

2019 WATER QUALITY REPORT

Consumer Confidence Report for the period of January 1 to December 31, 2019



CITY OF HORSESHOE BAY

PWS ID NUMBER: 1500015

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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.

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 at (800) 426-4791.

For more information regarding this report contact:

Jeff Koska, Utilities Director

Office: 830-598-9981

Email: jkoska@horseshoe-bay-tx.gov

Este informe contiene información importante sobre el origen y la calidad de su agua potable.

Para informacion en Espanol llame 830-598-8741.

The source of drinking water used by the City of Horseshoe Bay is
Surface Water from Lake Lyndon B. Johnson (LBJ).

Information about Source Water Assessments

A Source Water Susceptibility Assessment for your drinking water was completed by the Texas Commission on Environmental Quality (TCEQ). This information 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 information contained in the assessment allows us to focus source water protection strategies. 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 Confidence Report. For more information on source water assessments and protection efforts at our system, contact Jeff Koska, Utilities Director.

- For more information about your sources of water, please refer to the Source Water Assessment Viewer available at the following URL:
<https://www.tceq.texas.gov/gis/swaview>
- Further details about sources and source water assessments are available in Drinking Water Watch at the following URL: <http://dww2.tceq.texas.gov/DWW/>

SPECIAL NOTICE

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, 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; and,

- 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, the Environmental Protection Agency (EPA) prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration (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 a cause for health concerns. For more information on taste, odor, or color of drinking water, please contact the water department at 830-598-8741.

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 the 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 *(The following tables contain scientific terms and measures used in this report, some of which may require explanation.)*

AL	Action Level	The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.		
ALG	Action Level Goal	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.		
AVG	Average	Regulatory compliance with some MCLs are based on running annual average of monthly samples.		
MCL	Maximum Contaminant Level	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.		
MCLG	Maximum Contaminant Level Goal	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.		
MRDL	Maximum Residual Disinfectant Level	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.		
MRDLG	Maximum Residual Disinfectant Level Goal	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.		
NTU	Nephelometric Turbidity Units	A measure of turbidity.		
mg/L ppm	Milligrams per liter or parts per million – or one ounce in 7,350 gallons of water.	ug/L ppb	Micrograms per liter or parts per billion – or one ounce in 7,350,000 gallons of water.	
MAX	Maximum	MIN	Minimum	
NA	Not Applicable	YEAR	Collection Date; the year in which sample(s) were collected.	

Fluoride in drinking water.

This is an alert about your drinking water and a cosmetic dental problem that might affect children under nine years of age. At low levels, fluoride can help prevent cavities, but children drinking water containing more than 2 milligrams per liter (mg/L) of fluoride may develop cosmetic discoloration of their permanent teeth (dental fluorosis). The drinking water provided by your community water system **City of Horseshoe Bay** has a fluoride concentration of **0.2 mg/L**.

Dental fluorosis, in its moderate or severe forms, may result in a brown staining and/or pitting of the permanent teeth. This problem occurs only in developing teeth, before they erupt from the gums. Children under nine should be provided with alternative sources of drinking water or water that has been treated to remove the fluoride to avoid the possibility of staining and pitting of their permanent teeth. You may also want to contact your dentist about proper use by young children of fluoride-containing products. Older children and adults may safely drink the water.

Drinking water containing more than 4 mg/L of fluoride (the U.S. Environmental Protection Agency's drinking water standard) can increase your risk of developing bone disease. Your drinking water does not contain more than 4 mg/L of fluoride, but we're required to notify you when we discover that the fluoride levels in your drinking water exceed 2 mg/L because of this cosmetic dental problem.

For more information, please call **Dane Bybee** of City of Horseshoe Bay at **830-598-9983**. Some home water treatment units are also available to remove fluoride from drinking water. To learn more about available home water treatment units, you may call NSF International at 1-877-8-NSF-HELP.

2019 WATER QUALITY TEST RESULTS

Regulated Contaminants

Coliform Bacteria

MCLG	Total Coliform MCL	Highest No. of Positive	Fecal Coliform or E.Coli MCL	Total No. of Positive E.Coli or Fecal Coliform Samples	Violation	Likely Source of Contamination
2019	1 positive monthly sample	1	0	0	No	Naturally present in the environment.

Lead and Cooper - Testing Required Every 3 Years

Year	Contaminant (Unit)	MCLG	Action Level (AL)	90 th Percentile	# Sites over AL	Violation	Likely Source of Contamination
2019	Copper (ppm)	1.3	1.3	0.265	0	No	Erosion of natural deposits; leaching from wood preservatives; corrosion of household plumbing systems.
2019	Lead (ppb)	0	15	2.26	0	No	Corrosion of household plumbing systems, erosion of natural deposits.

Secondary Constituents and Other Unregulated Constituents

Many constituents (such as calcium, sodium, or iron) which are often found in drinking water can cause taste, color, and odor problems. The taste and odor constituents are called secondary constituents and are regulated by the State of Texas, not the EPA. These constituents are not a cause for health concern. Therefore, secondaries are not required to be reported in this document, but they may greatly affect the appearance and taste of your water.

Year	Constituent (Unit)	AVG Level	MIN Level	MAX Level	Limit	Likely Source of Contamination
2019	Aluminum (mg/L)	0.0825	0.0244	0.130	0.2	Abundant naturally occurring element.
2019	Chloride (mg/L)	39.5	37	42	300	A chemical compound of chlorine used in water purification.
2019	Manganese (mg/L)	0.001	0.001	0.001	.05	Occurs naturally in the environment as solids in soils and small particles in water.
2019	Nickel (mg/L)	0.0016	0.0016	0.0016	No MCL	Erosion of natural deposits.
2019	Potassium (mg/L)	4.2	4.17	4.23	No MCL	Runoff from fertilizers.
2019	Sodium	32.3	18.4	27.8	No MCL	Erosion of natural deposits.
2019	Total Alkalinity (mg/L)	132.9	111	167	No MCL	Naturally occurring soluble mineral salts.
2019	Total Dissolved Solids (mg/L)	269	247	291	1000	Total dissolved mineral constituents in water.
2019	Total Hardness as Calcium Carbonate (mg/L) or grains/gal	175 mg/L 11.667 gr/gal	171 mg/L 11.400gr/gal	184 11.400gr/gal	No MCL	The presence of calcium and magnesium in water is a factor contributing to the formation of scale and insoluble soap curds which are a means of clearly identifying hard water.
2019	Zinc (mg/L)	0.0089	0.000	0.0089	5mg/L	Erosion of natural deposits.

Inorganic Contaminants

Year	Contaminant (Unit)	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Violation	Likely Source of Contamination
2019	Barium (ppm)	0.0625	0.061 -0.0625	2	2	No	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits.
2019	Cyanide (ppb)	100	90 - 100	200	200	No	Discharge from plastics and fertilizer factories; Discharge from steel/metal factories.
2019	Fluoride (ppm)	0.20	0.12 - 0.17	4	4.0	No	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories.
2019	Nitrate [measured as Nitrogen (ppm)]	1	0.6 – 0.61	10	10	No	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits.

Radioactive Contaminants							
Year	Radioactive Contaminants	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Violation	Likely Source of Contamination
4/14/2016	Combined Radium 226/228 (pCi/L)	1.5	1.5 - 1.5	0	5	No	Erosion of natural deposits.

Disinfectants and Disinfection By-Products								
Year	Contaminant (Unit)	Highest Level Detected	Range of Levels	Detection Limit	MCLG	MCL	Violation	Source of Contaminant
**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.								
2019	Haloacetic Acids Total (HAA5) ppb	62	10.4 – 75.5	NA	No goal	60	Yes	By-product of drinking water disinfection.
**The value in the Highest Level or Detected Column is the highest average of all TTHM sample results collected at a location over a year.								
2019	Total Trihalomethanes (TTHM) ppb	95	17.6 – 114	NA	No goal	80	Yes	By-product of drinking water disinfection.

Disinfectant Residual								
Year	Constituent (Unit)	AVG Level	MIN	MAX	MRDL	MRDLG	Violation	Likely Source of Contamination
2019	Free Chlorine / Chloramines (ppm)	2.84	1.21	4.8	4	4	No	Water additive used to control microbes.

Turbidity is a measurement of the cloudiness of the water caused by suspended particles. We monitor it because it is a good indicator of water quality and the effectiveness of our filtration system and disinfectants.

Year	Turbidity	Level Detected	Limit Treatment Technique	Violation	Likely Source of Contamination
2019	Highest Single Measurement	0.32 NTU	1 NTU	No	Soil runoff
2019	Lowest Monthly % Meeting Limit	100%	0.30 NTU	No	Soil runoff

Organic Compounds							
Year	Contaminant (Unit)	AVG	MIN	MAX	MCL	Violation	Source of Contamination
2019	Carbon mg/L	4.96	2.93	7.46	No MCL	No	Herbicide runoff.

Total Organic Carbon							
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 violations section.							

REPORTING VIOLATIONS FOR 2019

Haloacetic Acids (HAA5)		
Some people who drink water containing haloacetic acids in excess of MCL over many years may have an increased risk of getting cancer.		
Violation Type	Violation Begin	Violation End
MCL, LRRA	01/01/2019	03/31/2019
Water samples showed that the amount of this contaminant in our drinking water was above its MCL standard for the period indicated. The flood of October 2018 increased the level of organics in our source water, Lake LBJ, causing elevated levels of HAA's from October 2018 to February 2019. The City returned to compliance in June 2019.		
Total Trihalomethanes (TTHM)		
Some people who drink water containing trihalomethanes in excess of the MCL over many years experience problems with their liver, kidneys, or central nervous systems, and may an increased risk of getting cancer.		
Violation Type	Violation Begin	Violation End
MCL, LRAA	01/01/2019	03/31/2019
MCL, LRAA	04/01/2019	06/30/2019
Water samples showed that the amount of this contaminant in our drinking water was above its MCL standard for the period indicated. The flood of October 2018 increased the level of organics in our source water, Lake LBJ, causing elevated levels of TTHM's from October 2018 to February 2019. The City returned to compliance in June 2019.		

REPORTING VIOLATIONS FOR 2019

Public Notification Rule

The Public Notification Rule helps to ensure that consumers will always know if there is a problem with their drinking water (e.g., boil water emergency). 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
PUBLIC NOTICE RULE LINKED TO VIOLATION	02/09/2019	08/12/2019
PUBLIC NOTICE RULE LINKED TO VIOLATION	02/15/2019	03/20/2019
PUBLIC NOTICE RULE LINKED TO VIOLATION	02/09/2019	08/12/2019
PUBLIC NOTICE RULE LINKED TO VIOLATION	02/15/2019	03/20/2019

We failed to adequately notify you, our drinking water consumers, about a violation of the drinking water regulations.

We failed to collect two quarterly scheduled lead and copper water quality parameter samples between July 2017 – December 2017. Water quality samples were taken in February 2018 and were all in compliance. As a result of these violations we were notified in February 2019 by TCEQ of the requirement to publish the mandatory notice below.

LEAD & COPPER RULE MONITORING AND REPORTING VIOLATION

Important Information About Your Drinking Water

The City of Horseshoe Bay has violated the monitoring and reporting requirements set by Texas Commission on Environmental Quality (TCEQ) in Chapter 30, Section 290, Subchapter F. Even though these were not emergencies, as our customers, you have the right to know what happened and what we did to correct these situations.

We are required to monitor your drinking water for specific contaminants on a regular basis. Result of regular monitoring are an indicator of whether or not our drinking water meets health standards. During July to December 2017 we did not complete all testing of Lead and Copper Water Quality Parameters for our system and therefore cannot be sure of the quality of your drinking water during that time.

The table below lists the contaminant(s) we did not properly test for during the year 2017, how often we are supposed to sample for Lead and Copper, how many samples we took, when samples should have been taken, and the date on which the follow-up samples were taken.

Contaminant	Required sampling frequency	Number of samples taken	When samples should have been taken	When samples were or will be taken
Lead and Copper Water Quality Parameters, Distribution	6/6 months	0	7/01/2017-12/31/2017	02/26/2018
Lead and Copper Water Quality Parameters, Entry Point	4/6 months	0	7/01/2017-12/31/2017	02/26/2018

What is being done?

Water Quality Samples were taken in February 2018 and all samples were in compliance. The City created a schedule for compliance testing to ensure strict adherence to regulatory testing. Twenty (20) Lead and Copper Samples from our residential customers were taken in the same time period with no exceedances of the regulatory levels.

For more information on this violation please contact Dan Bybee, Plant Operations Supervisor at (830)598-9983 or dbybee@horseshoe-bay-tx.gov or #1 Community Drive, Horseshoe Bay, TX 78657.

Please share this information with all other people who drink this water, especially those who may not have received this notice directly (i.e., 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.

This notice is being sent to you by the City of Horseshoe Bay. Public System Number: TX150015

Dated Distributed: July 1, 2020

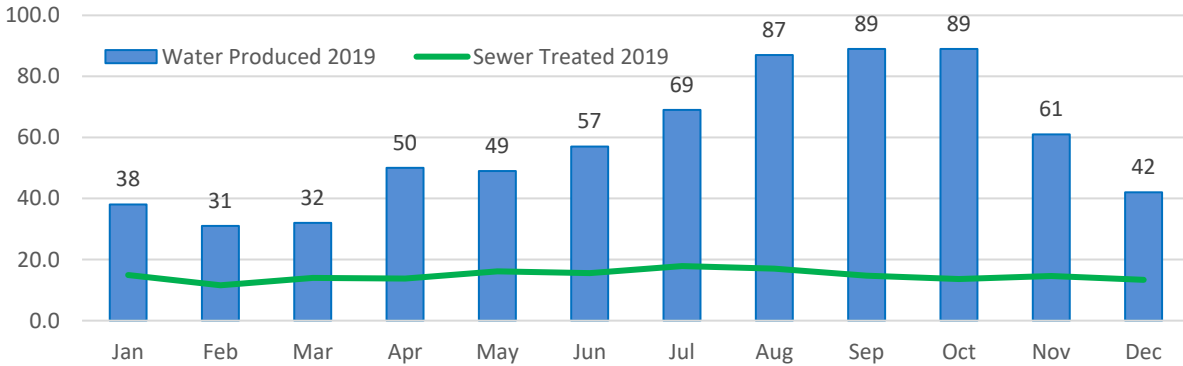
City of Horseshoe Bay Utilities Statistical Data for 2019

2017 WATER SYSTEM USAGE	
Maximum Month:	July - 79 MG
Minimum Month:	Feb - 34 MG
Water Produced in 2017:	603,813,000 million gallons (MG) or 1853 acre/ft
Average Day:	1.650 MGD
Water Loss:	4%
Water Going Toward Outside Use:	61%
Water Entering Sewer:	35%

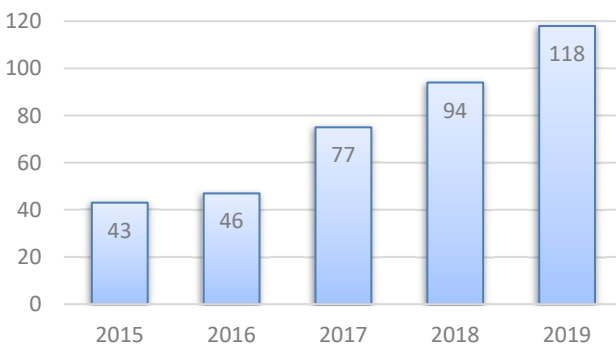
2018 WATER SYSTEM USAGE	
Maximum Month:	July - 82 MG
Minimum Month:	Feb - 32 MG
Water Produced in 2018:	619,335,000 million gallons (MG) or 1900 acre/ft
Average Day:	1.697 MGD
Water Loss:	5.5%
Water Going Toward Outside Use:	59.5%
Water Entering Sewer:	35%

2019 WATER SYSTEM USAGE	
Maximum Month:	Oct - 89 MG
Minimum Month:	Feb - 32 MG
Water Produced in 2019:	689,492,857 million gallons (MG) or 2116 acre/ft
Average Day:	1.889 MGD
Water Loss:	7.4%
Water Going Toward Outside Use:	60.6%
Water Entering Sewer:	32%

Water Production versus Sewer Treated in Million Gallons



Water Taps Installed by Year



Utilities Service Calls by Year

