

## Treasure Island Municipal Utility District 2019 Annual Drinking Water Quality Report

Public water System ID: TX0200038

This is your water quality report for January 1 to December 31, 2019

For more information regarding this report contact:

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Este reporte incluye información importante sobre el agua

para tomar. Para asistencia en español, favor de llamar al

telefono (979) 239-4198.

near Highway 146 in Texas City.

In 2019, TIMUD received 12,304,000 gallons of water from Galveston.

The estimated number of full-time residents currently served by TIMUD is 84.

TIMUD has 267 residential accounts and 1 commercial account.

### PUBLIC PARTICIPATION OPPORTUNITIES

For the opportunity to comment on or participate in decisions that may affect the quality of your water, the TIMUD Board of Directors meets quarterly on the second Saturday in February, May, August, and November at 10 am in the Community Building located at 146

Fathom, Freeport, TX 77541. This schedule is subject to change and changes are announced in advance and posted on the homepage and

calendar page on our website, [www.treasureislandtx.org](http://www.treasureislandtx.org).



## Information about your Drinking Water

### Treasure Island MUD's water is Purchased Surface Water

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.

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 EPAs Safe Drinking Water Hotline at (800) 426-4791.

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.

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. FDA regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

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.

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 Safe Drinking Water Hotline (800-426-4791)

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. We are responsible for providing high quality drinking water, but we 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>.



## Information about Source Water

TREASURE ISLAND MUD provides surface water purchased from The City of Galveston. In September of 2001, the City of Galveston started to receive its water supply from the Gulf Coast Water Authority's Thomas A. Mackey Water

Treatment Plant in Texas City. The Gulf Coast Water Authority (GCWA) owns 212 million gallons per day in water rights from the Brazos River and provides water for agriculture, industry, and municipal use. All water travels through 150 miles of canals stretching from the Brazos River, across Fort Bend, Brazoria and Galveston Counties to the GCWA's raw water reservoir located near Highway 146 in Texas City.

In 2019, TIMUD received 12,304,000 gallons of water from Galveston.

'No Source Water Assessment for your drinking water source(s) has been conducted by the TCEQ for your water system. The report describes the susceptibility and the types of constituents that may come into contact with your drinking water source based on human activities and natural conditions. The information in this assessment allows us to focus our source water protection strategies.'

The internet access for the City of Galveston Water Quality Report (Consumer Confidence Report) is: <http://www.galvestontx.gov/consumerconfidencereport>

### Information about Source Water Assessments

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. Some of this source water assessment information will be available later this year on Texas Drinking Water Watch at <http://dww.tceq.state.tx.us/DWW/> For more information on source water assessments and protection efforts at our system, contact Jim Coursey, TIMUD Operations Manager, 979-709-1302.

For more information about your sources of water, please refer to the Source Water Assessment Viewer available later at the following URL:

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

Further details about sources and source-water assessments are available in Drinking Water Watch at the following URL:

<http://dww.tceq.texas.gov/DWW/>

Source Water Name

Type of Water: SW Report Location <http://dww.tceq.state.tx.us/DWW/>.

Report Status: Provided later this year



Definitions and Abbreviations

Definitions and Abbreviations

Action level:

Action level Goal (ALG):

Avg:

Level 1 Assessment:

Level 2 Assessment:

Maximum Contaminant level or MCL:

Maximum Contaminant level Goal or MCLG:

Maximum residual disinfectant level or MRDL:

Maximum residual disinfectant level goal or MRDLG:

MFL

mmrem:

na:

NTU

pCi/L

ppb:

ppm:

ppq

ppt

Treatment Technique or TT:

The following tables contain scientific terms and measures, some of which may require explanation.

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

The level of a contaminant in drinking water below which there is no known or expected risk to health. ALGs allow for a margin of safety.

Regulatory compliance with some MCLs are based on running annual average of monthly samples.

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.

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.

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.

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.

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.

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.

million fibers per liter (a measure of asbestos)

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

not applicable.

nephelometric turbidity units (a measure of turbidity)

picocuries per liter (a measure of radioactivity)

micrograms per liter or parts per billion - or one ounce in 7,350,000 gallons of water.

milligrams per liter or parts per million - or one ounce in 7,350 gallons of water.

parts per quadrillion, or picograms per liter (pg/L)

parts per trillion, or nanograms per liter (ng/L)

A required process intended to reduce the level of a contaminant in drinking water.



Source Water

About The following Pages

Your Source

The pages that follow list all of the federally regulated or monitored contaminants which have been found in ~~your~~ drinking water. The U.S. EPA requires water systems to test for up to 97 contaminants.

### Abbreviations/Definitions:

**Maximum Contaminant Level Goal - MCL-G** - 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 - MCL** - The highest permissible 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 Residual Disinfectant Level-MRD** - The highest level of a disinfectant allowed in drinking water without causing an unacceptable possibility of adverse health effects.

**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 that a water system must follow.

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

**NTU - Nephelometric Turbidity Units** - This is the unit used to measure water turbidity.

**MFL - Million fibers per liter** - A measure of asbestos.

**pCi/L - Picocuries per liter** - A measurement of radioactivity in water.

**ppm - Parts per million** - One part per million, or milligrams per liter (mg/l).

**ppb - Parts per billion** - One part per billion, or micrograms per liter.

**ppt - Parts per trillion** - One part per trillion, or nanograms per liter.

**ppq - Parts per quadrillion** - One part per quadrillion, or picograms per liter.

### Inorganic Contaminants

Year (Range)	Contaminant	Average Level	Minimum Level	Maximum Level	MCL	MCLG	Unit of Measure	Source of Contaminant
2019	Barium	0.069	0.069	0.069	2	2	ppm	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits.
2019	Fluoride	0.53	0.53	0.53	4	4	ppm	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories.
2019	Nitrate	0.75	0.46	0.86	10	10	ppm	Runoff from fertilizer use; leaching from septic tanks; sewage; erosion of natural deposits.
2018	Gross beta emitters	5.4	5.4	5.4	50	0	pCi/L	Decay of natural and man-made deposits.
2015	Nitrite	0.02	0.00	0.02	1	1	ppm	Runoff from fertilizer use; leaching from septic tanks; sewage; erosion of natural deposits.

### Organic Contaminants

Year	Contaminant	Highest Average	Minimum Level	Maximum Level	MCL	MCLG	Unit of Measure	Source of Contaminant
2019	Simazine	0.25	0.25	0.25	4	4	ppb	Herbicide runoff.
2019	Atrazine	0.13	0.13	0.13	3	3	ppb	Runoff from herbicide used on row crops.



# Source Water

## Disinfection Byproducts

Year (Range)	Contaminant	Average Level	Minimum Level	Maximum Level	MCL	Unit of Measure	Source of Contaminant
2019	Total Haloacetic Acids	12.39	1.70	21.3	60	ppb	Byproduct of drinking water disinfection.
2018	Total Trihalomethanes	46.20	33.9	74.40	80	ppb	Byproduct of drinking water disinfection.

## Required Additional Health Information about Trihalomethanes (THM)

Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous systems, and may have an increased risk of getting cancer.

## Unregulated Contaminants

Bromoform, chloroform, bromodichloromethane, and dibromochloromethane are disinfection byproducts. There is no maximum contaminant level for these chemicals at the entry point to distribution.

Year	Contaminant	Average Level	Minimum Level	Maximum Level	Unit of Measure	Source of Contaminant
2018	Chloroform	10.69	3.2	21.8	ppb	Byproduct of drinking water disinfection.
2018	Bromoform	6.78	1.5	13.1	ppb	Byproduct of drinking water disinfection.
2018	Bromodichloromethane	14.30	4.7	25.4	ppb	Byproduct of drinking water disinfection.
2018	Dibromochloromethane	14.48	7.5	21.1	ppb	Byproduct of drinking water disinfection.

## Lead and Copper

Year	Contaminant	MCL G	Number of Sites Exceeding Action Level	Action Level	Unit of Measure	Source of Contaminant
2019	Lead	0	0	15	ppb	Corrosion of household plumbing systems; Erosion of natural deposits.
2019	Copper	1.3	0	1.3	ppm	Erosion of natural deposits; Leaching from wood preservatives; Corrosion of household plumbing systems.

## Turbidity

Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea and associated headaches.

Year	Contaminant	Highest Single Measurement	Lowest Monthly % of Samples Meeting Limits	Turbidity Limits	Unit of Measure	Source of Contaminant
2019	Turbidity	0.11	100%	0.3	NTU	Soil runoff.



## COLIFORMS

*Source Water*

### What are coliforms?

Total coliform bacteria are used as indicators of microbial contamination of drinking water because testing for them is easy. While not disease-causing organisms themselves, they are often found in association with other microbes that are capable of causing disease. Coliform bacteria are harder than many disease-causing organisms; therefore, their absence from water is a good indication that the water is microbiologically safe for human consumption. Fecal coliform bacteria and, in particular, *E. coli*, are members of the coliform bacteria group originating in the intestinal tract of warm-blooded animals and are passed into the environment through feces. The presence of fecal coliform bacteria (*E. coli*) in drinking water may indicate recent contamination of the drinking water with fecal material. The following table indicates whether total coliform or fecal coliform bacteria were found in the monthly drinking water samples submitted for testing by your water supplier last year.

### Coliform Bacteria

Maximum Contaminant Level Goal	Total Coliform Maximum Contaminant Level	Highest No. of Positive	Fecal Coliform or <i>E. Coli</i> Maximum Contaminant Level	Total No. of Positive <i>E. Coli</i> or Fecal Coliform Samples	Violation	Likely Source of Contamination
0	5% of monthly samples are positive	0	0	0	No	Naturally present in the environment

### Maximum Residual Disinfectant Level

Year	Disinfectant	Average Level	Minimum Level	Maximum Level	MRDL	MRDLG	Units	Source
2019	Chloramines	2.20	0.50	3.80	4.0	4.0	ppm	Disinfectant used to control microbes



# Source Water

## Secondary and Other Not Regulated Constituents (No associated adverse health effects)

Year (Range)	Constituent	Average Level	Minimum Level	Maximum Level	Limit	Unit of Measure	Source of Constituent
2019	Bicarbonate	111	111	111	NA	ppm	Corrosion of carbonate rocks such as limestone.
2019	Calcium	38.8	38.8	38.8	NA	ppm	Abundant naturally occurring element.
2019	Chloride	47	47	47	300	ppm	Abundant naturally occurring element; used in water purification; byproduct of oil field activity
2019	Copper	0.0024	0.0024	0.0024	1	ppm	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives.
2019	Magnesium	7.13	7.13	7.13	NA	ppm	Abundant naturally occurring element.
2019	Nickel	0.0018	0.0018	0.0018	NA	ppm	Erosion of natural deposits.
2019	pH	7.6	7.6	7.6	>7.0	units	Measure of corrosivity of water.
2019	Sodium	33.4	33.4	33.4	NA	ppm	Erosion of natural deposits; byproduct of oil field activity.
2019	Sulfate	36	36	36	300	ppm	Naturally occurring; common industrial byproduct; byproduct of oil field activity.
2019	Total Alkalinity as CaCO <sub>3</sub>	91	91	91	NA	ppm	Naturally occurring soluble mineral salts.
2019	Total Dissolved Solids	238	238	238	1000	ppm	Total dissolved mineral constituents in water.
2019	Total Hardness as CaCO <sub>3</sub>	126	126	126	NA	ppm	Naturally occurring calcium.
2019	Zinc	0.133	0.133	0.133	5	Ppm	Moderately abundant naturally occurring element; used in the metal industry.



# Treasure Island MUD 2019 Water Quality Test Results

Lead and Copper	Date Sampled	MCLG	Action Level (AL)	90th Percentile	# Sites Over AL	Units	Violation	Likely Source of Contamination
Copper	2019	1.3	1.3	0.035	0	ppm	N	Erosion of natural deposits; Leaching from wood preservatives; Corrosion of household plumbing substances
Lead	2019	0	15	3.2	0	ppb	N	Corrosion of household plumbing systems; Erosion of natural deposits.

Disinfection By-Products	Collection Date	Highest Level Detected	Range of Individual Samples	MCLG	MCL	Units	Violation	Likely Source of Contamination
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Halacetic Acids (HAA5)	2019	35	13.1 - 88	No goal for the total	60	ppb	N	By-product of drinking water disinfection.
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\*\* The value in the Highest Level or Average Detected column is the highest average of all HAA5 sample results collected at a location over a year\*

Total Trihalomethanes (TTHM)	2019	90	42.8 - 156	No goal for the total	80	ppb	Y	By-product of drinking water disinfection.
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\* The value in the Highest Level or Average Detected column is the highest average of all TTHM sample results collected at a location over a year\*

Inorganic Contaminants	Collection Date	Highest Level Detected	Range of Individual Samples	MCLG	MCL	Units	Violation	Likely Source of Contamination
Nitrate [measured as Nitrogen]	2019	1	1.01 - 1.01	10	10	ppm	N	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.

Synthetic organic contaminants including pesticides and herbicides	Collection Date	Highest Level Detected	Range of Individual Samples	MCLG	MCL	Units	Violation	Likely Source of Contamination
Dalapon	2019	2.5	0 - 2.5	200	200	ppb	N	Runoff from herbicide used on rights of way.



## Violations

### Public Notification Rule

The Public Notification Rule helps to ensure that consumers will always know if there is a problem with their drinking water. These notices immediately alert consumers if there is a serious problem with their drinking water (e.g., a boil water emergency).

Violation Type	Violation Begin	Violation End	Violation Explanation
PUBLIC NOTICE RULE LINKED TO VIOLATION	10/27/2019	12/23/2019	We failed to adequately notify you, our drinking water consumers, about a violation of the drinking water regulations. We sent the Notice of Violation out to you, our customers.

### Total Trihalomethanes (TTHM)

Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous systems, and may have an increased risk of getting cancer.

Violation Type	Violation Begin	Violation End	Violation Explanation
MCL, LRAA	07/01/2019	09/30/2019	Water samples showed that the amount of this contaminant in our drinking water was above its standard (called a maximum contaminant level and abbreviated MCL) for the period indicated. We are taking the following actions to address this issue: Flushing the system on a regular basis and quicker turnover of water in the storage tanks.
MCL, LRAA	10/01/2019	12/31/2019	Water samples showed that the amount of this contaminant in our drinking water was above its standard (called a maximum contaminant level and abbreviated MCL) for the period indicated. We are taking the following actions to address this issue: Flushing the system on a regular basis and quicker turnover of water in the storage tanks.



## INFORMATION ON THE DISINFECTANT (CHLORINE) USED TO TREAT YOUR WATER

TIMUD treats/disinfects your water by adding chlorine. Chlorine levels are checked regularly and recorded. Quarterly reports are generated with this data. These quarterly reports are required to be submitted to TCEQ. The residual chlorine level is measured in mg/Liter (equal to parts per million). The maximum residual disinfectant (chlorine) level is 0.400 mg/L, the minimum residual disinfectant level (chlorine) goal is 0.020 mg/L, and the maximum residual disinfectant (chlorine) level goal is 0.080 mg/L.

For the 1st quarter of 2019, the average disinfectant residual was 0.068 mg/L, with the lowest residual for the quarter at 0.030 mg/L, and the highest residual for the quarter at 0.160 mg/L.

For the 2nd quarter of 2019, the average disinfectant residual was 0.060 mg/L, with the lowest residual for the quarter at 0.022 mg/L, and the highest residual for the quarter at 0.150 mg/L.

For the 3rd quarter of 2019, the average disinfectant residual was 0.041 mg/L, with the lowest residual for the quarter at 0.022mg/L, and the highest residual for the quarter at 0.062 mg/L.

For the 4th quarter of 2019, the average disinfectant residual was 0.037 mg/L, with the lowest residual for the quarter at 0.019 mg/L, and the highest residual for the quarter at 0.057 mg/L.