



CITY OF BAY CITY

2018

Annual Drinking Water Quality Report

For the period of January 1—December 31, 2018



Public Water System ID: TX1610001

Phone number: (979) 323-1659

City of Bay City Water Quality Report

January 1—December 31, 2018

2

The City of Bay City is pleased to present the 2018 Annual Water Quality Report also known as the Consumer Confidence Report. This report is intended to provide you with important information about your drinking water and the efforts made by our water system to provide safe drinking water to the community. Our team of Water Operators & Utility Professionals take this responsibility very serious. The water produced and treated is the same water that our team, family and friends use on a daily basis. We can proudly say our water system is rated as a “Superior Water System” by the Texas Commission on Environmental Quality!



[THE SOURCE OF YOUR DRINKING WATER](#)

The City’s water is supplied by six water wells located across the City. Our water is drawn from the Chicot Aquifer located within the major Gulf Coast Aquifer which parallels the coastline from Louisiana to Mexico. When we turn on our faucet it is easy to see what we pay for—water. What is not so simple to see, is what it takes for the water to get to our faucets. Below ground, we have over **113 miles of water pipes, 8,000 water meters, 400 fire hydrants and 400 isolation valves** in our distribution system! Licensed Water Operators, Customer Service Technicians and Utility Maintenance Crews work around the clock to ensure high quality water is delivered to your faucet. In 2018, Bay City Water Plants produced over **688 million gallons of water!**

SOURCE WATER ASSESSMENT PROTECTION

The Texas Commission on Environmental Quality has completed an assessment of our source water and results indicate that some of our sources are susceptible to certain contaminants. The sampling requirements for our water system are based on this susceptibility and previous sample data. Any detections of these contaminants may be found in this Consumer Confidence Report. For more information on source water assessments and the protection efforts of our system, contact Krystal Mason, Code Compliance Officer at (979) 323-1692.



RESIDENTIAL PLUMBING & LEAD EXPOSURE



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 faucet 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>.

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:

EPA's Safe Drinking Water Hotline at (800) 426-4791

WATER LOSS

Data from water production meters as well as consumption and water loss reports compiled throughout the year are analyzed to identify areas of water loss. Minimizing water loss throughout the water system increases efficiency, reduces costs and leads to sustainability of our source water. In 2018, our system lost 112,981,893 gallons of water or roughly 16.28% of the water produced.

IMPORTANT HEALTH NOTICE

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 provider. Additional guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* are available from the **Safe Drinking Water Hotline (800-426-4791)**.

CONTAMINANTS MAY BE IN ALL DRINKING WATER

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, color, or odor of drinking water please contact our office. 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 that 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 source water include:

- Microbial contaminants (viruses, bacteria) - may come from sewage treatment plants, septic systems, livestock operations and wildlife
- Inorganic contaminants (salts, metals) - can be naturally occurring or result from storm water runoff, industrial/domestic wastewater discharges, oil and gas production, mining, farming
- Pesticides and herbicides—may come from a variety of sources such as agriculture, storm water runoff and residential uses
- Organic chemical contaminants (synthetic & volatile organic chemicals which are by-products of industrial processes) - can come from gas stations, storm runoff, septic systems
- Radioactive contaminants—can be naturally occurring or be the result of oil and gas production and mining activities

Our drinking water is regulated by the Texas Commission on Environmental Quality. The information on the following page lists all of the federally regulated or monitored contaminants which have been found in our drinking water. Please review the definitions as they will explain the information in the table.

ABBREVIATIONS

Avg	Regulatory compliance with some MCLs are based on a running annual average of monthly samples
MFL	million fibers per liter (a measure of asbestos)
mrem	millirems per year (a measure of radiation absorbed by the body)
N/A	not applicable
NTU	nephelometric turbidity units (a measure of turbidity)
pCi/L	picocuries per liter (a measure of radioactivity)
ppb	micrograms per liter or parts per billion—or one ounce in 7,350,000 gallons of water
ppm	milligrams per liter or parts per million—or one ounce in 7,350,000 gallons of water
ppq	parts per quadrillion or picograms per liter (pg/L)
ppt	parts per trillion or nanograms per liter (ng/L)
TT	Treatment Technique—a required process intended to reduce the level of a contaminant in drinking water

DEFINITIONS

Action Level (AL):	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 a contaminant in drinking water below which there is no known or expected risk to health. ALGs allow for a margin of safety.
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.
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 (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.
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.

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Inorganic Contaminants

Year	Constituent (unit of measure)	Highest Level Detected	Range of Levels Detected	MCL	MCLG	Violation	Likely Source of Contamination
2018	Arsenic (ppb)	10	8.5—10.6	10	0	No	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes
2017	Barium (ppm)	0.277	0.211—0.277	2	2	No	Discharge of drilling waste or metal refiners; erosion of natural deposits.
2017	Fluoride (ppm)	0.44	0.4—0.44	4.0	4	No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories.
2018	Nitrate (ppm) (<i>measured as Nitrogen</i>)	0.01	0—0.01	10	10	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
2017	Selenium (ppb)	5.0	0—5.1	50	50	No	Discharge from petroleum and metal refineries; Erosion of natural deposits; Discharge from mines.

While your drinking water meets EPA standards for arsenic, it does contain low levels of arsenic. EPA's standard balances the current understanding of arsenic's possible health effects against the costs of removing arsenic from drinking water. EPA continues to research the health effects of low levels of arsenic, which is a mineral known to cause cancer in humans at high concentrations and is linked to other health effects such as skin damage and circulatory problems.

Disinfection By-Products

Year	Constituent (unit of measure)	Highest Level Detected	Range of Levels Detected	MCL	MCLG	Violation	Likely Source of Contamination
2018	Haloacetic Acids (HAA5) (ppb)	2	0—2.2	80	N/A	No	By-product of drinking water disinfection
2018	Total Trihalomethanes (TTHM) (ppb)	14	2.1—24.7	80	N/A	No	By-product of drinking water disinfection

**The value in the Highest Level Detected column is the highest average of all HAA5 or TTHM sample results collected at a location over a year, respectively.

Radioactive Contaminants

Year	Constituent (unit of measure)	Highest Level Detected	Range of Levels Detected	MCL	MCLG	Violation	Likely Source of Contamination
2017	Combined Radium 226/228 (pCi/L)	3.2	1.5—3.2	5	0	No	Erosion of natural deposits.

Volatile Organic Contaminants

Year	Constituent (unit of measure)	Highest Level Detected	Range of Levels Detected	MCL	MCLG	Violation	Likely Source of Contamination
2018	Benzene (ppb)	1	0—0.6	5	0	No	Discharge from factories; Leaching from gas storage tanks and landfills.
2018	Xylenes (ppm)	0.0021	0—0.0021	10	10	No	Discharge from petroleum factories; Discharge from chemical factories.

Lead and Copper

Year	Constituent (unit of measure)	90th Percentile	Number of sites over AL	Action Level (AL)	MCLG	Violation	Likely Source of Contamination
2016	Copper (ppm)	0.13	0	1.3	1.3	No	Erosion of natural deposits; Leaching from wood preservatives; Corrosion of household plumbing systems.
2016	Lead (ppb)	2.6	0	15	0	No	Erosion of natural deposits; Corrosion of household plumbing systems.

Disinfectant Residual

Year	Constituent (unit of measure)	Average Level	Range of Levels Detected	MCL	MCLG	Violation	Likely Source of Contamination
2018	Free chlorine (ppm)	1.12	0.47—1.98	4	4	No	Water additive used to control microbes.

Microbiological Contaminants

Year	Constituent	Unit of Measure	Highest # of Positive Samples	MCL	MCLG	Violation	Likely Source of Contamination
2018	E.coli	Presence	0	0	0	No	Naturally present in the environment.

Violations

Year	Violation Type	Violation Begin	Violation End	Violation Explanation
2017	CCR Report	07/01/2017	1/30/2018	We failed to provide our annual CCR by the required date. The report informs our customers about the quality of our drinking water and characterizes the risks from exposure to contaminants detected in our drinking water.

Consumer Confidence Rule requires community water systems to prepare and provide to their customers annual consumer confidence reports on the quality of the water delivered by the system.



Ways to Save



Did you know that if the toilet flapper doesn't close properly after flushing, your toilet could use up to 200 gallons of water an hour? That's 4,800 gallons a day and over 1.7 million gallons a year if it is not fixed! But, even the small leaks can lead to high consumption and ultimately, a high water bill.

Stop by the Utility Billing office and ask for some toilet tabs to test your toilet flapper!

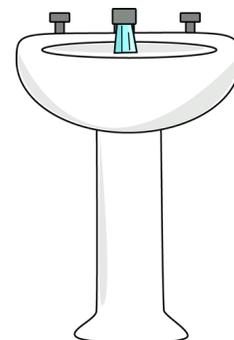
Water-efficient toilets can save up to 13,000 gallons of water a year!

Turn off the water while you brush your teeth! You can save up to 2 gallons a minute.

That's up to 220 gallons a week for a family of four!

Plug the sink instead of running the water to rinse your razor and save up to 200 gallons a month!

A FAUCET LEAKING AT A RATE OF ONE DROP PER SECOND CAN WASTE UP TO 3,000 GALLONS OF WATER A YEAR!!



Reducing a 10-minute shower using a standard showerhead to 5 minutes will save 12.5 gallons of water for each shower!

A water-efficient showerhead can save the average family 2,900 gallons of water per year!

LOVE
Where you **LIVE**
#VISITBAYCITYTX

*For more information regarding this report,
please contact:*

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