

2021 WATER QUALITY REPORT

Consumer Confidence Report for the period of January 1 to December 31, 2021



CITY OF HORSESHOE BAY
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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:

Dane Bybee, Plant Supervisor

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Email: dbybee@horseshoe-bay-tx.gov

Este informe contiene información importante sobre el origen y la calidad de su agua potable.
Para mas informacion en Espanol llame al 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 Dane Bybee, Plant Supervisor.

- 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: <https://dww2.tceq.texas.gov/DWW/>

Information about your Drinking 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 Hot-line 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; 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.	
L1A	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.	
L2A	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.	
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.	
MFL	Million Fiber Per Liter	A measure of asbestos.	
mrem	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.	
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.
ppq	Parts per quadrillion, or picograms per liter.	ppt	Parts per trillion, or nanograms per liter
MAX	Maximum	MIN	Minimum
NA	Not Applicable	YEAR	Collection Date; the year in which the sample(s) were collected
TT	Treatment Technique	A required process intended to reduce the level of a contaminant in drinking water.	

2021 WATER QUALITY TEST RESULTS

Regulated Contaminants

Lead and Copper - 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.

Inorganic Contaminants

Year	Contaminant (Unit)	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Violation	Likely Source of Contamination
2021	Barium (ppm)	0.0754	0.0708 - 0.0754	2	2	No	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits.
2021	Cyanide (ppb)	150	0 - 150	200	200	No	Discharge from plastics and fertilizer factories; Discharge from steel/metal factories.
2021	Fluoride (ppm)	0.2	0.21 - 0.22	4	4	No	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories.
2021	Nitrate [measured as Nitrogen (ppm)]	0.16	0.16 - 0.16	10	10	No	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits.
2021	Selenium	3	0-3	50	50	No	Discharge from petroleum and metal refineries; Erosion of natural deposits; Discharge from mines.

Synthetic organic contaminants including pesticides and herbicides

Year	Contaminant (Unit)	Highest Level Detected	Range of Levels	Detection Limit	MCLG	MCL	Violation	Source of Contamination
2021	Dalapon	1.1	0 - 1.1	NA	200	200	No	Runoff from herbicide used on rights of way.

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.								
2021	Haloacetic Acids Total (HAA5) ppb	41	13.7 – 89.2	NA	No goal	60	No	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.								
2021	Total Trihalomethanes (TTHM) ppb	89	19 - 147	NA	No goal	80	Y	By-product of drinking water disinfection.

Disinfectant Residual

Year	Constituent (Unit)	AVG Level	MIN	MAX	MRDL	MRDLG	Violation	Likely Source of Contamination
2021	Free Chlorine / Chloramines (ppm)	2.80	1.68	3.65	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
2021	Highest Single Measurement	0.49 NTU	1 NTU	No	Soil runoff
2021	Lowest Monthly % Meeting Limit	99%	0.3 NTU	No	Soil runoff

Organic Compounds							
Year	Contaminant (Unit)	AVG	MIN	MAX	MCL	Violation	Source of Contamination
2020	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 violation section.							

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

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 2021

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). Omission was corrected and returned to compliance.							

Violation Type	Violation Begin	Violation End	Violation Explanation
PUBLIC NOTICE RULE LINKED TO VIOLATION	10/29/2021	11/15/2021	We failed to adequately notify you, our drinking water customers, about a violation of the drinking water regulations.
PUBLIC NOTICE RULE LINKED TO VIOLATION	11/01/2021	12/01/2021	We failed to adequately notify you, our drinking water customers, about a violation of the drinking water regulations.

Total Trihalomethanes (TTHM)			
Violation Type	Violation Begin	Violation End	Violation Explanation
MCL, LRAA	07/01/2021	09/30/2021	Water samples showed that the amount of this contaminant in our drinking water was above the standard (called maximum contaminant level and abbreviated MCL) for the period indicated.

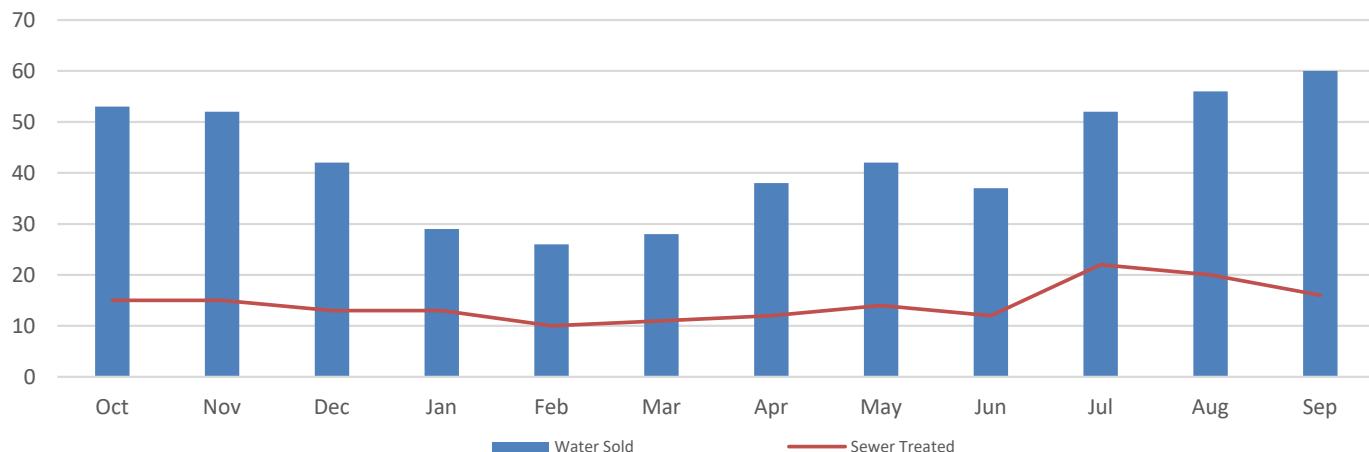
City of Horseshoe Bay Utilities Statistical Data for 2021

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 1900.67 acre/ft
Average Day:	1.889 MGD
Water Loss:	7.4%
Water Going Toward Outside Use:	63%
Water Entering Sewer:	37%

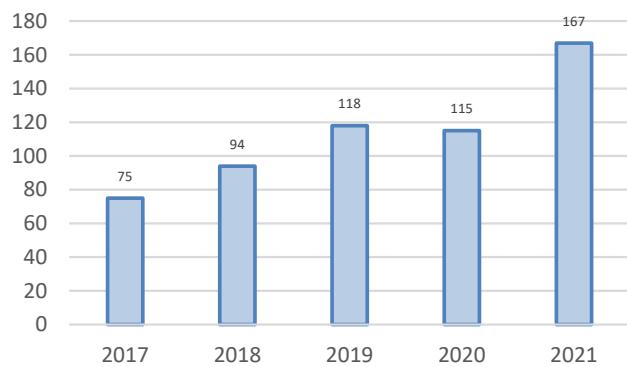
2020 WATER SYSTEM USAGE	
Maximum Month:	Aug- 93 MG
Minimum Month:	Mar – 38 MG
Water Produced in 2020:	712,250,000 million gallons (MG) or 2185.8 acre/ft
Average Day:	1.950 MGD
Water Loss:	7.1%
Water Going Toward Outside Use:	69%
Water Entering Sewer:	31%

2021 WATER SYSTEM USAGE	
Maximum Month:	Sept – 75 MG
Minimum Month:	Feb - 33 MG
Water Produced in 2021:	652,280,000 million gallons (MG) or 2100.77 acre/ft
Average Day:	2.350 MGD
Water Loss:	10.5%
Water Going Toward Outside Use:	65%
Water Entering Sewer:	35%

2021 Water Sold vs Sewer Treatment (treated in million gallons)



Water Taps Installed by Year



Utility Service Calls by Year

