



City of Shenandoah 2021 Consumer Confidence Report

(Annual Drinking Water Quality Report)

City of Shenandoah, Texas, 29955 I-45 North, Shenandoah, Texas, 77381 (281) 298-5522, www.shenandoahtx.us

Our Drinking Water Meets or Exceeds All Federal (EPA) Drinking Water Requirements

This report is a summary of the quality of the water we provide our customers. The analysis was made by using the data from the most recent U.S. Environmental Protection Agency (EPA) required tests and is presented in the attached pages. We hope this information helps you become more knowledgeable about what is in your drinking water.

SPECIAL NOTICE

Required language for ALL community public water supplies:

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).

Where do we get our drinking water?

GULF COAST AQUIFER and 3 GROUNDWATER WELLS
(109 Honey Berry St., 18971 & 19249 David Memorial Dr.)

The TCEQ completed an assessment of your source water and 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 detection 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 Joseph Peart at (281) 298-5522.

Some of this source water assessment information is available on Texas Drinking Water Watch at <http://dww.tceq.state.tx.us/DWW>

Public Information

Telephone: (281) 298-5522

Shenandoah's City Council has regularly scheduled meetings on the 2nd and 4th Wednesday of each month.

If you have questions about this report, please contact Joseph Peart.

Water Sources:

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 before treatment 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.

ALL drinking water may contain contaminants.

When drinking water meets federal standards there may not be any health benefits to purchasing bottled water or point of use devices. 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 Environmental Protection Agency's Safe Drinking Water Hotline (1-800-426-4791).

Secondary 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 causes 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.

En Español

Este informe incluye información importante sobre el agua potable. Si tiene preguntas o comentarios sobre este

informe en español, favor de llamar al tel. (281) 298-5522 para hablar con una persona bilingue en español.

DEFINITIONS

Average (Avg) – Regulatory compliance with some MCLs is based on running annual average of monthly samples.

Maximum Contaminant Level (MCL) – The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLFs 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 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 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.

ABBREVIATIONS

NTU – Nephelometric Turbidity Units

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

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

ppm - parts per million, or milligrams per liter (mg/L) or one ounce in 7.350 gallons of water

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

ppt – parts per trillion, or nanograms per liter

ppq – parts per quadrillion, or picograms per liter

Inorganic Contaminate

Collection Date	Contaminant	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Unit of Measure	Violation	Source of Contaminant
2019	Barium	0.0496	0.0496 – 0.0496	2	2	ppm	NONE	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits.
2020	Fluoride	0.39	0.39 – 0.39	4	4.0	ppm	NONE	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories.
2018	Nitrate (measured as Nitrogen)	0.04	0.02 – 0.03	10	10	ppm	NONE	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits.
2009	Gross alpha	4.1	0 – 4.1	3	15	0	pCi/L	Erosion of natural deposits.

Radioactive Contaminants

Year	Contaminant	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Unit of Measure	Violation	Source of Contaminant
2010	Beta/photon emitters	5.9	5.9 – 5.9	0	50	pCi/L*	NONE	Decay of natural and man-made deposits.
2013	Combined Radium 226/228	0.1	0 – 0.1	0	5	pCi/L	NONE	Erosion of natural deposits.

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

Synthetic Organic Contaminants Including Pesticides and Herbicides

Year	Contaminant	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Unit of Measure	Violation	Source of Contaminant
2014	2,4-D	<0.1	0-0.1	70	70	ppb	NONE	Runoff from herbicide used on row crops.

Maximum Residual Disinfectant Level

Year	Disinfectant	Average Level	Minimum Level	Maximum Level	MRDL	MRDLG	Unit of Measure	Violation	Source of Disinfectant
2017	Chlorine	1.13	.74	1.83	4	4	ppm	NONE	Disinfectant used to control microbes.

Disinfectants and Disinfection By-products

Year	Contaminant	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Unit of Measure	Violation	Source of Contaminant
2021	Total Trihalomethanes (TTHM)	5	4.9 – 4.9	No goal for the total	80	ppb	NONE	By-product of drinking water disinfection.
2021	Haloacetic Acids (HAA5)	1	1.1 – 1.1	No goal for the total	60	ppb	NONE	By-product of drinking water disinfection.

Unregulated Initial Distribution System Evaluation for Disinfection By-products WAIVED OR NOT YET SAMLED

Disinfectant Residual

Year	Disinfectant Residual	Average Level	Range of Levels Detected	MRDL	MRDLG	Unit of Measure	Violation	Source of Drinking Water
2021	Disinfectant Residual	1.05	0.76 – 1.34	4	4	ppm	NONE	Water additive used to control microbes.

Unregulated Contaminants

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

Year or Range	Contaminant	Average Level	Minimum Level	Maximum Level	Unit of Measure	Source of Contaminant
2014	Chloroform	0.8	0.6	<1.0	ppb	By-product of drinking water disinfection.
2020	Bromoform	2.05	1.6	5.9	ppb	By-product of drinking water disinfection.
2019	Bromodichloromethane	0.3	0	1.2	ppb	By-product of drinking water disinfection.
2020	Dibromochloromethane	1.6	1.0	3.4	ppb	By-product of drinking water disinfection.

Volatile Organic Contaminants

Year	Disinfectant Residual	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Unit of Measure	Violation	Source of Drinking Water
2021	Xylenes	0.0025	0 – 0.0025	10	10	ppm	NONE	Discharge from petroleum factories; Discharge from chemical factories

Lead and Copper

Contaminant	Date Sampled	MCLG	Action Level (AL)	90 th Percentile	# Sites Over AL	Unit of Measure	Violation	Source of Contaminant
Lead	6/26/2017	0	15	0.697	0	ppb	NONE	Corrosion of household plumbing systems; erosion of natural deposits
Copper	6/26/2017	1.3	1.3	0.0399	0	ppm	NONE	Erosion of natural deposits; Leaching from wood preservatives; corrosion of household plumbing systems.

Required Additional Health Information for Lead

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. This water supply 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>

Turbidity NOT REQUIRED

Total Coliform REPORTED MONTHLY TESTS FOUND NO COLIFORM BACTERIA

Fecal Coliform REPORTED MONTHLY TESTS FOUND NO FECAL COLIFORM BACTERIA

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

Year or Range	Constituent	Average Level	Minimum Level	Maximum Level	Secondary Limit	Unit of Measure	Source of Constituent
2020	Bicarbonate	293	287	299	NA	ppm	Corrosion of carbonate rocks such as limestone.
2020	Calcium	28.0	4.2	6.6	NA	ppm	Abundant naturally occurring element.
2020	Chloride	49	44	52	300	ppm	Abundant naturally occurring element; used in water purification; byproduct of oil field activity.
2017	Copper	0.011	0.002	0.0206	1	ppm	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives.
2020	Iron	0.243	0.0918	0.332	.3	ppm	Erosion of natural deposits; iron or steel water delivery equipment or facilities.
2011	Magnesium	2	0	6	NA	ppm	Abundant naturally occurring element.
2019	Manganese	0.001	0.0014	0.0015	.05/	ppm	Abundant naturally occurring element.
2005	Nickel	0.001	0	0.001	NA	ppm	Erosion of natural deposits.
2011	pH	8.1	8	8.1	>7.0	units	Measure of corrosivity of water.
2020	Sodium	142	117	168	NA	ppm	Erosion of natural deposits; byproduct of oil field activity.
2020	Sulfate	16	14	17	300	ppm	Naturally occurring; common industrial byproduct; byproduct of oil field activity.
2020	Total Alkalinity as CaCO ₃	241	235	247	NA	ppm	Naturally occurring soluble mineral salts.
2019	Total Dissolved Solids	365	363	367	1000	ppm	Total dissolved mineral constituents in water.
2019	Total Hardness as CaCO ₃	14	14	15	NA	ppm	Naturally occurring calcium.
2019	Zinc	0.010	0.01	0.018	5	ppm	Moderately abundant naturally occurring element; used in the metal industry.