# City of Grapevine 2024 Annual Drinking Water Quality Report

**Why are you receiving this report?**
This report provides information on the quality of your drinking water. This report includes information on water source(s), levels of detected contaminants and compliance with drinking water rules. The Environmental Protection Agency (EPA) requires that all water suppliers provide this report every year.

**En Español**
Este reporte incluye la información importante sobre el agua para tomar. Para asistencia en español, favor de llamar al telefono 817.410.3330.

**Our Drinking Water Meets or Exceeds All Federal (EPA) Drinking Water Requirements**
Providing safe and reliable drinking water is our highest priority. We are proud to produce and deliver water that meets or exceeds state and federal standards. 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 U.S. Environmental Protection Agency (EPA) required tests and is presented in the following pages.

**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 immunocompromised 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 from infections. You should seek advice about drinking water from your physician or health care provider. Additional guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* are available from the Safe Drinking Water Hotline at 800.426.4791 or at http://www.epa.gov/safewater/

**All Drinking Water May Contain Contaminants**
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. When drinking water meets federal standards, there may not be any health-based benefits to purchasing bottled water or point-of-use devices. More information about contaminants and potential health effects may be obtained by calling EPA's Safe Drinking Water Hotline at 800.426.4791 or at http://www.epa.gov/safewater/

**Texas Water Development Board Water Loss Audit**
In the Water Loss Audit submitted to the Texas Water Development Board by the City of Grapevine for the time period of January 2024 through December 2024, our system had an infrastructure leakage index of 12.57. If you have any questions about the water loss audit, please call 817.410.3330.

**What is being tested in UCMR5?**
In UCMR 5, the EPA selected 29 per- and polyfluoralkyl substances and one metal/pharmaceutical- lithium. PFAS are a group of synthetic chemicals used in a wide range of consumer products and industrial applications. These include: non-stick cookware, water repellent clothing, stain-resistant fabrics and carpets, cosmetics, firefighting foams, electroplating, and products that resist grease, water, and oil. PFAS are found in the blood of people and animals and in water, air, fish, and soil at locations across the United States and the world. Lithium is a naturally occurring metal that may concentrate in brine waters. Lithium salts are used as pharmaceuticals, in electrochemical cells, batteries and organic syntheses.

**When is the compliance deadline for PFAS?**
Because of the additional time required for capital improvements for systems to comply with the PFAS MCLs, the EPA is exercising its authority under the Safe Drinking Water Act to provide an additional two years for systems nationwide. Therefore, regulated PWSs must comply with all regulated PFAS MCLs in 2029, five years after the date of rule promulgation, including providing public notification for violations of the PFAS MCLs

**Where do we get our drinking water?**
Sources of drinking water (both tap 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. It can pick up substances resulting from the presence of animals or from human activity.

**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.
I**ndustrial 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 stations, urban storm water runoff, and residential uses.
**Radioactive contaminants -** which can be naturally-occurring or be the result of oil and gas production and mining activities.

Grapevine uses surface water from Lake Grapevine and purchases water from the Trinity River Authority (TRA). TRA uses surface water from Lake Arlington that is fed by Cedar Creek Reservoir and Richland-Chambers Reservoir.

A Source Water Susceptibility Assessment for your drinking water source(s) was completed by the Texas Commission on Environmental Quality. 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.

TCEQ classified the risks to our source water as “High” for most contaminants. “High” susceptibility means events or activities near sources of the City of Grapevine drinking water make it very likely that chemical constituents may come into contact with our source water. It does not mean there are any health risks present.

For more information on source water assessments and protection efforts of our system, call 817.410.3330.

For more information about your sources of water, please refer to the Source Water Assessment Viewer available at the following URL:
http://www.tceq.texas.gov/gis/swaview
Further details about sources and source-water assessments are available in Drinking Water Watch at the following URL:
http://dww2.tceq.texas.gov/DWW/

**Lake Water Treatment**
At the Grapevine and TRA water treatment plants, the lake water goes through several treatment processes to purify the water. After the water is purified, it is pumped through more than 328 miles of distribution pipelines.

**Lead Service Line Inventory**

As part of the Lead and Copper Rule Revisions the City of Grapevine conducted an inventory of all our service lines on both the city side of the meter and customer side of the meter. Each service line must be categorized as either lead, non-lead, galvanized requiring replacement or lead status unknown. This inventory has been published on our website and is available at the following link https://experience.arcgis.com/experience/024ca99d6e1b43d0945950580c874a58

**Definitions** – The following contains scientific terms and measures, some of which may require explanation.

**Annual Average**– Regulatory compliance with some MCLs are based on running annual average of monthly samples.

**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 a margin of safety.

**Maximum Contaminant Level (MCL)** - The highest level of a contaminant allowed in drinking water. MCLs are set as close to maximum contaminant level goals as feasible using the best available treatment technology.

**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.

**Maximum Residual Disinfectant Level (MRDL)** - The highest level of disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

**Treatment Technique** - A required process intended to reduce the level of a contaminant in drinking water.

**Action Level** - The concentration of a contaminant that, if exceeded, triggers 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.

**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 occasions.

**Abbreviations**

**NTU** - Nephelometric Turbidity Units (a measure of turbidity)

**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 (µg/L) – or one ounce in 7,350,000 gallons of water

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

**MFL** – million fibers per liter (a measure of asbestos)

**ppt** - parts per trillion, or nanograms per liter (ng/L)

**ppq** - parts per quadrillion, or picograms per liter (pg/L)

**ND** - Not Detected

**NA** - Not Applicable

**We need to tell you about a monitoring violation:**

On July 6th 2024 operations staff placed Filter 1 turbidimeter in Hold to clean the flow through cell. The operations staff forgot to remove the Hold status which stopped the data collection required for reporting. On the morning of July 7th the issue was discovered and data collection resumed. As a result, the turbidity data for filter 1 was not recorded for this time period. However, **at no time during this period did the combined filter effluent turbidity level exceed standards and there is no reason to believe that the quality of water was compromised.**

The following Mandatory Language required by the Texas Commission on Environmental Quality for Monitoring and Reporting Violations:

The **City of Grapevine**, PWS ID **TX2200013**, has violated the monitoring and reporting requirements set by Texas Commission on Environmental Quality (TCEQ) in Title 30, Texas Administrative Code (30 TAC), Section 290, Subchapter F. Public water systems that treat surface water and/or ground water under the direct influence of surface water are required to submit monthly operating reports with operational data of the treatment, disinfection and quality of the water provided to their customers.

We failed to monitor and/or report the following constituents: Turbidity for Filter 1*

This/These violation(s) occurred in the monitoring period(s):

July 6th, 2024, until July 7th, 2024.

*At no time did the combined filter effluent turbidity level exceed 0.09 NTU during this time period.

Results of regular monitoring are an indicator of whether or not your drinking water is safe. We did not complete all monitoring and/or reporting for surface water constituents, and therefore TCEQ cannot be sure of the safety of your drinking water during that time.

We are taking the following actions to address this issue:

The internal settings for the meter have been changed so that the turbidimeter readings are recorded even when the unit is in verification mode.

Please share this information with all 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.

If you have questions regarding this matter, you may contact Kent Conkle at 817-410-4464

## ABOUT THE FOLLOWING PAGES

The pages that follow, list all of the federally regulated or monitored contaminants that have been found in your drinking water. The U.S. EPA requires water systems to test up to 97 contaminants. Both Grapevine and TRA results are included.

### *REGULATED AT THE CUSTOMER'S TAP*

| Collection Date or Range | Contaminant | The 90th Percentile | Number of Sites Exceeding Action Level | Action Level | Unit of Measure | Violation | Source of Contaminant |
|---|---|---|---|---|---|---|---|
| 2022 | Lead | 2.0 | 2 | 15 | ppb | No | Corrosion of household plumbing systems; Erosion of natural deposits. |
| 2022 | Copper | 0.242 | 0 | 1.3 | ppm | No | Erosion of natural deposits; Leaching from wood preservatives; Corrosion of household plumbing systems. |

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. The City of Grapevine 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 two 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

### *ORGANIC CONTAMINANTS*

| Collection Date or Range | Contaminant | Grapevine Highest Level(1) | TRA Highest Level(2) | Minimum Level | Maximum Level | MCL | MCLG | Unit of Measure | Violation | Source of Contaminant |
|---|---|---|---|---|---|---|---|---|---|---|
| 2024 | Atrazine | 0.2 | 0.2 | 0.2 | 0.2 | 3 | 3 | ppb | No | Runoff from herbicide used on row crops. |
| 2024 | Simazine | 0.12 | 0.10 | 0.10 | 0.12 | 4 | 4 | ppb | No | Runoff from herbicide used on row crops. |

### *INORGANIC CONTAMINANTS*

| Collection Date or Range | Contaminant | Grapevine Highest Level(1) | TRA Highest Level(2) | Minimum Level | Maximum Level | MCL | MCLG | Unit of Measure | Violation | Source of Contaminant |
|---|---|---|---|---|---|---|---|---|---|---|
| 2024 | Barium | 0.047 | 0.038 | 0.038 | 0.047 | 2 | 2 | ppm | No | Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits. |
| 2024 | Bromate | NA | <5.00 | <5.00 | <5.00 | 10 | 0 | ppb | No | By-product of drinking water ozonation. |
| 2024 | Cyanide | NA | 160 | 160 | 160 | 200 | 200 | ppb | No | Discharge from plastic and fertilizer factories; Discharge from steel/metal factories. |
| 2024 | Fluoride | 0.138 | 0.356 | 0.138 | 0.356 | 4 | 4 | ppm | No | Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories. |
| 2024 | Nitrate | 0.116 | 0.489 | 0.116 | 0.489 | 10 | 10 | ppm | No | Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits. |
| GPV 2023 | Beta/photon emitters | 5.9 | ND | 5.9 | 5.9 | 50 | 0 | pCi/L* | No | Decay of natural and man-made deposits |
| 2023 | Combined Radium 226/228 | 1.5 | ND | ND | 1.5 | 5 | 0 | pCi/L | No | Erosion of natural deposits |

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

### 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.

## TURBIDITY

### GRAPEVINE WATER TRA WATER

| Collection Date or Range | Contaminant | Grapevine Highest Single Measurement | Grapevine Lowest Monthly % Of Samples Meeting Limits | TRA Highest Single Measurement | TRA Lowest Monthly % of Samples Meeting Limits | Turbidity Limits | Unit of Measure | Violation | Source of Contaminant |
|---|---|---|---|---|---|---|---|---|---|
| 2024 | Turbidity | 0.20 | 100% | 0.27 | 100% | 0.30 | NTU | No | Soil runoff. |

Turbidity (NTU) has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms. These organisms include bacteria, viruses and parasites that can cause symptoms such as nausea, cramps, diarrhea and associated headaches.

## Unregulated Contaminants

### GRAPEVINE (1) TRA WATER (2)

| Collection Date or Range | Contaminant | Minimum Level(1) | Maximum Level(1) | Minimum Level(2) | Maximum Level(2) | Unit of Measure | Source of Contaminant |
|---|---|---|---|---|---|---|---|
| 2024 | Bromodichloromethane | NA | NA | 9.81 | 9.81 | ppb | By-product of drinking water disinfection |
| 2024 | Chloroform | NA | NA | 10.1 | 10.1 | ppb | |
| 2024 | Dibromochloromethane | NA | NA | 5.31 | 5.31 | ppb | |

Unregulated contaminants are those for which the EPA has not established drinking water standards. The purpose of the unregulated contaminant monitoring is to assist EPA in determining the occurrence of unregulated contaminants in drinking water and whether future regulations are warranted.

## DISINFECTION BY-PRODUCTS

| Collection Date | Contaminant | Average Level | Minimum Level | Maximum Level | MCL | Unit of Measure | Violation | Source of Contaminant |
|---|---|---|---|---|---|---|---|---|
| 2024 | Total Trihalomethanes | 42.5 | 19.7 | 82.5 | 80 | ppb | No | By-product of drinking water disinfection. |
| 2024 | Total Haloacetic Acids | 19.1 | 7.7 | 38.1 | 60 | ppb | No | |

## DISINFECTANT RESIDUALS

| Collection Date or Range | Disinfectant | Annual Average (high) | Minimum Level | Maximum Level | MRDL | MCLG | Unit of Measure | Violation | Likely Source of Contamination |
|---|---|---|---|---|---|---|---|---|---|
| 2024 | Chloramines | 2.55 | 0.5 | 4.0 | 4 | <4.0 | ppm | No | Disinfectant used to control microbes. |

## UCMR 5

### GRAPEVINE (1) TRA WATER (2)

| Collection Date or Range | Contaminant | Minimum Level (1) | Maximum Level (1) | Minimum Level (2) | Maximum Level (2) | MCL | Unit of Measure | Source of Contaminant |
|---|---|---|---|---|---|---|---|---|
| 2024 | PFOS (CAS 1763-23-1) | 3.74 | 3.99 | 3.75 | 4.48 | 4.0 | ppt | Consumer, commercial, and industrial products. |
| 2024 | PFOA (CAS 335-67-1) | ND | ND | ND | ND | 4.0 | ppt | |

## *CRYPTOSPORIDIUM MONITORING INFORMATION*

*Cryptosporidium* is a microbial pathogen that may be found in water contaminated by feces. Although filtration removes *Cryptosporidium*, it cannot guarantee 100 percent removal nor can the testing methods determine if the organisms are alive and capable of causing cryptosporidiosis, an abdominal infection with nausea, diarrhea and abdominal cramps that may occur after ingestion of contaminated water.

*TRA Drinking water is treated from Lake Arlington. Water from Benbrook, Cedar Creek and Richland-Chambers reservoirs is pumped to Lake Arlington to provide adequate water levels during dry periods. Samples were collected from all four reservoirs monthly from January through December 2023 and analyzed for *Cryptosporidium*, and *Giardia* in accordance with the Long Term Stage 2 Enhanced Surface Water Treatment Rule. Of the twelve monthly samples taken from Lake Arlington, one sample was found to contain *Cryptosporidium* Oocysts at a concentration of 0.19 cysts per liter, seven samples were found to contain *Giardia* the highest concentration was 0.47 cysts per liter. Enteric virus samples are collected quarterly from Lake Arlington. No samples tested positive for Adenovirus or Enterovirus in the source lake water.

## *COLIFORMS*

Total Coliform bacteria are used as indicators of microbial contamination of drinking water because testing for them is easy. While not disease-causing organisms themselves, they are often found in association with other microbes that are capable of causing disease. Coliform bacteria are hardier than many disease-causing organisms; therefore, their absence from water is a good indication that the water is microbiologically safe for human consumption.

| Collection Date or Range | Contaminant | Highest Monthly % of Positive Samples | MCL | Unit of Measure | Violation | Source of Contaminant |
|---|---|---|---|---|---|---|
| 2024 | Total Coliform Bacteria GPV (1) | 1.6 | * | Presence | No | Naturally present in the environment |
| *Presence of coliform bacteria in 5% or more of the monthly samples. | | | | | | |

Fecal Coliform: REPORTED MONTHLY –TESTS FOUND NO FECAL COLIFORM BACTERIA

## *SECONDARY CONSTITUENTS*

Contaminants may be found in drinking water that may cause taste, color, or odor problems. These type of problems are not necessarily causes for health concerns. For more information on taste, odor, or color of drinking water, please contact 817.410.3330.

| Collection Date or Range | Constituent | Minimum Level (1) | Maximum Level (1) | Minimum Level (2) | Maximum Level (2) | Limit | Unit of Measure | Source of Constituent |
|---|---|---|---|---|---|---|---|---|
| 2024 | Acetone | NA | NA | 5.31 | 5.31 | NA | ppb | By-product of drinking water disinfection |
| 2024 | Aluminum | NA | NA | 31 | 31 | 200 | ppb | Abundant naturally-occurring element. |
| 2024 | Bicarbonate | NA | NA | 105 | 105 | NA | ppm | Corrosion of carbonate rocks such as limestone. |
| 2024 | Calcium | NA | NA | 45.3 | 45.3 | NA | ppm | Abundant naturally-occurring element. |
| 2024 | Chloride | NA | NA | 30.4 | 30.4 | 300 | ppm | Abundant naturally-occurring element; used in water purification; by-product of oil field activity. |
| 2024 | Conductivity | NA | NA | 451 | 451 | NA | µmhos/cm | Ability of water to conduct electricity due to electrolytes. |
| 2024 | Magnesium | NA | NA | 5.43 | 5.43 | NA | ppm | Abundant naturally-occurring element. |
| 2024 | Manganese | ND | ND | 0.005 | 0.005 | NA | ppm | Naturally-occurring element. |
| 2024 | Potassium | NA | NA | 4.82 | 4.82 | NA | ppm | Abundant naturally-occurring element. |
| 2024 | pH | 7.0 | 7.9 | 7.0 | 9.1 | NA | units | Measure of corrosivity of water. |
| 2024 | Sodium | 33.1 | 33.1 | 36.9 | 36.9 | NA | ppm | Erosion of natural deposits; By-product of oil field activity. |
| 2024 | Sulfate | NA | NA | 60.5 | 60.5 | 300 | ppm | Naturally-occurring; common industrial by-product; by-product of oil field activity. |
| 2024 | Total Alkalinity as CaCO3 | 115 | 115 | 105 | 105 | NA | ppm | Naturally-occurring soluble mineral salts. |
| 2024 | Total Dissolved Solids | 256 | 256 | 250 | 250 | 1000 | ppm | Total dissolved mineral constituents in water. |
| 2024 | Total Hardness as CaCO3 | 117 | 117 | 135 | 135 | NA | ppm | Naturally-occurring calcium. |