

Annual Drinking Water Quality Report January-December 2016

Town of Loxley

The Town of Loxley is pleased to present to you this year's Annual Quality Water Report. This report is designed to inform you about the quality water and services we deliver to you every day. Our constant goal is to provide you with a safe and dependable supply of drinking water. We want you to understand the efforts we make to continually improve the water treatment process and protect our water resources. We are committed to ensuring the quality of your water. Our four well sources are from the Mioncere Aquifer. Well #1 is located on North Holly Street, Well #2 located on County Road 55, Well #3 located on US Hwy 90 West and Well #4 located on located on US Hwy 90 West. We add chlorine to the water to kill bacteria, lime to produce a desirable water quality by raising the pH level to reduce corrosion and acidic conditions.

We have a **Source Water Protection Plan** available from our office that provides more information such as potential sources of contamination. A map of the possible contaminate sites is available for viewing at the town hall. I'm pleased to report our drinking water is safe and meets federal and state requirements. If you have questions about this report or concerning your water utility, please **contact Scott Bankester, Loxley Town Hall at 251-964-5162**. We want our valued customers to be informed about their water utility. If you want to learn more, please attend our regularly scheduled **meetings held on the second Monday of each month, 6 PM**, Loxley Town Hall, located at 1089 South Hickory Street.

MAYOR AND COUNCIL

♦ Billy Middleton, Mayor
♦ Lee Wilson
♦ Richard Teal
♦ Katherine Breeden
♦ Jeffery Knight
♦ Kasey Childress

The Town of Loxley routinely monitors for contaminants in your drinking water according to Federal and State laws. This table shows the results of our monitoring for the period of January 1st to December 31st, 2016. All drinking water, including bottled drinking water, may be reasonably expected to contain at least small amounts of some contaminants. It's important to remember that the presence of these contaminants does not necessarily pose a health risk.

PLAIN LANGUAGE DEFINITION

- **Not Required (NR)** – Laboratory analysis not required due to waiver granted by the Environmental Protection Agency for the State of Alabama.
- **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.
- **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.
- **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.
- **Variations & Exemptions (V&E)** - State or EPA permission not to meet an MCL or a treatment technique under certain conditions.
- **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)** - (mandatory language) A treatment technique is a required process intended to reduce the level of a contaminant in drinking water.
- **Threshold Odor Number (T.O.N.)**- The greatest dilution of a sample with odor-free water that still yields a just-detectable odor.
- **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 which there is no known or expected risk to health. MCLGs allow for a margin of safety.
- **Maximum Residual Disinfectant Level Goal or MRDLG** - The level of a 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.
- **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.
- **Not Detected- (ND)** Levels below method detection limits

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 run-off, 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, storm water run-off, 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 run-off, and septic systems.
- **Radioactive contaminants**, which can be naturally occurring or be the result of oil and gas production and mining activities.

Table of Primary Drinking Water Contaminants

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At high levels some primary contaminants are known to pose a health risks to humans. This table provides a quick glance of any primary contaminant detections.					
CONTAMINANT	MCL	AMOUNT DETECTED	CONTAMINANT	MCL	AMOUNT DETECTED
Bacteriological			Chlorite (ppm)	1	ND
Total Coliform Bacteria	< 5%	ND	Endothall (ppb)	100	ND
Turbidity (NTU)	TT	0.14	Endrin (ppb)	2	ND
Fecal Coliform & E. coli	0	ND	Epichlorohydrin (ppb)	TT	ND
Fecal Indiators (enterococci or coliphage)	TT	ND	Glyphosate (ppb)	700	ND
Radiological			Heptachlor (ppt)	400	ND
Beta particle and photon (mrem/yr)	4	ND	Heptachlor Epoxide (ppt)	200	ND

Gross Alpha particle (pCi/L)	15	0.2+/-0.5	0.6+/-0.5	Hexachlorobenzene (ppb)	1	ND
Combined radium 226 & 228 (pCi/L)	5	0.0+/-0.9	0.8+/-0.9	Hexachlorocyclopentadiene (ppb)	50	ND
Uranium (ppb)	30	ND		Lindane (ppt)	200	ND
Inorganic				Methoxychlor (ppb)	40	ND
Antimony (ppb)	6	ND		Oxamyl [Vydate] (ppb)	200	ND
Arsenic (ppb)	10	ND		Polychlorinated Biphenyls (PCBs)(ppt)	500	ND
Asbestos (MFL)	7	ND		Pentachlorophenol (ppb)	1	ND
Barium (ppm)	2	ND		Picloram (ppb)	500	ND
Beryllium (ppb)	4	ND		Simazine (ppb)	4	ND
Cadmium (ppb)	5	ND		Toxaphene (ppb)	3	ND
Chromium (ppb)	100	ND		Benzene (ppb)	5	ND
Copper (ppm) 90 th percentile results	AL=1.3	ND		Carbon Tetrachloride (ppb)	5	ND
Cyanide (ppb)	200	ND		Monochlorobenzene (ppb)	100	ND
Fluoride (ppm)	4	ND		Dibromochloropropane (ppt)	200	ND
Lead (ppb) 90 th percentile results)	AL=15	ND		0-Dichlorobenzene (ppb)	600	ND
Mercury (ppb)	2	ND		Para-dichlorobenzene (ppb)	75	ND
Nickel (ppb)	100	ND		1,2-Dichloroethane (ppb)	5	ND
Nitrate (as N)(ppm)	10	0.78		1,1-Dichloroethylene (ppb)	7	ND
Nitrite (as N)(ppm)	1	ND		Cis-1,2-Dichloroethylene (ppb)	70	ND
Total Nitrate/Nitrite (ppm)	10	ND		Trans-1,2-Dichloroethylene (ppb)	100	ND
Selenium (ppb)	50	ND		Dichloromethane (ppb)	5	ND
Sulfate (ppm)	500	1.53		1,2-Dichloropropane (ppb)	5	ND
Thallium (ppb)	2	ND		Ethylbenzene (ppb)	700	ND
Organic Chemicals				Ethylene Dibromide (EDB)(ppt)	50	ND
2,4-D (ppb)	70	ND		Styrene (ppb)	100	ND
2,4,5-TP (Silvex) (ppb)	50	ND		Tetrachloroethylene (ppb)	5	ND
Acrylamide (ppm)	TT	ND		1,2,4-Trichlorobenzene (ppb)	70	ND
Alachlor (ppb)	2	ND		1,1,1-Trichloroethane (ppb)	200	ND
Atrazine (ppb)	3	ND		1,1,2-Trichloroethane (ppb)	5	ND
Benzo(a)pyrene[PHAs] (ppt)	200	ND		Trichloroethylene (TCE)(ppb)	5	ND
Carbofuran (ppb)	40	ND		Total trihalomethanes (THM)(ppb)	80	ND
Chlordane (ppb)	2	ND		Toluene (ppm)	1	ND
Dalapon (ppb)	200	ND		Vinyl Chloride (ppb)	2	ND
Di-(2-ethylhexyl)adipate (ppb)	400	ND		Chlorine (ppm)	4	.97 1.12
Di(2-ethylhexyl)phthalates (ppb)	6	ND		Chlorine dioxide (ppb)	800	ND
Dinoseb (ppb)	7	ND		Bromate (ppb)	10	ND
Diquat (ppb)	20	ND		Total Organic Carbon (TOC)	TT	ND
Dioxin[2,3,7,8-TCDD] (ppq)	30	ND		Xylenes (Total)(ppm)	10	ND
Chloramines (ppm)	4	ND		Haloacetic Acids (HAA5)(ppb)	60	ND

Table of Detected Contaminants

CONTAMINANT	MCLG	MCL	Range		Amount Detected	Likely Source of Contamination	
Bacteriological January – December 2016							
Turbidity	0	TT	0.14	- 0.14	0.14	NTU	Soil runoff
Radiological January – December 2014							
Gross Alpha particle	0	15	0.2+/-0.5	- 0.6+/-0.5	0.6+/-0.5	pCi/L	Erosion of natural deposits
Combined Radium 226 & 228	0	5	0.0+/-0.9	- 0.8+/-0.9	0.8+/-0.9	pCi/L	Erosion of natural deposits
Inorganic January – December 2014							
Sulfate	N/A	500	ND	- 1.53	1.53	ppm	Naturally occurring in the environment
Chlorine	MRDLG 4	MRDL 4	.97	- 1.12	1.12	ppm	Water additive used to control microbes
Nitrate (as N)	10	10	0.78	- 0.78	0.78	ppm	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Table of Detected Secondary Contaminants January – December 2016							
Chloride	N/A	250	4.62	- 4.62	4.62	ppm	Naturally occurring in the environment or as a result of agricultural runoff
Total Dissolved Solids	N/A	500	32.0	- 32.0	32.0	ppm	Erosion of natural deposits

Table of Detected Special Contaminants								January – December 2016	
pH	0	N/A	8.31	-	8.31	8.31	SU	Naturally occurring in the environment or as a result of treatment with water additives	
Calcium	N/A	N/A	7.23	-	7.23	7.23	ppm	Erosion of natural deposits	
Sodium	0	N/A	2.41	-	2.41	2.41	ppm	Naturally occurring in the environment	
Total Alkalinity	0	N/A	20.6	-	20.6	20.6	ppm	Naturally occurring in the environment	
Magnesium	N/A	N/A	0.929	-	0.929	0.929	ppm	Erosion of natural deposits	
Total Hardness (as CaCO3)	N/A	N/A	21.9	-	21.9	21.9	ppm	Naturally occurring in the environment or as a result of treatment with water additives	
Specific Conductance	N/A	<500	62	-	62	62	umhos	Naturally occurring in the environment or as a result of treatment with water additives	
Langelier Index	N/A	N/A	-0.95	-	-0.95	-0.95	umhos	Naturally occurring in the environment or as a result of treatment with water additives	

Secondary Drinking Water Standards are guidelines regulating contaminants that may cause cosmetic effects (such as skin or tooth discoloration) or aesthetic effects (such as taste, odor, or color) in drinking water. ADEM has Secondary Drinking Water Standards established in state regulations applicable to water systems required to monitor for the various components.

Table of Secondary Contaminants

Contaminants	Detects		MCL	Contaminants	Detect s		MCL
Aluminum	ND	PPM	0.2	Manganese	ND	PPM	0.05
Chloride	4.62	PPM	250	Silver	ND	PPM	0.1
Iron	ND	PPM	0.3	Total Dissolved Solids	32.0	PPM	500
Color	ND	PPM	15.0	Zinc	ND	PPM	5
Foaming Agents	ND	PPB	500	Copper	ND	PPM	1
Odor	ND	T.O.N.	3	Lead	ND	PPB	.015

Table of Special Contaminants

Contaminants	Detect		MCL	Contaminants	Detect		MCL
Calcium	7.23	PPM	N/A	Sodium	2.41	PPM	N/A
Carbon Dioxide	ND	PPM	N/A	Sulfate	ND	PPM	250
Magnesium	0.929	PPM	N/A	Specific, Conductance	62	PPM	N/A
pH	8.31	PPM	N/A	Total Hardness (as CaCO3)	21.9	PPM	N/A
Total Alkalinity	20.6	PPM	N/A	Temperture	ND	°C	N/A
Langelier Index	-0.95	PPM	N/A				

Table of Unregulated Drinking Water Contaminants

CONTAMINANT	AVERAGE	CONTAMINANT	AVERAGE	CONTAMINANT	AVERAGE
1,1 - Dichloropropene	ND	Chloroform	ND	1,2,4-Trichlorobenzene	ND
Chloromethane	ND	1,1,2,2-Tetrachloroethane	ND	Chlorodibromomethane	ND
1,1-Dichloroethane	ND	Dibromomethane	ND	1,2,3 - Trichlorobenzene	ND
Dicamba	ND	1,2,3 - Trichloropropane	ND	Dichlorodifluoromethane	ND
1,2,4 - Trimethylbenzene	ND	Dieldrin	ND	1,3 - Dichloropropane	ND
Hexachlorobutadiene	ND	1,3 - Dichloropropene	ND	Isopropylbenzene	ND
1,3,5 - Trimethylbenzene	ND	M-Dichlorobenzene	ND	2,2 - Dichloropropane	ND
Methomyl	ND	3-Hydroxycarbofuran	ND	MTBE	ND
Aldicarb	ND	Aldicarb Sulfone	ND	Aldicarb Sulfoxide	ND
Aldrin	ND	Bromobenzene	ND	Bromochloromethane	ND
Bromodichloromethane	ND	Bromoform	ND	Bromomethane	ND
Butachlor	ND	Carbaryl	ND	Chloroethane	ND
Metolachlor	ND	Metribuzin	ND	N-Propylbenzene	ND
N - Butylbenzene	ND	Naphthalene	ND	O-Chlorotoluene	ND
P-Chlorotoluene	ND	P-Isopropyltoluene	ND	Propachlor	ND
Sec - Butylbenzene	ND	Tert - Butylbenzene	ND	Fluorotrichloromethane	ND

Unregulated contaminants are those for which EPA has not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist EPA in determining the occurrence of unregulated contaminants in drinking water and whether future regulation is warranted.

GENERAL INFORMATION

As you can see by the tables, our system had no violations of allowable limits of contaminants in drinking water. We're proud that your drinking water meets or exceeds all Federal and State requirements. We have learned through our monitoring and testing that some contaminants have been detected. The EPA has determined that your water IS SAFE at these levels. 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.

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.

Some people may be more vulnerable to contaminants in drinking water than the general population. People who are immuno-compromised, such as cancer patients undergoing chemotherapy, organ transplant recipients, HIV/AIDS positive or individuals with other immune system disorders, some elderly, and infants, can be particularly at risk from infections. Those at risk should seek advice about drinking water from the 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 (1-800-426-4791).

All 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 call the Environmental Protection Agency's Safe Drinking Water Hotline (1-800-426-4791).

Total Coliform: The Total Coliform Rule 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.

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. Loxley 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>.

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

We at the Town of Loxley work around the clock to provide top quality water to every tap. Please help us make this effort worthwhile by protecting our source water. Carefully follow instructions on pesticides and herbicides you use for your lawn and garden and properly dispose of household chemicals, paints and waste oil. We ask that all our customers help us protect our water sources, which are the heart of our community, our way of life and our children's future.