

Jasper Waterworks and Sewer Board, Inc.

2019 Annual Water Quality Report

The Jasper Waterworks and Sewer Board is pleased to present our 2019 Annual Water Quality Report. This publication is intended to keep you, our customers, informed on the issues concerning water and wastewater service provided by the Board. An important part of this communication is the Consumer Confidence Report, which is a requirement of the Safe Drinking Water Act. In 1974, the Safe Drinking Water Act (SDWA) was signed into law requiring all water systems that serve the public to meet national standards for water quality. These standards set limits for certain contaminants and require all public water systems to monitor for these contaminants. The Jasper Waterworks and Sewer Board routinely tests for these constituents in your drinking water according to federal and state laws. The table in this report shows the monitoring results beginning January 1, 2018 through December 31, 2018. Please review the report carefully. We feel that this information should assure you that your drinking water quality is among the best available in Alabama.

Federal regulatory changes will require the Board to upgrade treatment facilities at significant cost in order to meet new standards for both water and wastewater. The Board is committed to maintaining reasonable rates for our customers while implementing these expensive improvements.

Another goal of the Waterworks and Sewer Board is to become more responsive to our customers in all aspects of our services. We are committed to treating every customer in an efficient and courteous manner.

The Consumer Confidence Report summarizes the results of our extensive monitoring and testing for a wide array of potentially harmful contaminants and chemicals. We are proud to say we meet or exceed all drinking water requirements and you can be certain your water is safe.

We want our customers to be well informed about our operations and the services we provide. If you have any questions concerning water quality or any of the information presented in this report, please contact General Manager Jason Langley at 221-2141 or visit our website www.jwwsb.org. You may also attend the monthly board meetings held on the third Tuesday of each month at 6:00 P.M. at the board office located at 1620 Alabama Avenue.

Sources of Water

The Mulberry Fork of the Warrior River is the source of water supplied to all customers of the Jasper Waterworks and Sewer Board. The Alabama Department of Environmental Management classifies our raw water source as a Surface Water Source.

Source Water Assessment

The Jasper Waterworks and Sewer Board has completed an extensive source water assessment as required by the Alabama Department of Environmental Management. These sites pose no significant risk to our customers. Anyone wishing to view this report should contact the Board Office at 221-2141. It has been determined by the results of the assessment that our source water susceptibility ranking has a *LOW* potential.

Laye – Williams Filter Plant

Raw water from the Mulberry Fork is pumped to the water treatment plant where it is aerated to prevent taste and odor problems. Chlorine Dioxide is fed in the raw water either at the raw water pump station or prior to the rapid mix basin as a pre-oxidant to reduce disinfection by-product formation and to address potential taste and odor issues. Lime is added for pH adjustment and potassium permanganate for aid in organic removal. As water enters the rapid mix chamber, alum is added as a coagulant aid. The water flows through three flocculation basins and three settling basins prior to entering the rapid sand filters. Chlorine is added after filtration for disinfection and fluoride for protection of teeth. Finished water is stored in clear wells with a total storage capacity of 4,785,000 gallons. The water is then pumped from the clear wells to the transmission and distribution system. The Laye – Williams Filter Plant is currently capable of processing 18 million gallons of water per day (MGD). The plant capacity is projected to meet the potable water needs of the Board for several years.

A Brief History of the Jasper Waterworks and Sewer Board

The Waterworks Board of the city of Jasper was formed in 1942 as a nonprofit municipal corporation. The Board is responsible for the operation, maintenance and management of the water system. In 1949, the gas system was added to the responsibilities of the Board, which became known as the Waterworks and Gas Board of the City of Jasper. In 1971, the Board took over the operation and maintenance of the wastewater collection and treatment systems for the City of Jasper and was renamed Jasper Utilities Board. The gas system was sold to Alagasco in 1988 and in 1991 the Board's title was changed to its present designation. The waterworks system has been under continuous management of the Board for more than 60 years. The Board comprises five members appointed by the Jasper City Council.

The original water treatment facility, located in Cordova, was constructed in the 1930's and served the City of Jasper until the Laye – Williams Filter Plant was constructed in 1977, with additions and improvements being made in 1988, 1995, and 1999. The water treatment facility has been named the "**BEST OPERATED PLANT**" on several occasions. The current wastewater treatment facility was constructed in 1961 and later expanded in 1987 and 1996.

The Jasper Waterworks and Sewer Board Fact and Figures:

- 341 Miles of Water Mains in Service.
- 18 Million Gallons per Day of Water Treatment Capacity.
- 9 Water Storage Tanks.
- 8.9 Million Gallons of Water Storage Capacity.
- 848 Public Fire Hydrants.
- 87 Miles of Sewer Main in Service.
- 4.8 Million Gallons per Day of Wastewater Treatment Capacity.

Contaminants in Drinking Water

As you can see by the table, our system had no violations. The Jasper Waterworks & Sewer Board is proud that your drinking water meets or exceeds all Federal and State requirements. We have learned through our monitoring and testing that some constituents have been detected.

The EPA has determined that your water **IS SAFE** at these levels. All sources of drinking water are subject to potential contamination by constituents that are naturally occurring or manmade. 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 radioactive material, and it can pick up substances resulting from the presence of animals or from human activities. Substances can be microbes, organic or inorganic chemicals, or radioactive materials. All drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline at 1-800-426-4791.

Health Information

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 (Environmental Protection Agency)/CDC (Center of Disease Control) guidelines on appropriate means to lessen the risk of infection by cryptosporidium and other microbiological contaminants are available from the Safe Drinking Water Hotline (800-426-4791). All Drinking water, including bottled drinking water, may be reasonably expected to contain at least small amounts of some constituents. It's important to remember that the presence of these constituents does not necessarily pose a health risk.

Based on a study conducted by ADEM with the approval of the EPA a statewide waiver for the monitoring of asbestos and dioxin was issued. Thus, monitoring for these contaminants is not required.

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. The Jasper Waterworks and Sewer Board is responsible for providing high quality drinking water, but 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>.

Additional Facts on Lead

- Lead is a naturally-occurring metal that for most of the 20th century was used regularly as a component of paint, piping (including water service lines), solder, brass, and until the 1980s, as a gasoline additive. We no longer use lead in many of these products, but older products – such as paints and plumbing fixtures in older houses – that contain lead remain. EPA and the U.S. Centers for Disease Control (CDC) report that lead paint (and the contaminated dust and soil it generates) is the leading source of lead exposure in older housing.
- While lead is rarely present in water coming from a treatment plant, it can enter tap water through corrosion of some plumbing materials.
- A number of aggressive and successful steps have been taken in recent years to reduce the occurrence of lead in drinking water.
 - ✓ In 1986, Congress amended the national Safe Drinking Water Act to prohibit the use of pipe, solder or flux containing high lead levels.
 - ✓ The Lead Contamination Control Act of 1988 led schools and day-care centers to repair or remove water coolers with lead-lined tanks. EPA provided guidance to inform and facilitate their action.
- Since the implementation of the Lead and Copper Rule (1991), many community drinking water systems are required to actively manage the corrosivity of water distributed to customers. In addition, community water systems conduct routine monitoring at selected houses that have lead service lines and lead solder. If more than 10 percent of the homes tested have elevated lead levels (defined as more than 15 parts per billion), water providers must notify their consumers via several means. They must also take steps to reduce the problem, including improving corrosion control and possibly replacing lead service lines that contribute to lead contamination. (http://www.epa.gov/OGWDW/lcmmr/pdfs/qrg_Lcmmr_2004.pdf).
- You can't see, smell or taste lead in your water. Testing at the tap is the only way to measure the lead levels in your home or workplace. If you choose to have your tap water tested, be sure to use a properly certified laboratory. Testing usually costs between \$20 and \$100.

On-Line Resources

1. U. S. Environmental Protection Agency
Lead Hotline – The National Lead Information Center
<http://epa.gov/lead/pubs/nlic.htm>
2. U. S. Environmental Protection Agency
"Lead in Drinking Water"
<http://eps.gov/safewater/lead/index.html>
3. U. S. Centers for Disease Control and Prevention
"Lead and Drinking Water from Private Wells"
<http://www.cdc.gov/ncidod/dpd/healthywater/factsheets/lead.htm>
4. National Center For Environmental Health
"Lead in Water: Questions and Answers"
<http://www.cdc.gov/nceh/lead/faq/leadinwater.htm>
5. Mayo Clinic
"Lead Poisoning"
<http://www.mayoclinic.com/health/lead-poisoning/FL00068>
6. National Safety Council
"Lead Poisoning"
<http://www.nsc.org/library/facts/lead.htm>
7. American Water Works Association
Drinktap.org – Lead in Water
<http://drinktap.org/consumerdnn/Home/WaterInformation/WaterQuality/LeadinWater/tabid/70/Default.aspx>
8. American Water Works Association
"Lead and Drinking Water"
<http://www.awwa.org/Government/Content.cfm?ItemNumber=1063&nayItemNumber=3832>

Things You Can Do to Insure Reliable Operation of Your Water and Wastewater Systems:

If you need your water turned off at the meter, please call (205) 221-6031. Do not operate the meter cut off: We will be happy to dispatch a service worker to do this for you.

Customers should install a cut off valve on their service line. If you do not have a valve on your service line, please have one installed.

Never tamper or attempt to remove your meter. If you believe service is required, call (205) 221-6031.

Please do NOT flush items other than sanitary waste into the sewer. Objects such as plastics, towels, wood, and metal can cause obstructions in your service line and in the sewer main.

DISPOSE OF GREASE IN THE PROPER MANNER...NOT IN THE SANITARY SEWER.

Grease builds up over a short period of time clogging sewer lines. Avoid costly repairs and unhealthy sewer backups...**DON'T POUR GREASE DOWN THE DRAIN!**

Billing and Paying Your Bill

Billing is monthly - Customers receive one bill for all Jasper Waterworks and Sewer Board services. If payment is mailed or dropped into the depository, please include the account number on your check and enclose your payment stub. Payment can be made at our Main Office Lobby located at 1620 Alabama Avenue. Bills can be paid on-line at www.jwwsb.org or by phone @ 1-855-417-9069 with credit card or E-Check. Payment by automatic bank draft is available by contacting Customer Service at 221-2141. An after-hours depository is available at the Main Office on the north side of the building.

Jasper Waterworks & Sewer Board, Inc.

Jason Langley - General Manager

Haig Wright – Chairman

Al McAdams – Vice-Chairman

Bob Forbus - Board Member

Fred Webb - Board Member

Phillip Lee - Board Member

If you would like to review this report online please visit us at www.jwwsb.org

Definitions

In the following table you will find many terms and abbreviations that may not be familiar to you. To help you better understand these terms we have provided the following definitions.

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 - One part per billion corresponds to one minute in 2,000 years, or a single penny in \$10,000,000.

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, which a water system must follow.

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

Maximum Contaminant Level - The "Maximum Allowed" (MCL) is 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. 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 two 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.

Maximum Contaminant Level Goal - The "Goal" (MCLG) is 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.

ND - Not detected.

Piocuries Per Liter (pCi/l) - Picocuries per liter is a measure of radioactivity in water.

Millirems per years (mrem/yr) - Measures of radiation absorbed by the body.

MDL - Minimum Detectable Level.

Table of Primary Contaminants			
CONTAMINANT	UNITS	MCL	AMOUNT DETECTED
Bacteriological			
Total Coliform Bacteria	Percent of total samples that test positive for total coliform. No sample can test positive for fecal coliform or e-coli.	5%	0
Turbidity	TT=5NTU		.26
CRYPTO	0		0
Radiological			
Alpha Emitters	pCi/L	15	**
Radium 226	pCi/L	5	**
Radium 228	pCi/L	5	**
Beta/photo emitters	mrem/year	4	**

Inorganic Chemicals				Inorganic Chemicals			
Contaminant	Units	MCL	Amount Detected	Contaminant	Units	MCL	Amount Detected
Alkalinity	ppm	*	25	Copper	ppm AL=	AL=1.3	.965
Antimony	ppm	0.006	<MDL	Cyanide	ppm	0.2	<MDL
Aluminum	ppm	0.2	<MDL	Fluoride	ppm	4.0	<MDL
Arsenic	ppm	0.010	<MDL	Lead	ppm AL=	AL=0.015	<MDL
Barium	ppm	2	<MDL	Mercury	ppm	0.002	<MDL
Nickel	ppm	0.1	<MDL	Total Dissolved Solids	ppm	500	100
Iron	ppm	0.3	<MDL	Nitrate	ppm	10	.48
Beryllium	ppm	0.004	<MDL	Nitrite	ppm	1	<MDL
Langlier index		*	-1.8	MBAS	ppm	500	<MDL
Manganese	ppm	0.05	<MDL	pH	su	*	7.7
Magnesium	ppm	*	3.75	Hardness	ppm	*	42.8
Cadmium	ppm	0.005	<MDL	Selenium	ppm	0.05	<MDL
Chromium	ppm	0.1	<MDL	Sodium	ppm	*	5.92
Chloride	ppm	250	12.8	Silver	ppm	0.10	<MDL
Calcium	ppm	*	11	Sulfate	ppm	500	20.1
Conductance	umhos@25	*	149	Thallium	ppm	.002	<MDL
Carbon Dioxide	ppm	*	4.4	Zinc	ppm	5	0.502
Color	Color Units	15	<MDL	Odor	ppm	*	<MDL
Organic Chemicals				Organic Chemicals			
Contaminant	Units	MCL	Amount Detected	Contaminant	Units	MCL	Amount Detected
Alachlor	ppb	2	**	Glyphosphate	ppb	700	**
Acifluorfen	ppb	*	**	Heptachlor	ppb	0.4	**
Aldrin	ppb	*	**	Heptachlor Epoxide	ppb	0.2	**
Aldicarb	ppb	*	**	Hexachlorobutadiene	ppb	*	**
Aldicarb Sulfone	ppb	*	**	Hexachlorobenzene	ppb	1	**
Aldicarb Sulfoxide	ppb	*	**	Hexachlorocyclopentadiene	ppb	50	**
Atrazine	ppb	3	**	3-Hydroxycarbofuran	ppb	*	**
Benzene	ppb	5	<MDL	4-Isopropyltoluene	ppb	*	<MDL
Benzo(a)pyrene	ppb	200	**	Isopropylbenzene	ppb	*	<MDL
bis(2-Ethylhexyl)adipate	ppb	400	**	Lindane (gama-BHC)	ppb	0.2	**
bis(2-Ethylhexyl)phthalate	ppb	.6	**	meta-Xylene	ppb	*	**
Bromobenzene	ppb	*	<MDL	Methomyl	ppb	*	**
Bromochloromethane	ppb	*	<MDL	Methyl t-Butyl Ether	ppb	*	<MDL
Bromodichloromethane	ppb	100	3.96	Methylene Chloride	ppb	5	<MDL
Bromoform	ppb	*	<MDL				
Bromomethane	ppb	*	<MDL	Methoxychlor	ppb	40	**
Butachlor	ppb	*	**	Metolachlor	ppb	*	**
Carbaryl (Sevin)	ppb	8	**	Metribuzin	ppb	*	**
Carbofuran	ppb	.04	**	n-Butylbenzene	ppb	*	<MDL
2-Chlorotoluene	ppb	*	<MDL	n-Propylbenzene	ppb	*	<MDL

4-Chlorotoluene	ppb	*	<MDL	Napthalene	ppb	*	<MDL
Carbon Tetrachloride	ppb	5	<MDL	ortho-Xylene	ppb	*	**
Chlorobenzene	ppb	100	<MDL	Oxamyl	ppb	200	**
Chlordane	ppb	2	**	Para-Xylene	ppb	*	**
Chloroethane	ppb	*	<MDL	PCBs Total	ppb	*	**
Chloroform	ppb	50	7.2	Pentachlorophenol	ppb	1	**
Chloromethane	ppb	*	<MDL	Picloram	ppb	500	**
Dalapon	ppb	200	**	Propachlor	ppb	*	<MDL
Dicamba	ppb	*	**	sec-Butylbenzene	ppb	*	<MDL
1,2-Dibromo-3-Chloropropane	ppb	0.2	**	Simazine	ppb	4	**
cis-1,2 Dichloroethene	ppb	70	<MDL	Styrene	ppb	100	<MDL
1,2-Dibromoethane (EDB)	ppb	0.013	<MDL	Toxaphene	ppb	3	**
1,3 Dichloropropene	ppb	*	**	1,1,1,2-Tetrachloroethane	ppb	*	<MDL
1,1- Dichloroethane	ppb	*	<MDL	1,1,2,2-Tetrachloroethane	ppb	*	<MDL
1,1-Dichloroethene	ppb	7	<MDL	Haloacetic Acids	ppb	60	30.2
1,2-Dichloroethane	ppb	5	<MDL	1,2,3-Trichlorobenzene	ppb	*	<MDL
1,2-Dichlorobenzene	ppb	600	<MDL	1,2,4-Trichlorobenzene	ppb	70	<MDL
1,3-Dichlorobenzene	ppb	*	<MDL	1,1,1-Trichloroethane	ppb	200	<MDL
1,4-Dichlorobenzene	ppb	75	<MDL	1,1,2 Trichloroethane	ppb	5	<MDL
1,1-Dichloropropene	ppb	*	<MDL	1,2,3-Trichloropropane	ppb	*	<MDL
Trans-1,2- Dichloroethene	ppb	10	<MDL	1,2,4-Trimethylbenzene	ppb	*	<MDL
1,2-Dichloropropane	ppb	5	<MDL	1,3,5-Trimethylbenzene	ppb	*	<MDL
1,3-Dichloropropane	ppb	*	<MDL	2,4,5-TP(Silvex)	ppb	50	**
2,2-Dichloropropane	ppb	*	<MDL	2,4-D	ppb	70	**
Dibromochloromethane	ppb	*	.820	tert-Butylbenzene	ppb	*	<MDL
Dibromomethane	ppb	*	<MDL	Tetrachloroethene	ppb	5	<MDL
Dichloridfluoromethane	ppb	*	<MDL	TTHM	ppb	80	33.8
Dinoseb	ppb	7	**	Toluene	ppm	1	<MDL
Dieldrin	ppb	*	**	1,2Dichloroethene	ppb	5	**
Diquat	ppb	20	<MDL	1,3Dichloropropene	ppb	*	<MDL
Endrin	ppb	2	**	Trichloroethene	ppb	5	<MDL
3-Hydroxycarbofuran	ppb	*	**	Total Polychlorinated Biphenyls	ppb	.5	**
Endothal	ppb	100	**	Trichlorofluoromethane	ppb	*	<MDL
Ethylbenzene	ppb	700	<MDL	Xylenes	ppm	10	<MDL
Gamma-BHC	ppb	.2	**	Vinyl Chloride	ppb	2	<MDL
Glyphosate	ppb	700	**				
				** testing for this contaminant not required in 2016.			

Table of Detected Contaminants

CONTAMINANT	VIOLATION Y/N	RANGE	LEVEL DETECTED	UNIT MEASUREMENT	MCLG	MCL	LIKELY SOURCE
Bacteriological							
Total Coilform	No	0	0	present or absent	0	<5%	Present in the environment
Inorganics							
Alkalinity	No	18-57	57	ppm	*	*	Erosion of natural deposits.
Conductance	No	ND – 158	159	umhos@25c	*	*	Substances that form ions when in water
pH	No	6.5-7.7	7.7	su	*	*	
Carbon Dioxide	No	5-12	12	ppm	*	*	
Total Dissolved Solids	No	ND – 100	100	ppm	*	500	Erosion of natural deposits.
Sodium	No	ND – 5.9	5.9	ppm	*	*	Erosion of natural deposits
Sulfate	No	ND – 20.1	20.1	ppm	*	*	Runoff/leaching from natural deposits
Chloride	No	ND – 12.8	12.8	ppm	*	250	Runoff /leaching from natural deposits
Chlorine	No	.6 - 2.1	2.1	ppm	0	4	Water additive to control microbes
Copper	No	ND-.965	.965	ppm	*	1.3	Corrosion of household plumbing
Nitrate	No	ND – .48	.48	ppm	*	10	Run-off from fertilizer use.
Total Calcium	No	ND – 11	11	ppm	*	*	Erosion of natural deposits.
Zinc	No	ND-.502	.502	ppm	*	5	
Hardness	No	36–154	154	ppm	*	*	Erosion of natural deposits.
Total Magnesium	No	ND – 3.75	3.75	ppm	*	*	Erosion of natural deposits.
Drinking Water Volatiles							
Bromodichloromethane	No	3.86	3.86	ppb	*	100	By-product of drinking water chlorination

Chloroform	No	7.18	7.18	ppb	*	70	By-product of drinking water chlorination
Dibromochloromethane	No	.820	.820	ppb	*	80	By-product of drinking water chlorination
Volatile Organic Contaminants							
Total Trihalomethanes	No	7.6-43.9	43.9	ppb	*	80	By-product of drinking chlorination
			RAA 27.4				
Total Haloacetic Acids	No	8.2-30.2	30.2	ppb	*	60	By-product of drinking chlorination
			RAA 17.3				
Total Organic Carbon	No	1.3 – 2.6	2.6	ppm	*	TT	Naturally present in the environment

* No Standard

2018 Lead and Copper Testing

Contaminant	Dates	Action Level Exceeded	90 th Percentile Result	Number of Samples Taken	Action Level	Likely Source of Contamination
Copper	9/2018	No	.137 PPM	30	1.3PPM	Corrosion of household plumbing systems; erosion of natural deposits;
Lead	9/2018	No	<MDL	30	0.015PPM	Corrosion of household plumbing systems; erosion of natural deposits

UCMR4 Testing Results

Contaminant	CAS Registry Number	Sample Dates	Test Results	Analytical Methods
Total Microcystin	N/A	7/13/2018	< Minimum Reporting Level	EPA 546 (Elisa)
		7/26/2018		
		8/14/2018		
Anatoxin-a	64285-06-9	7/10/2018	< Minimum Reporting Level	EPA 545
		7/23/2018		
		8/10/2018		
Cylindrospermopsin	143545-90-8	7/10/2018	< Minimum Reporting Level	EPA 545
		7/23/2018		
		8/10/2018		