

2022 CONSUMER CONFIDENCE REPORT (CCR)

Lake MUD

(PWS ID: TX1011741)

Annual Water Quality Report for the period of January 1 to December 31, 2022

THIS REPORT IS INTENDED TO PROVIDE YOU WITH IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER AND THE EFFORTS MADE BY THE WATER SYSTEM TO PROVIDE SAFE DRINKING WATER.



Issued June 2023

Where do we get our drinking water?

The source of drinking water used by Lake MUD is purchased surface water from the Baytown Area Water Authority. The water comes from the Coastal Industrial Authority Canal. The TCEQ has completed a Source Water Assessment for all drinking water systems that own their sources. The report describes the susceptibility and types of constituents that may come into contact with your drinking water source based on human activities and natural conditions. The system(s) from which we purchase our water received the assessment report. For more information on source water assessments and protection efforts at our system, contact Si Environmental.

The water system with Lake MUD was on interconnect with Baytown Area Water Authority during the calendar year of 2022 for their water source. Attached you will find a copy of the regulated contaminant detected table for BAWA. If you require additional information about BAWA's water please call 281-426-3517.

PUBLIC PARTICIPATION OPPORTUNITIES

**DATE: BOARD OF DIRECTORS GENERALLY
MEET ON THE THIRD THURSDAY
OF EACH MONTH.**

TIME: 5:00 P.M.

**LOCATION: 8124 BAY RUN AVE, BAYTOWN, TX
77521**

PHONE: 281-807-9500

To learn about future public meetings (concerning your drinking water), or to request one be scheduled, please call us or email us at cyp.customerservice@sienviro.com or www.lakemud.com.

Is my water safe?

In order to ensure that tap water is safe to drink, the EPA prescribes regulations that 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. 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 in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity. Contaminants that may be present in sources include:

-Microbial contaminants, such as viruses and bacteria, which 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, can also come from gas stations, urban storm water runoff, and septic systems.

-Radioactive contaminants, which can be naturally occurring or be the result of oil and gas production and mining activities.

ALL drinking water may contain contaminants

When drinking water meets federal standards there may not be any health based benefits to purchasing bottled water or point of use devices. 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 water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline (1-800-426-4791).

Information about Unregulated Contaminants

Unregulated contaminants are those for which the 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. Contaminants may be found in drinking water that may cause taste, color, or odor problems. These types of problems are not necessarily causes for health concerns. For more information on taste, odor, or color of drinking water, please contact the system's business office.

En Español

Este reporte incluye información importante sobre el agua para tomar. Para asistencia en español, favor de llamar al teléfono (281)807-9500.

Special Notice

You may be more vulnerable than the general population to certain microbial contaminants, such as Cryptosporidium, in drinking water. Infants, some elderly or immune-compromised persons such as those undergoing chemotherapy for cancer; those who have undergone organ transplants; those who are undergoing treatment with steroids and people with HIV/AIDs or other immune system disorders can be particularly at risk from infections. You should seek advice about drinking water from your physician or health care provider. Additional guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline at (800)426-4791.



**SAVE WATER
SAVE THE EARTH**

The State of Texas monitors for some contaminants less than once per year because the concentrations of these contaminants do not change frequently.

Regulated Contaminants

Disinfectants and Disinfection By-	Collection Date	Your Water	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Haloacetic Acids (HAA5)	2022	30	16.6 – 26.3	No goal for the total	60	ppb	N	By-product of drinking water disinfection.
Total Trihalomethanes (TTHM)	2022	36	27.5 – 39.2	No goal for the total	80	ppb	N	By-product of drinking water disinfection.
Inorganic Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Nitrate [measured as Nitrogen]	2022	0.24	0.24 – 0.24	10	10	ppm	N	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.

LEAD AND COPPER

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. LAKE MUD 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](http://www.epa.gov/safewater/lead).

Lead/ Copper	Year	MCLG	Action Level	The 90 th Percentile	# of Sites Over AL	Units	Was This a Violation	Likely Source of Contaminant
Copper	2020	1.3	1.3	0.444	0	ppm	N	Erosion of natural deposits; Leaching from wood preservatives; Corrosion of household plumbing systems.
Lead	2020	0	15	0	0	ppb	N	Corrosion of household plumbing systems; erosion of natural deposits.

LEAD AND COPPER RULE PROTECTS PUBLIC HEALTH BY MINIMIZING LEAD AND COPPER LEVELS IN DRINKING WATER, PRIMARILY BY REDUCING WATER CORROSION. LEAD AND COPPER ENTER DRINKING WATER MAINLY FROM CORROSION OF LEAD AND COPPER IN PLUMBING MATERIALS.

Maximum Residual Disinfectant Level

Year	Disinfectant	Minimum Level	Average Level	Maximum Level	MRDL	MRDLG	Unit of Measure	Source of Chemical
2022	Chloramine	0.9	3.15	4.3	4.0	< 4.0	ppm	Disinfectant added to control microbes

ORGANIC CONTAMINANTS – NOT TESTED FOR OR NOT DETECTED

FECAL COLIFORM-NONE DETECTED

UNREGULATED CONTAMINANTS – NOT TESTED FOR OR NOT DETECTED

TURBIDITY – NOT REQUIRED

Total Coliform-None Detected

E.Coli – None Detected

Unregulated Contaminants

Unregulated Contaminants	Collection Date	Your Water	Lowest Level Detected	Highest Level Detected	Units
Chlorodibromomethane	2022	3.6	1.6	6.7	ppb
Chloroform	2022	18.6	15.7	21.4	ppb
Bromodichloromethane	2022	10.6	7	15.2	ppb

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 regulation is warranted.

Abbreviations and Definitions

PPQ - parts per quadrillion, or picograms per liter

NTU - Nephelometric Turbidity Units

MFL - million fibers per liter (a measure of asbestos)

pCi/L - picocuries per liter (a measure of radioactivity)

PPM - parts per million, or milligrams per liter (mg/L)

PPB - parts per billion, or micrograms per liter (ug/L)

PPT - parts per trillion, or nanograms per liter

Maximum Residual Disinfectant Level Goal (MRDLG) – 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 contamination.

Maximum Residual Disinfectant level (MRDL) –The highest level of disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

Maximum Contaminant Level (MCL) – The highest permissible level of a contaminant 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 level of a contaminant in drinking water below which there is no known or expected health risk. MCLGs allow for a margin of safety.

Treatment Technique – 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.

Action Level Goal (ALG)- The level of contaminant in drinking water below which there is not known or expected risk to health. ALGs allow for a margin of safety.

MREM/year- millirems per year (a measure of radiation absorbed by the body)

NA - not applicable

Maximum Residual Disinfectant level (MRDL) –The highest level of 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) – 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 contamination.

Level 1 Assessment - A Level 1 assessment is a study of the water system to identify potential problems and determine (if possible) why total coliform bacteria have been found in our water system.

Level 2 Assessment - A Level 2 assessment is a very detailed study of the water system to identify potential problems and determine (if possible) why an E. coli MCL violation has occurred and/or why total coliform bacteria have been found in our water system on multiple occasions.

If a water system has performed additional monitoring which indicates the presence of other contaminants in the finished water, TCEQ recommends that systems find out if EPA has proposed a National Primary Drinking Water Regulation or issued a health advisory for that contaminant by calling the Safe Drinking Water Hotline (800-426-4791). TCEQ considers detects above a proposed MCL or health advisory level to indicate possible health concerns. To learn more about your water, please refer to the Source Water Assessment Viewer available at the following URL:

<http://gis3.tceq.state.tx.us/swav/Controller/index.jsp?wtrsrc=>

**2022 Annual Quality Water Report
City of Baytown
281-420-5310
PWS ID #1010003**

Este reporte incluye información importante sobre el agua para tomar. Para asistencia en español, favor de llamar al telefono (281) 420-5310.

This is your water quality report for January 1 to December 31, 2022.

This report is about the quality of water and services we deliver every day. Our constant goal is to provide a safe and dependable supply of drinking water. We want you to understand the efforts made in continually improving the water treatment process and protecting our water resources.

CITY OF BAYTOWN purchases water from BAYTOWN AREA WATER AUTHORITY.

The Baytown Area Water Authority operates the Fritz Lanham Water Treatment Facility, which was completed in 1980. The facility is located on a 68-acre tract of land located at 7425 Thompson Road. This facility is operated on a 24-hour basis and has been rewarded “Superior Water System” rating from the State of Texas. The Baytown Area Water Authority uses a conventional filtering system that uses Coagulation, Flocculation, Sedimentation, Filtration, and Disinfection, to reduce or remove possible harmful contaminants that may be in the source water. Ferric Chloride and Cationic Polymer provide coagulation and then pass through Flocculation and Sedimentation chambers to clarify the water. Then, the water is filtered by passing through anthracite coal, sand, and gravel. Chloramine disinfection, the addition of ammonia and chlorine, is used to disinfect the water. For more information regarding this report, please contact the Baytown Area Water Authority by calling 281-420-5310 or writing to 7425 Thompson Rd, Baytown TX 77521.

BAYTOWN AREA WATER AUTHORITY receives surface water from the Trinity River via the Coastal Water Authority Canal.

The TCEQ completed an assessment of your source water and results indicate that some of your sources are susceptible to certain contaminants. The sampling requirements for your water system are based on this susceptibility and previous sample data. Any detections of these contaminants may be found in this Consumer Confident Report. For more information on source water assessment and protection efforts at our system, contact Baytown Area Water Authority at (281) 420-5310.

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, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or human activity.

Contaminants that may be present in source water include:

- **Microbial contaminants:** such as viruses and bacteria which 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, urban storm water runoff, and septic systems.
- **Radioactive contaminants,** which can be naturally occurring or be the result of oil and gas production and mining activities.

EPA Wants You To Know:

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 water poses a health risk. 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. Contaminants may be found in drinking water that may cause taste, color, or odor problems. These types of problems are not necessarily causing for health concerns.

More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline (1-800-426-4791).

You may be more vulnerable than the general population to certain microbial contaminants, such as *Cryptosporidium*, in drinking water. Infants, some elderly, or immunocompromised persons such as those undergoing chemotherapy for cancer; persons who have undergone organ transplants; those who are undergoing treatment with steroids; and people with HIV/AIDS or other immune system disorders, can be particularly at risk from infections. You should

seek advice about drinking water from your physician or health care providers. Additional guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* are available from the EPA's Safe Drinking Water Hotline.

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. The City of Baytown 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 EPA's Safe Drinking Water Hotline or at <http://www.epa.gov/safewater/lead>.

2022 Monitoring Results for Contaminants in Drinking Water for the City of Baytown

You may be more vulnerable than the general population to certain microbial contaminants, such as *Cryptosporidium*, in drinking water. Infants, some elderly, or immuno-compromised persons such as those undergoing chemotherapy for cancer; those who have undergone organ transplants; those who are undergoing treatment with steroids; and people with HIV/AIDS or other immune system disorders can be particularly at risk from infections. You should seek advice about drinking water from your physician or health care provider. Additional guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* are available from the Safe Drinking Water Hotline. (1-800-426-4791)

Microbiological Contaminants

Contaminant	% Positive	MCL EPA's Limits	Lowest Level Detected	Highest Level Detected	Violation (Yes / No)	Year ¹ Sampled	Potential Source of Contamination
Total Coliform Bacteria	0	Presence of coliform bacteria in 5% or less of monthly samples	0.00%	NA	NO	2022	Naturally present in the environment.
Fecal coliform and <i>E.Coli</i>	0	Presence of coliform bacteria in 5% or less of monthly samples	0.00%	NA	NO	2022	Human and animal fecal matter.

Suspended Particle and Carbon Removal

Contaminant	Unit	MCLG Health Goal	MCL EPA's Limits	Lowest Level Detected	Highest Level Detected	Violation (Yes / No)	Year ¹ Sampled	Potential Source of Contamination	
Turbidity ²	NTU	NA	TT / 0.3	0.04	0.24	NO	2022	Soil Runoff.	
Total Organic Carbon	mg/L	The Percentage of Total Organic Carbon (TOC) removal was measured each month and the system met all TOC removal Requirements Set, Unless a TOC violation is noted in the violation section.							Naturally present in the environment

Radioactive Contaminants

Contaminant	Unit	MCLG Health Goal	MCL EPA's Limits	Average Level Detected	Highest Level Detected	Violation (Yes / No)	Year ¹ Sampled	Potential Source of Contamination
Beta Emitters	pCi/L	0	50	5.6	6.8	NO	2021	Decay of natural and man-made deposits.
Combined Radium 226/228	pCi/L	0	5	1.5	1.5	NO	2021	Decay of natural and man-made deposits.

Inorganic Contaminants

Barium	mg/L	2	2	0.0506	0.0535	NO	2022	Discharge of drilling wastes. Discharge from metal refineries. Erosion of natural deposits.
Fluoride	mg/L	4	4	0.56	0.62	NO	2022	Erosion of natural deposits. Water additive to promote strong teeth. Discharge from fertilizer and aluminum factories.
Nitrate	mg/L	10	10	0.13	0.13	NO	2022	Runoff from fertilizer use. Leaching from septic tanks, sewage. Erosion of natural deposits.

Lead and Copper	Date Sampled	MCLG	Action Level (AL)	90th Percentile	# Sites Over AL	Units	Violation	Likely Source of Contamination
Copper	07/05/2022	1.3	1.3	0.599	0	ppm	N	Erosion of natural deposits; Leaching from wood preservatives; Corrosion of household plumbing
Lead	07/05/2022	0	15	2.2	0	ppb	N	Corrosion of household plumbing systems; Erosion of natural deposits.

Synthetic Organic Contaminants

Contaminant	Unit	MCLG Health Goal	MCL EPA's Limits	Average Level Detected	Lowest Level Detected	Highest Level Detected	Violation (Yes / No)	Year ¹ Sampled	Potential Source of Contamination
Atrazine	ug/L	3	3	0.19	0.10	0.39	NO	2022	Runoff from herbicide used on row crops.
Simazine	ug/L	4	4	0.064	< detection limit	0.12	NO	2022	Herbicide runoff.

Disinfectant Byproducts

Haloacetic Acids (HAA5)	ug/L	NA	60	18.4	7.6	31.6	NO	2022	Byproduct of drinking water chlorination.
Total Trihalomethanes (TTHMs)	ug/L	NA	80	23.5	6.0	39.6	NO	2022	Byproduct of drinking water chlorination.

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 regulation is warranted. Any unregulated contaminants detected are reported in the following table.

Substance	Unit	Level Detected	Range	Year Sampled	Potential Source of Contamination
Bromodichloromethane	ug/L	8.5	0-100	2022	Byproduct of drinking water chlorination.
Chloroform	ug/L	11.4	0-100	2022	
Dibromochloromethane	ug/L	3.5	0-100	2022	

Secondary and Physical Characteristics Results are from Baytown Area Water Authority 2022 unless otherwise stated ¹

Substance	Unit	Average Level Detected	Potential Source of Contamination
Alkalinity	mg/L	94.0	Naturally occurring soluble mineral salts.
Bicarbonate	mg/L	110.5	Corrosion of carbonate rocks such as limestone.
Calcium	mg/L	36.65	Abundant naturally occurring element.
Chloride	mg/L	46.5	Abundant naturally occurring element; used in water purification; byproduct of oil field activity.
Magnesium	mg/L	3.45	Abundant naturally occurring element.
Manganese	mg/L	0.139	Abundant naturally occurring element.
pH	units	7.90	Measure of corrosivity of water.
Sodium	mg/L	30.55	Erosion of natural deposits; byproduct of oil field activity.
Sulfate	mg/L	33.5	naturally occurring; common industrial byproduct; byproduct of oil field activity.
Total Dissolved Solids	mg/L	210.5	Total Dissolved mineral constituents in water.
Hardness	mg/L	121.0	Naturally occurring calcium.
Zinc	mg/L	0.0657	Moderately abundant naturally occurring element; used in the metal industry.

Disinfectant Residual	Year	Average Level	Range of Levels Detected	MRDL	MRDLG	Unit of Measure	Violation (Y/N)	Source in Drinking Water
Chloramines	2022	3.50	1.30 – 6.00	4	4	ppm	N	Water additive used to control microbes.

NOTES:

¹The state allows us to monitor for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of our data, though accurate, is more than one year old.

²Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of the effectiveness of our filtration system

³Some people who use water containing chloramines well in excess of the MRDL could experience irritating effects to their eyes and nose. Some people who drink water containing chloramines well in excess of the MRDL could experience stomach discomfort and anemia.

⁴The MCL for beta particles is 4 mrem/year. EPA considers 50 pCi/L to be the level of concern for beta particles.

Definitions and Abbreviations

Level 1 Assessment: A level 1 assessment is a study of the water system to identify problems and determine (if possible) why total coliform bacteria have been found in our water system.

Level 2 Assessment: A Level 2 assessment is a very detailed study of the water system to identify potential problems and determine (if possible) why an E.Coli MCL violation has occurred and/or why total coliform bacteria have been found in our water system on multiple occasions.

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

Maximum Contaminant Level (MCL): 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 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 Goal (MRDLG): 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.

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 for control of microbial contaminants.

Treatment Technique (TT): A required process intended to reduce the level of a contaminant in drinking water.

90th Percentile: 90% of samples are equal to or less than the number in the chart.

NTU (Nephelometric Turbidity Units): A measure of clarity.

NA: Not applicable.

ND: Not detectable at testing limits.

ug/L (micrograms per liter): ppb (parts per billion)

mg/L (milligrams per liter): ppm (parts per million)

pCi/L (picocuries per liter): a measure of radioactivity.

mrem/year--millirems per year: a measure of radiation absorbed by the body.