



# WATER QUALITY REPORT

JANUARY 1 – DECEMBER 31, 2019

Public Water Supply – ID# IL 1670300

The Village of Chatham is pleased to bring you the annual Water Quality Report for the period of January 1 to December 31, 2019. 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 Chatham is purchased ground water from the South Sangamon Water Commission (SSWC).

For more information regarding this report contact:  
Dustin Patterson at (217) 341-3656.

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

This Consumer Confidence Report (CCR) for calendar year 2019 contains information that is informative and demonstrates our continuing compliance with EPA regulations. Chatham is in frequent communication with the South Sangamon Water Commission (SSWC) relaying Village water quality concerns and recommending treatment improvements to the to ensure the production of a consistent, high quality water. A Water Plant membrane process upgrade in 2019 has resulted in increased plant capacity and an improved product for our water customers. Unidirectional watermain flushing continued in 2019 to ensure high water quality to all areas of the village while providing the Water Department staff with up-close monitoring of water clarity. The conversion from free chlorine to chloramines was hindered by analyzer issues, but we expect to see that change in 2020.

## Source Water and Drinking Water Contaminants

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-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.

The presence of contaminants does not necessarily indicate that water poses a health risk.

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.

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.

## Source Water Assessment

We want our valued customers to be informed about their water quality. If you would like to learn more, you are welcome to attend any of our regularly scheduled meetings. Village Committee meetings are held the second (2<sup>nd</sup>) Tuesday of each month at 6:00 P.M. at Village Hall. Questions regarding your water can be submitted on the Village website using the link supplied. The source water assessment for our supply has been completed by the Illinois EPA. 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://epa.state.il.us/cgi-bin/wp/swap-fact-sheets.pl>

Chatham's source of water is the South Sangamon Water Commission. Based on the information located in the Wellhead Protection Planning Map, no potential sources are located within the source water protection area of the wells. Information provided by the Leaking Underground Storage Tank and Site Remediation Program Sections of Illinois EPA did not indicate any additional sites with on-going remediation(s). The Illinois EPA has determined that the SSWC's Community Water Supply's source water has a high susceptibility to IOC, SOC, and bacteriological contamination. This determination is based on a number of criteria including: land use near the wells, location within a floodplain, well depth, and the available hydrogeologic data. In accordance with the U.S. EPA's Groundwater Rule, SSWC has received two (2) Non-Compliance Advisory letters (NCA) in 2013 for bacteriological detections in wells #5 and #6. The facility addressed the NCA's in a variety of ways such as chlorinating the well, secured well fittings, new sample tap(s), use of outside environmental consultants and reviewing the sampling protocol. While the NCA(s) have now been resolved, monitoring data is continually being tracked in regard to all active potable wells at SSWC. It should be noted, while the community's wells are properly constructed with sound integrity, the location of the wells is within a floodplain and well

depth leaves the potential for bacteriological contamination. However, to date, all potential routes and sanitary defects have been mitigated such that the source water is adequately protected, monitoring data has not indicated a history of disease outbreak and the sanitary survey of the water supply did not indicate a bacteriological contamination threat within 1,000 feet of the source water.

## 2019 REGULATED CONTAMINANTS DETECTED

### Lead and Copper

	Date Sampled	Number of Samples	ALG	Action Level (AL)	90 <sup>th</sup> Percentile	# Sites over AL	Units	Violation	Likely Source of Contamination
<b>Copper</b>	2019	120	1.3	1.3	0.74	0	ppm	N	Erosion of natural deposits; Leaching from wood preservatives; Corrosion of household plumbing systems
<b>Lead</b>	2019	120	0	15	3.6	0	ppb	N	Corrosion of household plumbing systems; erosion of natural deposits

### Lead and Copper Table Definitions:

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

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

### Additional Information regarding Lead

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 at (800) 426-4791 or at <http://www.epa.gov/safewater/lead>.

### Disinfectants & Disinfection By-Products

	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
<b>Chlorine</b>	2019	1.2	1.0 – 1.2	MRDLG = 4	MRDL = 4	ppm	N	Water additive used to control microbes
<b>Haloacetic Acids (HAA5)</b>	2019	24	8.5 – 46.4	No goal for the total	60	ppb	N	By-product of drinking water disinfection
<b>Total Trihalomethanes (TTHM)</b>	2019	47	23.1 – 77	No goal for the total	80	ppb	N	By-product of drinking water disinfection

## Data from the South Sangamon Water Commission

Chatham purchases treated water from the SSWC. The tables below indicate detected contaminants from the finished water at the treatment plant.

### Inorganic Contaminants

	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
<b>Barium</b>	9/24/2018	0.0324	0.0324 - 0.0324	2.0	2.0	ppm	N	Discharge of drilling wastes; discharge from metal refineries; erosion from natural deposits
<b>Fluoride</b>	9/24/2018	0.791	0.791 – 0.791	4.0	4.0	ppm	N	Erosion of natural deposits; water additives which promote strong teeth; discharge from fertilizer and aluminum factories
<b>Iron</b>	9/24/2018	ND	ND		1.0	ppm	N	This contaminant is not currently regulated by USEPA. However, the state regulates. Erosion of natural deposits
<b>Manganese</b>	2019	5	0 – 10	150	150	ppb	N	This contaminant is not currently regulated by USEPA. However, the state regulates. Erosion of natural deposits
<b>Nitrate (measured as nitrogen)</b>	2019	1	0.44 – 0.5	10	10	ppm	N	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
<b>Sodium*</b>	9/24/2018	50.6	50.6 – 50.6			ppm	N	Erosion from naturally occurring deposits: used in water softening regeneration

\*Sodium – There is no state or federal MCL for sodium. Monitoring is required to provide information to consumers and health officials who are concerned about sodium intake due to dietary precautions. If you are on a sodium restricted diet, consult a physician about this level.

### Radioactive Contaminants

	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
<b>Combined Radium 226/228</b>	7/23/2015	1.53	1.53 - 1.53	0	5	pCi/L	N	Erosion of natural deposits
<b>Gross alpha excluding radon &amp; uranium</b>	7/23/2015	1.12	1.12 - 1.12	0	15	pCi/L	N	Erosion of natural deposits

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.

## Data from City Water, Light & Power

Chatham periodically purchases treated water from the City of Springfield, City Water, Light & Power (CWLP). The tables below indicate detected contaminants from the finished water at the treatment plant.

### Inorganic Contaminants

	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
<b>Barium</b>	2019	0.022	NA	2.0	2.0	ppm	N	Discharge of drilling wastes; discharge from metal refineries; erosion from natural deposits
<b>Fluoride</b>	2019	0.7	0.6 – 0.7	4.0	4.0	ppm	N	Erosion of natural deposits; water additives which promote strong teeth; discharge from fertilizer and aluminum factories
<b>Nitrate (measured as nitrogen)</b>	2019	6.4	ND – 6.4	10	10	ppm	N	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
<b>Sodium*</b>	2019	12	NA			ppm	N	Erosion from naturally occurring deposits: used in water softening regeneration

### Disinfectants and Disinfection By-Products

	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
<b>Chloramines (as Cl<sub>2</sub>)</b>	2019	2	2 - 2	MRDLG = 4	MRDL = 4	ppm	N	Water additive used to control microbes

### Microbiological Contaminants

	Collection Date	Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
<b>Turbidity</b>	2019	0.26	NA	NA	0.3	NTU	N	Soil runoff

100% of the samples were below the TT value of 0.3. A value less than 95% constitutes a TT violation. The highest single measurement was 0.27 NTU. Any measurement in excess of 1 is a violation unless otherwise approved by the state.

The percentage of TOC removal was measured each month and CWLP met all TOC removal requirements.

## Data from City Water, Light & Power (cont.)

### Synthetic Organic Contaminants Including Pesticides and Herbicides

	Collection Date	Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Atrazine	2019	1	ND - 1	3	3	ppb	N	Runoff from herbicide used on row crops

### Unregulated Contaminant Monitoring

A maximum contaminant level for these contaminants has not been established by either state or federal regulations, nor has mandatory health effects language been set. The purpose of unregulated contaminant monitoring is to assist USEPA in determining the occurrence of unregulated contaminants in drinking water and whether future regulations are warranted.

	Highest Level Found	Range of Levels Found
HAA6Br (ppb)	5.07	3.72 – 5.88
HAA9 (ppb)	31.69	24.49 – 36.69
Manganese (ppb)	2.9	ND – 2.9

## Definition of Terms

Avg: Regulatory compliance with some MCL's are based on running annual average or monthly samples.

Level 1 Assessment: A Level 1 assessment is a study of the water system to identify potential problems and determine (if possible) why total coliform bacteria have been found in our water system.

Level 2 Assessment: A Level 2 assessment is a very detailed study of the water system to identify potential problems and determine (if possible) why an E. coli MCL violation has occurred and/or why total coliform bacteria have been found in our water system on multiple occasions.

Maximum Contaminant Level Goal or MCLG: The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLG's allow for a margin of safety.

Maximum Contaminant Level or MCL: The highest level of a contaminant that is allowed in drinking water. MCL's are set as close to the MCLG's as feasible using the best available treatment technology.

Maximum residual disinfectant level goal or MRDLG: The level of drinking water disinfectant below which there is no know 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

ND: Not detected

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

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

NTU: Nephelometric Turbidity Units