



CITY OF DENISON

500 West Chestnut - P.O. Box 347 – Denison, Texas 75021-0347

***CONSUMER
CONFIDENCE
REPORT***



**2017 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 10, 2018

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. Almost all of our customers are served by surface water from these two lakes. Our customers in the area of North Texas Regional Airport are served by a combination of surface water and ground water from wells the City operates on the NTRA property. These wells produce water from the Trinity/Paluxy aquifer formation. 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. 2017, our system lost an estimated 149,163,214 gallons of water. If you have any questions about the water loss audit please call 903-464-4480.

INORGANIC

| YEAR | CONTAMINANT | AVERAGE LEVEL | MIN. LEVEL | MAX. LEVEL | MCL | MCLG | UNIT OF MEASURE | SOURCE OF CONTAMINANT |
|------|-------------|---------------|------------|------------|-----|------|-----------------|--|
| 2017 | Barium | 0.11 | 0.11 | 0.11 | 2 | 2 | ppm | Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits |
| 2017 | Fluoride | 0.59 | 0.32 | 0.79 | 4 | 4 | ppm | Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from |
| 2017 | Nitrate | 0.14 | 0.14 | 0.14 | 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 |
|------|-------------|---------------|------------|------------|-----------------|--|
| 2017 | TOC | 5.74 | 4.97 | 6.43 | 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 |
|------|------------------------|---------------|------------|------------|-----|------|------------------|--|
| 2017 | Total Haloacetic Acids | 21.48 | 12.4 | 27.9 | 60 | < 60 | ppb | By-product of drinking water disinfection. |
| 2017 | Total Trihalomethanes | 56.72 | 7.98 | 108 | 80 | < 80 | ppb | By-product of drinking water chlorination. |
| 2017 | Chlorite | 0.60 | 0.32 | 0.95 | 1.0 | 0.8 | ppm | By-product of drinking water disinfection. |

DISINFECTION RESIDUALS

| YEAR | CONSTITUENT | ANNUAL AVERAGE | RANGE OF DETECTION | MRDL | MRDLG | UNITS | SOURCE |
|------|-------------|----------------|--------------------|------|-------|-------|---------------------------------------|
| 2017 | Chloramines | 3.1 | 0.05 – 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 |
|------|-------------|----------------------------|-------------------------------------|------------------|------------------|---|
| 2017 | Lead | < 0.001 | 0 | 0.015 | ppm | Corrosion of household plumbing systems; Erosion of natural deposits. |
| 2017 | Copper | 0.022 | 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 |
| 2017 | TURBIDITY | 0.26 | 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 |
|------|---------------------------|---------------|------------|------------|-------|-----------------|---|
| 2017 | Bicarbonate | 126 | 126 | 126 | NA | ppm | Corrosion of carbonate rocks such as limestone. |
| 2017 | Calcium | 79.6 | 79.6 | 79.6 | NA | ppm | Abundant naturally occurring element. |
| 2017 | Chloride | 263 | 263 | 263 | 300 | ppm | Abundant naturally occurring element; used in water |
| 2017 | Iron | < 0.05 | < 0.05 | < 0.05 | 0.3 | ppm | Erosion of natural deposits; iron or steel water delivery equipment of facilities |
| 2017 | Magnesium | 21 | 21 | 21 | NA | ppm | Abundant naturally occurring element |
| 2017 | pH | 8.0 | 7.6 | 8.2 | NA | units | Measure of corrosiveness of water. |
| 2017 | Sodium | 150 | 150 | 150 | NA | ppm | Erosion of natural deposits; byproduct of oil field activity. |
| 2017 | Sulfate | 161 | 161 | 161 | 300 | ppm | Naturally occurring; common industrial byproduct; |
| 2017 | Total Alkalinity as CaCO3 | 126 | 126 | 126 | NA | ppm | Naturally occurring soluble mineral salts. |
| 2017 | Total Dissolved Solids | 136 | 136 | 136 | 1000 | ppm | Total dissolved mineral constituents in water |
| 2017 | Total Hardness as CaCO3 | 285 | 285 | 285 | 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 |
| 002 | ----- | ----- | High | ----- | High | ----- | Medium | ----- | High | ----- | Med. |
| 001 | Low | Low | High | High | High | High | High | Medium | High | High | Med. |

NOTICE OF VIOLATION
IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER

The City of Denison 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 are doing (or did) to correct these situations.

We are required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not our drinking water meets health standards. During June 1 – September 30, 2015 we did not monitor or test-or-did not complete all monitoring or testing for Lead/Copper 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 last year, how often we are supposed to sample for Lead/Copper, how many samples we are supposed to take, how many samples we took, when samples should have been taken, and the date on which the follow-up samples were [or will be] taken.

| Contaminant | Required Sampling Frequency | Number of Samples Taken | When samples should have been taken | When samples were taken |
|--------------------|-------------------------------------|-------------------------|-------------------------------------|-------------------------------|
| Lead/Copper | 30 samples every three years | 30 | June 1 – Sept 30, 2015 | Aug 13 - Sept 10, 2015 |

What is being done?

We are working to correct the problem. For more information, please contact Dean Rylant at 903 464 4480 or Randell Water Plant, 4631 Randell Lake Rd, Denison, TX 75020.

THE CITY OF DENISON DID COLLECT ALL 30 SAMPLES REQUIRED, IN THE TIME FRAME (JUNE1-SEPT 30, 2015) REQUIRED, SUBMITTED THEM TO A TCEQ ACCREDITED NELAP LABORATORY FOR ANALYSIS AND HAD THE RESULTS IN OUR POSSESSION BEFORE THE OCTOBER 10, 2015 DEADLINE. THE TCEQ ACCREDITED NELAP LABORATORY DID NOT UPLOAD THE TEST RESULTS ON THE TCEQ WEBSITE BY THE DEADLINE, THEREFORE A VIOLATION WAS ISSUED TO THE CITY OF DENISON FOR NONCOMPLIANCE. BEFORE THE DEADLINE, WE OFFERED TO MAIL OR E-MAIL THE RESULTS TO TCEQ BUT THEY INFORMED US THEY DO NOT MANUALLY ENTER INFORMATION INTO THE DATA BASE.

THE CITY OF DENISON DID NOTHING WRONG BUT FURTHER PUNISHMENT WAS THREATENED IF WE DID NOT PUBLISH THIS REQUIRED NOTICE WITH REQUIRED WORDING. THE CITY OF DENISON THEN COLLECTED AND ANALYZED 30 MORE LEAD/COPPER SAMPLES IN JUNE1-SEPT 30, 2016 TO MEET TCEQ'S REQUIREMENTS. ALL 60 SAMPLES HAD TEST RESULTS BELOW REQUIRED TCEQ LIMITS. DENISON'S WATER HAS ALWAYS MET TCEQ'S HEALTH STANDARDS AND HAS ALWAYS BEEN SAFE.

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 Denison. Public Water System Number TX910003.

Date Distributed: June 1, 2018