

2022 Annual Drinking Water Quality Report
City of Hernando
PWS#: 0170002, 0170009 & 170050
June 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.

Contact & Meeting Information

If you have any questions about this report or concerning your water utility, please contact Neil Waldrop at 662.429.9092. 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 first & third Tuesdays of each month at 6:00 PM at the City Hall located at 475 W. Commerce.

Source of Water

Our water source is from wells drawing from the Sparta Aquifer. 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 well for the City of Hernando have received moderate 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 # 0170002		TEST RESULTS						
Contaminant	Violation Y/N	Date Collected	Level Detected	Range of Detects or # of Samples Exceeding MCL/ACL/MRDL	Unit Measurement	MCLG	MCL	Likely Source of Contamination
Microbiological Contaminants								
1. Total Coliform Bacteria including E. Coli	Y	October	Monitoring	0	NA	0	Presence of coliform bacteria in 5% of monthly samples	Naturally present in the environment E Coli comes from human and animal fecal waste
Radioactive Contaminants								
6. Radium 228	N	2020*	.59	No Range	pCi/L	0	5	Erosion of natural deposits
Inorganic Contaminants								
10. Barium	N	2022	.0305	No Range	ppm	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
14. Copper	N	2019/21*	0	0	ppm	1.3	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
17. Lead	N	2019/21*	1	0	ppb	0	AL=15	Corrosion of household plumbing systems, erosion of natural deposits
19. Nitrate (as Nitrogen)	N	2022	.402	No Range	ppm	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
20. Nitrite (as Nitrogen)	N	2022	.0233	No Range	ppm	1	1	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Unregulated Contaminants								
Sodium	N	2021*	19.5	No Range	ppm	20	0	Road Salt, Water Treatment Chemicals, Water Softeners and Sewage Effluents.
Disinfection By-Products								
Chlorine	Y	2022	1.2	.83 – 1.33	mg/l	0	MRDL = 4	Water additive used to control microbes

PWS ID # 0170009		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
Microbiological Contaminants								
1. Total Coliform Bacteria including E. Coli	Y	October	Monitoring	0	NA	0	Presence of coliform bacteria in 5% of monthly samples	Naturally present in the environment E Coli comes from human and animal fecal waste
Radioactive Contaminants								
5. Gross Alpha	N	2019*	2.5	No Range	pCi/L	0	15	Erosion of natural deposits
6. Radium 226 Radium 228	N	2019*	1.1 .82	No Range	pCi/L	0	5	Erosion of natural deposits
Inorganic Contaminants								
10. Barium	N	2022	.0311	No Range	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*	0	0	ppm	1.3	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
16. Fluoride**	N	2022	.354	No Range	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
19. Nitrate (as Nitrogen)	N	2022	.827	No Range	ppm	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
20. Nitrite (as Nitrogen)	N	2022	.0242	No Range	ppm	1	1	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Unregulated Contaminants								
Sodium	N	2021*	21.2	No Range	ppm	20	0	Road Salt, Water Treatment Chemicals, Water Softeners and Sewage Effluents.
Disinfection By-Products								
Chlorine	Y	2022	1.2	.59 – 1.91	mg/l	0	MDRL = 4	Water additive used to control microbes

PWS # 0170050		TEST RESULTS						
Contaminant	Violation Y/N	Date Collected	Level Detected	Range of Detects or # of Samples Exceeding MCL/ACL/MRDL	Unit Measurement	MCLG	MCL	Likely Source of Contamination
Inorganic Contaminants								
10. Barium	N	2022	.0315	No Range	ppm	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
14. Copper	N	2022	.1	0	ppm	1.3	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
17. Lead	N	2022	1	0	ppb	0	AL=15	Corrosion of household plumbing systems, erosion of natural deposits
19. Nitrate (as Nitrogen)	N	2022	.191	No Range	ppm	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
20. Nitrite (as Nitrogen)	N	2022	.0246	No Range	ppm	1	1	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Unregulated Contaminants								
Sodium	N	2021*	17.5	No Range	ppm	20	0	Road Salt, Water Treatment Chemicals, Water Softeners and Sewage Effluents.
Volatile Organic Contaminants								
76. Xylenes	N	2022	.00096	No Range	ppm	10	10	Discharge from petroleum factories; discharge from chemical factories
Disinfection By-Products								
Chlorine	N	2022	1.2	.58– 1.45	mg/l	0	MRDL = 4	Water additive used to control microbes

* Most recent sample. No sample required for 2022.

Microbiological Contaminants:

(1) Total Coliform/E Coli. Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful, waterborne pathogens may be present or that a potential pathway exists through which contamination may enter the drinking water distribution system.

Disinfection By-Products:

Chlorine. Some people who use water containing chlorine well in excess of the MRDL could experience irritating effects to their eyes and nose. Some people who drink water containing chlorine well in excess of the MRDL could experience stomach discomfort.

Sodium. EPA recommends that drinking water sodium not exceed 20 milligrams per liter (mg/L). Excess sodium from salt in the diet increases the risk of high blood pressure and cardiovascular disease.

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.

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 system # 170009 is 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 9. The percentage of fluoride samples collected in the previous calendar year that was within the optimal range of 0.6-1.2 ppm was 1050%. The number of months samples were collected and analyzed in the previous calendar year was 9.

Note: this system adds fluoride to your drinking water to help prevent and reduce cavities and improve overall oral health. Supply-chain issues have limited or prevented this water system's ability to obtain fluoride on a regular basis. The data presented above only reflects the months when this water system added fluoride to your drinking water.

MONITORING AND REPORTING OF COMPLIANCE DATA VIOLATIONS

Our system # 170002 received a Monitoring Violation, during October 2022, we did not complete all monitoring or testing for Bacteriological and Chlorine contaminants and therefore cannot be sure of the quality of our drinking water during that time. We were required to take six (6) samples and took five (5).

Our system # 170009 received a Monitoring Violation, during October 2022, we did not complete all monitoring or testing for Bacteriological and Chlorine contaminants and therefore cannot be sure of the quality of our drinking water during that time. We were required to take fifteen (15) samples and took thirteen (13).

A newer employee who was being trained at the time as a water operator mistakenly collected the incorrect number of required samples for Bacteriological and Chlorine. We have since taken the required sample that showed all samples met standards required for consumption. Moving forward the designated Water Operator will directly oversee the water sample collection process and verify that all samples are collected in a timely manner.

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 Hernando 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.