

# Annual Drinking Water Quality Report

**Mitchell PWD**

**IL1195210**

**Annual Water quality Report for the period of January 1 to December 31, 2018**

**This report is intended to provide you with important information about your drinking water and the effects made by the Water system to provide safe drinking water. These reports will not be mailed directly to customers but will be available at the water office. This report will be published in the local newspaper.**

**The source of drinking water used by MITCHELL PWD is Purchased Surface Water**

**For more information regarding this report contact: Charles (Ed) Futch, 618-931-0164.**

**Este informe contiene informacion muy importante sobre el agua que usted bebe.**

**Traduzcalo o hable con alguien que lo entienda bien.**

## **Source of Drinking Water:**

The sources of drinking water (both tap water and bottled water) includes 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 pick up 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 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>.

### Source Water Information

Source Water Name	Type of Water	Report Status	Location
CC 01-MASTER METER 1 FF IL1195030 TP02 CITY	SW	_____	N OF INT BREMAN AVE IN GRANITE CITY
CC 02-MASTER METER 2 FF IL1195030 TP02	SW	_____	N OF INTER ST.THOMAS
CC 04-MASTER METER 3 FF IL1195030 TP02	SW	_____	ADJ TO FLYING J TRUCK STOP

### Source Water Assessment

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. MPWD meetings are held the third Thursday of each month at 745 E. Chain of Rocks Rd, Granite City IL 62040 (5:00pm). 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 Mitchell Public Water District office hours are from 7:00am till 3:30 pm or call the District Manager Charles E Futch at 618-931-0164 for a copy to be mailed. 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 of Water: IL AMERICAN-GRANITE CITY Illinois EPA considers all surface water sources of 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. Within the Illinois portion of the Mississippi River Watershed, which is illustrated in Figure 3, 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 susceptibility of the IAWC-Granite City intakes. With high flow rates and long distances of travel on the Mississippi River, critical areas can be extensive. The critical area for the IAWC-Granite City intake was determined using data from a joint U.S. Environmental Protection Agency/U.S. Geological Survey project. This project used a computer modeling program (SPARROW) to determine travel times on major rivers in the United States. Accidental spills of hazardous materials into navigable waterways are a major concern because of their frequency in the United States in recent years. Illinois has access to 1,116 miles of inland waterway that can handle commercial barge traffic. These include the Upper Mississippi River, Illinois River Waterway, and the Ohio River. Along these waterways are numerous facilities that load and unload hazardous materials. Analysis of reported spills indicate that between 1974 and 1989, 794 accidental spills of hazardous materials occurred along Illinois waterways. Approximately 92% of these spills occurred along the Mississippi and/or the Illinois River. Figure 2 shows the critical area of concern (Zone 1) For the IAWC-Granite City surface water intake. Spills occurring in this critical area will travel to the intake in five hours or less, making contingency planning and spill reporting a major concern in this watershed. Information concerning spill response planning on the Mississippi River may be found at the U. S. EPA website [www.epa.gov/region5/oil](http://www.epa.gov/region5/oil), and additional data can also be downloaded at the U. S. Geological Survey's FTP site [ftp://ftp.umesc.er.usgs.gov/pub/gis\\_data/oil\\_spill](ftp://ftp.umesc.er.usgs.gov/pub/gis_data/oil_spill).

## 2018 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 Contamination	Date sampled	MCLG	Action Level (AL)	90 <sup>th</sup> Percentile	# Sites over AL	Units	Violations	Likely Source of
Copper deposits:  preservatives;  plumbing systems.	06/12/ 2017	1.3	1.3	0.183	0	ppm	N	Erosion of natural  Leaching from wood  Corrosion of household

### 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 user 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 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 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 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.

**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.

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.

## Regulated Contaminants

Disinfectants and Disinfection Contamination	Collection Date	Highest Level	Range of Levels	MCLG	MCL	Units	Violation	Likely Source of
Disinfection By-Products		Detected	Detected					
Chlorine control microbes <sub>2</sub>	12/31/2018	2	1.4 – 3	MRDLG = 4	MRDL = 4	ppm	N	Water additive used to
Haloacetic Acids water disinfection the total	2018	29	17.1 – 51.6	No goal for	60	ppb (HAA5)	N	By-product of drinking
Total Trihalomethanes (TTHM) water disinfection	2018	51	23 – 67.8	No goal for	80	ppb	N	By-product of drinking the total



Illinois American Water Granite City District  
2000 W 24th Street  
Granite City, IL 62040

PWSID IL1195030

## Source Water Information

Illinois EPA considers all surface water sources of 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. The East St. Louis Water Treatment Facility 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 water service regardless of variations in the source water.

Accidental spills of hazardous materials into navigable waterways are a major concern because of their frequency in the United States in recent years. Illinois has access to 1,116 miles of inland waterway that can handle commercial barge traffic. These include the Upper Mississippi River, Illinois River Waterway, and the Ohio River. Along these waterways are numerous facilities that load and unload hazardous materials. Analysis of reported spills indicate that between 1974 and 1989, 794 accidental spills of hazardous materials occurred along Illinois waterways. Approximately 92% of these spills occurred along the Mississippi and/or the Illinois River. Spills occurring in this critical area will travel to the intake in five hours or less, making contingency planning and spill reporting a major concern in this watershed. Information concerning spill response planning on the Mississippi River may be found at the U. S. EPA website <https://www.epa.gov/oil-spills-prevention-and-preparedness-regulations>, and additional data can also be downloaded at the U. S. Geological Survey's FTP site <https://www.epa.gov/waterdata>.

The Illinois Environmental Protection Agency (IEPA) has completed a source water assessment for the East St. Louis system and a copy is available upon request by calling Ian Rischmiller, Water Quality Supervisor at 309-208-0196. 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>.

## The Partnership for Safe Water

Illinois American Water's Granite City District is a volunteer participant in the USEPA's Partnership For Safe Water, a National program designed to achieve operational excellence in water treatment.



In 2017 Illinois American Water's Granite City District was awarded the prestigious "Fifteen-Year Director's Award" under the Partnership for Safe Water program administered by the USEPA and other water related organizations. The award honors water utilities for achieving operational excellence, by voluntarily optimizing their treatment facility operations and adopting more stringent performance goals than those required by federal and state drinking water standards. We are proud to report that we have maintained those standards throughout 2018. Only a small percentage of facilities in the United States have received the Fifteen-Year Partnership Award.

## 2018 Water Quality Information

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 2018. Although all of the substances listed are under the Maximum Contaminant Level (MCL) set by the U.S. Environmental

Protection Agency, we feel it is important that you know exactly what was detected and how much of the substance was present in the water. If you have questions about the data please contact us.

### How to Read This Table

Illinois American Water conducts extensive monitoring to ensure that your water meets all water quality standards. The results of our monitoring are reported in the following tables. While most monitoring was conducted in 2018, 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.

### Illinois American Water – Granite City Facility 2018 Regulated Substances Detected

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

Inorganic Contaminants	Collection Date	MCLG	MCL	Highest Level Detected	Range of Levels Detected	Compliance Achieved	Typical Sources
Fluoride (ppm) <sup>1</sup>	2018	4	4	0.8	0.72-0.85	Yes	Water additive that promotes strong teeth
Nitrate (ppm) <sup>2</sup>	2018	10	10	3	ND-2.85	Yes	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Sodium (ppm) <sup>3</sup>	2018	N/A	N/A	17	16.9-16.9	Yes	Erosion from naturally occurring deposits: Used in water softener regeneration

<sup>1</sup> 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.

<sup>2</sup> 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.

<sup>3</sup> 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.

### Turbidity <sup>4</sup>

Substance (Units)	Year Sampled	Limit (Treatment Technique)	Level Detected	Compliance Achieved	Typical Source
Lowest Monthly % meeting limit	2018	0.3 NTU	100%	Yes	Soil runoff
Highest Single Measurement	2018	1 NTU	0.37 NTU	Yes	Soil runoff

<sup>4</sup> 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, unless a TOC Violation is noted in the violation section.

## Illinois American Water- East St. Louis Facility 2018 Regulated Substances Detected

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

Inorganic Contaminants	Collection Date	MCLG	MCL	Highest Level Detected	Range of Levels Detected	Compliance Achieved	Typical Sources
Fluoride (ppm) <sup>2</sup>	2018	4	4	0.74	0.73-0.74	Yes	Water additive that promotes strong teeth
Manganese (ppb)	2018	150	150	18	17-18	Yes	This contaminant is not currently regulated by the USEPA. However, the state regulates. Erosion of natural deposits.
Nitrate (ppm) <sup>3</sup>	2018	10	10	5	2.73-4.85	Yes	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Sodium (ppm) <sup>4</sup>	2018	N/A	N/A	17	16.4-16.6	Yes	Erosion from naturally occurring deposits: Used in water softener regeneration
Radioactive Contaminants	Collection Date	MCLG	MCL	Highest Level Detected	Range of Levels Detected	Compliance Achieved	Typical Sources
Beta/photon emitters (pCi/l) <sup>1</sup>	2014	0	50	5	4 – 5	Yes	Decay of natural and man-made deposits
Combined Radium 226/226 (pCi/L)	2016	0	5	1.98	ND – 1.98	Yes	Erosion of natural deposits.
Synthetic Organic Contaminants	Collection Date	MCLG	MCL	Highest Level Detected	Range of Levels Detected	Compliance Achieved	Typical Sources
Atrazine	2018	3	3	0.6	ND - 0.6	Yes	Runoff from herbicide used on row crops.
Volatile Organic Contaminants	Collection Date	MCLG	MCL	Highest Level Detected	Range of Levels Detected	Compliance Achieved	Typical Sources
Xylenes	2018	10	10	0.0007	ND-0.007	Yes	Discharge from petroleum factories; Discharge from chemical factories.

<sup>1</sup> The MCL for Beta/photon emitters is written as 4 millirem/year (measured of rate of radioactive decay). EPA considers 50 pCi/L as the level of concern for beta emitters

<sup>2</sup> 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.

<sup>3</sup> 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.

<sup>4</sup>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.

### Turbidity <sup>5</sup>

Substance (Units)	Year Sampled	Limit (Treatment Technique)	Level Detected	Compliance Achieved	Typical Source
Lowest Monthly % meeting limit	2018	0.3 NTU	98%	Yes	Soil runoff
Highest Single Measurement	2018	1 NTU	0.79 NTU	Yes	Soil runoff

<sup>5</sup> 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, unless a TOC Violation is noted in the violation section.

### Unregulated Contaminant Monitoring Rule (UCMR4)<sup>6</sup>

Contaminant (units)	Year Sampled	Amount Detected (Average)	Range of Detections	Typical Source
2-Methoxyethanol (ppb)	2018	0.2	ND-0.3	Used in a number of consumer products, such as synthetic cosmetics, perfumes, fragrances, hair preparations and skin lotions



Manganese (ppb)	2018	7	ND-1.1	Naturally-occurring element; commercially available in combination with other elements and minerals; used in steel production, fertilizer, batteries and fireworks; drinking water and wastewater treatment chemical; essential nutrient
Total Haloacetic Acids 9 – UCMR4 (ug/L)	2018	28	5.9 – 24	By-product of drinking water disinfection.

<sup>6</sup> Unregulated contaminants are those for which EPA has not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist EPA in determining the occurrence of unregulated contaminants in drinking water and whether future regulation is warranted. A maximum contaminant level (MCL) for these substances has not been established by either state or federal regulations, nor has mandatory health effects language.

#### Table Definitions and Abbreviations

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

**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.

**Amount 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 date from the entry point with the highest value is reported.

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

**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 a 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. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

**N/A:** not applicable.

**ND:** not detected.

**NTU - Nephelometric Turbidity Units:** Measurement of the clarity, or turbidity, of water.

**pCi/L - Picocuries per liter:** Measurement of the natural rate of disintegration of radioactive contaminants in water (also beta particles).

**ppb - Parts per billion:** One part substance per billion parts water or micrograms per liter (mg/L).

**ppm - Parts per million:** One part substances per million parts water or milligrams per liter (ug/L).

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

**Treatment Technique (TT):** A required process intended to reduce the level of a contaminant in drinking water.

### **Violation Summary Table**

We are happy to announce that no monitoring, reporting, treatment technique, maximum residual disinfectant level, or maximum contaminant level violations were recorded during 2018.