

## Riviera Utilities

We are pleased to provide you with this year's Annual Water Quality Report. This report provides information concerning the source of your drinking water, treatment techniques, and testing results, as well as an explanation of the numbers and terms contained in it.

Riviera Utilities works diligently to provide high quality water at the lowest possible price. We are committed to providing a quality drinking water that meets or exceeds all state and federal drinking water standards.

### General Information



All drinking water, including bottled 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.

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 from urban storm water run-off, wastewater discharges, oil/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.

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 their health care providers.

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.

#### Definitions

Action Level-the concentration of a contaminant that, if exceeded, triggers treatment or other requirements.  
 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.  
 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  
 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.

Riviera Utilities	
Water Sources	Seven groundwater wells producing from the Miocene Group undifferentiated
Treatment	Chlorination, fluoridation, corrosion control, and pH adjustment
Storage Capacity	Four tanks - 3,150,000 gallons
Customers	Approximately 11,050
Interconnections	Summerdale Water and Perdido Bay Water

Operations Team	
Lee Kibler	Plant Operations Superintendent
Robert Davis	Plant Operation Supervisor
Mark Lucassen	Operator
Zack Hamby	Operator
Tony Darling	Operator
John French	Operator

For information on customer piping and issues that result from backflow prevention, hot water tanks, water hammer, installation or material defects, please visit our website at [www.rivierautilities.com](http://www.rivierautilities.com) and go to "water", and then to "facts on customer piping".

Management Team	
Thomas L. DeBell	General Manager & CEO
Richard A. Peterson	Manager: Gas, Water, Wastewater
Miles McDaniel	Public Affairs & Communication

Utilities Board	
Ralph G. Hellmich	Chairman
Barbara Ingram	Co-Chairman
John E. Koniari	Director
Michael D. Werneth	Director
Robert D. Schreiber	Director

Our regularly scheduled Utilities Board meetings are held on the third Tuesday of each month at 1:00 p.m. in the office of the Utilities Board.



# 2015

## Annual Water Quality Report

Water Quality Testing Performed in 2014

## Monitoring Schedule

**Riviera Utilities** monitors for contaminants according to a schedule assigned to us by the Alabama Department of Environmental Management (ADEM), using EPA approved methods and a State certified laboratory. ADEM allows us to monitor for some contaminants less than once per year because the concentrations of these contaminants do not change frequently.

Constituent Monitored	Date Monitored
Inorganic Contaminants	2013
Lead/Copper	2013
Microbiological Contaminants	current
Nitrates	2014
Radioactive Contaminants	2010
Synthetic Organic Contaminants	2013
Volatile Organic Contaminants	2013
Disinfection By-products	2014
Unregulated Contaminant Monitoring Rule 3 (UCMR3) contaminants	2014

## Water Quality Protection

In compliance with the Alabama Department of Environmental Management (ADEM), **Riviera Utilities** has developed a **Source Water Assessment plan that will assist in protecting** our water sources. The assessment has been performed, public notification has been completed, and the plan has been approved by ADEM. A copy of the report is available in the Gas, Water and Wastewater Manager's office for review during regular business hours, or you may purchase a copy upon request for a nominal reproduction fee.

**Riviera Utilities** continuously monitors the water production and water treatment facilities that deliver safe drinking water to you. We utilize a Bacteriological Monitoring Plan to ensure we sample for potential contamination from locations throughout our distribution system. Chlorine residual is routinely tested by our technicians and bacteriological tests are run to ensure adequate disinfection is available to protect your drinking water. Results show that the required minimum free chlorine residual level of 0.2 mg/L is maintained. We have also established a Cross-Connection Policy to insure safe drinking water for our customers. Please help us make these efforts 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.

## Lead and Drinking Water

As required by federal and state agencies, we also have an outside laboratory monitor our distribution system for lead. Levels of lead in our system have always been well below the minimum standard. Even though we do not have a problem with lead, the following information about lead is required to be in this report:

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. We are 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 on the EPA's website ([www.epa.gov/safewater/lead](http://www.epa.gov/safewater/lead)).

## Primary Drinking Water Contaminants

Below is a list of *Primary Drinking Water Contaminants* and some *Unregulated Contaminants* for which our water system monitors according to a schedule assigned to us by the Alabama Department of Environmental Management (ADEM). These contaminants were *not* detected in your drinking water unless they are listed in the *Table of Detected Drinking Water Contaminants*.

STANDARD LIST OF PRIMARY DRINKING WATER CONTAMINANTS					
Contaminant	MCL	Unit of Msmt	Contaminant	MCL	Unit of Msmt
<b>Bacteriological Contaminants</b>			trans-1,2-Dichloroethylene	100	ppb
Total Coliform Bacteria	<5%	present or absent	Dichloromethane	5	ppb
Fecal Coliform and E. coli	0	present or absent	1,2-Dichloropropane	5	ppb
Turbidity	TT	NTU	Di (2-ethylhexyl)adipate	400	ppb
Cryptosporidium	TT	Calculated organisms/liter	Di (2-ethylhexyl)phthalate	6	ppb
<b>Radiological Contaminants</b>			Dinoseb	7	ppb
Beta/Photon emitters	4	mrem/yr	Dioxin [2,3,7,8-TCDD]	30	ppq
Alpha emitters	15	pCi/l	Diquat	20	ppb
Combined radium	5	pCi/l	Endothal	100	ppb
Uranium	30	pCi/l	Endrin	2	ppb
<b>Inorganic Chemicals</b>			Epichlorohydrin	TT	TT
Antimony	6	ppb	Ethylbenzene	700	ppb
Arsenic	10	ppb	Ethylene dibromide	50	ppb
Asbestos	7	MFL	Glyphosate	700	ppb
Barium	2	ppm	Heptachlor	400	ppt
Beryllium	4	ppb	Heptachlor epoxide	200	ppt
Cadmium	5	ppb	Hexachlorobenzene	1	ppb
Chromium	100	ppb	Hexachlorocyclopentadiene	50	ppb
Copper	AL=1.3	ppm	Lindane	200	ppt
Cyanide	200	ppb	Methoxychlor	40	ppb
Fluoride	4	ppm	Oxamyl [Vydate]	200	ppb
Lead	AL=15	ppb	Polychlorinated biphenyls (PCBs)	0.5	ppb
Mercury	2	ppb	Pentachlorophenol	1	ppb
Nitrate	10	ppm	Picloram	500	ppb
Nitrite	1	ppm	Simazine	4	ppb
Selenium	.05	ppm	Styrene	100	ppb
Thallium	.002	ppm	Tetrachloroethylene	5	ppb
<b>Organic Contaminants</b>			Toluene	1	ppm
2,4-D	70	ppb	Toxaphene	3	ppb
Acrylamide	TT	TT	2,4,5-TP (Silvex)	50	ppb
Alachlor	2	ppb	1,2,4-Trichlorobenzene	.07	ppm
Benzene	5	ppb	1,1,1-Trichloroethane	200	ppb
Benzo(a)pyrene [PAHs]	200	ppt	1,1,2-Trichloroethane	5	ppb
Carbofuran	40	ppb	Trichloroethylene	5	ppb
Carbon tetrachloride	5	ppb	Vinyl Chloride	2	ppb
Chlordane	2	ppb	Xylenes	10	ppm
Chlorobenzene	100	ppb	Disinfectants & Disinfection Byproducts		
Dalapon	200	ppb	Chlorine	4	ppm
Dibromochloropropane	200	ppt	Chlorine Dioxide	800	ppb
o-Dichlorobenzene	600	ppb	Chloramines	4	ppm
p-Dichlorobenzene	75	ppb	Bromate	10	ppb
1,2-Dichloroethane	5	ppb	Chlorite	1	ppm
1,1-Dichloroethylene	7	ppb	HAA5 [Total haloacetic acids]	60	ppb
cis-1,2-Dichloroethylene	70	ppb	TTHM [Total trihalomethanes]	80	ppb
<b>UNREGULATED CONTAMINANTS</b>					
1,1 - Dichloropropene	Aldicarb	Chloroform	Chloroform	Metolachlor	
1,1,1,2-Tetrachloroethane	Aldicarb Sulfone	Chloromethane	Chloromethane	Metribuzin	
1,1,2,2-Tetrachloroethane	Aldicarb Sulfoxide	Dibromochloromethane	Dibromochloromethane	N - Butylbenzene	
1,1-Dichloroethane	Aldrin	Dibromomethane	Dibromomethane	Naphthalene	
1,2,3 - Trichlorobenzene	Bromobenzene	Dicamba	Bromobenzene	N-Propylbenzene	
1,2,3 - Trichloropropane	Bromochloromethane	Dichlorodifluoromethane	Dichlorodifluoromethane	O-Chlorotoluene	
1,2,4 - Trimethylbenzene	Bromodichloromethane	Dieldrin	Bromodichloromethane	P-Chlorotoluene	
1,3 - Dichloropropane	Bromoform	Hexachlorobutadiene	Bromoform	P-Isopropyltoluene	
1,3,5 - Trimethylbenzene	Bromomethane	Isopropylbenzene	Bromomethane	Propachlor	
1,3,5 - Trimethylbenzene	Butachlor	M-Dichlorobenzene	Butachlor	Sec - Butylbenzene	
2,2 - Dichloropropane	Carbaryl	Methylol	Carbaryl	Tert - Butylbenzene	
3-Hydroxycarbofuran	Chloroethane	MTBE	Chloroethane	Trichlorofluoromethane	

The tables below contains results from the most recent monitoring which was performed in accordance with State and Federal regulations. The table shows only those contaminants that were detected. We are pleased to report that our drinking water meets or exceeds federal and state requirements.

**TABLE OF DETECTED DRINKING WATER CONTAMINANTS**

Contaminants	Violation Y/N	Level Detected	Unit Msmt	MCLG	MCL	Likely Source of Contamination
Alpha emitters	NO	1.2 ± 0.5	PCi/l	0	15	Erosion of natural deposits
Chlorine	NO	0.98-2.83	ppm	MRDL=4	MRDL= 4	Water additive used to control microbes
Fluoride	NO	ND-0.59	ppm	4	4	Erosion of natural deposits; water additive to promote strong teeth; discharge from factories
Lead (at consumer's tap)	NO	<0.050 * 1> AL	ppb	0	AL=15	Corrosion of household plumbing systems, erosion of natural deposits
Nitrate (as Nitrogen)	NO	1.17-1.18	ppm	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
TTHM [Total trihalomethanes]	NO	RAA 4.00 ND-14.0	ppb	0	80	By-product of drinking water chlorination
HAA5 [Total haloacetic acids]	NO	RAA 0.41 ND-1.79	ppb	0	60	By-product of drinking water chlorination
<b>Secondary Contaminants</b>					<b>Secondary MCL</b>	
Chloride	NO	7.65-7.71	ppm	none	250	Naturally occurring in the environment or as a result of agricultural runoff
Hardness	NO	16.7-21.5	ppm	none	none	Naturally occurring in the environment or as a result of treatment with water additives
Iron	NO	ND-0.07	ppm	none	0.30	Naturally occurring in the environment; erosion of natural deposits; leaching from pipes
pH	NO	6.45-8.28 **	S.U.	none	6.5-8.5	Naturally occurring in the environment or as a result of treatment with water additives
Sodium	NO	3.08-3.43	ppm	none	none	Naturally occurring in the environment
Sulfate	NO	0.71-3.89	ppm	none	250	Naturally occurring in the environment or as a result of industrial discharge or runoff
Total Dissolved Solids	NO	24.0-44.0	ppm	none	500	Naturally occurring in the environment or as a result of industrial discharge or agricultural runoff or from lime used for pH control

\* Figure shown is 90<sup>th</sup> percentile and # of sites greater than Action Level (15.0 ppb) = 1.

\*\*Secondary contaminants are non-enforceable guidelines relating to cosmetic or aesthetic effects in drinking water.

## Unregulated Contaminant Monitoring Rule 3 (UCMR3) Contaminants

The UCMR 3 requires some water systems to monitor for 30 unregulated contaminants (28 chemicals and 2 viruses) during 2013-2015. The monitoring schedule for Riviera Utilities is August 2014 and February 2015. The table below shows only those contaminants that were detected in 2014.

Unregulated Contaminant Monitoring Rule 3 (UCMR3) Contaminants			
Contaminants	Level Detected (Range)	Unit Msmt	Likely Source of Contamination
Chromium	0.19-2.80	ppb	Naturally occurring in the environment or as a result of industrial discharge
Cobalt	ND-0.72	ppb	Industrial or medical discharge; waste runoff
Strontium	13.8-18.9	ppb	Naturally occurring in the environment or as a result of discharge
Chromium, Hexavalent	0.06-2.70	ppb	Naturally occurring in the environment or as a result of industrial discharge