

Salem Municipal Utilities
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2019 CONSUMER CONFIDENCE REPORT

Salem Municipal Utilities
201 East Market Street
Salem, IN. 47167

This is Your Annual Report on Drinking Water Quality.

Important information for the Spanish-speaking population

Este informe contiene información muy importante sobre la calidad del agua potable que usted consume. Por favor traduzcalo, o hable con alguien que entienda bien y pueda explicarle.

Is our water safe?

This brochure is a snapshot of the water quality of the drinking water that we provided last year. Included as part of this report are details about where the water that you drink comes, what it contains, and how it compares to Environmental Protection Agency (EPA) and Indiana standards. We are committed to provide you with all the information that you need to know about the quality of the water that you drink.

Do I need to take special precautions?

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-Compromised people, such as people with cancer undergoing chemotherapy, people who have undergone organ transplant, people with HIV/AIDS or other kind of 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 has set guidelines with appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants which are available from the Safe Drinking Water Hotline at (800) 426-4791.

Where does our water come from?

Salem Water Works has two water treatment facilities with a combined treatment capacity of four million gallons a day. Both plants utilize the conventional treatment processes of Disinfection, Flocculation/Sedimentation, and filtration. We use Chlorine for disinfection, *Brennfloc cc2358* for sedimentation, Carbon to remove taste and odor, Sodium Peroxide to oxidize organics and Fluoride for dental health. The John Hay treatment facility was built in 1968 to increase Salem's water supply. It has a designed treatment capacity of three million gallons per day. The John Hay facility has a 210 acre surface supply lake and typically treats over two million gallons per day. Lake John Hay is located approximately seven miles north of Salem. Salem Water Works has a combined storage capacity of three million gallons and we provide water for Salem, East Washington, and Pekin. All of our treatment plant personnel are State Certified and follow strict water treatment guidelines to provide quality drinking water to our community.

Why are there contaminants in my drinking water?

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants.

Water Quality Data

The tables in this report list all the contaminants that we detected during the 2016 calendar year. The presence of these contaminants in the water does not necessarily indicate that the water poses a health risk. Unless otherwise indicated, the data presented in this table is from testing between January 1 and December 31, 2019. The Indiana Department of Environmental Management (IDEM) requires us to monitor for certain contaminants at a frequency less than once per year because the concentrations of these contaminants are not expected to vary significantly from one year to another. Some of the data, though representative of the water quality, may however be more than one year old.

The presence of these contaminants does not necessarily indicate that the water poses a health risk or that it is not suitable for drinking. More information about contaminants and their potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline at (800) 426-4791.

The sources of drinking water (both tap 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, or can pick up substances resulting from the presence of animals or from human activity.

Contaminants that may be present in the raw, untreated water may 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 that result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, and mining or farming operations.

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 operations, and can also result from gas stations, urban storm water runoff, and septic systems

Radioactive Contaminants, which can be naturally-occurring or the result of oil and gas production and mining activities.

In order to ensure that tap water is safe to drink, the EPA prescribes regulations that limit the amount of certain contaminants that may be present in the water provided by public drinking water systems. We are required to treat our water according to EPA's regulations. Moreover, FDA regulations establish limits for contaminants that may be present in bottled water, which must provide the same level of health protection for public health.

Our Watershed Protection Efforts

Our water system is working with the community to increase awareness of better waste disposal practices to further protect the sources of our drinking water. We are also working with other agencies and local watershed groups to educate the community on ways to keep our water safe.

Definitions: The tables within this document contain scientific terms and measures, some of which may require explanation

ALG: Action Level Goal, 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.

AL: Action Level, the concentration of a contaminant which, if exceeded, triggers treatment or other requirements or action which a system must follow.

MCLG: Maximum Contaminant Level Goal, the level of a contaminant in drinking water below which there is no known or expected risk to health

MCLGs allow for a margin of safety.

MCL: Maximum Contaminant Level, the highest level of a contaminant that is allowed in drinking water.

MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

MRDLG: Maximum Residual Disinfectant level Goal, the level of drinking water disinfectant below which there is no known or expected risk to health.

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

MRDL: Maximum Residual Disinfectant Level, the highest level of disinfectant allowed in drinking water.

There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

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

ppm: milligrams per liter or parts per million – or one ounce in 7,350 gallons of water.

ppb: micrograms per liter or parts per billion – or one ounce in 7,350,000 gallons of water.

n/a: not applicable

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

NTU: Nephelometric Turbidity Unit, a measure of the clarity (or cloudiness) of water.

pCi/L: picocuries per liter, a measure for radiation.

P*: Potential violation, one that is likely to occur in the near future once the system have sampled for four quarters.

ND: Not Detected, the result was not detected at or above the analytical method detection level.

Special Note on 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. Our system is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been setting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using the 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>.

Special Note on Turbidity: **The Turbidity treatment technique (TT) requires that at least 95% of the total combined effluent turbidity samples shall not exceed 0.3 NTU (1.0 NTU for slow sand and diatomaceous earth filtration systems) At least 95% is required to be in compliance. In addition, the maximum turbidity level cannot exceed 1.0 NTU at anytime.

Special Note on TTHm and HAA5: Some people who drink water containing Haloacetic Acids or Total Trihalomethanes in excess of the MCL over many years may have an increased risk of getting cancer.

Please Share This Information

Large water volume customers (like apartment complexes, hospitals, schools, and/or industries) are encouraged to post extra copies of this report in conspicuous locations or to distribute them to your tenants, residents, patients, students, and/or employees. This "good faith" effort will allow non-billed customers to learn more about the quality of the water that they consume.

Public Involvement Opportunities

If you have any questions about the contents of this report, please contact Mr. Russell Brown at 812-883-6146. Or you can join us at our Water Board Meeting, which are regularly held on the second Monday of the month at City Hall in the Council Chamber at 6:30pm.

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	2019	1	1 - 1	MRDLG = 4	MRDL = 4	ppm	N	Water additive used to control microbes.
Haloacetic Acids (HAA5)	2019	58	42 - 72.9	No goal for the total	60	ppb	Y	By-product of drinking water disinfection.
Total Trihalomethanes (TTHM)	2019	76	46.3 - 130	No goal for the 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
Fluoride	2019	0.1	0.073 - 0.073	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]	2019	1	0.942 - 0.942	10	10	ppm	N	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
Radioactive Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Gross alpha excluding radon and uranium	2019	0.09	0.09 - 0.09	0	15	pCi/L	N	Erosion of natural deposits.
Synthetic organic contaminants including pesticides and herbicides	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Atrazine	2019	2.01	0 - 2.01	3	3	ppb	N	Runoff from herbicide used on row crops.
Di (2-ethylhexyl) phthalate	2019	1.47	0 - 1.47	0	6	ppb	N	Discharge from rubber and chemical factories.

Violations Table

Consumer Confidence Rule			
The Consumer Confidence Rule requires community water systems to prepare and provide to their customers annual consumer confidence reports on the quality of the water delivered by the systems.			
Violation Type	Violation Begin	Violation End	Violation Explanation
CCR ADEQUACY/AVAILABILITY/CONTENT	10/01/2018	02/05/2019	We failed to provide to you, our drinking water customers, an annual report that adequately informed you about the quality of our drinking water and the risks from exposure to contaminants detected in our drinking water.

Haloacetic Acids (HAA5)			
Some people who drink water containing haloacetic acids in excess of the MCL over many years 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.

Revised Total Coliform Rule (RTCR)			
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 pathogens in these wastes can cause short-term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a greater health risk for infants, young children, the			
Violation Type	Violation Begin	Violation End	Violation Explanation
MONITORING, ROUTINE, MINOR (RTCR)	01/01/2019	01/31/2019	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.

Turbidity			
	Limit (Treatment Technique)	Level Detected	Violation
Highest single measurement	1 NTU	0.28 NTU	N
Lowest monthly % meeting limit	0.3 NTU	100%	N

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

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.

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	08/09/2019	1.3	1.3	0.307	0	ppm	N	Erosion of natural deposits; Leaching from wood preservatives; Corrosion of household plumbing systems.
Lead	08/09/2019	0	15	2.5	0	ppb	N	Corrosion of household plumbing systems; Erosion of natural deposits.

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.

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.

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

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.

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 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

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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.