83 - 0.83	0	15	pCi/L	N	Erosion of natural deposits.

## Regulated Contaminants

Disinfectants and Disinfection By-Products	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Chlorine	12/31/2017	1.8	1 - 2	MRDLG = 4	MRDL = 4	ppm	N	Water additive used to control microbes.
Chlorite	2017	0.98	0.59 - 0.98	0.8	1	ppm	N	By-product of drinking water disinfection.
Haloacetic Acids (HAA5)	2017	17	0 - 32.9	No goal for the total	60	ppb	N	By-product of drinking water disinfection.
Total Trihalomethanes (TTHM)	2017	18	12.51 - 22.5	No goal for the total	80	ppb	N	By-product of drinking water disinfection.
Inorganic Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Barium	2017	0.0035	0.0019 - 0.0035	2	2	ppm	N	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.
Fluoride	2017	0.6	0.499 - 0.59	4	4.0	ppm	N	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories.
Nitrate [measured as Nitrogen]	2017	1	0.18 - 0.62	10	10	ppm	N	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
Sodium	2017	11	11 - 15			ppm	N	Erosion from naturally occurring deposits. Used in water softener regeneration.
Zinc	2017	0.0099	0 - 0.0099	5	5	ppm	N	This contaminant is not currently regulated by the USEPA. However, the state regulates. Naturally occurring; discharge from metal
Radioactive Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Combined Radium 226/228	04/13/2015	1.061	0.416 - 1.061	0	5	pCi/L	N	Erosion of natural deposits.
Gross alpha excluding radon and uranium	01/19/2015	2.95	2.95 - 2.95	0	15	pCi/L	N	Erosion of natural deposits.
Synthetic organic contaminants including pesticides and herbicides	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination

Atrazine	2017	0.32	0 - 0.32	3	3	ppb	N	Runoff from herbicide used on row crops.
----------	------	------	----------	---	---	-----	---	--

#### Turbidity

	Limit (Treatment Technique)	Level Detected	Violation	Likely Source of Contamination
Highest single measurement	1 NTU	0.299 NTU	N	Soil runoff.
Lowest monthly % meeting limit	0.3 NTU	100%	N	Soil runoff.

Information Statement: Turbidity is a measurement of the cloudiness of the water caused by suspended particles. We monitor it because it is a good indicator of water quality and the effectiveness of our filtration system and disinfectants.

#### Total Organic Carbon

The percentage of Total Organic Carbon (TOC) removal was measured each month and the system met all TOC removal requirements set, unless a TOC violation is noted in the violations section.



## Regulated Contaminants

Disinfectants and Disinfection By-Products	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Chloramines	12/31/2017	2.9	2.5 - 3	MRDLG = 4	MRDL = 4	ppm	N	Water additive used to control microbes.
Halocetic Acids (HAA5)	2017	38	16.5 - 41.0	No goal for the total	60	ppb	N	By-product of drinking water disinfection.
Total Trihalomethanes (TTHM)	2017	38	28.6 - 44.7	No goal for the total	80	ppb	N	By-product of drinking water disinfection.
Inorganic Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Barium	2017	0.03	0.03 - 0.03	2	2	ppm	N	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.
Fluoride	2017	0.7	0.722 - 0.722	4	4.0	ppm	N	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories.
Nitrate [measured as Nitrogen]	2017	1	0.45 - 1.4	10	10	ppm	N	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
Sodium	2017	9	9.2 - 9.2			ppm	N	Erosion from naturally occurring deposits. Used in water softener regeneration.
Radioactive Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Combined Radium 226/228	01/27/2014	0.812	0.819 - 0.819	0	5	pCi/L	N	Erosion of natural deposits.

Gross alpha excluding radon and uranium    01/27/2014    2.31    2.31 - 2.31    0    15    pCi/L    N    Erosion of natural deposits.

---

**Turbidity**

	Limit (Treatment Technique)	Level Detected	Violation	Likely Source of Contamination
Highest single measurement	1 NTU	0.11 NTU	N	Soil runoff.
Lowest monthly % meeting limit	0.5 NTU	100%	N	Soil runoff.

Information Statement: Turbidity is a measurement of the cloudiness of the water caused by suspended particles. We monitor it because it is a good indicator of water quality and the effectiveness of our filtration system and disinfectants.

**Total Organic Carbon**

The percentage of Total Organic Carbon (TOC) removal was measured each month and the system met all TOC removal requirements set, unless a TOC violation is noted in the violations section.

---

GATEWAY REGIONAL WATER COMPANY INC.

Regulated Contaminants

Disinfectants and Disinfection By-Products	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Haloacetic Acids (HAAS)*	2017	32	31.9 - 31.9	No goal for the total	60	ppb	N	By-product of drinking water disinfection.
Total Trihalomethanes (TTHM)	2017	35	34.6 - 34.6	No goal for the total	80	ppb	N	By-product of drinking water disinfection.
Inorganic Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Arsenic	2017	1	1.2 - 1.2	0	10	ppb	N	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes.
Barium	2017	0.064	0.064 - 0.064	2	2	ppm	N	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Fluoride	2017	0.6	0.649 - 0.649	4	4.0	ppm	N	Erosion of natural deposits; Discharge from fertilizer and aluminum factories; Water additive which promotes strong teeth
Manganese	2017	5	5.2 - 5.2	150	150	ppb	N	This contaminant is not currently regulated by the USEPA. However, the state regulates. Erosion of natural deposits.
Nitrate (measured as Nitrogen)	2017	1	0.87 - 0.87	10	10	ppm	N	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
Selenium	2017	2	2.3 - 2.3	50	50	ppb	N	Discharge from petroleum and metal refineries; Erosion of natural deposits; discharge from mines.
Sodium	2017	25	25 - 25			ppm	N	Erosion from naturally occurring deposits; Used in water softener regeneration.
Synthetic organic contaminants including pesticides and herbicides	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Atrazine	2017	1	0 - 2	3	3	ppb	N	Runoff from herbicide used on row crops.
Simazine	2017	1.5	0 - 1.5	4	4	ppb	N	Herbicide runoff.

GATEWAY REGIONAL WATER COMPANY INC.

Turbidity

	Limit (Treatment Technique)	Level Detected	Violation	Likely Source of Contamination
Highest single measurement	1 NTU	0.279 NTU	N	Soil runoff.
Lowest monthly % meeting limit	0.3 NTU	100%	N	Soil runoff.

Information Statement: Turbidity is a measurement of the cloudiness of the water caused by suspended particles. We monitor it because it is a good indicator of water quality and the effectiveness of our filtration system and disinfectants.

Total Organic Carbon

The percentage of Total Organic Carbon (TOC) removal was measured each month and the system met all TOC removal requirements set, unless a TOC violation is noted in the violations section.

The Long Term 2 Enhanced Surface Water Treatment Rule (LT2ESWTR) was published in the Federal Register on January 5, 2006. Its goal was to reduce the risk of disease caused by Cryptosporidium and other microorganisms by identifying the systems at the greatest risk for source water contamination. The USEPA (United States Environmental Protection Agency) finalized both the LT2ESWTR and the Stage 2 Disinfectants against microbial contamination while reducing risks from disinfection byproducts.

Under the LT2ESWTR, filtered systems were required to collect before any treatment source water Cryptosporidium, E. Coli, and turbidity samples once a month from every surface water or ground water under the direct influence of surface water (GWUDI) source for a period of 24 month.

Gateway Regional Water Company, Inc. is monitoring our raw water supply from Carlyle Lake before treatment for the presence of cryptosporidium for 26 months, beginning in October, 2016 and ending in November, 2018. During the 12 months monitored in 2017, there was no indicated presence of cryptosporidium and the mean was 0.000 cysts / liter.

Cryptosporidium is a microbial parasite found in most surface waters throughout the U. S. Although filtration removes cryptosporidium, the most commonly used filtration methods cannot guarantee 100 percent removal. Current test methods do not enable us to determine if the organisms are dead or if they are capable of causing disease. Symptoms of infection include nausea, diarrhea, and abdominal cramps. Most healthy individuals can overcome the disease within a few weeks. However, immuno-compromised people are at greater risk of developing life-threatening illness. Immuno-compromised individuals are encouraged to consult their doctors regarding appropriate precautions to avoid infection. Cryptosporidium must be ingested to cause disease and may be spread thru other means than drinking water.