

**2017 Annual Water Quality Report**  
(Testing Performed January - December 2016)



*Utilities Director*  
Chad Hennis

**Board of Water and Sewer Commissioners  
of the City of Saraland**

307 Shelton Beach Road • P. O. Box 837 • Saraland, AL 36571  
Phone: 251-675-5126/679-5508  
Fax: 251-679-5512

*Board*  
James E. Davis  
Jackie R. Haines  
Ron K. Mitchell  
H. O'Neil Robinson  
Scooter Thronson

We at Saraland Water Service work around the clock to provide top quality water to every tap. 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. We are pleased to report that our drinking water meets or exceeds Federal and State requirements. This report is designed to inform you about the quality water and services we deliver to you every day. We are committed to ensuring the quality of your water.

<b>Water Source</b>	Four groundwater wells producing from the Coastal Planes Deposit Holocene Aquifer	
<b>Number of Customers</b>	Approximately 4740	
<b>Water Treatment</b>	Lime for pH adjustment, phosphate to sequester iron and provide corrosion control, chlorine for disinfection, and fluoride for dental protection In addition, well #1 includes aeration to facilitate the removal of iron and carbon dioxide, pre-chlorination and potassium permanganate to aid in oxidation, and filtration to remove oxidation	
<b>Storage Capacity</b>	Four (4) storage tanks with a combined capacity of 3,750,000 gallons	
<b>Interconnections</b>	Sell water to Mobile Area Water & Sewer System for the College Woods area	
<b>Board Members</b>	James E. Davis	H. O'Neil Robinson
	Jackie R. Haines	Scooter Thronson
	Ron K. Mitchell	
<b>Utilities Director</b>	Chad Hennis	

**Monitoring Schedule**

**Saraland Water Service** routinely monitors for constituents in your drinking water according to Federal and State laws in accordance with the regulatory schedule. The EPA or ADEM requires us to monitor for certain contaminants less than once per year because the concentrations of these contaminants do not change frequently. This report contains results from the most recent monitoring which was performed in accordance with the regulatory schedule.

<b>Constituents Monitored</b>	<b>Date Monitored</b>
Inorganic Contaminants	2016
Lead/Copper	2016
Microbiological Contaminants	current
Nitrates	2016
Radioactive Contaminants	2013
Synthetic Organic Contaminants (including herbicides and pesticides)	2016
Volatile Organic Contaminants	2016
Disinfection By-products	2016
UCMR3 (Unregulated Contaminant Monitoring Rule) Contaminants	2013

**Questions?**

If you have any questions about this report, or concerning your water utility, please contact **John Vaughn** at 251-675-5126. We want our valued customers to be informed about their water utility. If you wish to learn more, please attend any of our regularly scheduled meetings. They are held on **the 1<sup>st</sup> and 3<sup>rd</sup> Thursdays of each month at the Saraland Water Service office at 5:30 p.m.**

More information about contaminants to drinking water and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline at (1-800-426-4791).

## Safe Drinking Water Act

The Safe Drinking Water Act (SDWA) was signed into law on December 16, 1974. The purpose of the law is to assure that the nation's water supply systems serving the public meet minimum national standards for the protection of public health. The SDWA directed the U. S. Environmental Protection Agency (EPA) to establish national drinking water standards. The 1996 Amendments to the SDWA created a need for Consumer Confidence Reports (Annual Water Quality Reports) to reveal to consumers the detected amounts of contaminants in their drinking water.

### General Information

All drinking water, including bottled drinking water, may be reasonably expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. MCL's, defined in a List of Definitions in this report, 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.

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

In order 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. Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water.

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 was not required.

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. People at risk should seek advice about drinking water from 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 (800-426-4791).

### Information about Lead

Lead in drinking water is rarely found in source water but is primarily from materials and components associated with service lines and home plumbing. Your water system is responsible for providing high quality drinking water but cannot control the variety of materials used in plumbing components.

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Use *only* water from the cold-water tap for drinking, cooking, and *especially for making baby formula*. Hot water is more likely to cause leaching of lead from plumbing materials. 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. These recommended actions are very important to the health of your family.

Lead levels in your drinking water are likely to be higher if:

- Your home or water system has lead pipes, or
- Your home has faucets or fittings made of brass which contains some lead, or
- Your home has copper pipes with lead solder and you have naturally soft water, and
- Water often sits in the pipes for several hours.

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 [www.epa.gov/safewater/lead](http://www.epa.gov/safewater/lead).

## Source Water Assessment

**Saraland Water Service** has completed a Source Water Assessment Plan, which provides additional information such as potential sources of contamination. It includes a susceptibility analysis, which classifies potential contaminants as high, moderate, or non-susceptible to contaminating the water source. The ADEM-approved plan is available in our office for review during normal business hours, or you may purchase a copy upon request for a nominal reproduction fee.

As you can see, we are very actively involved in protecting our water supply. You can help us protect our water resources by disposing of waste in the proper manner and reporting someone else who might not be doing so. Carefully follow instructions on pesticides and herbicides you use for your lawn and garden, and properly dispose of household chemicals, paints and waste oil. Please help us protect our water supply.

### Detected Contaminants

**Saraland Water Service** regularly monitors for contaminants in the water, as required by ADEM. Of the many contaminants tested, only these were at a level of detection. All drinking water may be reasonably expected to contain at least small amounts of contaminants. It is important to remember that the presence of these contaminants does not necessarily pose a health risk.

TABLE OF DETECTED DRINKING WATER CONTAMINANTS						
Contaminants	Violation Y/N	Level Detected	Unit Msmt	MCLG	MCL	Likely Source of Contamination
Alpha emitters	NO	1.1 ± 0.6	PCi/l	0	15	Erosion of natural deposits
Radium 228	NO	0.4 ± 0.7				
Barium	NO	ND-0.08	ppm	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Copper	NO	0.219 * 0>AL	ppm	1.3	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Di(2-ethylhexyl) phthalate	NO	ND-2.90	ppb	0	6	Discharge from rubber and chemical factories
Fluoride	NO	Avg. 2.29 0.53-8.79 **	ppm	4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from factories
Nitrate (as Nitrogen)	NO	ND-1.09	ppm	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
TTHM [Total trihalomethanes]	NO	ND-0.56	ppb	0	80	By-product of drinking water chlorination
<b>Unregulated Contaminants</b>						
Chloroform	NO	ND-0.65	ppb	n/a	n/a	Naturally occurring in the environment or as a result of industrial discharge or agricultural runoff
Bromodichloromethane	NO	ND-0.76	ppb	n/a	n/a	Naturally occurring in the environment or as a result of industrial discharge or agricultural runoff
Chlorodibromomethane	NO	ND-0.66	ppb	n/a	n/a	Naturally occurring in the environment or as a result of industrial discharge or agricultural runoff
Bromoform	NO	ND-0.72	ppb	0	none	Naturally occurring in the environment or as a result of industrial discharge or agricultural runoff
<b>Secondary Contaminants</b>						
Aluminum	NO	ND-0.06	ppm	n/a	0.2	Erosion of natural deposits or as a result of treatment
Chloride	NO	8.22-17.3	ppm	n/a	250	Naturally occurring in the environment or as a result of industrial discharge or agricultural runoff
Hardness	NO	10.6-35.7	ppm	n/a	n/a	Naturally occurring in the environment or as a result of treatment with water additives
Iron	NO	ND-0.28	ppm	n/a	0.30	Naturally occurring in the environment; erosion of
Manganese	NO	ND-0.03	ppm	n/a	0.05	Erosion of natural deposits; leaching from pipes
pH	NO	5.69-6.87	S.U.	n/a	n/a	Naturally occurring in the environment or as a result of treatment with water additives
Sodium	NO	5.46-18.7	ppm	n/a	n/a	Naturally occurring in the environment
Sulfate	NO	5.07-10.3	ppm	n/a	250	Naturally occurring in the environment or as a result of industrial discharge or agricultural runoff
Total Dissolved Solids	NO	52.0-104	ppm	n/a	500	Naturally occurring in the environment or as a result of industrial discharge or agricultural runoff
Zinc	NO	ND-0.09	ppm	none	5	Erosion of natural deposits; discharge from refineries and factories; runoff from landfills

\* Figure shown is 90<sup>th</sup> percentile and number of sites above the Action Level (AL) = 0

\*\* Single sample tested for Fluoride at a level of 8.79ppm; site was resampled and tested, and the level was 0.66ppm.  
Figures shown are average and range of data.

### Unregulated Contaminant Rule 3 (UCMR3) Contaminants Detected 2013

Contaminants	Violation Y/N	Level Detected	Unit Msmt.	Likely Source of Contamination
Chromium	NO	ND-1.70	ppb	Naturally occurring in the environment or as a result of industrial discharge
Cobalt	NO	ND-4.40	ppb	Industrial or medical discharge; waste runoff
Strontium	NO	33.0-62.0	ppb	Naturally occurring in the environment or as a result of discharge
Vanadium	NO	ND-2.80	ppb	Naturally occurring in the environment or as a result of runoff from mining or industrial discharge
Chromium, Hexavalent	NO	ND-1.50	ppb	Naturally occurring in the environment or as a result of industrial discharge
1,4-Dioxane	NO	ND-0.50	ppb	Industrial discharge; leachate from landfills
1,1-Dichloroethane	NO	ND-0.19	ppb	Industrial discharge; leachate from landfills

#### DEFINITIONS

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

**Coliform Absent (ca)-** Laboratory analysis indicates that the contaminant is not present.

**Disinfection byproducts (DBPs)-** are formed when disinfectants used in water treatment plants react with bromide and/or natural organic matter (i.e., decaying vegetation) present in the source water. Different disinfectants produce different types or amounts of disinfection byproducts. Disinfection byproducts for which regulations have been established include trihalomethanes (THM), haloacetic acids (HAA5), bromate, and chlorite.

**Initial Distribution System Evaluation (IDSE)-**a one-time study conducted by water systems to identify distribution system locations with high concentrations of trihalomethanes (THMs) and haloacetic acids (HAAs).  
**Locational Running Annual Average (LRAA)-**yearly average of all the DPB results at each specific sampling site in the distribution system. The highest distribution site LRAA is reported in the Table of Detected Contaminants.

**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 (MRDL)-**the highest level of a disinfectant allowed in drinking water

**Micrograms per liter (ug/L) –** Equivalent to parts per billion (ppb) since one liter of water is equal in weight to one billion micrograms.

**Milligrams per liter (mg/L) –** Equivalent to parts per million

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

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

**Non-Detects (ND)-** laboratory analysis indicates that the constituent is not present above detection limits of lab equipment.

**Not Reported (NR)-**laboratory analysis, usually Secondary Contaminants, not reported by water system. EPA recommends secondary standards to water systems but does not require systems to comply.

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

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

**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.

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

**RAA-Running annual average**

**Standard Units (S.U.)-pH** of water measures the water's balances of acids and bases and is affected by temperature and carbon dioxide gas. Water with less than 6.5 could be acidic, soft, and corrosive. A pH greater than 8.5 could indicate that the water is hard.

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

**Variances & Exemptions (V&E)-**State or EPA permission not to meet an MCL or a treatment technique under certain conditions.

The following table is a list of *Primary Drinking Water Contaminants*, *Unregulated Contaminants*, and *Secondary Contaminants* for which our water system routinely monitors according to our regulatory schedule. These contaminants were *not* detected in your drinking water unless they are listed in the *Table of Detected Drinking Water Contaminants*.

REGULATED CONTAMINANTS			
<b>Bacteriological</b>	Mercury	Dichloromethane	Simazine
Total Coliform Bacteria	Nitrate	1,2-Dichloropropane	Styrene
Fecal Coliform and E. coli	Nitrite	Di (2-ethylhexyl)adipate	Tetrachloroethylene
Fecal Indicators	Selenium	Di (2-ethylhexyl)phthalate	Toluene
Turbidity	Thallium	Dinoseb	Toxaphene
Cryptosporidium	<b>Organic Contaminants</b>	Dioxin [2,3,7,8-TCDD]	2,4,5-TP(Silvex)
<b>Radiological</b>	2,4-D	Diquat	1,2,4-Trichlorobenzene
Beta/photon emitters	Acrylamide	Endothall	1,1,1-Trichloroethane
Alpha emitters	Alachlor	Endrin	1,1,2-Trichloroethane
Combined radium	Benzene	Epichlorohydrin	Trichloroethylene
Uranium	Benzo(a)pyrene [PAHs]	Ethylbenzene	Vinyl Chloride
<b>Inorganic Chemicals</b>	Carbofuran	Ethylene dibromide	Xylenes
Antimony	Carbon tetrachloride	Glyphosate	<b>Disinfection Byproducts</b>
Arsenic	Chlordane	Heptachlor	Chlorine
Asbestos	Chlorobenzene	Heptachlor epoxide	Chlorine Dioxide
Barium	Dalapon	Hexachlorobenzene	Chloramines
Beryllium	Dibromochloropropane	Hexachlorocyclopentadiene	Bromate
Cadmium	o-Dichlorobenzene	Lindane	Chlorite
Chromium	p-Dichlorobenzene	Methoxychlor	HAA5 [Total haloacetic acids]
Copper	1,2-Dichloroethane	Oxamyl [Vydate]	TTHM [Total trihalomethanes]
Cyanide	1,1-Dichloroethylene	Polychlorinated biphenyls	
Fluoride	cis-1,2-Dichloroethylene	Pentachlorophenol	
Lead	trans-1,2-Dichloroethylene	Picloram	
UNREGULATED CONTAMINANTS			
1,1 – Dichloropropene	1,1 – Dichloropropene	1,1 – Dichloropropene	1,1 – Dichloropropene
1,1,1,2-Tetrachloroethane	1,1,1,2-Tetrachloroethane	1,1,1,2-Tetrachloroethane	1,1,1,2-Tetrachloroethane
1,1,2,2-Tetrachloroethane	1,1,2,2-Tetrachloroethane	1,1,2,2-Tetrachloroethane	1,1,2,2-Tetrachloroethane
1,1-Dichloroethane	1,1-Dichloroethane	1,1-Dichloroethane	1,1-Dichloroethane
1,2,3 - Trichlorobenzene	1,2,3 - Trichlorobenzene	1,2,3 - Trichlorobenzene	1,2,3 - Trichlorobenzene
1,2,3 - Trichloropropane	1,2,3 - Trichloropropane	1,2,3 - Trichloropropane	1,2,3 - Trichloropropane
1,2,4 - Trimethylbenzene	1,2,4 - Trimethylbenzene	1,2,4 - Trimethylbenzene	1,2,4 - Trimethylbenzene
1,3 – Dichloropropane	1,3 – Dichloropropane	1,3 – Dichloropropane	1,3 – Dichloropropane
1,3 – Dichloropropene	1,3 – Dichloropropene	1,3 – Dichloropropene	1,3 – Dichloropropene
1,3,5 - Trimethylbenzene	1,3,5 - Trimethylbenzene	1,3,5 - Trimethylbenzene	1,3,5 - Trimethylbenzene
2,2 – Dichloropropane	2,2 – Dichloropropane	2,2 – Dichloropropane	2,2 – Dichloropropane
SECONDARY CONTAMINANTS			
Alkalinity, Total (as CA, CO <sub>3</sub> )	Copper	Magnesium	Silver
Aluminum	Corrosivity	Manganese	Sodium
Calcium, as Ca	Foaming agents (MBAS)	Odor	Sulfate
Chloride	Hardness	Nickel	Total Dissolved Solids
Color	Iron	pH	Zinc