

2022 Drinking Water Quality Report

Prepared for **CITY OF PALESTINE** (PWS I.D. TX0010001)
Anderson County, Texas

We are pleased to present you with our 2022 Drinking Water Quality Report. This report is designed to inform you about the quality water and services we deliver to you every day. The Safe Drinking Water Act requires us to prepare and deliver this report to you on an annual basis. The City of Palestine is committed to ensuring the quality of your drinking water.

En Espanol

This report includes important information about your drinking water. To receive a copy of this information or have it translated into Spanish, please call (903) 731-8400.

Este reporte incluye la información importante sobre el agua para tomar. Para asistencia en español, favor de llamar al telefono (903) 731-8400.

The City of Palestine's water meets or exceeds all Federal (EPA) drinking water requirements.

This report is a summary of the quality of the water we provide to 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.

Where does our drinking water come from? §290.272(a)

Our drinking water is obtained from surface water sources. The raw water intake draws from the Neches River in Anderson County. A Source Water Susceptibility Assessment for your drinking water source has been updated by the Texas Commission on Environmental Quality and has been provided to us. The report 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 sampling requirements for your water system is based on this susceptibility and previously sample data. Any detections of these contaminants will be found in this Consumer Confidence Report. For more information about your sources of water, please refer to the Source Water Assessment Viewer available at the following [URL:http://gis3.tceq.state.tx.us/swav/Controller/index.jsp?wtrsrc=](http://gis3.tceq.state.tx.us/swav/Controller/index.jsp?wtrsrc=). Further details about sources and source-water assessments are available in Drinking Water Watch at the following [URL:http://dww.tceq.texas.gov/DWW](http://dww.tceq.texas.gov/DWW). For more information on source water assessments and protection efforts for our system please call us (903) 731-8400.

Public Inquiries:

If you have any questions about this report or any other issue concerning your water utility, please contact Kevin Olson at (903) 731-8400. We want you to be informed about our water quality. If you want to learn more, please attend any of our regularly scheduled city council meetings. §290.272(g)(2)

Day: 2nd & 4th Monday of each month **Time:** 5:30 p.m. **Location:** City Hall 504 N. Queen Street, Palestine

SPECIAL NOTICE FOR THE ELDERLY, INFANTS, CANCER PATIENTS, PEOPLE WITH HIV/AIDS OR OTHER IMMUNE PROBLEMS

You may be more vulnerable than the general population to certain microbial contaminants, such as *Cryptosporidium*, in drinking water. Infants, some elderly, or Immuno-compromised 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 for infections. You should seek advice about drinking water from your physician or health care provider. The EPA/Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline (800-426-4791). §290.273

About the Attached Tables

All drinking water, including bottled drinking water, may be reasonably expected to contain at least small amounts of some contaminants that may cause taste, color, or odor problems. The presence of contaminants or these types of issues, does not necessarily indicate that the water poses a health risk. For more information on taste, odor, or color of drinking water, please contact the City of Palestine Public Works Department. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Water Drinking Hotline (1-800-426-4791).

The sources of drinking water (both tap and bottled) 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 animal or human activity.

Other substances may be found in the water supply. **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. **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. **Pesticides and herbicides**, which may come from a variety of sources such as agriculture, urban storm water runoff, and residential uses.

In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. FDA regulations establish limits for contaminants in bottled water which must provide the same protection for public health. The attached tables contain all of the constituents, which have been found in your drinking water for the period of January 1st to December 31st, 2022, unless otherwise noted. The U.S. EPA requires water systems to test up to 97 constituents.

In the following tables, you will find many terms and abbreviations you might not know. To help you better understand these terms we've provided the following definitions: see §290.272(b):

- **Maximum Contaminant Level** – The “Maximum Allowed” (MCL) is 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** – The “Goal” (MCLG) is 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.
- **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 occasion
- **Treatment Technique (TT)** – A treatment technique is a required process intended to reduce the level of a contaminant in drinking water.
- **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.
- **Parts per million (ppm) or Milligrams per liter (mg/l)** – One part per million corresponds to a single penny in \$10,000 or is about the same as one drop of soda in 35 Big Gulps (32 oz. each).
- **Parts per billion (ppb) or Micrograms per liter (ug/l)** – One part per billion corresponds to one minute in 2,000 years, or a single penny in \$10,000,000.
- **Micromhos per cm (umhos/cm)** – This property is a measure of the ability of water to conduct electricity.
- **HRA Avg. (Highest Running Annual Average)** – The highest of four values calculated by averaging each quarter's average result with the three (3) previous quarter's average results.
- **Million Fibers per liter (MFL)** – A measure of asbestos.

- Millirems per year (mrem) – A measure of radiation absorbed by the body.
- Picocuries per liter (pCi/L) – A measure of radioactivity.
- Nephelometric Turbidity Units (NTU) – A measure of turbidity.
- Not Applicable (N/A) – Not applicable

The state requires us to monitor for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of our data, though representative, is more than one year old.

Table 1. Inorganic Constituents §290.272 (c)

Constituent	City of Palestine Max. Level	MCL	MCLG	Range of Detections	Sample Year	Violation	Typical Sources of Constituent
Asbestos (ppm)	0.197	>10	>7	0.197 - 0.197	2021	NO	Natural occurring mineral. Erosion of natural deposits;
Barium (ppm)	0.042	2	2	0.042 - 0.042	2022	NO	Erosion of natural deposits; Discharge of drilling wastes; Discharge from metal refineries.
Fluoride (ppm)	0.0435	4	4	0.0435 - 0.0435	2022	NO	Water additive which promotes strong teeth; Erosion of natural deposits; Discharge from fertilizers and aluminum factories.
Nitrate (ppm)	0.345	10	10	0.345 - 0.345	2022	NO	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits

*Year of most recent analysis

Table 2. Organic Constituents §290.272 (c)

Constituent	City of Palestine Max. Level	MCL	MCLG	Range of Detection	Sample Year	Violation	Typical Sources of Constituent
Di(2-ethylhexyl) phthalate (ppm)	No Detect	6	0	ND	2021*	NO	Discharge from rubber and chemical factories.

*Year of most recent analysis

Table 3. Disinfection Byproducts & Disinfection Residual §290.272(c)

Constituent	City of Palestine Max. Level	MCL	MCLG	Range of Detection	Sample Year	Violation	Typical Sources of Constituent
Total Trihalomethanes (ppb)	57.6	80	0	35.5- 57.6	2022	NO	By product of drinking water chlorination
Total Haloacetic Acids (ppb)	27.0	60	0	11.3- 27.0	2022	NO	By product of drinking water chlorination.
Chlorine Disinfectant (ppm)**	2.41*	4	--	0.50 -	2022	NO	Disinfectant used to control microbes.

** Maximum level determined by the highest running annual average (HRAA) This evaluation is required sampling by the EPA to determine the range of total Trihalomethanes and Haloacetic acid in the system for future regulations. The samples are not used for compliance and may have been collected under non-standards conditions. EPA also requires the data to be reported here.

Additional Health Information for Lead §290.272(g)(2)

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 material 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 water for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your drinking 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>.

Table 4. Lead & Copper §290.272(c)

Constituent	City of Palestine Water 90 th percentile	AL	MCLG	Number of sites found above the AL	Sample Year	Typical Sources of Constituent
Lead (ppm)	.001	15	0	0	2021*	Erosion of natural deposits. Corrosion of household plumbing systems
Copper (ppm)	0.034	1.3	1.3	0	2021*	Erosion of natural deposits; Corrosion of household plumbing systems; Leaching from wood preservatives

*Year of most recent analysis

Table 5. Unregulated Constituents §290.272 (c)(1)(B)

Constituent	City of Palestine Max. Level	MCL	MCLG	Range of Detection	Sample Year	Typical Sources of Constituent
Chloroform (ppb)	23.2	None		13.9 - 22.6	2022	Unregulated contaminant monitoring helps EPA to determine where certain contaminants occur and whether it needs to regulate them.
Bromodichloromethane (ppb)	20.1	None		12.5 - 20.1	2022	Unregulated contaminant monitoring helps EPA to determine where certain contaminants occur and whether it needs to regulate them.
Dibromochloromethane (ppb)	12.7	None		8.21 - 12.7	2022	Unregulated contaminant monitoring helps EPA to determine where certain contaminants occur and whether it needs to regulate them.
Bromoform (ppb)	1.68	None		ND - 1.68	2022	Unregulated contaminant monitoring helps EPA to determine where certain contaminants occur and whether it needs to regulate them.

Table 6. Radionuclides

Constituent	City of Palestine Max. Level	MCL	MCLG	Range of Detection	Sample Year	Violation	Typical Sources of Constituent
Gross Beta (pCi/L) Beta Photon Emitters	4.8-	50	0	4.8 – 4.8	2021*	NO	Decay of natural and man-made deposits
Combined Uranium	No Detect	0.03	0	No Detect	2017*	NO	Erosion of natural deposits
Combined Radium 226/228 (pCi/L)	No Detect	5	0	1.5 - 1.5	2021*	NO	Erosion of natural deposits

*Year of most recent analysis

Table 7. – Bacteria

Maximum Contaminant Level Goal	Total Coliform Max. Level	Highest No. of Positives	Fecal Coliform or E. Coli Max Level	Total No. of Positive Samples	Violation	Likely Source of Contamination
0	1 Positive Monthly Sample	1		0	NO	Naturally present in the environment

Table 8. – Turbidity

TURBIDITY	Level Detected	Limit (Treatment Technique)	Violation	Likely Source of Contamination
Highest Single Measurement	0.32 NTU	1 NTU	NO	Soil run-off
Lowest Monthly % Meeting Limit	100%	0.3 NTU	NO	Soil run-off

Table 9. Secondary Constituents & Properties of Water §290.118(g)

Constituent	City of Palestine Water	Secondary Limit	Range of Detections	Sample Year	Typical Sources of Constituent
Aluminum (ppb)	0.00012	0.02	ND – 0.00013	2022	Minerals, Metals, and other parameters commonly found in drinking water.
Sodium (ppb)	0.0135	None	ND – 0.0135	2022	
Iron (ppb)	No Detect	None	No Detect	2022	
Calcium (ppb)	0.0197	None	ND – 0.0197	2022	
Manganese (ppb)	No Detect	50	No Detect	2022	
Chloride (ppb)	0.0261	300	ND – 0.0261	2022	
Sulfate (ppb)	0.0356	300	ND – 0.0356	2022	
Potassium (ppb)	0.00404	None	ND – 0.00404	2022	
Zinc (ppb)	No Detect	5	No Detect	2022	
Total Hardness as CaCO3 (ppb)	0.0651	None	ND – 0.0651	2022	
Total Alkalinity (ppb)	0.0410	None	0.0230 – 0.0410	2022	
Alkalinity, Bicarbonate CaCO3 (ppb)	0.0272	ND	ND – 0.0272	2022	
Alkalinity, Carbonate CaCO3 (ppb)	0.00128	ND	ND – 0.00128	2022	
Alkalinity, Hydroxide (ppb)	No Detect	ND	No Detect	2022	
Alkalinity, Phenolphthalein (ppb)	0.64	ND	0.64	2022	
Dissolved Solids (ppb)	0.126	1000	ND – 0.126	2022	
Dil. Conductance (umhos/cm)	230	None	ND - 230	2022	

Secondary constituents may be found in drinking water that may cause taste, color, and odor problems. These types of problems are not necessarily causes for health concerns. The State of Texas regulates these constituents, not the EPA. We are not required to report these constituents in this document but do so to help inform you the consumer. For more information on these constituents, please call us.

Table 10. – Total Organic Carbon

Total Organic Carbon

The percentage of Total Organic Carbon (TOC) was measured monthly (sample results range: 0.5 mg/l to 6.57 mg/l) The system met all TOC removal requirements set, unless a TOC violation is noted in Table 11 - System Violations.

Table 11. – System Violations

Lead and Copper Rule			
The Lead and Copper Rule protects public health by minimizing lead and copper levels in drinking water, primarily by reducing corrosivity. Lead and copper enter drinking water mainly from corrosion of lead and copper containing plumbing materials.			
Violation Type	Violation Begin	Violation End	Violation Explanation
LEAD CONSUMER NOTICE (LCR)	12/30/2021	01/08/2022	We failed to provide the results of lead tap water monitoring to the consumers at the location water was tested. These were supposed to be provided no later than 30 days after learning the results.

As you can see by the table above, our system HAD ONE VIOLATION. The violation was corrected upon notification.

We are proud that your **drinking water meets or exceeds** all Federal and State requirements. We have learned through our monitoring and testing that some constituents have been detected. The EPA has determined that your water **IS SAFE** at these levels. Please call our office if you have questions. Kevin Olson can be reached at 903-731-8400 between the hours of 8:00 AM – 5:00 PM Monday – Friday.

Water Loss for 2022

In the water loss information submitted to the Texas Water Development Board for the time period of January- December 2022, our system lost an estimated 50,857,000 gallons of water. If you have any questions about the water loss audit please call City of Palestine, 903-731-8400.