

# 2021 Consumer Confidence Report

(Annual Drinking Water Quality Report for 1 January 31 December 2021)  
(St Jacob – IL1190950)

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. Sources of drinking water used by the Village of St Jacob is Well and Purchased Surface Water

## Sources 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 pick up substances resulting from the presence of animals or from human activity.

## Contaminates 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.

## Summary:

- 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 info about contaminants and potential health effects can be obtained by calling the EPAs 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>

**For more information about this report contact:** Curtis Kinnick at 618-334-3285

**Questions or Concerns:** Please Attend a council meeting held at 6:30 on the 1<sup>st</sup> and 3<sup>rd</sup> Wednesday or each month in the Village Hall.

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

## Source Water Information

Source Water Name		Type of Water	Report Status	Location
CC 03-MASTER METER HIGHLAND-	FF IL1190550 TP02	SW	_____	3 MI E/ STJ-N SIDE 40
CC 04-MASTER METER-BOND MADISON	FF IL0050020 TP01	SW	_____	FROM BOND-MADISON WATER CO
CC 05-MASTER METER-TRI-TWSP	FF IL1190080 TP01	SW	_____	FROM TRI-TOWNSHIP WD

## 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. 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 water operator at Curtis Kinnick 618-334-3285. 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: **HIGHLAND 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. **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). **Source of Water: IL AMERICAN-EAST ST LOUIS 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-East St. Louis 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-East St. Louis 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-East St. Louis 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). **Source of Water: S L M WATER COMMISSION 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. Primary sources of pollution in Illinois lakes can include agricultural runoff, land disposal (septic systems) and shoreline erosion.

## Village of St Jacob

### 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	2019	1.3	1.3	1.29	1	ppm	N	Erosion of natural deposits; Leaching from wood preservatives; Corrosion of household plumbing systems.

### Regulated Contamination

#### Disinfectant By-Products

Disinfectants and disinfection by-products	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Chloramines	12/31/2021	1.6	0.9 – 2.0	MRDLG = 4	MRDL = 4	ppm	No	Water additive used to control microbes
Haloacetic Acids (HAA5)	2021	49	21.9 - 69	NA	60	ppb	No	By-product of drinking water disinfection
Total Trihalomethanes (TTHM?)	2021	61	19.5 – 67.5	NA	80	ppb	No	By-product of drinking water disinfection

#### Inorganic Contaminates

Inorganic Contaminates	Collection Date	Highest Level Detected	Range of Level Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Barium	5/16/18	0.186	0.186 – 0.186	2	2	ppm	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.
Fluoride	5/16/18	0.93	0.93 – 0.93	4	4.0	ppm	No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Sodium	2018	399	339-339			ppm	No	Runoff from fertilizers use; leaching from septic tanks, sewer; erosion of natural deposits

## Radioactive Contaminates

Radiological Contamination	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation `	Likely Source of Contamination
Combined Radium	7/12/17	2.27	2.27 – 2.27	0	5	pCi/L	No	Erosion of natural deposits
Gross alpha excluding radon and uranium	7/12/17	6.9	6.9 – 6.9	0	15	pCi/L	No	Erosion of natural deposits

## Water Quality Test Results Definitions

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 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 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.
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.

# Illinois American Water – Granite City Water Quality Results

## Regulated Substances

Substance	Year Sampled	Compliance Achieved	MCLG	MCL	Highest Compliance Result	Range Detected	Likely Source of Contamination
Fluoride	2021	Yes	4.0	4.0	0.8	0.83 – 0.83	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Nitrate	2021	Yes	10	10	4	2.51 – 3.98	Runoff from fertilizers use; leaching from septic tanks, sewer; erosion of natural deposits

## Other Substance of Interest

Substance	Year Sampled	Compliance Achieved	MCLG	MCL	Highest Compliance Result	Range Detected	Likely Source of Contamination
Sodium	2021	NA	NA	NA	28	28.1 – 28.1	Erosion from naturally occurring deposits. Used in water softeners regeneration.

## Turbidity

Turbidity	Limit (treatment technique)	Level Detected	Compliance Achieved	Likely Source of Contamination
Lowest Monthly % meeting limits	0.3 NTU	100%	Yes	Soil Runoff
Highest Single Measurement	1 NTU	.24 NTU	Yes	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

## Unregulated Contamination Monitoring Rule (UCMR4)

Parameter	Units	Year	Average Result	Range Detected	Typical Source
Manganese	ppb	2019	10	4.7 - 16	Manufactured chemicals: used in household goods for stains, grease, heat and water resistance

**PER- POLYFLUOROALKYL SUBSTANCES** Per- or polyfluoroalkyl substances” (PFASs) are synthetic substances used in a variety of products, such as: stain resistant fabric, non-stick coatings, firefighting foam, paints, waxes, and cleaning products. They are also components in some industrial processes like electronics manufacturing and oil recovery.

While the EPA has not developed drinking water standards for PFAS, Illinois American Water recognizes the importance of testing for these contaminants. Compounds detected are tabulated below, along with typical sources. In 2021, our PWS was sampled as part of the State of Illinois PFAS Statewide Investigation. Results from this sampling indicated PFAS were detected in our drinking water (above the health advisory level/below the health advisory level) establish by the Illinois EPA. Follow up monitoring is being conducted. For more information about PFAS health advisories <http://www2.illinois.gov/epa/topics/water-quality/pfas-healthadvisory.aspx>

Parameter	Units	Year	Average Result	Health Based Guidance Level	Highest Result	Range Detected	Typical Source
Manganese	ppb	2021	10	560,000	3.0	2.4 – 3.0	Manufactured chemicals: used in household goods for stains, grease, heat and water resistance

The health-based guidance levels are intended to be protective of all people consuming the water over a lifetime of exposure. It is important to understand that guidance levels are not regulatory limits for drinking water. Rather, the guidance levels are benchmarks against which sampling results are compared to determine if additional investigation or other response action is necessary.

# Illinois American Water- East St. Louis Water Quality Results

## Regulated Substances

Substance (with Units)	Year Sampled	Compliance Achieved	MCLG	MCL	Highest Compliance Result	Range Detected	Typical Source
Fluoride	2021	Yes	4.0	4.0	0.7	0.72 – 0.72	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Manganese (ppm)	2021	Yes	150	20	20	0 – 20.0	This contaminant is not currently regulated by the USEPA, However, the state regulates it: erosion of natural deposits
Nitrate	2021	Yes	10	10	4.0	1.77 – 3.78	Runoff from fertilizers use; leaching from septic tanks, sewer; erosion of natural deposits
Arsenic	2021	Yes	0	10	1.0	0 – 1.0	Erosion of Natural Deposits, runoff from orchards. Runoff from glass and electronic production waste.
Combined Radium 226/22 (pCi/L)	2020	Yes	0	5	1.29	0.977 – 1.29	Erosion of Natural Deposits
Gross Alpha Excluding Radon and Uranium (pCi/L)	2020	Yes	0	15	2.84	0.24 – 2.84	Erosion of Natural Deposits
Atrazine (ppb)	2021	Yes	3	3	0.9	0 – 0.9	Erosion of Natural Deposits

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 10ppm is a health risk for infants of less than 6 months of age. High nitrate levels in drinking water can cause blue baby syndrome. Nitrate levels may rise quickly for short period of time because of rainfall or agricultural activity.

3 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

Requirement	Limit (treatment technique)	Level Detected	Compliance Achieved	Likely Source of Contamination
Lowest Monthly % meeting limits	0.3 NTU	100%	Yes	Soil Runoff
Highest Single Measurement	1 NTU	0.3 NTU	Yes	Soil Runoff

4 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



## Other Substances of Interest

Substance	Year Sampled	Compliance Achieved	MCLG	Limit	Highest Result	Range Detected	Typical Source
Sodium (ppb)	2021	NA	NA	NA	23	21.6 – 23.1	Erosion from naturally occurring deposits. Used in water softeners regeneration.

## Regulated Substances Detected

Lead and Copper	Date Sampled	MCLG	Action Level (AL)	90th Percentile	# Sites Over AL	Units	Violation	Likely Source of Contamination
Copper	2021	1.3	1.3	0.232	1	ppm	No	Erosion of natural deposits; Leaching from wood preservatives; Corrosion of household plumbing systems.

## Unregulated Perfluorinated Compounds

Parameter	Year	Units	Health Based Guidance Level	Highest Result	Range Detected	Typical Source
Perflourooctane Sulfonic Acid (PROS)	2021	ppt	14	3.1	0 - 3.1	Manufactured chemicals: used in household goods for stains, grease, heat and water resistance
Perflourooctanoic Acid (PFOA)	2021	ppt	2	2.9	0 - 2.9	Manufactured chemicals: used in household goods for stains, grease, heat and water resistance
Perflourohexanoic Acid (PFHxA)	2021	ppt	560,000	3.5	0 - 3.5	Manufactured chemicals: used in household goods for stains, grease, heat and water resistance
Perflourobutanesukfonic Acid (PFBS)	2021	ppt	2100	2.3	0 – 2.3	Manufactured chemicals: used in household goods for stains, grease, heat and water resistance

## Disinfection/Disinfection Byproducts

Parameter	Year	MCLG	MCL	Highest Level Detected	Range Detected	Violation	Typical Source
Haloactetic Acid (ppb)	2021	NA	60	31	20.4 – 30.2	No	By-product of drinking water disinfection
TTHM- Total Trihalomethanes (ppb)	2021	NA	80	41	20.0 – 59.0	No	By-product of drinking water disinfection
Chloramines (ppm)	2021	MRDLG=4	MRDLG=4	2.6	2.0 – 3.0	No	Water Additive used to Control Microbes

5 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

## SML Water Commission Water Quality Results

Lead and Copper	Date Sampled	MCLG	Action Level (AL)	90th Percentile	# Sites Over AL	Units	Violation	Likely Source of Contamination
Copper	2019	1.3	1.3	0.202	0	ppm	N	Erosion of natural deposits; Leaching from wood preservatives; Corrosion of household plumbing systems.

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.

### Regulated Contaminates:

#### Disinfection/Disinfection By-products

Disinfectants and disinfection by-products	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Chloramines	2021	3	2.1 -	3.4	MRDL = 4	ppm	No	Water additive used to control microbes
Haloacetic Acids (HAA5)	2021	43	27.9 – 54.8	NA	60	ppb	No	By-product of drinking water disinfection
Total Trihalomethanes (TTHM?)	2021	61	33.8 – 70	NA	80	ppb	No	By-product of drinking water disinfection.

#### Radioactive Contaminates

Radioactive Contaminates	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Combined Radium	2021	0.75	0.75 – 0.75	0	5	pCi/l	No	Erosion of natural deposits
Gross Alpha excluding radon and Uranium	2021	0.63	0.63 – 0.63	0	15	pCi/l	No	Erosion of natural deposits

## Turbidity

Turbidity	Limit (treatment technique)	Level Detected	Violation	Likely Source of Contamination
Lowest Monthly % meeting limits	0.15 NTU	100%	No	Soil Runoff
Highest Single Measurement	1 NTU	.0.8 NTU	No	Soil Runoff

4 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.

## Inorganic Contaminates

Inorganic Contaminates	Collection Date	Highest Level Detected	Range of levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Arsenic	2021	1	1.38 – 1.38`	0	10	ppb	No	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes.
Barium	2021	0.0443	0.0443 – 0.0443	2	2	ppm	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.
Fluoride	2021	0.8	0.8 – 0.8	4	4.0	ppm	No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Nitrate	2021	0.36	0.36 – 0.36	10	10	ppm	No	Runoff from fertilizers use; leaching from septic tanks, sewer; erosion of natural deposits
Sodium	2021	17	16.6 – 16.6			ppm	No	Erosion from naturally occurring deposits. Used in water softener regeneration

## Synthetic Organic Compounds

Synthetic Organic Contaminates including pesticides and Herbicides	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contaminates
Atrazine	2021	0.33	0 – 0.33	3	3	ppb	No	Runoff from herbicides use on row crops
Simazine	2021	1	0 – 1	4	4	Ppb	No	Herbicide runoff

## TRI-Township Water District

Lead and Copper	Date Sampled	MCLG	Action Level (AL)	90th Percentile	# Sites Over AL	Units	Violation	Likely Source of Contamination
Copper	2019	1.3	1.3	0.34	0	ppm	No	Erosion of natural deposits; Leaching from wood preservatives; Corrosion of household plumbing systems.
Lead	2019	0	15	1.1	0	ppb	No	Corrosion of household plumbing systems, Erosion of natural deposits

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.

Disinfectants and disinfection by-products	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Chloramines	2021	3.0	1 – 3.2	MRDL = 4	MRDL = 4	ppm	No	Water additive used to control microbes
Haloacetic Acids (HAA5)	2021	55	1.14 - 61	NA	60	ppb	No	By-product of drinking water disinfection
Total Trihalomethanes (TTHM?)	2021	71	33.8 - 77	NA	80	ppb	No	By-product of drinking water disinfection.

## Highland IL Water Quality Results

Lead and Copper	Date Sampled	MCLG	Action Level (AL)	90th Percentile	# Sites Over AL	Units	Violation	Likely Source of Contamination
Copper	2021	1.3	1.3	0.164	0	ppm	No	Erosion of natural deposits; Leaching from wood preservatives; Corrosion of household plumbing systems.
Lead	2021	0	15	3.6	3	ppb	No	Corrosion of household plumbing systems, Erosion of natural deposits

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.

## Regulated Contaminates

### Disinfection/Disinfection Byproducts

Disinfectants and disinfection by-products	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Chloramines	2021	2.5	2 - 3	MRDL = 4	MRDL = 4	ppm	No	Water additive used to control microbes
Haloacetic Acids (HAA5)	2021	32	4.35 – 36.9	NA	60	ppb	No	By-product of drinking water disinfection
Total Trihalomethanes (TTHM?)	2021	36	22.9 - 49	NA	80	ppb	No	By-product of drinking water disinfection.

### Radioactive Contaminates

Radioactive Contaminates	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Combined Radium	2015	1.4	1.4-1.4	0	5	pCi/l	No	Erosion of natural deposits
Gross Alpha excluding radon and Uranium	2015	7.2	7.2-7.2	0	15	pCi/l	No	Erosion of natural deposits

## Turbidity

Turbidity	Limit (treatment technique)	Level Detected	Violation	Likely Source of Contamination
Lowest Monthly % meeting limits	0.3 NTU	100%	No	Soil Runoff
Highest Single Measurement	1 NTU	0.1 NTU	No	Soil Runoff

4 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.

## Inorganic Contaminates

Inorganic Contaminates	Collection Date	Highest Level Detected	Range of levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Barium	2021	0.04	0.04 – 0.04	2	2	ppm	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.
Fluoride	2021	0.7	0.689 – 0.689	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)	2021	1	0.92 – 0.92	10	10	ppm	No	Runoff from fertilizers use; leaching from septic tanks, sewer; erosion of natural deposits
Sodium	2021	9	9.1 – 9.1			ppm	No	Erosion from naturally occurring deposits. Used in water softener regeneration

\*The Lead and Copper Rule protects public health by minimizing lead and copper levels in drinking water; primarily by reducing water corrosivity. Lead and copper enter drinking water mainly from corrosion of lead and copper containing plumbing materials.

**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.

**Per- and Polyfluoroalkyl Substances (PFAS):** In 2021, our PWS was sampled as part of the State of Illinois PFAS Statewide Investigation. Eighteen PFAS compounds were sampled, and none were detected in our finished drinking water. For more information about PFAS health advisories: <https://www2.illinois.gov/epa/topics/water-quality/pfas/Pages/pfas-healthadvisory.aspx>