

**Annual Drinking Water Quality Report  
For  
CHAPIN  
IL1370050**

Annual Water Quality Report for the period of January 1 to December 31, 2020. 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 Chapin is purchased ground Water Under Direct Influence of Surface Water

For more information regarding this report contact: Dalton Surratt at 217-472-3111

Este informe contiene información muy importante sobre el agua que usted bebe. Tradúzcalo o 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 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 water runoff, and residential uses.

Organic chemical contaminants, including synthetic and volatile organic chemicals, which are by-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 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>.

### Meeting Location

Village of Chapin holds there monthly meetings at village hall 510 Everett Street Chapin, Il 62628 on the 2<sup>nd</sup> Wednesday of each month at 7:00pm.

### Source Water Information

Source Water Name	Type of Water	Report Status	Location
cc 01-RAW GW LINE FROM JACKSONVILLE	FF IL1370200 TP01 GU	Good	Wells at Naples IL

The water source is from Ranney collector well at Naples, IL. The Secondary Source is surface water from Lake Mauvaisterre, Lake Jacksonville.

### 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 contact Steve Edwards (217)435-2527 or Village Hall. 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: JACKSONVILLE 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. Causes of pollution to the lake include nutrients, siltation, suspended solids, and organic enrichment. Primary sources of pollution include agricultural runoff, land disposal (septic systems), and shoreline erosion. Figure 1 shows the watersheds for Lake Jacksonville and Mauvaise Terre Lake and the potential contamination sources located within them. Figure 2 shows the location of the Jacksonville community water wells, the Minimum and Maximum Setback Zones associated with each well and the delineated 5-year Recharge Area. In addition, the potential source of contamination located near the wells are also displayed. Due to the presence of potential source and the unconfined nature of the wells, Illinois EPA considers these wells to be susceptible to contamination.

## 2020 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)	90 <sup>th</sup> Percentile	# Sites Over AL	Units	Violation	Likely Source of Contamination
Copper	07/18/2018	1.3	1.3	1.04	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.

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 margin of safety.

Maximum Contaminant Level or MCL:

The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to MCLGs as feasible using the best available treatment technology.

Maximum residual disinfectant level goal or MRDLG:

The level of a 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.

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 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.

ppb:

Micrograms per liter or parts per billion – or one ounce in 7,350,000 gallons of water

na:

Not applicable

Avg:

Regulatory compliance with some MCLs are based on running annual average of monthly samples

ppm:

Milligrams per liter or part per million – or one ounce in 7,350,000 gallons of water

mrem:

Millirems per year (a measure of radiation absorbed by the body)

Treatment Technique or TT:

A required process intended to reduce the level of a contaminant in drinking water

### 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	12/31/2020	1.1	.49-1.81	MRDLG = 4	MRDL = 4	ppm	N	Water additive used to control microbes.
Haloacetic Acid (HAA5)	2020	32	17.1-52.5	No goal for total	60	ppb	N	By – product of drinking water disinfection.
Total Trihalomethanes (TTHM)	2020	64	42-77.3	No goal for 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	08/06/2018	1.4	1.4 – 1.4	0	10	Ppb	N	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes.
Barium	08/06/2018	0.0719	0.0719 – 0.0719	2	2	ppm	N	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.
Fluoride	08/06/2018	0.64	0.64 – 0.64	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]	2020	1	0.95-0.95	10	10	ppm	N	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
Sodium	08/06/2018	33.8	33.8 – 33.8			ppm	N	Erosion from naturally occurring deposits: Use 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	01/14/2015	1.51	1.51 – 1.51	0	5	pCi/L	N	Erosion of natural deposits.
Gross alpha excluding radon and uranium	01/14/2015	1.8	1.8 – 1.8	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	0.031NTU	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.

**Violations Table**

<b>Chlorine</b>			
Some people who use water containing chlorine well in excess of the MRDL could experience irritating effects to their eyes and nose. Some people who drink water containing chlorine well in excess of the MRDL could experience stomach discomfort.			
Violation Type	Violation Begin	Violation end	Violation Explanation
Monitoring, Routine (DBP), Major	01/01/2020	03/21/2020	We failed to test our drinking water for the contaminant and period indicated. Because of this failure we cannot be sure of the quality of our drinking water during the period indicated.

<b>Revised Total Coliform Rule (RTCR)</b>			
The Revised Total Coliform Rule (RTCR) seeks to prevent waterborne diseases caused by E. coli. E. coli are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Human or animal wastes. Human pathogens in these wastes can cause short-term effects, such as diarrhea, cramps, nausea, headaches.			
Violation Type	Violation Begin	Violation End	Violation Explanation
Monitoring, Routine, Major (RTCR)	03/01/2020	03/21/2020	We failed to test our drinking water for the contaminant and period indicated. Because of this failure, we cannot be sure of the quality of our drinking water during the period indicated.

In 2020, our PWS was sampled as part of the State of Illinois PFAS Statewide Investigation. Eighteen PFDAS compounds were sampled, and none were detected in our finished drinking water. For more information about PFAS health advisories <http://www2.illinois.gov/epa/topics/water-quality/pfas/Pages/pfas-healthadvisory.aspx>

City of Jacksonville  
2020 Regulated Contaminants Detected

<b>Coliform Bacteria</b>							
MCL – Coliform	MCLG	Total Coliform Maximum Contaminant Level	Highest Number of Positive	MCL-Fecal Coliform or E-Coli	Violation	Total # Positive E-Coli or Fecal Coliform Samples	Likely Source of Contaminant
Monthly Samples	0	1 positive monthly sample	1	0	No	0	Naturally present on the environment

--	--	--	--	--	--	--	--

Lead & Copper (Collection Date 8/8/2017)							
	Lead Action Level (AL)	90 <sup>th</sup> Percentile	# Sites Over (AL)	MCLG	Units	Violation?	Likely Source of Contaminant
Lead**	15	<1.0	0	0	ug/L	No	Corrosion of household plumbing system. Erosion of natural deposits
Copper**	1.3	0.0055	0	1.3	ppm	No	Erosion of natural deposits; Leaching from wood preservatives; Corrosion of household plumbing systems

Regulated Contaminants	Highest Level Detected	Range of Levels Detected	Unit of Measurement	MCLG	MCL	Violation?	Likely Source of Contaminant
Disinfectants & Disinfection By-Products							
Free Chlorine	1.4	1.2 – 1.4	ppm	MRDLG=4	MRDL=4	No	Water additive used to control microbes
Haloacetic Acids(HAA5)	24	8.75 – 27.8	ppb	No goal for total	60	No	By – product of drinking water disinfection
Total Trihalomethanes (TTHM)	78	25.61 – 97.4	ppb	No goal for total	80	No	By – product of drinking water disinfection.

\*Not all sample results may have been used for calculating the Highest Level Detected because so results may be part of an evaluation to determine where compliance sampling should occur in the future

Inorganic Contaminants (Sodium is not currently regulated by the USEPA. However, the state has set an MCL for supplies serving a population of 1,000 or more).							
Arsenic	1	1.3 – 6.9	ppb	0	10	No	Erosion of natural deposits; Runoff from orchards; Runoff from grass and electronic production waste.
Barium	0.12	0.0048 – 0.12	ppm	2	2	No	Discharge of drilling wastes; Discharge from metal refineries: Erosion of natural deposits.
Fluoride	0.5	0 – 0.505	ppm	4	4	No	Erosion of natural deposits; Water additive which promotes strong teeth: Discharge from fertilizer and aluminum factories.
Iron	4.5	0 – 4.5	ppm		1	No	This contaminant is not currently regulated by the USEPA. However, the state regulates Erosion of natural deposits.
Manganese	440	0 – 440	ppb	150	150	No	This contaminant is not currently regulated by the USEPA. However, the state regulates Erosion of natural deposits.
Nitrate (measured as Nitrogen)	2	0 – 1.9	ppm	10	10	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
Sodium	24	15 – 30	ppm			No	Erosion of naturally occurring deposits: used in water softener regeneration.
Selenium	3.1	0 – 3.1	ppb	50	50	No	Discharge from petroleum and metal refineries; Erosion of natural deposits; Discharge from mines.

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.

Turbidity	Limit	Level Detected	Violation	Likely Source

	(Treatment Technique)			of Contamination			
Lowest monthly % meeting limit	0.3 NTU	100%	No	Soil Runoff	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.		
Highest Single Measurement	1NTU	0.052 NTU	No	Soil Runoff			
Radioactive Contaminants UNTREATED SOURCE WATER							
Combined Radium 226/228 (Sample Date 9/6/2017)	1.778	0.906-1.778	pCi/L	0	5	No	Erosion of natural deposits

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 contact Rick

Hearin, Superintendent of Operations, at (217)479-4660. 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 state requires us to monitor for certain contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of our data, though accurate, is more than one year old.