

2022 Annual Drinking Water Quality Report
City of Grenada
PWS#: 220003, 220004, 220005, 220007, 220036 & 220062
April 2023

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.

About Our System

The city has a 6 member board, with all except two have attended the required board management training.

#220003 - All city treatment plants are in construction currently to become "B" plants. All old existing wet wells will be torn down and replaced with new ones. All old chlorine/phosphate buildings are to be torn down and replaced with new wet wells under new buildings with line feeders, chlorine roto meters with switch over capabilities, etc.

#220004 - The tanks will be inspected, 2 new check valves at the #2 booster station have been installed and another pump motor to be installed this year.

#220005 - Fort Hill has a new 750 GPM well with stainless steel casing installed to protect from rust. There was new filter media installed into the 4 pressure filters. The chlorine system was upgraded with auto switchovers, and a new line feeder and lime vat, etc. Girl Scout well is currently off line for construction. A new wet well, building aerator, line feeder and chlorine apparatus with switchovers to be installed.

#220007 - The Monday Road Elliott system's tanks are to be inspected on or before 6/21/23. The industries with backflow prevention is current. The Elliott South well had a new submersible pump installed this year and 2 valves that turns off the flow to the pressure tank. The Bolton Hill well had a new submersible pump installed. New flow meters have been installed on 2 wells and the third one is on order.

#220036 - One well site is currently offline for repairs, we hope to have this problem fixed in the not to distant future.

#220062 - New 6" lines were added to the existing 6" to accommodate the new 500 GPM well and 250,000 gallon elevation tank that will be built in the future.

Contact & Meeting Information

If you have any questions about this report or concerning your water utility, please contact Fred Chapman at 662.417.6446 or 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 Tuesday of the month at 6:00 PM at City Hall.

Source of 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 identify 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.

Period Covered by Report

We routinely monitor for contaminants in your drinking water according to federal and state laws. This report is based on results of our monitoring period of January 1st to December 31st, 2022. In cases where monitoring wasn't required in 2022, the table reflects the most recent testing done in accordance with the laws, rules, and regulations.

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 contaminants. It's important to remember that the presence of these contaminants does not necessarily indicate that the water poses a health risk.

Terms and Abbreviations

In the table you may find unfamiliar terms and abbreviations you might not be familiar with. To help you better understand these terms we've provided the following definitions:

Action Level (AL) : *The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that 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 billion (ppb) or micrograms per liter: one part by weight of analyte to 1 billion parts by weight of the water sample.

Parts per million (ppm) or Milligrams per liter (mg/l): one part by weight of analyte to 1 million parts by weight of the water sample.

Picocuries per liter (pCi/L): picocuries per liter is a measure of the radioactivity in water.

PWS ID#:0220003		TEST RESULTS						
Contaminant	Violation Y/N	Date Collected	Level Detected	Range of Detects or # of Samples Exceeding MCL/ACL	Unit Measurement	MCLG	MCL	Likely Source of Contamination
Radioactive Contaminants								
6. Radium 226 Radium 228	N	2019*	.80 .52	.57 - .80 .49 - .52	pCi/L	0	5	Erosion of natural deposits
Inorganic Contaminants								
10. Barium	N	2022	.182	.0819 - .182	ppm	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
13. Chromium	N	2022	.8	No Range	ppb	100	100	Discharge from steel and pulp mills; erosion of natural deposits
14. Copper	N	2019/21*	.6	0	ppm	1.3	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
16. Fluoride	N	2022	.626	.154 - .626	ppm	4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
17. Lead	N	2019/21*	1	0	ppb	0	AL=15	Corrosion of household plumbing systems, erosion of natural deposits
Unregulated Contaminants								
Sodium	N	2021*	25.3	No Range	ppm	20	0	Road Salt, Water Treatment Chemicals, Water Softeners and Sewage Effluents.
Disinfection By-Products								
81. HAA5	N	2022	3.31	2.17 – 3.31	ppb	0	60	By-Product of drinking water disinfection.
82. TTHM [Total trihalomethanes]	N	2022	8.99	No Range	ppb	0	80	By-product of drinking water chlorination.
Chlorine	N	2022	1.1	.7 – 1.9	ppm	0	MDRL = 4	Water additive used to control microbes

* Most recent sample. No sample required for 2022.

**MONITORING AND REPORTING OF COMPLIANCE DATA VIOLATIONS
SIGNIFICANT DEFICIENCIES – 220003**

During a sanitary survey conducted on 10/20/22, the Mississippi State Department of Health cited the following significant deficiency(s): **CONDITION OF STORAGE TANKS.** The system is scheduled to complete corrective actions by 6/21/23 using a compliance plan or are within the initial 120 days.

Tank inspections - all elevated tanks are to be inspected within a 5 year time frame. The city failed to meet the 5 year limit requirement, and therefore received a significant deficiency. The city has 120 days from date of survey to correct this error or apply for an extension. The extension was granted and the tanks should be inspected and corrected within the extension time frame.

PWS ID#: 220004		TEST RESULTS						
Contaminant	Violation Y/N	Date Collected	Level Detected	Range of Detects or # of Samples Exceeding MCL/ACL	Unit Measurement	MCLG	MCL	Likely Source of Contamination
Inorganic Contaminants								
10. Barium	N	2022	.0201	.0174- .0201	ppm	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
13. Chromium	N	2022	.5	No Range	ppb	100	100	Discharge from steel and pulp mills; erosion of natural deposits
14. Copper	N	2020/22	.1	0	ppm	1.3	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
15. Cyanide	N	2021*	26	No Range	ppb	200	200	Discharge from steel/metal factories; discharge from plastic and fertilizer factories
16. Fluoride	N	2022	.7	.124 – .7	ppm	4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
17. Lead	N	2020/22	0	0	ppb	0	AL=15	Corrosion of household plumbing systems, erosion of natural deposits
Unregulated Contaminants								
Sodium	N	2019*	79000	51000 - 79000	PPB	0	0	Road Salt, Water Treatment Chemicals, Water Softeners and Sewage Effluents.
Disinfection By-Products								
81. HAA5	N	2022	6.1	No Range	ppb	0	60	By-Product of drinking water disinfection.
82. TTHM [Total trihalomethanes]	N	2022	5.76	No Range	ppb	0	80	By-product of drinking water chlorination.
Chlorine	N	2022	1.3	.5 – 1.6	ppm	0	MDRL = 4	Water additive used to control microbes

* Most recent sample. No sample required for 2022.

**MONITORING AND REPORTING OF COMPLIANCE DATA VIOLATIONS
SIGNIFICANT DEFICIENCIES – 220004**

During a sanitary survey conducted on 10/20/22, the Mississippi State Department of Health cited the following significant deficiency(s): CROSS CONNECTION CONTROL. The system is scheduled to complete corrective actions by 6/21/23 using a compliance plan or are within the initial 120 days.

House Bill # 692 created a new category of cross connection; “low hazard posing a very low risk. To my knowledge, Holcomb has no high hazard risk.

PWS ID#: 220005		TEST RESULTS						
Contaminant	Violation Y/N	Date Collected	Level Detected	Range of Detects or # of Samples Exceeding MCL/ACL	Unit Measurement	MCLG	MCL	Likely Source of Contamination
Inorganic Contaminants								
10. Barium	N	2022	.0316	.031 - .0316	ppm	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
14. Copper	N	2020/22	2.7	0	ppm	1.3	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
17. Lead	N	2020/22	2.7	7	ppb	0	AL=15	Corrosion of household plumbing systems, erosion of natural deposits
Unregulated Contaminants								
Sodium	N	2021*	6.76	6.52 – 6.76	ppm	20	0	Road Salt, Water Treatment Chemicals, Water Softeners and Sewage Effluents.
Disinfection By-Products								
Chlorine	N	2022	1.3	.7 – 1.8	ppm	0	MDRL = 4	Water additive used to control microbes

* Most recent sample. No sample required for 2022.

Inorganic Contaminants:

(18) Lead. Infants and children who drink water containing lead in excess of the action level could experience delays in their physical or mental development. Children could show slight deficits in attention span and learning abilities. Adults who drink this water over many years could develop kidney problems or high blood pressure.

System – 220005

Test results from system # 220005 show that we exceeded the action level for lead.

**MONITORING AND REPORTING OF COMPLIANCE DATA VIOLATIONS
SIGNIFICANT DEFICIENCIES – 220005**

During a sanitary survey conducted on 10/20/22, the Mississippi State Department of Health cited the following significant deficiency(s): CROSS CONNECTION CONTROL. The system is scheduled to complete corrective actions by 6/21/23 using a compliance plan or are within the initial 120 days.

House Bill # 692 created a new category of cross connection; "low hazard posing a very low risk. To my knowledge, Girl Scout Fort Hill has no high hazard risk.

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								
10. Barium	N	2022	.032	.0139 - .032	ppm	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
13. Chromium	N	2022	1.2	1 – 1.2	ppb	100	100	Discharge from steel and pulp mills; erosion of natural deposits
14. Copper	N	2020/22	.4	0	ppm	1.3	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
16. Fluoride	N	2022	.724	.171 – .724	ppm	4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
17. Lead	N	2020/22	1	0	ppb	0	AL=15	Corrosion of household plumbing systems, erosion of natural deposits
Unregulated Contaminants								
Sodium	N	2019*	140000	98000 - 140000	ppb	0	0	Road Salt, Water Treatment Chemicals, Water Softeners and Sewage Effluents.
Disinfection By-Products								
81. HAA5	N	2022	14	No Range	ppb	0	60	By-Product of drinking water disinfection.
82. TTHM [Total trihalomethanes]	N	2022	4.52	No Range	ppb	0	80	By-product of drinking water chlorination.
Chlorine	N	2022	1.5	1 – 1.8	ppm	0	MDRL = 4	Water additive used to control microbes

* Most recent sample. No sample required for 2022.

MONITORING AND REPORTING OF COMPLIANCE DATA VIOLATIONS

SIGNIFICANT DEFICIENCIES – 220007

During a sanitary survey conducted on 10/20/22, the Mississippi State Department of Health cited the following significant deficiency(s): CROSS CONNECTION CONTROL. The system is scheduled to complete corrective actions by 6/21/23 using a compliance plan or are within the initial 120 days.

Cross connection control requires certain businesses to have a backflow preventor install to prevent any contamination passing into the water supply. These records were not updated at the time of the city's annual report. These records are 80% complete and should be completed by the extension deadline.

PWS ID#: 220036		TEST RESULTS						
Contaminant	Violation Y/N	Date Collected	Level Detected	Range of Detects or # of Samples Exceeding MCL/ACL	Unit Measurement	MCLG	MCL	Likely Source of Contamination
Inorganic Contaminants								
8. Arsenic	N	2022	.5	No Range	ppb	n/a	10	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes
10. Barium	N	2022	.0229	.0221 - .0229	ppm	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
13. Chromium	N	2022	1.4	1.1 – 1.4	ppb	100	100	Discharge from steel and pulp mills; erosion of natural deposits
14. Copper	N	2020/22	.5	0	ppm	1.3	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
16. Fluoride	N	2022	.184	.176 - .184	ppm	4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
17. Lead	N	2020/22	1	0	ppb	0	AL=15	Corrosion of household plumbing systems, erosion of natural deposits
21. Selenium	N	2022	2.7	No Range	ppb	50	50	Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines
Unregulated Contaminants								
Sodium	N	2019*	140000	No Range	PPB	0	0	Road Salt, Water Treatment Chemicals, Water Softeners and Sewage Effluents.
Volatile Organic Contaminants								
76. Xylenes	N	2022	.001459	No Range	ppm	10	10	Discharge from petroleum factories; discharge from chemical factories
Disinfection By-Products								
81. HAA5	N	2022	11.8	9.26 – 11.8	ppb	0	60	By-Product of drinking water disinfection.
82. TTHM [Total trihalomethanes]	N	2022	38.9	19.9 – 38.9	ppb	0	80	By-product of drinking water chlorination.
Chlorine	N	2022	1.4	.5– 1.6	ppm	0	MDRL = 4	Water additive used to control microbes

* Most recent sample. No sample required for 2022.

MONITORING AND REPORTING OF COMPLIANCE DATA VIOLATIONS SIGNIFICANT DEFICIENCIES – 220036

During a sanitary survey conducted on 10/20/22, the Mississippi State Department of Health cited the following significant deficiency(s): CROSS CONNECTION CONTROL. The system is scheduled to complete corrective actions by 6/21/23 using a compliance plan or are within the initial 120 days.

Cross connection control requires certain businesses to have a backflow preventor install to prevent any contamination passing into the water supply. These records were not updated at the time of the city's annual report. These records are 80% complete and should be completed by the extension deadline.

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
Inorganic Contaminants								
10. Barium	N	2022	.0106	.0052 - .0106	ppm	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
13. Chromium	N	2022	.6	No Range	ppb	100	100	Discharge from steel and pulp mills; erosion of natural deposits
14. Copper	N	2022	.4	0	ppm	1.3	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
16. Fluoride	N	2022	.786	.116 - .786	ppm	4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
17. Lead	N	2022	2	0	ppb	0	AL=15	Corrosion of household plumbing systems, erosion of natural deposits
Unregulated Contaminants								
Sodium	N	2021	73.4	72.8 – 73.4	ppm	20	0	Road Salt, Water Treatment Chemicals, Water Softeners and Sewage Effluents.
Disinfection By-Products								
81. HAA5	N	2022	3.88	2.24 – 3.88	ppb	0	60	By-Product of drinking water disinfection.
82. TTHM [Total trihalomethanes]	N	2022	26	No Range	ppb	0	80	By-product of drinking water chlorination.
Chlorine	N	2022	1.5	.7 – 1.9	ppm	0	MDRL = 4	Water additive used to control microbes

* Most recent sample. No sample required for 2022.

MONITORING AND REPORTING OF COMPLIANCE DATA VIOLATIONS SIGNIFICANT DEFICIENCIES – 220062

During a sanitary survey conducted on 10/20/22, the Mississippi State Department of Health cited the following significant deficiency(s): CROSS CONNECTION CONTROL. The system is scheduled to complete corrective actions by 6/21/23 using a compliance plan or are within the initial 120 days.

House Bill # 692 created a new category of cross connection; “low hazard posing a very low risk. To my knowledge, Girl Scout Fort Hill has no high hazard risk.

We are required to monitor your drinking water for specific contaminants 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. We have learned through our monitoring and testing that some contaminants have been detected, however the EPA has determined that your water IS SAFE at these levels.

LEAD INFORMATION

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.

FLUORIDE INFORMATION

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 0.6-1.2 ppm was as follows. The percentage of fluoride samples collected in the previous calendar year that was within the optimal range of 0.6-1.2 ppm was as follows. For all systems the number of months samples were collected and analyzed in the previous calendar year were 12.

System #	# of Months	Percentage
220003	7	46%
220004	6	50%
220005	5	42%
220007	5	47%
220036	0	0%
220062	7	12%

UNREGULATED CONTAMINANTS

Unregulated contaminants are those for which EPA has not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist EPA in determining the occurrence of unregulated contaminants in drinking water and whether future regulations are warranted.

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 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.