2020 Consumer Confidence Report

(Annual Drinking Water Quality Report for 1 January 31 December 2019)

(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 1st and 3rd 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
WELL 5 (60200)	.7 MI N/RT 40 ON ST JAC-	GW	_____	_____

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, Curtis Kinnick, at 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: **ST JACOB** Based on information obtained in a Well Site Survey, published in 1990 by the Illinois EPA, a watertreatment plant with a surface impoundment located 500 feet from Well #4 and 1,850 feet from Well #5. Furthermore, information provided by the Leaking Underground Storage Tank Section of Illinois EPA indicated an additional site with an on-going remediation. However, the site has not been field verified by the Groundwater Section staff.The Illinois EPA has determined that the St. Jacob Community Water Supply's source water has is not susceptible to contamination. This determination is based on a number of criteria including: monitoring conducted at the wells; monitoring conducted at the entry point to the distribution system; and the available hydrogeologic data on the wells.Furthermore, in anticipation of the U.S. EPA's proposed Ground Water Rule, the Illinois EPA has determined that the St. Jacob Community Water Supply is not vulnerable to viral contamination. This determination is based upon the fact that the following criteria were evaluated during the Vulnerability Waiver Process: the community's wells are properly constructed with sound integrity and proper site conditions; a hydrogeologic barrier exists which prevents pathogen movement; all potential routes and sanitary defects have been mitigated such that the source water is adequately protected; monitoring data did not indicate a history of disease outbreak; and the sanitary survey of the water supply did not indicate a viral contamination threat. Because the community's wells are constructed in a confined aquifer, which should prevent the movement of pathogens into the wells, well hydraulics were not considered to be a significant factor in the susceptibility determination. Hence, well hydraulics were not evaluated for this groundwater supply.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, 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.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, 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.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.

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

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	2019	21.5	1.2 – 1.5	4	4	ppm	No	Water additive used to control microbes
Haloacetic Acids (HAA5)	2019	36	2.6 – 98.2	NA	60	ppb	No	By-product of drinking water disinfection
Total Trihalomethanes (TTHM?	2019	81	22.4 – 153	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	2018	0.186	0.186 – 0.186	2	2	ppm	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.
Fluoride	2018	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
Gross Alpha emitters excluding radon and uranium	2014	1.5	1.5-1.5	0	15	pCi/L	No	Erosion of natural deposits
Beta/Photon emitters	2014	4.4	4.4-4.4	0	4	Mrem/yr	No	Erosion of natural deposits

Violations Table

Total Trihalomethanes (TTHM)

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.

Violation Type	*Violation Begin*	*Violation End*	*Violation Explanation*
MCL, LRAA	10/01/2019	12/31/2019	Water samples showed that the amount of this contaminant in our drinking water was above its standard (called a maximum contaminant level and abbreviated MCL) for the period indicated.

Corrective Measures:

- We completed a Operational Evaluation of the Tri-township line including SML water district where the source water originated. No issues were found with the water at the source location.
- Since the Tri-township water lines only have several service connections, we concluded that the cause of the violation was due to water remaining in the watermain to long casing the build-up of "disinfection Byproducts". To remedy this situation, we have established an active hydrant flushing program to bring fresher water into the system. We have noticed lower disinfection byproduct levels since we started the flushing program in January.
- We will also draw additional water samples on the Tri-township to insure entire system is in compliance.

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 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.

Illinois American Water – Granite City Water Quality Results

Inorganic Contaminates

Inorganic Contaminates	Collection Date	Highest Level Detected	Range of Level Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Sodium	2019	15	14.9-14.9	N/A	N/A	ppm	No	Erosion from naturally occurring deposits. Used in water softener regeneration
Fluoride	2019	0.8	0.77-0.77	4	4.0	ppm	No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Nitrate	2019	4	3.53-3.53	10	10	Ppm	No	Runoff from fertilizers use; leaching from septic tanks, sewer; erosion of natural deposits

- There is no 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 in the water
- Fluoride is added to the water supply to help promote strong teeth.

Turbidity

Turbidity	Limit (treatment technique)	Level Detected	Violation	Likely Source of Contamination
Lowest Monthly % meeting limits	0.3 NTU	99.4%	No	Soil Runoff
Highest Single Measurement	1 NTU	.0414 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 Compounds
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.

Unregulated Contamination Monitoring Rule (UCMR4)

Substance (units)	Year Sampled	Amount Detected (Avg)	Range Detected	Typical Source
Manganese	2019	10.48	4.7-16	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	2019	26.69	18-42	By-product of drinking water disinfection.

Illinois American Water- East St. Louis Water Quality Results

Inorganic Contaminates

Inorganic Contaminates	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Fluoride	2019	0.7	0.71-0.72	4	4.0	ppm	No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Nitrate	2019	5	1.78-4.71	10	10	ppm	No	Runoff from fertilizers use; leaching from septic tanks, sewer; erosion of natural deposits
Sodium	2019	21	18.7-21.2	NA	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 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.

Radioactive Contaminates

Radiological Contamination	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation `	Likely Source of Contamination
Gross Alpha emitters excluding radon and uranium	2014	1.5	1.5-1.5	0	15	pCi/L	No	Erosion of natural deposits
Beta/Photon emitters	2014	4.4	4.4-4.4	0	4	Mrem/yr	No	Erosion of natural deposits

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

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	.0.31 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. 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 Compounds
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.

Unregulated Contaminates

Unregulated Contaminant monitoring rule (UCMR4)5	Year Sampled	Amount Detected (Average)	Units	Range of Detections	Likely Source of Contamination
2-Methoxyethanol	2019	0.075	Ppb	ND-0.60	Used in a number of consumer products, such as synthetic cosmetics, perfumes, fragrances, hair preparations and skin lotion
Manganese	2019	7.31	Ppb	2.5-17	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	2019	20.59	Ppb	11-49	By-product of drinking water disinfection

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

Disinfectants and disinfection by-products	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Chloramines	2019	2.6	2.5-2.6	4	4	ppm	No	Water additive used to control microbes
Haloacetic Acids (HAA5)	2019	40	25.1 - 51.7	NA	60	ppb	No	By-product of drinking water disinfection
Total Trihalomethanes (TTHM?	2019	56	24.3 - 75.9	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	0.15 NTU	100%	No	Soil Runoff
Highest Single Measurement	1 NTU	.0.9 NTU	No	Soil Runoff

Inorganic Contaminates

Inorganic Contaminates	Collection Date	Highest Level Detected	Range of levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Arsenic	2019	1	0.88-0.88	0	10	ppb	No	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes.
Barium	2019	0.0394	0.0394-0.0394	2	4.0	ppm	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.
Fluoride	2019	0.9	0.89-0.89	4	4.0	ppm	No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Manganese	2019	28	27.7-27.7	150	150	ppb	No	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
Nitrate	2019	0.38	0.38-0.38	10	10	ppm	No	Runoff from fertilizers use; leaching from septic tanks, sewer; erosion of natural deposits
Sodium	2019	13	13-13			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	2019	1	0-1.7	3	3	ppb	No	Runoff from herbicides use on row crops

Highland IL Water Quality Results

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	2017	1.3	1.3	0.086	0	ppm	No	Erosion of natural deposits; Leaching from wood preservatives; Corrosion of household plumbing systems.
Lead	2017	0	15	8.2	1	ppb	No	Corrosion of household plumbing systems, Erosion of natural deposits

Regulated Contaminates

Disinfectants and disinfection by-products	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Chloramines	2019	2.3	2.1-2.3	4	4	ppm	No	Water additive used to control microbes
Haloacetic Acids (HAA5)	2019	34	17.7-50	NA	60	ppb	No	By-product of drinking water disinfection
Total Trihalomethanes (TTHM?	2019	41	18.4-65.4	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	0.29 NTU	No	Soil Runoff

Inorganic Contaminates

Inorganic Contaminates	Collection Date	Highest Level Detected	Range of levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Zinc	2019	0.011	0.011 – 0.011	5	5	ppm	No	Naturally Occurring; discharge from metal
Barium	2019	0.053	0.053 – 0.053	2	2	ppm	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.
Fluoride	2019	0.8	0.821 – 0.821	4	4.0	ppm	No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Nitrate	2019	0.38	0.38-0.38	10	10	ppm	No	Runoff from fertilizers use; leaching from septic tanks, sewer; erosion of natural deposits
Sodium	2019	11	11 – 11			ppm	No	Erosion from naturally occurring deposits. Used in water softener regeneration