



2023 Water Quality Report

We're pleased to present to you this year's Annual 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 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.

Message to Our Customers

We are committed to the quality of your drinking water. As in the past, your drinking water has been and remains safe to drink. 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.

Table of Primary Contaminants

Spanish Fort Water System routinely monitors your drinking water according to Federal and State laws. This table shows the results of the combined monitoring of Spanish Fort Water System, City of Loxley, and Mobile Area Water And Sewer System, for the period of January 1st thru December 31st, 2023. At high levels some primary contaminants are known to pose a health risk to humans. This table provides a quick glance of any primary contaminants detected.

CONTAMINANT	MCL	AMOUNT DETECTED	CONTAMINANT	MCL	AMOUNT DETECTED
Bacteriological			Organic Chemicals		
Total Coliform Bacteria	< 5%	ND	0-Dichlorobenzene	600 ppb	ND
Turbidity	TT	0.3	p-Dichlorobenzene	75 ppb	ND
Fecal Coliform and E.coli	<5%	ND	1,2-Dichloroethane	5 ppb	ND
Radiological			1,1-Dichloroethylene	7 ppb	ND
Beta/Photon emitters (pCi/L)	50	0.518	cis-1,2-Dichloroethylene	70 ppb	ND
Alpha emitters (pCi/L)	15	1.79	trans-1,2-Dichloroethylene	100 ppb	ND
Combined radium (pCi/l)	5	1.21	Dichloromethane	5 ppb	ND
Inorganic Chemicals			1,2-Dichloropropane	5 ppb	ND
Antimony	6 ppb	ND	Di-(2-ethylhexyl)adipate	400 ppb	ND
Arsenic	10 ppb	ND	Di(2-ethylhexyl)phthalates	6 ppb	ND
Asbestos (MFL)	7	ND	Dinoseb	7ppb	ND
Barium	2 ppm	0.033	Dioxin [2,3,7,8-TCDD]	30 ppq	ND
Beryllium	4 ppb	1	Diquat	20 ppb	ND
Bromate	10 ppb	ND	Endothall	100 ppb	ND
Beryllium	4 ppb	1	Endrin	2 ppb	ND
Cadmium	5 ppb	ND	Epichlorohydrin	TT	ND
Chloramines	4 ppm	ND	Ethylbenzene	700 ppb	ND
Chlorine	4 ppm	2.79	Ethylene dibromide [EDB]	50 ppt	ND
Chlorine Dioxide	800 ppm	100	Glyphosate	700 ppb	ND
Chlorite	1 ppm	0.76	HAA5	60 ppb	(See Note 1)
Chromium	100 ppb	ND	Heptachlor	400 ppt	ND
Copper	AL=1.3 ppm	0.34	Heptachlor epoxide	200 ppt	ND
Cyanide	200 ppb	ND	Hexachlorobenzene	1 ppb	ND
Fluoride	4 ppm	1.51	Hexachlorocyclopentadiene	50 ppb	ND
Lead	AL=15 ppb	4	gamma-BHC	200 ppt	ND
Mercury	2 ppb	ND	Methoxychlor	40 ppb	ND
Nitrate	10 ppb	0.02	Oxamyl [Vydate]	200 ppb	ND
Nitrite	1 ppm	ND	Pentachlorophenol	1 ppb	ND
Total Nitrate and Nitrite	10 ppm	0.18	Picloram	500 ppb	ND
Selenium	50 ppb	ND	PCBs	500 ppt	ND
Thallium	2 ppb	ND	Simazine	4 ppb	ND
Organic Chemicals			Styrene	100 ppb	ND
Acrylamide	TT	ND	Tetrachloroethylene	5 ppb	ND
Alachlor	2 ppb	ND	Toluene	1 ppb	ND
Atrazine	3 ppb	ND	TOC	TT	1.30 - 1.90
Benzene	5 ppb	ND	TTHM	80 ppb	(See Note 1)
Benzo(a)pyrene[PAHs]	200 ppt	83	Toxaphene	3 ppb	ND
Carbofuran	40 ppb	ND	2,4,5-TP (Silvex)	50 ppb	ND
Carbon tetrachloride	5 ppb	ND	1,2,4-Trichlorobenzene	70 ppb	ND
Chlordane	2 ppb	ND	1,1,1-Trichloroethane	200 ppb	ND
Chlorobenzene	100 ppb	ND	1,1,2-Trichloroethane	5 ppb	ND
2,4-D	70 ppb	ND	Trichloroethylene	5 ppb	ND
Dalapon	200 ppb	ND	Vinyl Chloride	2 ppb	ND
Dibromochloropropane	200 ppt	ND	Xylene (Total)	10 ppm	ND

Note 1 - See Table of Detected Contaminants for description of Treatment Technique (TT).

Sources of Water

We have a Source Water Protection Plan available from our office that provides more information such as potential sources of contamination. Operating under permit by the Alabama Department of Environmental Management, the Spanish Fort Water System has two wells that draw from the Miocene Aquifer. Well #5 is located on Water Tower Rd., and Well #4 is located behind the Rouses Shopping Center. Spanish Fort Water System also purchased water from The Mobile Area Water and Sewer System and the City of Loxley. The source of MAWSS customers' drinking water is Converse Reservoir (Big Creek Lake), which is fed by springs, streams, and rainfall in the Converse Reservoir Watershed. The City of Loxley Utilities obtains its drinking water through the use of three (3) public water supply wells. The wells produce groundwater from sand units in the aquifer known regionally as the Miocene Aquifer. The source of recharge to the aquifers is precipitation.

Educational Information

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 infection. 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). 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. The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and radioactive material, and it can pick up substances resulting from the presence of animals or from human activity.

Lead Notice

Every report shall contain the following lead-specific information: If present, elevated levels of lead can cause serious health problems, especially for pregnant woman and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. Spanish Fort 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>.

Definitions

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:

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 (ug/l) - one part per billion corresponds to one minute in a million years or a single penny in \$10,000,000.

Maximum Contaminant Level Goal - 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 Contaminant Level - 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.

Variations and Exemptions - ADEM or EPA permission not to meet an MCL or a treatment technique under certain conditions.

Treatment Technique (TT) - (mandatory language) A treatment technique is a required process intended to reduce the level of a contaminant in drinking water.

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

Nephelometric Turbidity Unit (NTU) - Nephelometric Turbidity Unit is a measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

Results of Radon Monitoring

Radon is radioactive gas that you can't see, taste, or smell. It is found throughout the United States. Radon can move up through the ground and into a home through cracks and holes in the foundation. Radon can build up to high levels in all types of homes. Radon can also get into indoor air when released from tap water from showering, washing dishes, and other household activities. Compared to radon entering the home through soil, radon entering the home through tap water will in most cases be a small source of radon in indoor air. Radon is a known human carcinogen. Breathing air containing radon can lead to lung cancer. Drinking water containing radon may also cause increased risk of stomach cancer. If you are concerned about radon in your home, test the air in your home. Testing is inexpensive and easy. Fix Your home if the level of radon in your air is 4 picocuries per liter of air (pCi/L) or higher. There are simple ways to fix a radon problem that aren't too costly. For additional information, call your state radon program or call EPA's Radon Hotline (800-SOS-RADON).

Dioxin and Asbestos

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 is not required.

If you have any questions about this report, please contact Terry Evans at 626-3067. 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 Board meetings. They are held on the second Tuesday of each month at 5:00 pm. Our Board Members are: Robbins Flynn (President), Bob Robbins (Vice President), Jimmy Ashcraft, Boyd Pugh and Ric Boutin.

2023 Table of Detected Contaminants

Regulated Substances					
Substance	MCLG	MCL	Highest Detected	Range	Major Sources
Barium, ppm	2	2	0.033	0.21 - 0.033	Discharge of drilling waste; Discharge from metal refineries; Erosion of natural deposits
Benzo(a)pyrene[PHAs], ppt	0	2	0.83	0.83	Leaching from linings of water storage tanks and distribution lines
Chlorine, ppm	MRDLG=4	MRDL=4	2.79	0.45 - 2.79	Water additive to control microbes
Chlorine Dioxide, ppb	MRDLG=800	MRDLG=800	100	ND - 100.0	Water additive to control microbes
Chlorite, ppm	0.8	1	0.76	0.22 - 0.76	Disinfection By-Product
Copper , ppm	1.3	AL=1.3	0.026 at 90th percentile (AL not exceeded)	0.0026 - 0.34	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Fluoride, ppm	4	4	1.51	ND - 1.51	Water additive promoting strong teeth; Erosion of natural deposits; Discharge from fertilizer and aluminum factories
Lead, ppb	0	AL=15	4 at 90th percentile (AL not exceeded)	ND—4500	Corrosion of household plumbing systems, erosion of natural deposits
Nitrate, ppm	10	10	0.02	ND - 0.02	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Total NO2 + NO3, mg/L	10	10	0.018	ND - 0.018	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Turbidity, NTU	N/A	TT (under filter)-at least 95% of samples<0.3	0.099 (TT Not Exceeded)	0.032 - 0.099	Soil runoff
Total Organic Carbon (TOC)	N/A	TT	Lowest Performance Ratio 1.24	1.86	Naturally present in the environment
Total Trihalomethanes, ppb	N/A	80	Highest average = 81*	4.9 - 92.0	Disinfection By-Product
Haloacetic Acids, (HAA5), ppb	N/A	60	Highest average = 30.6*	3.4 - 39	Disinfection By-Product
Gross Alpha, pCi/L	0	15	1.836	-1.93 - 1.79	Erosion of natural deposits
Gross Beta, mrem/yr	0	4	1.242	-1.448	Erosion of natural deposits
Combined Radium, pCi/L	0	5	1.21	0.0194 - 1.21	Erosion of natural deposits

Substances Regulated Under Secondary Drinking Water Standards					
Substance	MCLG	MCL	Highest Detected	Range	Major Sources
Aluminum, ppm	N/A	0.2	0.33	0.096 - 0.33	Secondary contaminant; May cause colored water
Iron, ppm	N/A	0.3	0.25	ND - 0.25	Secondary contaminant; May cause colored water
Manganese, ppm	N/A	0.05	0.06	ND - 0.06	Secondary contaminant; May cause colored water
Chloride, ppm	N/A	250	8.2	7.3 - 8.2	Secondary Contaminant
Total Dissolved Solids, ppm	N/A	500	110	50 - 110	Secondary Contaminant
Color, units	N/A	15 color units	10	5 - 10	Special Corrosivity Monitoring (MAWSS has implemented a corrosion control program.)
Odor, TON	NA	3	1	ND - 1.0	
pH	NA	N/A	10.5	6.4 - 10.5	
Alkalinity as CaCO3, ppm	N/A	N/A	15.6	11.5 - 15.6	
Sodium	N/A	N/A	4.7	3.1 - 4.7	
Sulfate as SO4	N/A	250	25.9	19.8 - 25.9	
Calcium	N/A	N/A	15.9	10 - 15.9	
Carbon Dioxide	N/A	N/A	14.8	10.5 - 14.8	
Magnesium	N/A	N/A	1.2	0.95 - 1.2	
Hardness as CaCO3	N/A	N/A	44	24.0 - 44.0	
Temperature, C	N/A	N/A	39.4	11.0 - 39.40	
Corrosivity (saturation index)	N/A	N/A	-1.85	-1.4 to -1.85	
Specific Conductance	N/A	N/A	126	68.20 - 126	
Orthophosphate	N/A	N/A	0.16	0.16	

* All site locations monitor MCL compliance for Total Trihalomethanes and HAA5 based on each sites location running average (LRAA) based on the last four quarters of monitoring. The LRAA for each site must be < MCL of 80 ppb and 60 ppb respectively. Since a LRAA of 81 ppb for Total Trihalomethanes was detected, please see the below section from MAWSS explaining this violation.

MAWSS Per- and Polyfluoroalkyl (PFAS)					
Substance	MCLG	MCL	Highest Detected	Range	Major Sources
Perfluorobutane sulfonic acid (PFBS), ppt	Index*	Index*	1.70 (Index = 0.19)	0.78 - 1.7	Discharge and waste from industrial facilities; Stain-resistant treatments
Perfluorohexane sulfonic acid (PFHxS), ppt	10	10	0.56	ND - 0.56	Firefighting foam; Discharge and waste from industrial facilities
Perfluorohexanoic acid (PFHXA), ppt	N/A	N/A	0.92	0.75 - 0.92	Firefighting foam; Discharge and waste from industrial facilities
Perfluoroheptanoic acid (PFHpA), ppt	N/A	N/A	1.8	ND - 1.8	Degradation of many different long-chain PFAS components
Perfluorooctane sulfonic acid (PFOS), ppt	0	4	1.3	0.76 - 1.3	Firefighting foam; Discharge from electroplating facilities; Discharge and waste from industrial facilities
Perfluorooctanoic acid (PFOA), ppt	0	4	2.5	1.1 - 2.5	Discharge and waste from industrial facilities; Stain-resistant treatments

* EPA set enforceable limits on April 10, 2024. Detected compounds in 2023 met these standards, despite not being enforceable for the values listed. Contaminants listed with "Index" use a weighted value equation labeled the hazard index with the highest obtained values analyzed and given in parenthesis. The MCL for the hazard index is 1.0 with MAWSS 2023 values equal to 0.19.

Mobile Area Water and Sewer System strives to provide the highest levels of quality and service possible. However, in August 2023, we exceeded drinking water standards for total trihalomethanes in the Snow Road North area by 0.001 parts per million, or 1 part per billion. No other areas sampled exceeded regulatory standards. This is also the first time that Mobile Area Water and Sewer Systems has had a violation of disinfection byproduct drinking water standards in any area within the system. MAWSS mailed notices regarding this event to all customers November 27th, 2023 which you should have received shortly afterwards. We immediately took steps to reduce future values below the regulatory standards again which consisted of increased internal monitoring and the installation of automatic flushing units. These actions were successful and MAWSS returned to compliance with the next sampling event November 14th, 2023. We have exceeded the standards since.

We are dedicated to ensuring we meet regulatory standards again moving forward, just as we have done during all previous quarters in the past.

In July 2023, we missed submitting two water samples for Total Organic Carbon (TOC) to an outside certified lab as required by our sampling plan. Even though the outside certified lab did not test the samples, samples were tested in the MAWSS lab. There is no indication that the water you received in July was of lesser quality than the water obtained in the months before and since this event. The TOC monitoring non-compliance event is a sampling protocol violation not a water quality violation due to not maintaining water quality standards.

We take both of these errors seriously. MAWSS has added procedural changes to our sampling program to ensure this sampling event error is not repeated and we have obtained the equipment necessary to ensure consistent water quality that meets regulatory standards.

The Alabama Department of Environmental Management (ADEM) requires that these non-compliance incidents be conveyed to our customers using the language identified in the attached DBP and TOC Non-Compliance Notices within this consumer confidence report.

MOBILE WATER & SEWER BOARD HAS LEVELS OF DISINFECTION BY PRODUCTS ABOVE DRINKING WATER STANDARDS

Our water system recently violated a drinking water standard. Although this is not an emergency, as our customers, you have a right to know what happened, what you should do, and what we are doing to correct this situation.

We routinely monitor for the presence of drinking water contaminants. Testing results we received in August of 2023 show that our system exceeds the standard or maximum contaminant level (MCL) for total trihalomethanes (TTHM). The standard for total trihalomethanes is 0.080 MG/L. The chart below lists the locations, disinfectant byproduct and levels that exceeded the maximum contaminant level.

This is not an immediate risk. If it had been, you would have been notified immediately. However, some people who drink water containing total trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous system, and may have an increased risk of getting cancer. However, if you have specific health concerns, consult your doctor.

LOCATION	CONTAMINANT	QUARTER	LEVEL (MG/L)
769 SNOW ROAD NORTH	TTHM	JUL-SEP 2023	0.081

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

Since the time of this violation, MAWSS has increased flushing out of a permanently installed flusher in the area of the violation. Increasing flushing lowers water age in the area of concern, and typically is the most effective means of lowering TTHM concentration within a specific part of the system. All other service locations tested by MAWSS met drinking water standards.

TOC MONITORING NON-COMPLIANCE NOTICE

The Mobile Area Water and Sewer Board is required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether your drinking water meets health standards. During July 2023, we did not complete all required monitoring for Total Organic Compounds and therefore cannot be sure of the quality of your drinking water during that time.

Total Organic Carbon (TOC) has no health effects. However, Total Organic Carbon provides a medium for the formation of disinfection byproducts. These byproducts include Trihalomethanes (THMs) and Haloacetic Acids (HAAs). Drinking water containing these byproducts in excess of the MCL may lead to adverse health effects, liver or kidney problems, or nervous system effects, and may lead to an increased risk of getting cancer.

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

Since July, MAWSS has monitored for the required chemicals properly. MAWSS has also taken the step of adding additional oversight to ensure sampling for these chemicals are not missed again.

Should you have any questions concerning these notices, contact: Ken Mohr or Markus Moore at 4725 Moffett Rd Ste A, Mobile, AL 36618 (251) 694-3100.

REPORTING NON-COMPLIANCE NOTICE

The Spanish Fort Water System has incurred an inorganics reporting non-compliance. The non-compliance resulted from a failure to submit the January 2020 — December 2022 results by January 10, 2023. All testing was done for this time and was in compliance. All test results are included in this report.

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

Spanish Fort Water System is continuing to monitor for the required contaminants. Should you have any questions concerning this non-compliance or monitoring requirements, please contact Terry Evans at 30686 Driftwood Lane in Spanish Fort or call (251) 626-3067.

In 1974, The Safe Drinking Water Act (SDWA) was signed into law requiring all water systems that serve the public to meet national standards for water quality. These standards set the limits for certain contaminants and require all public water systems to monitor for these contaminants. Spanish Fort Water System routinely tests for these constituents in your drinking water according to Federal and State laws. The tables in this report show the monitoring results of the Calendar Year 2023. Sampling Schedule beginning January 1 through December 31 of 2023.