

THE WATER WE DRINK  
2018 Water Quality Report  
**MARCO RURAL WATER COMPANY**  
SYSTEM # 3320001  
April 16, 2019

We're pleased to present to you this year's Water Quality Report. This report is designed to inform you about the quality of 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 to protect our water resources. We are committed to ensuring the quality of your water. As required by SCDHEC, Marco Rural Water Company's certified personnel checks both the water plants and system and analyzes our water seven days a week to insure delivery of safe drinking water for Marco's customers. Marco's water source comes from several deep wells located in Marion County from a source called the Black Creek Aquifer. Marco has three wells located near Sellers, three wells near Marion, one well east of Mullins, one well near Gapway, one well in Rains, and one in Britton's Neck. All of these are connected by over 800 miles of pipe.

Marco Rural Water Company has a SCDHEC certified lab with certified personnel analyzing required water quality parameters. Marco's water plants and system are checked by certified operators with a minimum of a "D" level license as required by SCDHEC. Marco has a blow-off and hydrant flushing program to insure "good water" and proper hydrant operation.

Marco Rural Water Company maintains a cross-connection / backflow program . A cross connection is formed at any point where a drinking water line connects to any water source of questionable quality. Outside water taps and garden hoses tend to be the most common sources of cross-connection contamination at homes. Community water supplies are continuously jeopardized by cross-connections unless appropriate valves, known as backflow prevention devices, are installed and maintained. Marco has surveyed all industrial, commercial, and institutional facilities in the service area to make sure that all potential cross-connections are identified and eliminated or protected by a backflow preventer. We also inspect and test each backflow preventer a minimum of one time per year as required by SCDHEC. For more information, visit the web site of the American Backflow Prevention Association([www.abpa.org](http://www.abpa.org)). Marco Rural Water Company also has a Source Water Assessment Plan that is available for your review at [www.scdhec.gov/water/html/srcewtr.html](http://www.scdhec.gov/water/html/srcewtr.html) . If you do not have internet access, please contact Robert Winkeler at (843) 423-4680 to make arrangements to review this document.

This Water Quality Report shows our water quality and what it means, and we are pleased to present it to you. This report contains results of potential groundwater contaminants and will be delivered to you on a yearly basis for consumer information and knowledge of the efforts that are being taken by all parties to deliver safe drinking water. Any questions or concerns about the Water Quality Report should be directed to Robert Winkeler who is the General Manager of Marco Rural Water Company. Mr. Winkeler can be contacted at (843) 423-4680 between 8:30 a.m. & 5:00 p.m. Monday through Thursday and between 8:30 a.m. & 1:00 p.m. on Friday. You, Marco's customers, are invited to participate in the board meetings or annual membership meeting to voice your concerns about the drinking water. The board meets the third Monday (7:00 p.m.) each month at the office at 1935 Senator Gasque Road in Marion. The annual membership meeting is at the Marion/Mullins Vocational Center on Highway 76, Marion, South Carolina.

Marco Rural Water Company 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>, (2018). The state requires Marco to monitor for contaminants less than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year. Some data, though representative of the water quality, is more than one year old. As water travels over the land or underground, it can pick up substances or contaminants such as microbes, inorganic and organic chemicals, and radioactive substances. All sources of drinking water are subject to potential contamination by substances that are naturally occurring or man made. 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. FDA regulations establish limits for contaminants in bottled water which must provide the same protection for public health. All drinking water, including bottled drinking water, may be reasonably expected to contain at least small amounts of some constituents. It's important to remember that the presence of these constituents does not necessarily pose a health risk. These substances can be microbes, inorganic or organic chemicals and radioactive substances. Microbial contaminants, such as viruses and bacteria, may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife. Inorganic contaminants, such as salts and metals, can be naturally-occurring or result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming. Pesticides and herbicides may come from a variety of sources such as agriculture, urban storm water runoff, and residential uses. Organic chemical contaminants, including synthetic and volatile organic chemicals, are by-products of industrial processes and petroleum production. These can also come from gas stations, urban storm water runoff, and septic systems. Radioactive contaminants can be naturally occurring or be the result of oil and gas production and mining activities. 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. 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.

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/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).

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. Marco Rural Water Company 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 drinking 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>.

## 2018 Regulated Contaminants Detected

### Lead and Copper

Lead and Copper	Date Sampled	MCLG	Action Level (AL)	90 <sup>th</sup> Percentile	# Sites Over AL	Units	Violation	Likely source of Contamination
Lead	2016	0	15	2.6	0	Ppb	N	Erosion of natural deposits; Corrosion of household plumbing systems
Copper	2016	1.3	1.3	.31	0	ppm	N	Erosion of natural deposits; Leaching from wood preservatives; Corrosion of household plumbing systems.

### Water Quality Test Results

**Terms and abbreviations used in the Consumer Confidence Report:** (In this table you will find many terms and abbreviations you might not be familiar with. To help you better understand these terms we've provided the following definitions):

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

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

**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.

**Maximum Contaminant Level (MCL)** - (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 (MCLG)** - (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)** – (mandatory language) 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.

**Maximum Residual Disinfectant Level Goal (MRDLG)** – (mandatory language) 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.

### Regulated Contaminants

Disinfectants and Disinfection By-Products	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Chlorine	2018	.58	0.42 – 0.7	4	4	ppm	N	Water additive to control microbes.
Haloacetic Acids	2018	14	2.9 – 19.2	No goal for the total	60	ppb	N	By-product of drinking water chlorination.

Not all sample results may have been used for calculating the Highest Level Detected because some results may be part of an evaluation to determine where compliance sampling should occur in the future.

Total Trihalomethanes (TThm)	2018	72	12.3 – 78.9	No goal for the total	80	ppb	N	By-product of drinking water chlorination.
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Not all sample results may have been used for calculating the Highest Level Detected because some results may be part of an evaluation to determine where compliance sampling should occur in the future.

Inorganic Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Fluoride	2018	2.9	2.9– 2.9	2	4.0	ppm	Y	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Nitrate (measured as Nitrogen)	2018	.042	0 – 0.042	10	10	ppm	N	Runoff from fertilizer use; Leaching from Septic Tanks, sewage; Erosion of natural Deposits
Sodium **Unregulated Contaminant	2018	230	32 - 230	N/A	N/A	Mg/l	N	Occurs Naturally
Radioactive Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Combined Radium 226/ 228	2015	1.2	0 – 1.2	0	5	pCi/L	N	Erosion of Natural Deposits
Gross Alpha excluding radon and uranium	2015	9.3	0 – 9.3	0	15	pCi/L	N	Erosion of Natural Deposits

Unregulated contaminants are those that don't yet have a drinking water standard set by USEPA. The purpose of monitoring for these contaminants is to help USEPA decide whether the contaminants should have a standard.

<b>Unregulated Contaminant Monitoring Regulation 4 (Sampled in 2018)</b>			
<b>Parameter</b>	<b>Unit</b>	<b>Level Detected</b>	<b>Range</b>
Germanium	Ug/L	0	
Manganese	Ug/L	47.6	.965 – 47.6
alpha-Hexachlorocyclohexane	Ug/L	0	
Chlorpyrifos	Ug/L	0	
Dimethipin	Ug/L	0	
Ethoprop	Ug/L	0	
Oxyfluorfen	Ug/L	0	
Profenofos	Ug/L	0	
Tebuconazole	Ug/L	0	
Permethrin, cis & trans	Ug/L	0	
Tribufos	Ug/L	0	
Butylated hydroxyanisole	Ug/L	0	
o-Toluidine	Ug/L	0	
Quinoline	Ug/L	.138	.0229 - .138
1-Butanol	Ug/L	0	
2-Methoxyethanol	Ug/L	0	
2-Propen-1-ol	Ug/L	0	
Bromide	Ug/L	374	21.2 - 374
Total Organic Carbon (TOC)	Ug/L	1560	1130 - 1560
Bromochloroacetic acid	Ug/L	5.12	.976 – 5.12
Bromodichloroacetic acid	Ug/L	3.01	0 – 3.01
Chlorodibromoacetic acid	Ug/L	3.85	.562 – 3.85
Dibromoacetic acid	Ug/L	9.06	.366 – 9.06
Dichloroacetic acid	Ug/L	4.63	.389 – 4.63
Monobromoacetic acid	Ug/L	.909	0 - .909
Monochloroacetic acid	Ug/L	0	
Tribromoacetic acid	Ug/L	6.16	0 – 6.16
Trichloroacetic acid	Ug/L	4.01	0 – 4.01

**IMPORTANT NOTICE ABOUT YOUR DRINKING WATER**  
Elevated Fluoride Levels Detected in the Marco Water System

\*This is an alert about your drinking water and a cosmetic dental problem that might affect children under nine years of age. At low levels, fluoride can help prevent cavities, but children drinking water containing more than 2 milligrams per liter (mg/l) of fluoride may develop cosmetic discoloration of their permanent teeth (dental fluorosis). The drinking water provided by Marco Water has a fluoride concentration of 2.9 mg/l.

Dental fluorosis in its moderate or severe forms may result in a brown staining and or pitting of the permanent teeth. This problem occurs only in developing teeth, before they erupt from the gums. Children under nine should be provided with alternative sources of drinking water or water that has been treated to remove the fluoride to avoid possible staining or pitting of their permanent teeth. You may also want to contact your dentist about proper use by young children of fluoride-containing products. Older children and adults may safely drink the water.

Drinking water containing more than 4 mg/l of fluoride (the US Environmental Protection Agency's drinking water standard) can increase your risk of developing bone disease. Your drinking water does not contain more than 4 mg/l of fluoride, but we are required to notify you when we discover that fluoride levels in your drinking water exceed 2 mg/l because of cosmetic dental problems.

\**Fluoride.* Some people who drink water containing fluoride in excess of the MCL, over many years could get bone disease, including pain and tenderness of the bones. Children may get mottled teeth. South Carolina has a secondary standard of 2.0 ppm.

For more information, please call Robin Winkeler at (843) 423-4680. Some home water treatment units are also available to remove fluoride from drinking water. To learn more about available water treatment units, you may call NSF International at 1-877-8-NSF-HELP.\*

All sources of drinking water are subject to potential contamination by substances that are naturally occurring or man-made. These substances can be microbes, inorganic or organic chemicals and radioactive substances. 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.

**If you have special health needs--**

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/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 (800-426-479). 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. Marco Water 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 drinking 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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A notice of availability of this report has been published in the *Star & Enterprise* and copies of this report are posted at the office of Marco Rural Water Company, Marion County Courthouse, Marion Post Office, Mullins Post Office, Nichols Post Office, Rains Post Office, Sellers Post Office, and Brittons Neck Post Office. This report is also available online at [www.marcoruralwater.org/water-quality-report](http://www.marcoruralwater.org/water-quality-report). To request a paper copy of this report, please call our office at 843-423-4680.

“We at Marco Rural Water Company work around the clock to provide top quality water to every tap”, said Robert Winkeler. “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.”

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Robert Winkeler, Manager