

## 2016 Annual Drinking Water Quality Report

### Robertsdale Water Works

The Robertsdale Water Works is pleased to present to you this year's Annual Drinking Water Quality 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.

We have a Source Water Protection Plan available. We are continually working on it to ensure it provides more information such as potential sources of contamination. I'm pleased to report that our drinking water is safe and meets federal and state requirements. If you have any questions about this report or concerning your water utility, please contact Rodney Whitehead, Robertsdale Water Works, 251-947-8950. We want our valued customers to be informed about our water utility. If you want to learn more, please attend any of our regularly scheduled meetings. They are held on the 1st Monday of each month, 6:00 P.M., Robertsdale City Hall located at 22647 Racine Street.

The Robertsdale Water Works routinely monitors for constituents in your drinking water according to federal and state laws. This table shows the results of our monitoring for the period of January 1<sup>st</sup> to December 31<sup>st</sup>, 2015. 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 calling the Environmental Protection Agency's Safe Drinking Water Hotline (1-800-426-4791).

### **PLAIN LANGUAGE DEFINITIONS**

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

*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.

*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

## Table of Primary Contaminants

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
<b>Bacteriological</b>			Endothall	100	ND
Total Coliform Bacteria	< 5%	0	Endrin	2	ND
Turbidity	TT	ND	Epichlorohydrin	TT	ND
<b>Radiological</b>			Glyphosate	700	ND
Beta/photon emitters (mrem/yr)	4	ND	Heptachlor	400	ND
Alpha emitters (pci/l)	15	ND	Heptachlor epoxide	200	ND
Combined radium (pci/l)	5	ND	Hexachlorobenzene	1	ND
<b>Inorganic</b>			Hexachloropentadiene	1	ND
Antimony (ppb)	6	ND	Lindane	200	ND
Arsenic (ppb)	50	ND	Methoxychlor	40	ND
Asbestos (MFL)	7	ND	Oxamyl [Vydate]	200	ND
Barium (ppm)	2	ND	PCBs	500	ND
Beryllium (ppb)	4	ND	Pentachlorophenol	1	ND
Cadmium (ppb)	5	ND	Picloram	500	ND
Chromium (ppb)	100	ND	Simazine	4	ND
Copper (ppm)	AL=1.3	ND	Toxaphene	3	ND
Cyanide (ppb)	200	ND	Benzene	5	ND
Fluoride (ppm)	4	ND	Carbon Tetrachloride	5	ND
Lead (ppb)	AL=15	ND	Chlorobenzene	100	ND
Mercury (ppb)	2	ND	Dibromochloropropane	200	ND
Nitrate (ppm)	10	<b>2.0</b>	o-Dichlorobenzene	600	ND
Nitrite (ppm)	1	ND	p-Dichlorobenzene	75	ND
Selenium	50	ND	1,2-Dichloroethane	5	ND
Thallium	2	ND	1,1-Dichloroethylene	7	ND
<b>Organic Chemicals</b>			Cis-1,2-Dichloroethylene	70	ND
2,4-D	70	ND	trans-1,2-Dichloroethylene	100	ND
2,4,5-TP (Silvex)	50	ND	Dichloromethane	5	ND
Acrylamide	TT	ND	1,2-Dichloropropane	5	ND
Alachlor	2	ND	Ethylbenzene	700	ND
Atrazine	3	ND	Ethylene dibromide	50	ND
Benzo(a)pyrene[PHAs]	200	ND	Styrene	100	ND
Carbofuran	40	ND	Tetrachloroethylene	5	ND
Chlordane	2	ND	1,2,4-Trichlorobenzene	70	ND
Dalapon	200	ND	1,1,1-Trichloroethane	200	ND
Di-(2-ethylhexyl)adipate	400	ND	1,1,2-Trichloroethane	5	ND
Di(2-ethylhexyl)phthalates	6	ND	Trichloroethylene	5	ND
Dinoseb	7	ND	TTHM	100	ND
Diquat	20	ND	Toluene	1	ND
Dioxin[2,3,7,8-TCDD]	30	ND	Vinyl Chloride	2	ND
			Xylenes	10	ND

TTHM was not a required test during 2015.

In addition to the 76 primary drinking water contaminants, the utility monitors regularly for the following unregulated and secondary contaminants as regulated by the Alabama Department of Environmental Management. The ADEM has proposed regulations under consideration at the time of this publication to require any detects of these contaminants to be reported in all subsequent water quality reports. The requirement of this additional monitoring and reporting will further insure the safety of your drinking water and will keep you, as a utility customer, more informed.

**SECONDARY CONTAMINANTS TABLE**

<b>CONTAMINANT</b>				<b>CONTAMINANT</b>			
<b>MCL</b>		<b>UNIT MEASUREMENT</b>		<b>MCL</b>		<b>UNIT MEASUREMENT</b>	
Amount detected				Amount detected			
Aluminum	0.2	ND	PPM	Manganese	0.05	ND	PPM
Chloride	250	ND	PPM	Odor	3	ND	threshold odor #
Color	15	ND	Units	Silver	0.1	ND	PPM
Copper	1	ND	PPM	Sulfate	250	ND	PPM
Foaming Agents	0.5	ND	PPM	Total Dissolved Solids	500	ND	PPM
Iron	0.3	ND	PPM	Zinc	5	ND	PPM

**Unregulated Contaminants Table**

<b>CONTAMINANT</b>	<b>Average</b>	<b>Range</b>	<b>CONTAMINANT</b>	<b>Average</b>	<b>Range</b>
1,1 – Dichloropropene	ND	0.070 - 0.130	Chloroform	ND	0.070 - 0.130
1,1,1,2-Tetrachloroethane	ND	0.070 - 0.130	Chloromethane	ND	0.070 - 0.130
1,1,2,2-Tetrachloroethane	ND	0.070 - 0.130	Dibromochloromethane	ND	0.070 - 0.130
1,1-Dichloroethane	ND	0.070 - 0.130	Dibromomethane	ND	0.070 - 0.130
1,2,3 - Trichlorobenzene	ND	0.070 - 0.130	Dicamba	ND	0.070 - 0.130
1,2,3 - Trichloropropane	ND	0.070 - 0.130	Dichlorodifluoromethane	ND	0.070 - 0.130
1,2,4 - Trimethylbenzene	ND	0.070 - 0.130	Dieldrin	ND	0.000 - 0.000
1,3 – Dichloropropane	ND	0.070 - 0.130	Hexachlorobutadiene	ND	0.070 - 0.130
1,3 – Dichloropropene	ND	0.070 - 0.130	Isoprpylbenzene	ND	0.070 - 0.130
1,3,5 - Trimethylbenzene	ND	0.070 - 0.130	M-Dichlorobenzene	ND	0.070 - 0.130
2,2 – Dichloropropane	ND	0.070 - 0.130	Methomyl	ND	0.000 - 0.000
3-Hydroxycarbofuran	ND	0.000 - 0.000	MTBE	ND	0.000 - 0.000
Aldicarb	ND	0.000 - 0.000	Metolachlor	ND	0.000 - 0.000
Aldicarb Sulfone	ND	0.000 - 0.000	Metribuzin	ND	0.000 - 0.000
Aldicarb Sulfoxide	ND	0.000 - 0.000	N – Butylbenzene	ND	0.070 - 0.130
Aldrin	ND	0.000 - 0.000	Naphthalene	ND	0.070 - 0.130
Bromobenzene	ND	0.070 - 0.130	N-Propylbenzene	ND	0.070 - 0.130
Bromochloromethane	ND	0.070 - 0.130	O-Chlorotoluene	ND	0.070 - 0.130
Bromodichloromethane	ND	0.070 - 0.130	P-Chlorotoluene	ND	0.070 - 0.130
Bromoform	ND	0.070 - 0.130	P-Isopropyltoluene	ND	0.070 - 0.130
Bromomethane	ND	0.070 - 0.130	Propachlor	ND	0.000 - 0.000
Butachlor	ND	0.000 - 0.000	Sec – Butylbenzene	ND	0.070 - 0.130
Carbaryl	ND	0.000 - 0.000	Tert – Butylbenzene	ND	0.070 - 0.130
Chloroethane	ND	0.070 - 0.130	Trichlorfluoromethane	ND	0.070 - 0.130

**Table of Detected Contaminants**

Contaminant	Violation Y/N	Level Detected	Unit Measurement	MCLG	MCL	Likely Source of Contamination
19. Nitrate (as Nitrogen)	NO	2.0	Ppm	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits

## Special Table

## Amount Detected

Calcium	ND
Magnesium	ND
Sodium	ND
Hardness CaCo3	ND
Alkalinity	ND
PH	7.4

### Health effects:

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

## ***GENERAL INFORMATION ABOUT DRINKING WATER CONTAMINANTS***

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).**

## ***VARIANCES AND WAIVERS***

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.

## ***MAYOR AND COUNCIL***

Charles Murphy, Mayor  
Sue Cooper  
Ruthie Campbell

Joe Kitchens  
Brent Kendrick  
Paul Hollingsworth

## ***EMPLOYEES***

Rodney Whitehead, Foreman  
James Brill  
Tommie Carlee

Kurt Lassitter  
Jason Hughes  
James Bauer

## ***BOARD MEETING TIME***

The City of Robertsedale council meeting is held on the 1st Monday of each month at 6 P.M. at the Robertsedale City Hall located at 22647 Racine Street.

## ***WATER SOURCE***

Our water sources are groundwater. Well # 2 draws water from the Miocene Aquifer and is located on Michigan St behind City Hall. Well # 3 draws water from the Miocene Aquifer and is located on Park Avenue. Well # 4 draws water from the Miocene Aquifer and is located on Fairground Road. Well # 5 draws water from the Miocene Aquifer and is located on Julius Childress Dr.

## ***TREATMENT TECHNIQUES***

The Robertsdale Water Works adds chlorine to the water to kill bacteria. Lime is added to produce a desirable water quality by raising the pH level to reduce corrosion and acidic conditions.

Well # 5 is disinfected by MIOX treatment to kill bacteria. Caustic soda is added to produce a desirable water quality by raising the pH level to reduce corrosion and acidic conditions. The water goes through a filtration system to remove iron and then a polymer is added to further reduce the iron.

We at the City of Robertsdale work around the clock to provide top quality water to every tap. We ask that all of 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 serve 3,352 customers and have about 85 miles of water mains.