

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, odor, or color 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. Food and Drug Administration 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

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*.

Este informe incluye información importante sobre su agua potable. Para asistencia, por favor llame al (979) 245-3222.



For more information regarding this report contact:
Krystal Mason
Water/Wastewater Quality Coordinator
(979) 323-1692

City of Bay City

2016 ANNUAL DRINKING WATER QUALITY REPORT

Water Quality Report for the period of January 1 - December 31, 2016



A SUPERIOR RATED WATER SYSTEM

PWS ID: TX1610001
Phone Number: (979) 323-1659

The City of Bay City is pleased to present its 2016 Annual Water Quality 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. It is in accordance with the United States Protection Agency (EPA) National Primary Drinking Water Regulations, 40 CFR Part 141 Subpart O that requires all drinking water suppliers to provide the public with an annual statement describing the water supply and the quality of its water.

THE SOURCE OF YOUR DRINKING WATER



The City's water is supplied by water wells located throughout the City. It 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 Operators, Customer Service Technicians and Maintenance Crews work around the clock to ensure high quality water is delivered to your faucet. In 2016, Bay City Water Plants produced over 833 million gallons of water!

RESIDENTIAL PLUMBING PIPES AND 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. The City of Bay City 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>.



IMPORTANT HEALTH INFORMATION

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; 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 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 2016, our system lost 194,694,112 gallons of water or roughly 23% of the water produced.

SOURCE WATER ASSESSMENT PROTECTION

The Texas Commission on Environmental Quality has completed an assessment of your source water and results indicate that some of our 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 Confidence Report. For more information on source water assessments and the protection efforts of our system, contact Krystal Mason, Water/Wastewater Quality Coordinator at (979) 323-1692.

FREQUENTLY ASKED QUESTIONS

Did our Public Water System (PWS) have any violations in 2016?

No. The City of Bay City PWS had no violations in 2016. Our water is rated superior.

Is our water tested?

Yes. Each day Water Operators test the level of chlorine not only at our water wells but also at various sites around the City. In addition, throughout each month, we collect water samples from homes all over the City for bacteriological testing. Also, the State of Texas collects water samples quarterly and annually to test for regulated contaminants such as arsenic and fluoride as well as unregulated contaminants such as calcium, aluminum and sodium.

Who can I contact after hours if I have a City-related water or sewer problem?

After 5:00 PM and on weekends, our phones are monitored by an answering service. Call 979-245-7146. Give the Operator your address, name, phone number and nature of your problem. An after-hours crew will evaluate the situation and make any necessary repairs to ensure your service is restored.

My water looks, smells and tastes funny. Is it safe to drink?

Yes, it is. Our disinfectant levels are tested daily to ensure we have met the minimum chlorine level of .2 mg/L. However, from time to time following water line repairs debris (such as rust deposits) in the lines can be stirred causing the water to take on a reddish-brown or yellow appearance. Although it looks unappealing, it is safe to drink. To help clear the water, you can open a large faucet (such as a bathtub) and allow the water to run for 10-15 minutes. If the water has not cleared after that, please call Public Works at 979-323-1659 and we will have an Operator look into the problem.

Do we have hard water?

Yes. Based on U.S. Department of Interior definitions our water is considered "hard." Testing conducted in February 2016, indicated our water hardness is 126 mg/L.

Why do I have low water pressure just at one sink?

The aerator attached to your faucet can trap debris. Clearing the aerator should restore your water pressure. If you experience low pressure throughout your home, please report it to Public Works.

How could I have used that much water?

Check your toilet flapper valve! Stop by the Utility Billing office and we will provide you with toilet tabs to help you detect a leaking flapper valve. Leaky flapper valves are difficult to detect and can unknowingly leak up to 200 gallons of water per day! You can also ask Utility Billing to check your meter to see if it indicates a leak. Fixing leaky pipes and faucets will save you money and help us conserve water for future generations!!

Where can I find more information on our water system?

Visit the Texas Drinking Water Watch website - <http://dww2.tceq.texas.gov/DWW/>. This website contains all the current and past information about our water system.

Our drinking water is regulated by the Texas Commission on Environmental Quality (TCEQ). 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.

DEFINITIONS

The following tables contains scientific terms and measures, some of which may require explanation:

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

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.

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.

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.

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.

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 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.

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

N/A: not applicable

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

NTU: nephelometric turbidity units (a measure of turbidity)

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

ppb: micrograms per liter (ug/L) or parts per billion or one ounce in 7,350,000 gallons of water

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

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

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

ppq: parts per quadrillion, or pictograms per liter (pg/L)

2016 DRINKING WATER QUALITY REPORT

INORGANIC CONTAMINANTS

Year	Constituent (unit of measure)	Highest Level Detected	Range of Levels Detected	MCL	MCLG	Violation	Likely Source of Contamination
2016	Arsenic (ppb)	10	3.1 - 10	10	N/A	No	Erosion of natural deposits; discharge of drilling waste
2016	Barium (ppm)	.247	.228 - .247	2	2	No	Erosion of natural deposits; discharge of drilling waste
2014	Fluoride (ppm)	.61	.39 - .61	4	4	No	Erosion of natural deposits; water additive
2015	Nitrate (ppm)	.01	0 - .01	10	10	No	Runoff from fertilizer use; erosion of natural deposits

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
2016	Haloacetic Acids (ppb)	1	0 - 1.8	60	N/A	No	By-product of drinking water disinfection
2016	Total Trihalomethanes (ppb)	6	0 - 6.6	80	N/A	No	By-product of drinking water disinfection

RADIOACTIVE CONTAMINANTS

Year	Constituent (unit of measure)	Highest Level Detected	Range of Levels Detected	MCL	MCLG	Violation	Likely Source of Contamination
2011	Beta/photon emitters (pCi/L)*	4	4 - 4	50	N/A	No	Decay of natural and man-made deposits
2011	Combined Radium 226/228 (pCi/L)	1	1 - 1	5	N/A	No	Erosion of natural deposits

**The EPA considers 50 pCi/L to be the level of concern for beta particles.*

VOLATILE ORGANIC CONTAMINANTS

Year	Constituent (unit of measure)	Highest Level Detected	Range of Levels Detected	MCL	MCLG	Violation	Likely Source of Contamination
2016	Benzene (ppb)	1	0 - 2.1	5	0	No	Discharge from factories; Leaching from gas storage tanks and landfills
2016	Ethylbenzene (ppb)	5.5	0 - 5.5	700	700	No	Discharge from petroleum refineries
2016	Toluene (ppm)	.0083	0 - .0083	1	1	No	Discharge from petroleum refineries
2016	Xylenes (ppm)	0 - .04	0 - .04	10	10	No	Discharge from petroleum or chemical factories

LEAD AND COPPER

Year	Constituent (unit of measure)	90 th Percentile	Number of sites of AL	Action Level (AL)	MCLG	Violation	Likely Source of Contamination
2016	Copper (ppm)	.13	0	1.3	1.3	No	Erosion of natural deposits; 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 TABLE

Year	Constituent (unit of measure)	Average	Range of Levels Detected	MCL	MCLG	Violation	Likely Source of Contamination
2016	Free chlorine (ppm)	1.16	.51 - 2.2	4	4	No	Disinfectant used to control microbes

MICROBIOLOGICAL CONTAMINANTS

Year	Constituent (unit of measure)	Unit of Measure	Highest No. of Positive	MCL	MCLG	Violation	Likely Source of Contamination
2016	Total Coliform Bacteria	Presence	1	1 Positive Monthly Sample	0	No	Naturally present in the environment
2016	E.coli	Presence	0	0	0	No	Naturally present in the environment