



# 2020 ANNUAL WATER QUALITY REPORT

(Consumer Confidence Report)

CITY OF WEATHERFORD  
Public Water System #1840005

## GAC Filters to Improve Water Aesthetics

Construction is underway for new granular activated carbon (GAC) filters at the city's Water Purification Plant (WPP) to improve the aesthetics of Weatherford's drinking water. The city occasionally experiences taste and odor issues stemming from naturally occurring geosmin in our water supplies. Geosmin contributes to the earthy taste and odor and is detectable at very low levels. While geosmin levels are generally detectable year-round, levels historically spike in the late summer and then again during the winter. Although this is not a health concern, it does affect the aesthetic quality of the treated water that we distribute to our customers.

Following an evaluation of alternatives, the city's consultant recommended to add GAC filter media to the existing WPP filters (Phase 1) and construct

four new full-depth GAC filters (Phase 2). Phase 1 was completed in 2019, and although it was on a much smaller scale than Phase 2, it provided immediate improvements at low cost while the City designed Phase 2. This also allowed the City to monitor the impact of the GAC filter media. Phase 1 was expected to reduce geosmin levels by ~20%, and Phase 2 by 90% or more. Phase 1 has exceeded expectations. In addition to aesthetic improvements, GAC filters are effective at removing several other compounds from our water that will further improve our drinking water and even help meet future regulatory requirements that may be imposed on water providers. Phase 2 is expected to be completed by Fall 2022. The cost of this project is ~\$9.3 million and is being funded from existing rate revenues at no additional cost to rate payers.



## Why Provide A Water Quality Report?

The sources of drinking water (both tap water 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, and can pick up substances resulting from the presence of animals or from human activity.

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 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, 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.

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 system's business office.

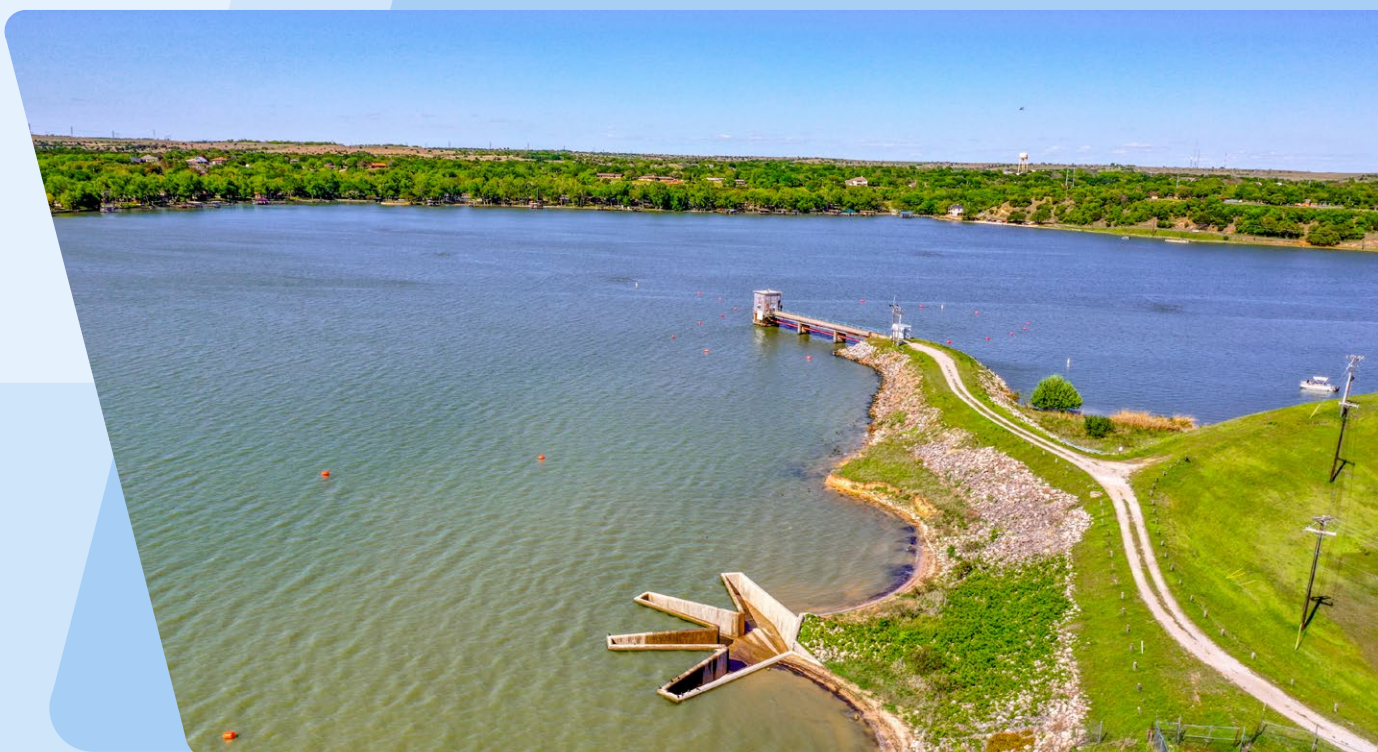
You may be more vulnerable than the general population to certain microbial contaminants, such as Cryptosporidium, in drinking water. Infants, some elderly, or immunocompromised persons such as those undergoing chemotherapy for cancer; persons who have undergone organ transplants; those who are undergoing 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 providers. Additional guidelines on appropriate means to lessen the risk of infection by Cryptosporidium are available from the Safe Drinking Water Hotline (800-426-4791).

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. City of Weatherford is responsible for providing high quality drinking water, but we 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 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 or at <http://www.epa.gov/safewater/lead>.

### Water Loss

In the water loss audit submitted to the Texas Water Development Board for the time period of January 2020 to December 2020, our system lost an estimated 25.84 gallons per connection per day. Water loss is calculated using data from our finished water meter at the City of Weatherford Water Treatment Plant minus how much is sold to our water customers. If you have any questions about the water loss audit, please call the City of Weatherford Water Utilities Department at (817) 598-4275.



# 2020 Water Quality Report

\*For January 1 to December 31, 2020

## ABBREVIATIONS & DEFINITIONS USED IN TABLES

| Inorganic Contaminants         | Year Tested | Highest Level or Average Detected | Range of Levels Detected | MCLG | MCL | Unit of Measure | Violation (Y/N) | Likely Sources of Contamination  |
|--------------------------------|-------------|-----------------------------------|--------------------------|------|-----|-----------------|-----------------|--|
| Arsenic                        | 2020        | Not Detected                      | Not Detected             | 0    | 10  | ppb             | N               | Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes.                    |
| Barium                         | 2020        | 0.063                             | 0.063-0.063              | 2    | 2   | ppm             | N               | Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits.                                |
| Chromium                       | 2020        | Not Detected                      | Not Detected             | 100  | 100 | ppb             | N               | Discharge from steel and pulp mills; erosion of natural deposits.  |
| Cyanide                        | 2020        | 84.2                              | 84.2-84.2                | 200  | 200 | ppb             | N               | Discharge from plastic and fertilizer factories; discharge from steel/metal factories.                                     |
| Fluoride                       | 2020        | 0.613                             | 0.613-0.613              | 4    | 4   | ppm             | N               | Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories. |
| Nitrate (measures as Nitrogen) | 2020        | 0.265                             | 0.265-0.265              | 10   | 10  | ppm             | N               | Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits.                               |
| Selenium                       | 2020        | Not Detected                      | Not Detected             | 50   | 50  | ppb             | N               | Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines.                          |

### Total Organic Carbon

Total Organic Carbon (TOC) has no health effects. The disinfectant can combine with TOC to form disinfection by-products. Disinfection is necessary to ensure the water does not have unacceptable levels of pathogens. Disinfection by-products include Trihalomethanes (TTHM) and Haloacetic Acid (HAA5), which are reported elsewhere in this report.

|                      | Year Tested | Highest Level or Average Detected | Range of Levels Detected | MCLG | MCL | Unit of Measure | Violation (Y/N) | Likely Source of Contamination        |
|----------------------|-------------|-----------------------------------|--------------------------|------|-----|-----------------|-----------------|---------------------------------------|
| Total Organic Carbon | 2020        | 4.33                              | 3.95-4.84                | NA   | TT  | ppm             | N               | Naturally present in the environment. |

| Disinfection Byproducts       | Year Tested | Highest Level or Average Detected | Range of Levels Detected | MCLG                  | MCL | Unit of Measure | Violation (Y/N) | Likely Source of Contamination             |
|-------------------------------|-------------|-----------------------------------|--------------------------|-----------------------|-----|-----------------|-----------------|--|
| Haloacetic Acids (HAA5)       | 2020        | 30*                               | 15.2-27                  | No goal for the total | 60  | ppb             | N               | By-product of drinking water disinfection. |
| Total Trihalomethanes (TTHMs) | 2020        | 54*                               | 38.8-66.9                | No goal for the total | 80  | ppb             | N               | By-product of drinking water disinfection. |
| Chlorite                      | 2020        | 0.503                             | 0.079-0.503              | 0.8                   | 1   | ppm             | N               | By-product of drinking water disinfection. |

\*The result is the highest compliance average (locational running annual average) for HAA5 & TTHM

| Microbial Contaminants  | MCLG | Total Coliform MCL | Total No. of Samples Taken | Total No. of Positive E. Coli or Fecal Coliform Samples | Violation (Y/N) | Likely Source of Contamination        |
|-------------------------|------|--------------------|----------------------------|---|-----------------|---------------------------------------|
| Total Coliform Bacteria | 0    | 5%*                | 372                        | 0   | N               | Naturally present in the environment. |

\*No more than 5% of samples can be Total Coliform positive in a month.

| Turbidity   | Year Tested | Level Detected | Limit (Treatment Technique) | Unit of Measure | Violation | Likely Source of Contamination |
|---|-------------|----------------|-----------------------------|-----------------|-----------|--------------------------------|
| Highest Single Measurement                        | 2020        | 0.35 NTU       | 1 NTU                       | NTU             | N         | Soil Runoff.                   |
| Lowest Monthly % of Samples Meeting 0.3 NTU Limit | 2020        | 100%           | 0.3 NTU                     | NTU             | N         | Soil Runoff.                   |

| Radioactive Contaminants | Year Tested | Highest Level Detected | Range of Levels Detected | MCLG | MCL | Unit of Measure | Violation (Y/N) | Likely Sources of Contamination         |
|--------------------------|-------------|------------------------|--------------------------|------|-----|-----------------|-----------------|---|
| Beta/Photon Emitters     | 2017        | 4.2**                  | 4.2-4.2                  | 0    | 50* | pCi/L           | N               | Decay of natural and man-made deposits. |
| Uranium                  | 2017        | 1.2                    | 1.2-1.2                  | 0    | 30  | ug/L            | N               | Erosion of natural deposits.            |

\*The MCL for beta particles is 4 mrem/year. EPA considers 50 pCi/L to be the level of concern for beta particles.

\*\*Because the beta particle results were below 50 pCi/L, no test for individual beta particle constituents was required.

| Lead and Copper | Year Tested | 90th Percentile | # of Sites Over Action Level (AL) | MCLG | AL  | Unit of Measure | Violation (Y/N) | Likely Sources of Contamination   |
|-----------------|-------------|-----------------|-----------------------------------|------|-----|-----------------|-----------------|---|
| Copper          | 2019        | 0.13            | 0                                 | 1.3  | 1.3 | ppm             | N               | Erosion of natural deposits; leaching from wood preservatives; corrosion of household plumbing systems. |
| Lead            | 2019        | 1.8             | 0                                 | 0    | 15  | ppb             | N               | Corrosion of household plumbing systems; erosion of natural deposits.                                   |

| Disinfectant Residual | Year Tested | Average Level | Range of Levels Detected | MRDL | MRDLG | Unit of Measure | Violation (Y/N) | Likely Source of Contamination           |
|-----------------------|-------------|---------------|--------------------------|------|-------|-----------------|-----------------|--|
| Chloramines           | 2020        | 3.06*         | 0.8-5.5                  | 4    | 4     | ppm             | N               | Water additive used to control microbes. |

\*The value in the average level is the running annual average of all samples collected over a year.

### Secondary Constituents

Many constituents (such as calcium and sodium) which are often found in drinking water can cause taste, color, and odor problems. The taste and odor constituents are called secondary constituents and are regulated by the State of Texas, not by the EPA. These constituents are not causes for health concerns.

| Secondary & Non-Regulated Constituents | Year Tested | Amount Detected | Range of Levels Detected | MCLG | MCL | SMCL  | Unit of Measure | Violation (Y/N) | Likely Source  |
|--|-------------|-----------------|--------------------------|------|-----|-------|-----------------|-----------------|--|
| Calcium                                | 2020        | 46.4            | 46.4-46.4                | NA   | NA  | NA    | ppm             | N               | Naturally present in the environment.  |
| Chloride                               | 2020        | 36.2            | 36.2-36.2                | NA   | NA  | 300   | ppm             | N               | Abundant; naturally occurring element; used in water purification; by-product of oil field activity. |
| Manganese                              | 2020        | 0.0028          | 0.0028-0.0028            | NA   | NA  | 0.05  | ppm             | N               | Naturally present in the environment; mining; industrial discharges.                                 |
| pH                                     | 2020        | 8.30            | 8.10-8.55                | NA   | NA  | >7.0  | Units           | N               | Measurement of the corrosivity of water.   |
| Sodium                                 | 2020        | 26.5            | 26.5-26.5                | NA   | NA  | NA    | ppm             | N               | Erosion of natural deposits; by-products of oil field activity.                                      |
| Sulfate                                | 2020        | 28.4            | 28.4-28.4                | NA   | NA  | 300   | ppm             | N               | Naturally occurring common industrial product; by-product of oil field activity.                     |
| Zinc                                   | 2020        | ND              | ND                       | NA   | NA  | 5     | ppm             | N               | Naturally present in the environment, by-product of steel production.                                |
| Total Alkalinity as CaCO <sub>3</sub>  | 2020        | 139             | 139-139                  | NA   | NA  | NA    | ppm             | N               | Naturally occurring soluble mineral salts.   |
| Total Dissolved Solids                 | 2020        | 223             | 223-223                  | NA   | NA  | 1,000 | ppm             | N               | Total dissolved mineral constituents in water.   |
| Total Hardness as CaCO <sub>3</sub>    | 2020        | 163             | 163-163                  | NA   | NA  | NA    | ppm             | N               | Naturally occurring calcium and magnesium.   |

### Unregulated Contaminants

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 further regulation is warranted.

| Unregulated Contaminants | Year Tested | Average Level | Range of Levels Detected | MCLG | MCL | Unit of Measure | Likely Sources of Contamination            |
|--------------------------|-------------|---------------|--------------------------|------|-----|-----------------|--|
| Bromodichloromethane     | 2020        | 16.9          | 13.7-22.6                | 0    | NA  | ppb             | By-product of drinking water disinfection. |
| Bromoform                | 2020        | 4.4           | 2.1-6.88                 | 0    | NA  | ppb             |  |
| Chloroform               | 2020        | 11.2          | 6.5-15.5                 | 70   | NA  | ppb             |  |
| Dibromochloromethane     | 2020        | 18.9          | 15.1-24.6                | 60   | NA  | ppb             |  |

**90th Percentile:** 90% of samples are equal to or less than the number in the chart.

**Action Level (AL):** The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

**Average (AVG):** Regulatory compliance with some MCLs are based on running annual average of monthly samples.

**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 (MRDL):** The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfection is necessary for control of microbial contaminants.

**Maximum Residual Disinfectant Level Goal (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 disinfectants to control microbial contaminants.

**NA:** Not applicable

**Nephelometric Turbidity Units (NTU):** Measurement of the clarity, or turbidity, of water.

**PPB:** Parts per billion or micrograms per liter-one ounce in 7,350,000 gallons of water.

**PPM:** Parts per million or milligrams per liter-one ounce in 7,350 gallons of water.

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

**Treatment Technique (TT):** A required process intended to reduce the level of a contaminant in drinking water.

**Turbidity:** Turbidity is the measurement of the cloudiness of the water caused by suspended particles. We monitor it because it is a good indicator of water quality and the effectiveness of our filtration system and disinfectants.

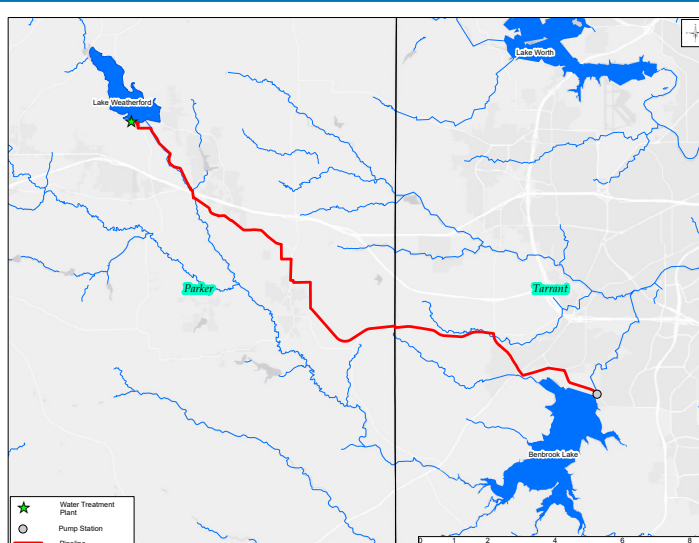
The Weatherford Municipal Utility Board, Administrators, and Water Treatment Professionals will be available for questions regarding water quality issues during the July 29, 2021 Board Meeting. The meeting is scheduled to begin at 12:00 p.m. at City Hall (303 Palo Pinto Street).

For more information regarding this report, please contact Angel Rudolph at (817) 598-4275.

Este reporte incluye informacio'n importante sobre el agua para tomar. Para asistencia en espanol, favor de llamar al telefono (817) 598-4275.

## WHERE DOES WEATHERFORD DRINKING WATER COME FROM?

City of Weatherford provides surface water from Lake Weatherford located in Parker County. We also have a secondary source of water - Benbrook Lake located in Tarrant County. Analysis for Benbrook Lake is not included in this report.



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