

2022 Town of Flower Mound Annual Water Quality Report



The Town of Flower Mound is pleased to present the 2022 Annual Water Quality Report. Our goal is to meet the water usage needs of our customers by providing the highest quality water available. Public participation regarding the water system is offered through attending public meetings, emailing publicworks@flower-mound.com, calling 972.539.SERV, or visiting www.flower-mound.com. For more information regarding this report, contact the Town of Flower Mound at 972.874.6400.

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 following pages. We hope this information helps you become more knowledgeable about what's in your drinking water.

Where Do We Get Our Drinking Water?

Flower Mound (PWS #0610023) purchased 5,904,000,000 gallons of treated drinking water from Dallas Water Utilities (DWU) and the Upper Trinity Regional Water District (UTRWD). In 2022, water loss totaled 220,641,036 gallons. That figure includes water not accounted for through metering and/or estimation. All of Flower Mound's water is surface water, obtained from lakes and rivers. The majority of this water is taken from Lake Lewisville but can also come from the Elm Fork of the Trinity River and lakes Ray Roberts, Grapevine, Ray Hubbard, Tawakoni, and Chapman. The TCEQ Source Water Susceptibility report describes the susceptibility and types of constituents that may come into contact with the drinking water source based on human activities and natural conditions. Please call 972.874.6400 for more information on water source assessments and protection efforts of our system.

Secondary Constituents

Constituents, such as calcium, sodium, or iron, commonly found in drinking water at varying concentration, can influence the taste, color, and odor of water. The State of Texas regulates these taste and odor constituents, called secondary constituents, but does not consider them cause for health concern. The secondary constituents are not presented in this annual report; however, monthly test results can be provided upon request.

En Español

Este informe incluye información importante sobre el agua potable. Si tiene preguntas o comentarios sobre éste informe en español, favor de llamar al tel. 972.874.6000 para hablar con una persona bilingüe en español.

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, picks up substances left by the presence of animals or human activity, and in some cases, radioactive material.

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 the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline at 800.426.4791.

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, 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.

In order to ensure that tap water is safe to drink, the EPA prescribes regulations that 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. Contaminants may be found in drinking water that may cause taste, color, or odor problems. These types of problems are not necessarily causes for health concerns. For more information on taste, odor, or color of drinking water, please contact the Town of Flower Mound at 972.874.6400.

People who may be more vulnerable than the general population to certain microbial contaminants, such as Cryptosporidium, in drinking water, include 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. These people can be particularly at risk for infections and should seek advice about drinking water from a 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 (800.426.4791).

Definitions/Abbreviations

Action Level (AL) - The concentration of a contaminant, which exceeded triggers treatment or other requirements that a water system must follow. Average regulatory compliance with some MCLs are based on running annual average of monthly samples.

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.

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

MFL - Million fibers per liter (a measure of asbestos).

mrem - Millirems per year (a measure of radiation absorbed by the body).

N/A - Not applicable.

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

pCi/L - Picocuries per liter (a measure of radioactivity).

ppb - Micrograms per liter or parts per billion.

ppm - Milligrams per liter or parts per million.

Ppq - Parts per quadrillion, or picograms per liter (pg/L).

Ppt - Parts per trillion, or nanograms per liter (ng/L).

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



Coliforms

Total coliform bacteria are used as indicators of microbial contamination of drinking water. While not disease-causing (pathogen), they are often found with other microbes that are pathogens. Coliform bacteria are hardier than many pathogens; therefore, their absence from water is an indication that the drinking water is microbiologically safe for human consumption. The Total Coliform table indicates whether total coliform or fecal coliform bacteria were found in the monthly drinking water samples during 2022.

HAA5 and THM

This evaluation is required by EPA to determine the range of total trihalomethane and haloacetic acids in the system for future regulations. The samples are not used for compliance, and may have been collected under nonstandard conditions. EPA requires the data to be reported here. Please contact the Town of Flower Mound at 972.874.6400 if you have any questions.

Unregulated Contaminant Monitoring Regulations (UCMR)

Unregulated contaminants are those for which EPA has not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist EPA in

determining the occurrence of unregulated contaminants in drinking water and whether future regulation is warranted. Any unregulated Contaminants detected are reported in the following table. For additional information and data, visit <http://bit.ly/unregulatedcontaminant>, or call the Safe Drinking Water Hotline at 800.426.4791.

Lead and Copper

Elevated levels of lead can cause serious health problems, especially for pregnant women and young children, if present in drinking water. Lead in drinking water is primarily introduced 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. Lead and copper concentrations can become elevated as the water remains in contact with plumbing for long periods. 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 (800.426.4791) or by visiting www.epa.gov/safewater/lead.

Water Quality Monitoring Results

The following tables list all of the federally regulated or monitored constituents that have been found in your drinking water. The U.S. EPA requires water systems to test up to 90 constituents. As the tables illustrate, the drinking water provided to Flower Mound customers met or exceeded all established standards. The tables identify contaminants detected during 2022 or the most recent testing done in accordance with regulations, including the maximum amounts allowed by state and federal regulations. TCEQ completed a Source Water Susceptibility for all drinking water systems that own their sources. This report describes the susceptibility and types of constituents that may come into contact with the drinking water source based on human activities and natural conditions. The system(s) from which we purchase our water received the assessment report. For more information on source water assessments and protection efforts at our system, contact the Town of Flower Mound at 972.874.6400.

| REGULATED CHARACTERISTICS | | | | | | | |
|---------------------------------|----------------|--------------|-------------------------|--------------------------|---------|---------|--|
| DETECTED INORGANIC CONTAMINANTS | | | | | | | |
| Contaminant | Water District | Date Sampled | Average Amount Detected | Range of Detected Levels | MCL | MCLG | Source of Contaminant |
| Barium (ppm) | Dallas | 2022 | 0.033 | 0.032 – 0.033 | 2 | 2 | Erosion of natural deposits; discharge of drilling wastes or metal refineries. |
| | UTRWD | 2022 | Max 0.040 | 0.038 – 0.040 | | | |
| | Flower Mound | 2009 | 0.038 | 0.038 | | | |
| Fluoride (ppm) | Dallas | 2022 | 0.602 | 0.520 – 0.647 | 4 | 4 | Water additive to promote strong teeth; erosion of natural deposits. Discharge from fertilizer and aluminum factories. |
| | UTRWD | 2022 | Max 0.240 | 0.196 – 0.240 | | | |
| | Flower Mound | 2010 | 0.56 | 0.240 – 0.680 | | | |
| Nitrate (ppm) | Dallas | 2022 | 0.883 | 0.400 – 1.19 | 10 | 10 | Runoff from fertilizer use; leaching from septic tanks, sewage, erosion of natural deposits. |
| | UTRWD | 2021 | 0.583 | 0.19 – 0.583 | | | |
| | Flower Mound | 2022 | 0.583 | 0.362 – 0.774 | | | |
| Nitrite (ppm) | Dallas | 2022 | 0.006 | <0.001 – 0.017 | 1 | 1 | Runoff from fertilizer use; leaching from septic tanks, sewage, erosion of natural deposits. |
| Selenium (ppb) | Dallas | 2015 | 1.57 | <1.00 – 2.8 | 50 | 50 | Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines. |
| Cyanide (ppb) | Dallas | 2022 | 168 | 139 – 192 | 200 ppb | 200 ppb | Discharge from steel/metal factories; discharge from plastic and fertilizer factories. |
| | UTRWD | 2022 | Max 38.3 | ND – 38.3 | | | |
| Chromium (ppb) | Dallas | 2020 | 1.03 | <1 – 1.80 | 100 ppb | 100 ppb | Discharge from steel and pulp mills; erosion of natural deposits. |
| | UTRWD | 2020 | Max 1.7 | N/A | | | |
| Bromate (ppb) | Dallas | 2022 | 6.9 | 0 – 27.2 | 10 | 0 | By-product of drinking water disinfection. |
| | UTRWD | 2022 | Max 6.89 | 4.58 – 6.89 | | | |
| Antimony (ppb) | Dallas | 2016 | 0.09 | <0.200 – 0.27 | 6 | 6 | Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder. |
| Arsenic (ppb) | Dallas | 2017 | <1 | <1 | 10 | 0 | Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes. |
| | UTRWD | 2020 | 1.1 | N/A | | | |

| DETECTED ORGANIC CONTAMINANTS | | | | | | | |
|----------------------------------|--------------|------|----------|--------------|-----|-----|---|
| Atrazine (ppb) | Dallas | 2022 | 0.13 | 0.10 – 0.20 | 3 | 3 | Herbicide runoff. |
| | UTRWD | 2022 | Max 0.20 | ND – 0.20 | | | |
| | Flower Mound | 2009 | 0.23 | 0.0 – 0.48 | | | |
| Simazine (ppb) | Dallas | 2022 | 0.08 | .06 – 0.11 | 4 | 4 | Herbicide runoff. |
| | UTRWD | 2021 | 0.09 | <0.06 – 0.09 | | | |
| | Flower Mound | 2009 | 0.03 | 0.0 – 0.23 | | | |
| Bis(2-ethylhexyl)phthalate (ppb) | Dallas | 2016 | 0.54 | <0.5 – 2.7 | 6 | 6 | Contact with rubber or plastic. |
| | UTRWD | 2007 | 2.81 | Not reported | | | |
| Di(2-ethylhexyl)phthalate (ppb) | Flower Mound | 2007 | 1.41 | 0.0 – 2.81 | 6 | 0 | Discharge from rubber and chemical factories. |
| Lindane (ppt) | Flower Mound | 2009 | 5.83 | 0.0 – 140 | 200 | 200 | Runoff/leaching from insecticide used on cattle, lumber, gardens. |

| DETECTED RADIOACTIVE CONTAMINANTS | | | | | | | |
|-------------------------------------|--------------|------|------|-----------|----|---|---|
| Combined Radium (226 & 228) (pCi/L) | Dallas | 2011 | 1.0 | 1.0 | 5 | 0 | Erosion of natural deposits. |
| | UTRWD | 2015 | 1.5 | N/A | | | |
| Gross Beta Emitters (pCi/L) | Dallas | 2017 | 5.1 | 4.2 – 6.6 | 50 | 0 | Decay of natural and man-made deposits. |
| | UTRWD | 2017 | ND | N/A | | | |
| | Flower Mound | 2009 | 1.95 | 0.0 – 5.2 | | | |

| DISINFECTION BY-PRODUCTS | | | | | | | |
|------------------------------|--------------|------|----------|-------------|----|---|--|
| Total Trihalomethanes (ppb) | Dallas | 2022 | 18.5 | 4.7 – 17 | 80 | 0 | By-product of drinking water disinfection. |
| | UTRWD | 2019 | Max 13.9 | N/A | | | |
| | Flower Mound | 2022 | 16.73 | 10.7 – 28.4 | | | |
| Total Haloacetic Acids (ppb) | Dallas | 2022 | 12.6 | 1.3 – 15.3 | 60 | 0 | By-product of drinking water disinfection. |
| | UTRWD | 2016 | 20 | 7.1 – 20 | | | |
| | Flower Mound | 2022 | 5.80 | 1.0 – 17.7 | | | |

| MAXIMUM RESIDUAL DISINFECTANT LEVEL | | | | | | | |
|-------------------------------------|----------------|--------------|---------------|---------------|---------------|------|-------|
| | Water District | Date Sampled | Average Level | Minimum Level | Maximum Level | MRDL | MRDLG |
| Total Chloramine Residual (ppm) | Dallas | 2022 | 3.02 | 2.75 | 3.27 | 4.0 | <4.0 |
| | UTRWD | 2019 | Max 3.8. | 2.7 | 3.8 | | |
| | Flower Mound | 2022 | 2.8 | 1.0 | 4.5 | | |

| Contaminant | MCL | Date Sampled | Unit of Measure | Highest Monthly % of Positive Samples | Source of Contaminant |
|-------------------------|-----|--------------|-----------------|---------------------------------------|---------------------------------------|
| Total Coliform Bacteria | * | 2022 | Presence | 2.22 | Naturally present in the environment. |

* Presence of coliform bacteria in 5% or more of monthly samples

| Contaminant | Water District | Date Sampled | 90 th Percentile Values | Number of Sites Exceeding Action Level | MCL | Unit of Measure | Source of Contaminant |
|--------------|----------------|--------------|------------------------------------|--|-----|-----------------|--|
| Lead (ppb) | Dallas | 2021 | 0 | 0 | 15 | ppb | Corrosion of household plumbing systems. |
| | Flower Mound | 2020 | 2.7 | 0 | | | |
| Copper (ppm) | Dallas | 2021 | 0.26 | 0 | 1.3 | ppm | Corrosion of household plumbing systems. |
| | Flower Mound | 2020 | 0.58 | 0 | | | |

| UNREGULATED DISINFECTION BY-PRODUCTS | | | | | | | |
|--------------------------------------|----------------|------|-------------------------|--------------------------|-----|------|--|
| Contaminant | Water District | Date | Average Amount Detected | Range of Detected Levels | MCL | MCLG | Source of Contaminant |
| Chloroform (ppb) | Dallas | 2022 | 2.61 | 1.08 – 5.13 | N/A | 70 | By-product of drinking water disinfection. |
| | Flower Mound | 2022 | 4.47 | 1.67 – 16.0 | | | |
| Bromoform (ppb) | Dallas | 2022 | 1.11 | 0.00 – 1.78 | N/A | 0 | By-product of drinking water disinfection. |
| | Flower Mound | 2022 | 2.26 | <1 – 3.05 | | | |
| Bromodichloro-methane (ppb) | Dallas | 2022 | 3.19 | 2.55 – 3.54 | N/A | 0 | By-product of drinking water disinfection. |
| | Flower Mound | 2022 | 4.72 | 2.95 – 8.57 | | | |
| Dibromochloromethane (ppb) | Dallas | 2022 | 3.13 | 1.72 – 4.23 | N/A | 60 | By-product of drinking water disinfection. |
| | Flower Mound | 2022 | 5.39 | 2.53 – 7.31 | | | |
| Chloroethane (ppb) | Flower Mound | 2009 | 1.12 | 0 – 3.31 | N/A | N/A | By-product of drinking water disinfection. |

Unregulated contaminant monitoring is conducted to help the EPA determine where certain parameters occur, and whether those contaminants need to be monitored.

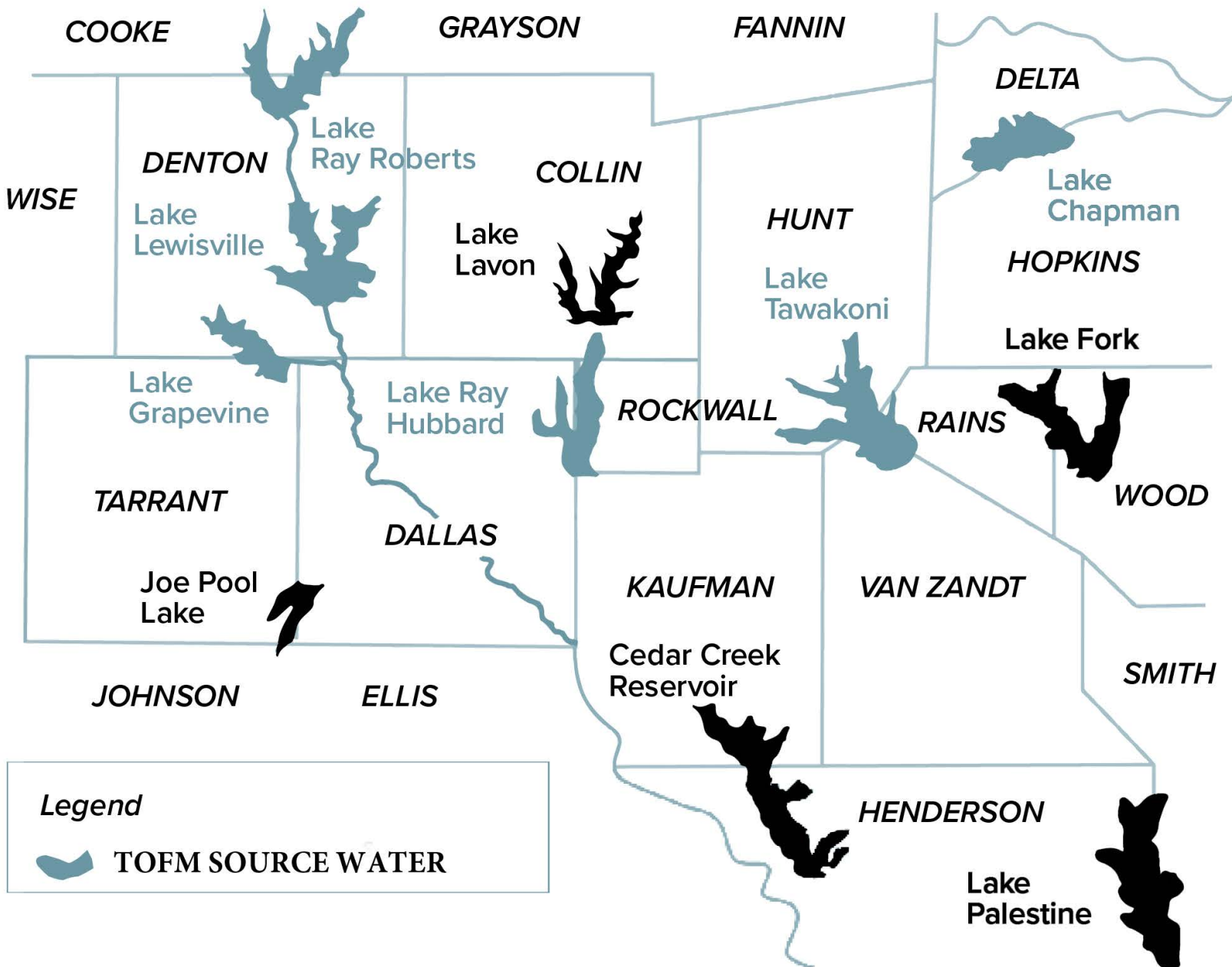
| Turbidity | Water District | Date Sampled | Highest Single Measurement | Lowest Monthly % of Samples Meeting Limits | Minimum and Maximum Levels | MCLG | Source of Contaminant |
|-----------------|----------------|--------------|----------------------------|--|----------------------------|------|-----------------------|
| Turbidity (NTU) | Dallas | 2022 | 0.27 | 100 | N/A | N/A | Soil runoff. |
| | UTRWD | 2022 | 0.29 | 100 | | | |

| Contaminant | Water District | Date Sampled | Average | Minimum and Maximum Levels | Source of Contaminant |
|----------------------------|----------------|--------------|---------|----------------------------|---------------------------------------|
| Total Organic Carbon (ppm) | Dallas | 2022 | 3.21 | 2.49 – 4.63 | Naturally present in the environment. |
| | UTRWD | 2022 | Max 3.4 | 2.34 – 3.4 | |

Where Your Water Comes From

The Town of Flower Mound purchases water from the City of Dallas and the Upper Trinity Regional Water District.

Sources include Elm Fork of the Trinity River and lakes Ray Roberts, Lewisville, Grapevine, Ray Hubbard, Tawakoni, and Chapman.



For more information regarding this report, contact the Town of Flower Mound at 972.874.6400.