

2016 Annual Drinking Water Quality Report
 City of Grenada
 PWS#: 220003, 220004, 220005, 220007, 220036 & 220062
 April 2017

We're pleased to present to you this year's Annual Quality Water 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. Our water source is from wells drawing from the Meridian Upper Wilcox, Middle Wilcox and Lower Wilcox Aquifers.

The source water assessment has been completed for our public water system to determine the overall susceptibility of its drinking water supply to identified potential sources of contamination. A report containing detailed information on how the susceptibility determinations were made has been furnished to our public water system and is available for viewing upon request. The wells for the City of Grenada have received lower to higher susceptibility rankings to contamination.

If you have any questions about this report or concerning your water utility, please contact Dale Ratliff at 662-227-3415. We want our valued customers to be informed about their water utility. If you want to learn more, please attend any of our regularly scheduled meetings. They are held on the second Monday of the month at 6:00 PM at City Hall.

We routinely monitor for contaminants in your drinking water according to Federal and State laws. This table below lists all of the drinking water contaminants that were detected during the period of January 1st to December 31st, 2016. In cases where monitoring wasn't required in 2016, the table reflects the most recent results. As water travels over the surface of land or underground, it dissolves naturally occurring minerals and, in some cases, radioactive materials and can pick up substances or contaminants from the presence of animals or from human activity; microbial contaminants, such as viruses and bacteria, that 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 runoff, 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, urban storm-water runoff, 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 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 that limit the amount of certain contaminants in water provided by public water systems. 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 indicate that the water poses a health risk.

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.

Maximum Contaminant Level (MCL) - 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) - 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. There is convincing evidence that addition of a disinfectant is necessary to control microbial contaminants.

Maximum Residual Disinfectant Level Goal (MRDLG) - The level of a drinking water disinfectant below which there is no known or expected risk of health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

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.

PWS ID#:0220003		TEST RESULTS						
Contaminant	Violation Y/N	Date Collected	Level Detected	Range of Detects or # of Samples Exceeding MCL/ACL	Unit Measure -ment	MCLG	MCL	Likely Source of Contamination
Inorganic Contaminants								
8. Arsenic	N	2014*	.5	No Range	ppb	n/a	10	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes

10. Barium	N	2014*	.176	.076 – .176	ppm	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
13. Chromium	N	2014*	5.6	4 – 5.6	ppb	100	100	Discharge from steel and pulp mills; erosion of natural deposits
14. Copper	N	2014/16*	.5	0	ppm	1.3	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
16. Fluoride	N	2014*	.157	No Range	ppm	4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
17. Lead	N	2014/16*	1	0	ppb	0	AL=15	Corrosion of household plumbing systems, erosion of natural deposits

Disinfection By-Products

81. HAA5	N	2016	4	3 - 4	ppb	0	60	By-Product of drinking water disinfection.
82. TTHM [Total trihalomethanes]	N	2016	4.21	No Range	ppb	0	80	By-product of drinking water chlorination.
Chlorine	N	2016	1	.40- 1.30	ppm	0	MDRL = 4	Water additive used to control microbes

Unregulated Contaminants

Strontium	N	2013*	.507	.194-.507	UG/L	0.3	MRL 0.3	Naturally-occurring element found in the earth's crust and at low concentrations in seawater, and in some surface and ground water; cobaltous chloride was formerly used in medicines and as a germicide
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PWS ID#: 220004

TEST RESULTS

Contaminant	Violation Y/N	Date Collected	Level Detected	Range of Detects or # of Samples Exceeding MCL/ACL	Unit Measure -ment	MCLG	MCL	Likely Source of Contamination
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Inorganic Contaminants

10. Barium	N	2014*	.0195	.0148- .0195	ppm	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
13. Chromium	N	2014*	7.4	6.7 – 7.4	ppb	100	100	Discharge from steel and pulp mills; erosion of natural deposits
14. Copper	N	2012/14*	.3	0	ppm	1.3	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
16. Fluoride	N	2014*	.172	.143 – 1.72	ppm	4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
17. Lead	N	2012/14*	1	0	ppb	0	AL=15	Corrosion of household plumbing systems, erosion of natural deposits

Disinfection By-Products

81. HAA5	N	2014*	13	10 - 13	ppb	0	60	By-Product of drinking water disinfection.
82. TTHM [Total trihalomethanes]	N	2014*	4.49	No Range	ppb	0	80	By-product of drinking water chlorination.
Chlorine	N	2016	1.2	1 – 1.3	ppm	0	MDRL = 4	Water additive used to control microbes

PWS ID#: 220005		TEST RESULTS						
Contaminant	Violation Y/N	Date Collected	Level Detected	Range of Detects or # of Samples Exceeding MCL/ACL	Unit Measure -ment	MCLG	MCL	Likely Source of Contamination
Inorganic Contaminants								
10. Barium	N	2014*	.0268	.0258 - .0268	ppm	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
13. Chromium	N	2014*	1.2	No Range	ppb	100	100	Discharge from steel and pulp mills; erosion of natural deposits
17. Lead	N	2012/14*	1	0	ppb	0	AL=15	Corrosion of household plumbing systems, erosion of natural deposits
Disinfection By-Products								
Chlorine	N	2016	1.2	1 - 1.2	ppm	0	MDRL = 4	Water additive used to control microbes

PWS ID#: 220007		TEST RESULTS						
Contaminant	Violation Y/N	Date Collected	Level Detected	Range of Detects or # of Samples Exceeding MCL/ACL	Unit Measure -ment	MCLG	MCL	Likely Source of Contamination
Inorganic Contaminants								
8. Arsenic	N	2014*	1	.6 - 1	ppb	n/a	10	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes
10. Barium	N	2014*	.0295	.0282 - .0295	ppm	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
13. Chromium	N	2014*	10.8	7.1 - 10.8	ppb	100	100	Discharge from steel and pulp mills; erosion of natural deposits
14. Copper	N	2012/14*	.1	0	ppm	1.3	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
16. Fluoride	N	2014*	.231	.223 - .231	ppm	4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
17. Lead	N	2012/14*	2	0	ppb	0	AL=15	Corrosion of household plumbing systems, erosion of natural deposits
Disinfection By-Products								
81. HAA5	N	2014*	6	No Range	ppb	0	60	By-Product of drinking water disinfection.
82. TTHM [Total trihalomethanes]	N	2014*	6.51	No Range	ppb	0	80	By-product of drinking water chlorination.
Chlorine	N	2016	1	.8 - 1.1	ppm	0	MDRL = 4	Water additive used to control microbes

PWS ID#: 220036		TEST RESULTS						
Contaminant	Violation Y/N	Date Collected	Level Detected	Range of Detects or # of Samples Exceeding MCL/ACL	Unit Measure -ment	MCLG	MCL	Likely Source of Contamination
Inorganic Contaminants								
8. Arsenic	N	2014*	1.5	1.2 - 1.5	ppb	n/a	10	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes
10. Barium	N	2014*	.0264	.0208 - .0264	ppm	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits

13. Chromium	N	2014*	9.4	8.7 – 9.4	ppb	100	100	Discharge from steel and pulp mills; erosion of natural deposits
14. Copper	N	2012/14*	.8	0	ppm	1.3	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
16. Fluoride	N	2014*	.19	.176 - .19	ppm	4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
17. Lead	N	2012/14*	3	0	ppb	0	AL=15	Corrosion of household plumbing systems, erosion of natural deposits
21. Selenium	N	2014*	5.5	4.2 – 5.5	ppb	50	50	Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines

Disinfection By-Products

81. HAA5	N	2016	7	No Range	ppb	0	60	By-Product of drinking water disinfection.
82. TTHM [Total trihalomethanes]	N	2016	39.7	No Range	ppb	0	80	By-product of drinking water chlorination.
Chlorine	N	2016	1.1	.6 – 1.6	ppm	0	MDRL = 4	Water additive used to control microbes

PWS ID#: 220062

TEST RESULTS

Contaminant	Violation Y/N	Date Collected	Level Detected	Range of Detects or # of Samples Exceeding MCL/ACL	Unit Measure -ment	MCLG	MCL	Likely Source of Contamination
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Inorganic Contaminants

10. Barium	N	2014*	.0104	.0043 - .0104	ppm	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
13. Chromium	N	2014*	5.3	4.8 – 5.3	ppb	100	100	Discharge from steel and pulp mills; erosion of natural deposits
14. Copper	N	2012/14*	.4	0	ppm	1.3	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
16. Fluoride	N	2014*	.132	.127 - .132	ppm	4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
17. Lead	N	2012/14*	1	0	ppb	0	AL=15	Corrosion of household plumbing systems, erosion of natural deposits

Disinfection By-Products

82. TTHM [Total trihalomethanes]	N	2014*	2.64	No Range	ppb	0	80	By-product of drinking water chlorination.
Chlorine	N	2016	1.2	1 – 1.3	ppm	0	MDRL = 4	Water additive used to control microbes

* Most recent sample. No sample required for 2016.

As you can see by the table, our system had no violations. We're proud that your drinking water meets or exceeds all Federal and State requirements. We have learned through our monitoring and testing that some constituents have been detected however the EPA has determined that your water IS SAFE at these levels.

We are required to monitor your drinking water for specific constituents on a monthly basis. Results of regular monitoring are an indicator of whether or not our drinking water meets health standards. In an effort to ensure systems complete all monitoring requirements, MSDH now notifies systems of any missing samples prior to the end of the compliance period.

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. Our water system 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 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>. The Mississippi State Department of Health Public Health Laboratory offers lead testing. Please contact 601.576.7582 if you wish to have your water tested.

Significant Deficiencies – System # 220004 & 220036

Monitoring and Reporting of Compliance Data Violations:

During a sanitary survey conducted on 1/17/2017, the Mississippi State Department of Health cited the following significant deficiency(s): Failure to meet water supply demand (overloaded by serving greater than 100% capacity)

Corrective Actions: These systems are currently within the initial 120 day corrective action period which expires 6/27/2017.

To comply with the "Regulation Governing Fluoridation of Community Water Supplies", our systems are required to report certain results pertaining to fluoridation of our water system. The number of months in the previous calendar year in which average fluoride sample results were within the optimal range of 0.7-1.3 ppm was as follows. The percentage of fluoride samples collected in the previous calendar year that was within the optimal range of 0.7-1.3 ppm was as follows.

System #	# of Months	Percentage
220003	9	100%
220004	8	88%
220005	7	83%
220007	7	74%
220036	8	100%
220062	8	94%

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.

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 1.800.426.4791.

The City of Grenada works around the clock to provide top quality water to every tap. We have four certified operators on staff, who would be pleased to answer any and all customer questions. 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.