CONSUMER
CONFIDENCE
REPORT

2019 DRINKING WATER QUALITY REPORT FOR
THE CITY OF DENISON
(903) 464-4480

This report is provided in response to the
1996 Safe Drinking Water Act amendments and specifically, USEPA's Consumer Confidence Rule, which became effective September 19, 1998.

HOW IS WATER TREATED?

The City of Denison uses the latest techniques and equipment to consistently produce superior quality drinking water. Utilizing conventional treatment processes, we produce an average of four to ten million gallons of water per day for our customers. The process is divided into four separate steps to achieve the desired quality product mandated by the TCEQ and USEPA. Coagulation, sedimentation, filtration, and disinfection are considered the treatment of choice for surface water in the United States. Coagulation is chemically and mechanically changing the raw water to remove the majority of larger solids. In settling the water, the finer particles have time to be removed before continuing on to filtration to remove microscopic particles. Disinfection is done with chloramine compounds before leaving the water plant and entering the distribution system. The water is sampled and tested throughout the treatment process. Sampling is performed to make sure the processes are working and that the water is safe before it leaves the plant. The City of Denison is required to test 25 sites per month in the distribution system and reports results to TCEQ and USEPA. All employees involved in treating, collecting samples, and making repairs to the distribution system are certified by TCEQ through training and testing.

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 regulated by the State of Texas, not EPA. These constituents are not causes for health concern. Therefore, secondary standards are not required to be reported in this document but they may greatly affect the appearance and taste of your water.

TCEQ 290.272 (c)(5) UNREGULATED CONTAMINATES

Unregulated contaminants are those for which EPA has not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist the EPA in determining the occurrence of unregulated contaminants in drinking water and whether future regulation is warranted. We participated in gathering data under the Unregulated Contaminates Monitoring Rule and if any unregulated contaminants were detected they are shown in the tables elsewhere in the report.

DEFINITIONS

NTU – Nephelometric Turbidity Units. This is the unit used to measure water turbidity.

MCLG – Maximum Contaminant Level Goal. The level of a contaminant in drinking water below which there is no known or expected health risk. MCLG's allow for a margin of safety.

MCL – Maximum Contaminant Level. The highest permissible level of a contaminant that is allowed in drinking water. MCL's are set as close to the MCLG's as feasible using the best available treatment technology.

MRDLG - Maximum Residual Disinfection Level Goal The level of a drinking water disinfectant below which there is no known or expected risk of health. MRDLGs do not reflect the benefits of use of disinfectants to control microbial contaminants.

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.

AL – Action Level The concentration of a contaminant which, if exceeded, trigger treatment or other requirements that a water system must follow.

TURBIDITY – A measure of the cloudiness of water. We monitor it because it is a good indicator of the effectiveness of our filtration system.

TT - TREATMENT TECHNIQUE – A required process intended to reduce the level of a contaminant in drinking water.

ppm – Parts per million. One part per million equals one packet of artificial sweetener sprinkled into 250 gallons of iced tea.

ppb–Parts per billion. One part per billion is equal to one packet of artificial sweetener added to an Olympic size swimming pool.

pci/L – Picocuries per liter is a measure of radioactivity in water.

NOTICE TO AT-RISK POPULATIONS

Some people may be more vulnerable to contaminants in drinking water than the general population. Immune-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/ Centers for Disease Control and Prevention (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 (1-800-426-4791).

PUBLIC PARTICIPATION OPPORTUNITIES

A public meeting with the City of Denison's water treatment personnel will be held to answer any questions and respond to comments water customers may have.

DATE: JULY 07, 2020

TIME: 10:00 AM

LOCATION: 4631 RANDELL LAKE ROAD

PHONE NO: (903) 464-4480

OUR DRINKING WATER MEETS OR EXCEEDS ALL 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 data from the most recent 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.

WATER SOURCES

The sources of drinking water (both tap water and bottled) include river, lakes, streams, ponds, reservoirs, springs and wells. As water travels over the land's surface 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. Contaminants that may be in untreated water include microbes, inorganic contaminants, pesticides, herbicides, organic chemical contaminants and radioactive contaminants.

WHERE DO WE GET OUR WATER?

Most of the water we treat is from city-owned Lake Randell, located to the northwest of Denison between US 75 and Lake Texoma. The supply for Lake Randell is supplemented by water transferred from Lake Texoma. All of our customers are served by surface water from these two lakes. TCEQ completed an assessment of our source water and results indicate that some of the sources are susceptible to certain contaminants. The sampling requirements for our water system are based on this susceptibility and previous sample data. Any detection of those contaminants will be found in this report. For more information on source water assessments and protection efforts at our system, please contact us.

ALL DRINKING WATER MAY CONTAIN CONTAMINANTS

When drinking water meets federal standards there may not be any health-related benefits to purchasing bottled water or point of use devices. All drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of these contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects may be obtained by calling USEPA's Safe Drinking Water Hotline *(1-800-426-4791).*

WATER LOSS AUDIT

In the water loss audit submitted to the Texas Water Development Board for the time period of Jan.-Dec. 2019, our system lost an estimated 143,785,305 gallons of water. If you have any questions about the water loss audit please call 903-464-4480.

NOTICE OF VIOLATION
TOTAL ORGANIC CARBON, ROUTINE MAJOR

The City of Denison, 0910003, has violated the monitoring and reporting requirements set by Texas Commission on Environmental Quality (TCEQ) in Title 30, Texas Administration Code (30 TAC), Section 290, Subchapter F. Public water systems that use a series of treatment processes that includes coagulation, flocculation, sedimentation or clarification, and filtration as part of the overall treatment protocol must monitor Total Organic Carbon and report the results of that monitoring to the TCEQ on a monthly basis.
We failed to monitor and/or report Total Organic Carbon for November 2019, in the monitoring period, fourth quarter 10/1/19 – 12/31/19.

Results of monitoring are an indicator of whether drinking water is protected from potential adverse health effects associated with disinfectants and disinfection-by-products. We did not complete all monitoring and/or reporting for disinfectant by-product precursors, and therefore TCEQ cannot be sure of the Total Organic Carbon levels in your drinking water during that time.

We are taking the following actions to address the issue: We have collected every required sample starting December 2019 and are no longer in violation. The City of Denison has developed a redundant check system to prevent further violations of this nature.

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

If you have questions regarding this matter, you may contact Dean Rylant at 903 464 4480.

INORGANIC

YEAR	CONTAMINANT	AVERAGE LEVEL	MIN. LEVEL	MAX. LEVEL	MCL	MCLG	UNIT OF MEASURE	SOURCE OF CONTAMINANT
2019	Barium	0.059	0.059	0.059	2	2	ppm	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
2019	Fluoride	0..70	0.60	0.80	4	4	ppm	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from
2019	Nitrate	0.0489	0.0489	0.0489	10	10	ppm	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
2017	Gross Beta	< 4.0	< 4.0	< 4.0	50	0	pci/l	Decay of natural and man-made deposits

TOTAL ORGANIC CARBON (SOURCE WATER)

YEAR	CONTAMINANT	AVERAGE LEVEL	MIN. LEVEL	MAX.LEVEL	Unit of Measure	SOURCE OF CONTAMINANT
2019	TOC	5.45	4.79	6.52	ppm	Naturally occurring organic (No associated adverse health effects)

DISINFECTION BYPRODUCTS

YEAR	CONTAMINANT	AVERAGE LEVEL	MIN. LEVEL	MAX. LEVEL	MCL	MCLG	UNITS OF MEASURE	SOURCE OF CONTAMINANT
2019	Total Haloacetic Acids	15.3	7.0	22.9	60	< 60	ppb	By-product of drinking water disinfection.
2019	Total Trihalomethanes	11.7	9.94	14.8	80	< 80	ppb	By-product of drinking water chlorination.
2019	Chlorite	0.56	0.30	0.85	1.0	0.8	ppm	By-product of drinking water disinfection.

DISINFECTION RESIDUALS

YEAR	CONSTITUENT	ANNUAL AVERAGE	RANGE OF DETECTION	MRDL	MRDLG	UNITS	SOURCE
2019	Chloramines	3.7	0.5 – 4.0	4	4	ppm	Disinfectant used to control microbes

LEAD AND COPPER

YEAR	CONTAMINANT	THE 90th PERCENTILE	SITES EXCEEDING ACTION LEVEL	ACTION LEVEL	UNIT OF MEASURE	SOURCE OF CONTAMINANT
2019	Lead	< 0.001	0	0.015	ppm	Corrosion of household plumbing systems; Erosion of natural deposits.
2019	Copper	0.0096	0	1.3	ppm	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from

YEAR	CONTAMINANT	HIGHEST SINGLE MEASUREMENT	LOWEST MONTHLY % OF SAMPLES MEETING	TURBIDITY LIMITS	UNITS OF MEASURE	SOURCE OF CONTAMINANT
2019	TURBIDITY	0..29	99.9%	0.3	NTU	Soil runoff

SECONDARY AND OTHER NOT REGULATED CONSTITUENTS (No associated adverse health effects)

YEAR	CONSTITUENT	AVERAGE LEVEL	MIN. LEVEL	MAX. LEVEL	LIMIT	UNIT OF MEASURE	SOURCE OF CONSTITUENT
2019	Bicarbonate	128	128	128	NA	ppm	Corrosion of carbonate rocks such as limestone.
2019	Calcium	67.8	67.8	67.8	NA	ppm	Abundant naturally occurring element.
2019	Chloride	122	122	122	300	ppm	Abundant naturally occurring element; used in water
2019	Iron	< 0.05	< 0.05	< 0.05	0.3	ppm	Erosion of natural deposits; iron or steel water delivery equipment of facilities
2019	Magnesium	12.7	12.7	12.8	NA	ppm	Abundant naturally occurring element
2019	pH	7.9	7.7	8.1	NA	units	Measure of corrosiveness of water.
2019	Sodium	76.2	76.2	76.2	NA	ppm	Erosion of natural deposits; byproduct of oil field activity.
2019	Sulfate	77.4	77.4	77.4	300	ppm	Naturally occurring; common industrial byproduct;
2019	Total Alkalinity as CaCO3	128	128	128	NA	ppm	Naturally occurring soluble mineral salts.
2019	Total Dissolved Solids	399	399	399	1000	ppm	Total dissolved mineral constituents in water
2019	Total Hardness as CaCO3	221	221	221	NA	ppm	Naturally occurring calcium.

SOURCE WATER SUSCEPTIBILITY ASSESSMENT RESULTS

System Susceptibility Summary

Asbestos	Cyanide	Metals	Microbial	Minerals	Radiochemical	Synthetic Organic Chemicals	Disinfection Byproduct	Volatile Organic Chemicals	Drinking Water Contaminant Candidate	Other
Low	Low	High	Medium	High	High	High	Medium	High	High	Med.

Entry Point Susceptibility Summary

Entry Point ID	Asbestos	Cyanide	Metals	Microbial	Minerals	Radiochemical	Synthetic Organic Chemicals	Disinfection Byproduct	Volatile Organic Chemicals	Drinking Water Contaminant Candidate	Other
001	Low	Low	High	High	High	High	High	Medium	High	High	Med.

TCEQ 290.272 (c)(5)
UNREGULATED CONTAMINATES

Unregulated contaminants are those for which EPA has not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist the EPA in determining the occurrence of unregulated contaminants in drinking water and whether future regulation is warranted. We participated in gathering data under the Unregulated Contaminates Monitoring Rule and if any unregulated contaminants were detected they are shown in the tables elsewhere in the report.

UNREGULATED CONTAMINATES	**MINIMUM / MAXIMUM**	**AVG. ug/L**
MANGANESE	2.39 / 29.4 ug/L	12.87
HAA9	16.06 / 31.6 ug/L	21.82