

# The Utilities Board of the City of Roanoke

## Annual Drinking Water Report

### 2017

The Safe Drinking Water Act (SDWA) requires 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 Utilities Board of the City of Roanoke routinely tests for these constituents in your drinking water according to federal and state laws. The tables in this report show the monitoring results beginning January 1, 2017 thru December 31, 2017. If you have any questions concerning water quality please contact Jerry Revis 334-863-4055. You may also attend the monthly board meeting held on the third Monday of each month at 4:00 p.m. at the Roanoke Utilities Board office located 3573 Highway 431 in Roanoke, Alabama. Currently serving Board members are Ronald Cameron, Willie Mae Jones, Chris Holloway, Walter Sudduth, and William Morris.

Operating under permit by the Alabama Department of Environmental Management, the Roanoke Utilities Board operates a Two MGD surface treatment plant located at 58913 Hwy 22. Our water source is Crystal Lake, a 74-acre watershed lake located north of town on Hwy. 431. A backup supply Jones, Creek Reservoir, is located next to the filter plant off of Hwy. 22 west of town. The drainage basin for the reservoir consists primarily of woodlands and forests providing Roanoke with an excellent and reliable raw water source. Roanoke's Source Water Assessment is completed and can be reviewed by contacting Jerry Revis at 334-863-4055.

Environmental Resource Analysts, Inc. performed all water quality tests. If you have any questions or concerns regarding the contents of this report, please feel free to call them with your concerns. 1-334-502-3444.

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

1. *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.
2. *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.
3. *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.
4. *Action Level* - the concentration of a contaminant, which, if exceeded, triggers treatment or other requirements, which a water system must follow.
5. *Treatment Technique (TT)* - A treatment technique is a required process intended to reduce the level of a contaminant in drinking water.
6. *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 the MCLGs as feasible using the best available treatment technology.
7. 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.
8. *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
9. *ND* = Not Detected
10. *BMDL* – Below Method Detection Limits.

## Table of Primary Contaminants

At high levels primary contaminants are known to pose a health risks to humans. This table provides a quick glance of any primary contaminant detected

CONTAMINANT	MCL	AMOUNT DETECTED			
<b>Bacteriological 01/01/17-12/31/17</b>					
Total Coliform Bacteria	< 5%	0			
Turbidity	TT	0.18			
<b>Radiological 01/01/17-12/31/17</b>					
Radium-228 (pci/l)	5	BMDL			
<b>Inorganic 4/18/12</b>					
Antimony (ppb)	6	BMDL			
Arsenic (ppb)	50	BMDL			
Asbestos (MFL)	7	ND			
Barium (mg/l)	2	0.012			
Beryllium (ppb)	4	BMDL			
Cadmium (ppb)	5	BMDL			
Chromium (ppb)	100	BMDL			
Copper (mg/l)	AL=1.3	BMDL			
Cyanide (ppb)	200	BMDL			
Fluoride (mg/l)	4	BMDL			
Lead (ppb)	AL=15	BMDL			
Mercury (ppb)	2	BMDL			
Nickel (mg/l)	0.1	BMDL			
Nitrate (As N) (mg/l)	10	BMDL			
Nitrite (As N) (mg/l)	1	BMDL			
Total Nitrate/Nitrite		BMDL			
Selenium (mg/l)	50	BMDL			
Sulfate (mg/l)	500	16.5			
Thallium (mg/l)	2	0.00049			
<b>Secondary Inorganic 4/18/12</b>					
Alkalinity, Total		14.5			
Aluminum	0.2	BMDL			
Calcium		8.83			
Carbon Dioxide		13.0			
Chloride	250	5.0			
Color	15	BMDL			
Copper	1	BMDL			
Foaming Agents (Surfactants)	0.5	BMDL			
Hardness, Total (As Caco3)		30.5			
Iron	0.3	BMDL			
Magnesium		1.20			

Manganese	0.05	BMDL			
Odor	3	None			
PH		6.46			
Silver	0.1	BMDL			
Sodium		6.37			
Sp. Cond.		80.1			
Total Dissolved Solids (TDS)	500	56.0			
Zinc	5	BMDL			

## Unregulated Contaminants Table (UCMR4)

### Assessment Monitoring (List 1)

(05/01/09-02/28/10 Sampling Period)

CONTAMINANT	Average	Range	CONTAMINANT	Average	Range
1,3 - dinitrobenzene	ND	0.000 - 0.000	245-HBB	ND	0.000 - 0.000
BDE-100	ND	0.000 - 0.000	BDE-153	ND	0.000 - 0.000
BDE-47	ND	0.000 - 0.000	BDE-99	ND	0.000 - 0.000
dimethoate	ND	0.000 - 0.000	RDX	ND	0.000 - 0.000
terbufos sufone	ND	0.000 - 0.000	TNT	ND	0.000 - 0.000

## Table of Detected Contaminants

CONTAMINANT	MCLG	MCL	Range		Amount Detected		Likely Source of Contamination
<b>Bacteriological</b>	(01/01/17-12/31/17 Sampling Period)						
Total Coliform Bacteria	< 5%	0			0	Absent	Naturally present in the environment
Turbidity	0	TT			0.10	NTU	Soil runoff
<b>Inorganic Chemicals</b>	(01/01/17-12/31/17 Sampling Period)		Lead & Copper (08/31/2016)				
Copper	<6.0	AL=1.3	No. of Sites above action level 0 of 1		0.01	mg/l	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead	<0.190	AL=0.015	No. of Sites above action level 0 of 1		BMDL	mg/l	Corrosion of household plumbing systems; erosion of natural deposits
Fluoride	<0.040	4	0.9	- 0.44	0.58	mg/l	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
<b>Organic Chemicals</b>	(01/01/17-12/31/17 Sampling Period)						
TTHM	0	80	13.5	- 40.2	16.3	ppb	By-product of drinking water chlorination
HAA5	0	60	18.7	43.1	25.9	ppb	By-product of drinking water chlorination

As you can see by the tables, our system recently violated a drinking water standard. Although this is not an emergency, as our customers, you have the right to know what happened, what should do, and what we are doing to correct this situation.

We routinely monitor for the presence of drinking water contaminants. Testing results we received in January of 2013 show that our system exceeds the standard or maximum contaminant level (MCL) FOR TOTAL TRIHALOMETHANES (TTHM) AND HALOACETIC ACIDS (HAA5). THE STANDARD FOR TOTAL TRIHALOMETHANES IS 0.080 MG/L AND THE STANDARD FOR HALOACETIC ACIDS IS 0.060 MG/L. THE CHART BELOW LISTS THE LOCATION, DISINFECTANT BYPRODUCT AND LEVEL THAT EXCEEDED THE MAXIMUM CONTAMINANT LEVEL.

LOCATION	CONTAMINANT	LEVEL
----------	-------------	-------

DRIVE		
1388 FAIRWAY DRIVE	HAA5	0.64.7

All sources of drinking water (both tap water and bottled water) are subject to potential contamination by constituents that are naturally occurring or are man made. Those constituents 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 does not necessarily indicate that the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency’s Safe Drinking Water Hotline at 1-800-426-4791.

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).

Some people who drink water contaminated with trihalomethanes (TTHMs) in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous system, and may have an increased risk of getting cancer. Since most surface water treatment plants use chlorine for disinfection, TTHMs have become a national problem. Even though we have not exceeded the MCL for TTHMs we monitor our treatment process closely to insure that we do not exceed the level in the future.

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 material and components associated with service lines and home plumbing. Roanoke Utilities Board is responsible for providing high quality drinking water, but cannot control the variety of material 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 (800-426-4791) or at <http://www.epa.gov/safewater/lead>.

We ask that all our customers help us protect our water sources, which are the heart of our community.