Drinking Water Report

2019 Consumer Confidence Report

Jackson Water Utility

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The Jackson Water Utility is pleased to provide you with the 2019 Drinking Water Report. We want to keep you informed about the quality of water and services that are delivered to you every day. We are committed to serving our users by meeting the daily challenges of providing a safe and adequate supply of water in all circumstances.

WATER SOURCE - 100% ground water, obtained from five (5) active producing wells, which two (2) of the wells are artesian flowing. Other facilities include two (2) water towers for a combined storage capacity of 700,000 gallons and one (1) booster station. The utility uses chlorine as a disinfecting agent and adds a blended phosphate to the drinking water. This blend of phosphates is a sequestering agent used to control red water, discoloration, scale deposits, and corrosion of watermains, service lines and plumbing. Phosphorus is a major component in a person's diet and is found in almost all foods. The National Sanitation Foundation and the Underwriters Laboratories approve this food grade formula for use in public drinking water. The utility also maintains a total of approximately 50 miles of water main and 3384 customers connected to those mains. In 2019, the water utility pumped a total of 253 million gallons of water.

HEALTH and EDUCATION – The sources of drinking water, both tap water and bottle water, include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels 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. All sources of drinking water are subject to potential contamination by constituents that are naturally occurring or are manmade. Those constituents can be microbes, organic or inorganic chemicals, or radioactive materials. Please remember that the presence of these constituents does not necessarily pose a health risk. The *Jackson Water Utility* routinely monitors for constituents in your drinking water according to Federal and State laws. The following table shows the results of our monitoring as of December 31st, 2019. All drinking water may be reasonably expected to contain at least small amounts of some constituents. 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 microbiological contaminants are available from the Safe Drinking Water Hotline 1-800-426-4791.

WATER SYSTEM INFORMATION AND OPPORTUNITIES FOR INPUT - The Jackson Water Utility is pleased to report that our system had no violations and that the drinking water is safe and meets federal and state requirements. If you have any questions about this report or your water utility, please contact *Brian Kober, P.E., Director of Public Works or Dan Rathke, Water Supervisor at 262-677-0707.* The Jackson Water Utility wants the valued customers to be informed about their water utility. In the continuing efforts to maintain a safe and dependable water supply, there may be times necessary to make improvements to the water system. The costs of these improvements may be reflected in the rate structure. Rate adjustments may be necessary in order to address these improvements. Also, you are invited to attend any of our regularly scheduled Village Board meetings. Village board meets the second Tuesday of each month at 7:30 PM, and the Board of Public Works meets the last Tuesday of each month at 7:30 PM.

Thank you for allowing the Jackson Water Utility to continue providing you with clean, quality water. The Jackson Water Utility works around the clock to provide top quality water to every tap. We ask that all our customers help us protect our water sources, which is the heart of our community, our way of life and our children's future.

DEFINITIONS - In this table you will find many terms and abbreviations you might not be familiar with. To help you better understand these terms we've provided the following definitions:

Non-Detects (ND) - laboratory analysis indicates that the constituent is not present.

Parts per million (ppm) *or Milligrams per liter (mg/l)* - one part per million corresponds to one minute in two years or a single penny in $10,000.

Parts per billion (ppb) *or Micrograms per liter (ug/l)* - one part per billion corresponds to one minute in 2,000 years, or a single penny in $10,000,000.

Parts per trillion (ppt) *or Nanograms per liter* ***(nanograms/l)*** - one part per trillion corresponds to one minute in 2,000,000 years, or a single penny in $10,000,000,000.

Parts per quadrillion (ppq) *or Picograms per liter* ***(picograms/l)*** - one part per quadrillion corresponds to one minute in 2,000,000,000 years or one penny in $10,000,000,000,000.

Picocuries per liter (pCi/L) - picocuries per liter is a measure of the radioactivity in water.

Millirems per year (mrem/yr) - measure of radiation absorbed by the body.

Million Fibers per Liter (MFL) - million fibers per liter is a measure of the presence of asbestos fibers that are longer than 10 micrometers.

Nephelometric Turbidity Unit (NTU) - nephelometric turbidity unit is a measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

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

Treatment Technique ***(TT)*** - (mandatory language) A treatment technique is a required process intended to reduce the level of a contaminant in drinking water.

Maximum Contaminant Level - (mandatory language) The "Maximum Allowed" (MCL) is 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 - (mandatory language) The "Goal" (MCLG) is the level of a contaminant in drinking water below that there is no known or expected risk to health. MCLG's allow for a margin of safety.

Maximum residual disinfectant level – (MRDL) The highest level of disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfection is necessary for control of microbial contaminants.

Maximum residual disinfectant level goal – (MRDLG) The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLG's do not reflect the benefits of the use of disinfectants to control microbial contaminants.

MCL's are set at very stringent levels. To understand the possible health effects described for many regulated constituents, a person would have to drink 2 liters of water every day at the MCL level for a lifetime to have a one-in-a-million chance of having the described health effect.

Total Coliform: The Total Coliform Rule (TCR) requires water systems to meet a stricter limit for coliform bacteria. Coliform bacteria are usually harmless, but their presence in water can be an indication of disease-causing bacteria. When coliform bacteria are found, special follow-up tests are done to determine if harmful bacteria are present in the water supply. If this limit is exceeded, the water supplier must notify the public by newspaper, television or radio. To comply with the stricter

regulation, we have increased the average amount of chlorine in the distribution system.

Nitrates: As a precaution we always notify physicians and health care providers in this area if there is ever a higher than normal level of nitrates in the water supply.

Lead: Lead in drinking water is rarely the sole cause of lead poisoning, but it can add to a person's total lead exposure. All potential sources of lead in the household should be identified and removed, replaced or reduced.

Hardness: Water described as "hard" is high in dissolved minerals, specifically calcium and magnesium. Hard water is not a health risk, but a nuisance because of mineral buildup on plumbing fixtures and poor soap and/ or detergent performance.

What is the hardness level of Jackson's Municipal Water System? Jackson's water hardness is 22 grains/gallon or 380 parts/million; the iron content is 0.4 milligrams per liter or 1/2 part/million.

TEST RESULTS

Microbiological Contaminants

Contaminant	Violation Y/N	Level Detected	Unit Measurement	MCLG	MCL	Year Sampled	Likely Source of Contamination
Total Coliform Bacteria	N	0		0	presence of coliform bacteria in 5% of monthly samples	2019	Naturally present in the environment
Fecal coliform and *E.coli*	N	0		0	a routine sample and repeat sample are total coliform positive, and one is also fecal coliform or *E. coli* positive	2019	Human and animal fecal waste

Inorganic Contaminants

Antimony	N	ND	ppb	6	6	2014	Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder
Arsenic	N	7	ppb	N/A	10	2017	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes
Barium	N	0.097	ppm	2	2	2017	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Beryllium	N	ND	ppb	4	4	2014	Discharge from metal refineries and coal-burning factories; discharge from electrical, aerospace, and defense industries
Cadmium	N	0.3	ppb	5	5	2014	Corrosion of galvanized pipes; erosion of natural deposits; discharge from metal refineries; runoff from waste batteries and paints
Chromium	N	4	ppb	100	100	2014	Discharge from steel and pulp mills; erosion of natural deposits
Copper	N*	0.57	ppm	1.3	AL=1.3	2017	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Fluoride	N	0.2	ppm	4	4	2017	Erosion of natural deposits; Water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Lead	N*	2.7	ppb	0	AL=15	2017	Corrosion of household plumbing systems, erosion of natural deposits
Mercury (inorganic)	N	ND	ppb	2	2	2014	Erosion of natural deposits; discharge from refineries and factories; runoff from landfills; runoff from cropland
Nickel	N	2.7	ppb		100	2017	Nickel occurs naturally in soils, ground water and surface waters and is often used in electroplating stainless steel and alloy products
Nitrate (NO3-N)	N	2.4	ppm	10	10	2019	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Nitrate (NO2-N)	N	0.014	ppm	1	1	2015	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Selenium	N	ND	ppb	50	50	2014	Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines
Sodium	N	21	ppm	N/A	N/A	2017	N/A
Thallium	N	0.2	ppb	0.5	2	2014	Leaching from ore-processing sites; discharge from electronics, glass, and drug factories

*** systems exceeding a lead and/or copper action level must take action to reduce lead and/or copper in the drinking water. The lead and copper values represent the 90th percentile of all compliance samples collected. If you want information on the number of sites, please contact the Jackson Water Utility.**

Synthetic Organic Contaminants including Pesticides and Herbicides

Contaminant	Violation Y/N	Level Detected	Unit Measurement	MCLG	MCL	Year Sampled	Likely Source of Contamination
2,4-D	N	ND	ppb	70	70	2014	Runoff from herbicide used on row crops
2,4,5-TP (Silvex)	N	ND	ppb	50	50	2014	Residue of banned herbicide
Acrylamide	N	ND		0	TT	2014	Added to water during sewage/wastewater treatment
Alachlor	N	ND	ppb	0	2	2014	Runoff from herbicide used on row crops
Atrazine	N	ND	ppb	3	3	2014	Runoff from herbicide used on row crops
Carbofuran	N	ND	ppb	40	40	2014	Leaching of soil fumigant used on rice and alfalfa
Chlordane	N	ND	ppb	0	2	2014	Residue of banned termiticide
Dalapon	N	ND	ppb	200	200	2014	Runoff from herbicide used on rights of way
Di(2-ethylhexyl)adipate	N	ND	ppb	400	400	2014	Discharge from chemical factories
Di(2-ethylhexyl)phthalate	N	1.5	ppb	0	6	2014	Discharge from rubber and chemical factories
Dibromochloropropane	N	ND	nanograms/l	0	200	2014	Runoff/leaching from soil fumigant used on soybeans, cotton, pineapples, and orchards
Dinoseb	N	ND	ppb	7	7	2014	Runoff from herbicide used on soybeans and vegetables
Diquat	N	ND	ppb	20	20	2014	Runoff from herbicide use
Endothall	N	ND	ppb	100	100	2014	Runoff from herbicide use
Endrin	N	ND	ppb	2	2	2014	Residue of banned insecticide
Epichlorohydrin	_	_		0	TT	2014	Discharge from industrial chemical factories; an impurity of some water treatment chemicals
Ethylene dibromide	N	ND	nanograms/l	0	50	2014	Discharge from petroleum refineries
Glyphosate	N	ND	ppb	700	700	2014	Runoff from herbicide use
Heptachlor	N	ND	nanograms/l	0	400	2014	Residue of banned termiticide
Heptachlor epoxide	N	ND	nanograms/l	0	200	2014	Breakdown of heptachlor
Hexachlorobenzene	N	ND	ppb	0	1	2014	agricultural chemical factories
Hexachlorocyclo-pentadiene	N	ND	ppb	50	50	2014	Discharge from chemical factories
Lindane	N	ND	nanograms/l	200	200	2014	Runoff/leaching from insecticide used on cattle, lumber, gardens
Methoxychlor	N	ND	ppb	40	40	2014	Runoff/leaching from insecticide used on fruits, vegetables, alfalfa, livestock
Oxamyl [Vydate]	N	ND	ppb	200	200	2014	Runoff/leaching from insecticide used on apples, potatoes and tomatoes
PCBs [Polychlorinated biphenyls]	N	ND	nanograms/l	0	500	2014	Runoff from landfills; discharge of waste chemicals
Pentachlorophenol	N	ND	ppb	0	1	2014	Discharge from wood preserving factories
Picloram	N	ND	ppb	500	500	2014	Herbicide runoff
Simazine	N	ND	ppb	4	4	2014	Herbicide runoff
Toxaphene	N	ND	ppb	0	3	2014	Runoff/leaching from insecticide used on cotton and cattle

Volatile Organic Contaminants

Contaminant	Violation Y/N	Level Detected	Unit Measurement	MCLG	MCL	Year Sampled	Likely Source of Contamination
Benzene	N	ND	ppb	0	5	2015	Discharge from factories; leaching from gas storage tanks and landfills
Carbon tetrachloride	N	ND	ppb	0	5	2015	industrial activities
Chlorobenzene	N	ND	ppb	100	100	2015	chemical factories
o-Dichlorobenzene	N	ND	ppb	600	600	2015	Discharge from industrial chemical factories
p-Dichlorobenzene	N	ND	ppb	75	75	2015	Discharge from industrial chemical factories
1,2-Dichloroethane	N	ND	ppb	0	5	2015	Discharge from industrial chemical factories
1,1 - Dichloroethylene	N	ND	ppb	7	7	2015	Discharge from industrial chemical factories
cis-1,2Dichloroethylene	N	ND	ppb	70	70	2015	Discharge from industrial chemical factories
trans-1,2Dichloroethylene	N	ND	ppb	100	100	2015	Discharge from industrial chemical factories
Dichloromethane	N	.3 Average	ppb	0	5	2015	Discharge from pharmaceutical and chemical factories
1,2-Dichloropropane	N	ND	ppb	0	5	2015	Discharge from industrial chemical factories
Ethylbenzene	N	ND	ppb	700	700	2015	Discharge from petroleum refineries
Styrene	N	ND	ppb	100	100	2015	Discharge from rubber and plastic factories; leaching from landfills
Tetrachloroethylene	N	ND	ppb	0	5	2015	factories and dry cleaners
1,2,4-Trichlorobenzene	N	ND	ppb	70	70	2015	Discharge from textile-finishing factories
1,1,1 - Trichloroethane	N	ND	ppb	200	200	2015	other factories
1,1,2 - Trichloroethane	N	ND	ppb	3	5	2015	Discharge from industrial chemical factories
Trichloroethylene	N	ND	ppb	0	5	2015	Discharge from metal degreasing sites and other factories
Toluene	N	ND	ppm	1	1	2015	Discharge from petroleum factories
Vinyl Chloride	N	ND	ppb	0	2	2015	Leaching from PVC piping; discharge from plastics factories
Xylenes	N	ND	ppm	10	10	2015	Discharge from petroleum factories; discharge from chemical factories

Disinfection Byproducts Contaminants

TTHM	N	24	ppb	0	80	2019	By-products of drinking water chlorination
HAA5	N	13	ppb	60	60	2019	By-products of drinking water chlorination

Unregulated Contaminants

Bromodichloromethane	N	4.3	ppb	N/A	N/A		N/A
Bromoform	N	0.18	ppb	N/A	N/A		N/A
Chloroform	N	12	ppb	N/A	N/A		N/A
Chloromethane	N	0.14	ppb	N/A	N/A		N/A
Dibromochloromethane	N	1.7	ppb	N/A	N/A		N/A

Radioactivity

Contaminant	Violation Y/N	Level Detected	Unit Measurement	MCLG	MCL		Likely Source of Contamination
Beta/photon emitters	N	ND	mrem/yr	0	4	2014	Decay of natural and man-made deposits
Alpha emitters	N	2.1	pCi/1	0	15	2014	Erosion of natural deposits
Combined radium	N	1.4	pCi/1	0	5	2014	Erosion of natural deposits