# WATER QUALITY 2017

## Guadalupe-Blanco River Authority

Johnson Ranch
PWS# 0460265
EXECELLENCE IN WATER QUALITY

Dear Customer,

The Guadalupe-Blanco River Authority (GBRA) is pleased to provide you with the 2017 Water Quality Report (January 1-December 31, 2017). We take all possible precautions to safeguard your water supply and hope you will be encouraged to learn about the high quality of water provided to you.

The Federal Safe Drinking Water Act (SDWA) requires water utilities to issue an annual report to customers, in addition to other notices that may be required by law. This report explains where your drinking water comes from, what it contains, and the health risks our water testing and treatment are designed to prevent.

We are committed to providing you with information about your water supply because informed customers are our best allies in supporting improvements needed to maintain the highest drinking water standards.

**We are proud to report that the Texas Commission on Environmental Quality (TCEQ) has assessed our system and determined that your drinking water, meets or exceeds all federal and state water quality standards.**

The tables on this report list all substances that were detected in our treated water, and the highest level at which they were detected. The tables also reflect the highest levels allowed by federal regulatory agencies. Please read this information carefully and if you have questions, call the numbers listed in this report.

### Customer Views Welcome

The GBRA strongly supports the national primary water regulation compliance process. If you are interested in learning more about the water department, water quality, or participating in the decision-making process, there are a number of opportunities available.

Questions about water quality can be answered by calling the GBRA Division Manager at 830-885-2639 from 8 am – 5 pm, Monday through Friday. Inquiries about public participation and policy decisions should be directed to the GBRA Division Manager at 830-885-2639.

The GBRA Board of Directors meets every third Wednesday of the month at 10:00 am in the GBRA River Annex located at 905 Nolan St., Seguin, Texas and all meetings are open to the public.

### En Español

Este informe incluye information importante sobre el agua potable. Si tiene preguntas o commentarios sobre este informe en Español, favor de llamar al tel. 512-398-3461 para hablar con una personal bilingue en español durante las horas regulares de oficina (8 am – 5 pm).

## Information about your Drinking Water

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 EPAs 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. We are 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.

Copper is an essential nutrient, but some people who drink water containing copper in excess of the action level over a relatively short amount of time could experience gastrointestinal distress. Some people who drink water containing copper in excess of the action level over many years could suffer liver or kidney damage. People with Wilson's disease should consult their personal doctor.

## Where Do We Get Our Drinking Water?

Johnson Ranch received its water from Canyon Reservoir via the GBRA Western Canyon Water Treatment Plant. The water system is operated by the Guadalupe-Blanco River Authority.

TCEQ completed an assessment of your source water, and results indicate that some of our sources are susceptible to certain contaminants. The sampling requirements for your water system is based on this susceptibility and previous sample data. Any detections of these contaminants will be found in this Consumer Confidence Report. For more information on source water assessments and protection efforts at our system contact the GBRA Division Manager at 830-885-2639.

Trained operators monitor and test the water, including the addition of chlorine, to ensure that our water meets or exceeds all state and federal drinking water standards. The treated water is delivered to the Johnson Ranch water storage tanks and delivered through its distribution system to you. For information on the treatment of your drinking water and water quality protection efforts, contact GBRA Division Manager at the GBRA Western Canyon Water Treatment Plant at 830-885-2639.

## What We Found

The following tables list the contaminants that have been found in your drinking water. USEPA requires water systems to test for more than 97 contaminants. The column marked "Highest Level at Any Sampling Point" shows the highest test results during the year. The "Source of Contaminant" column shows where the substance usually originates. In the water loss audit submitted to the Texas Water Development Board, our system lost an estimated 8,292,000 gallons of water or 10.4% loss of water. If you have any questions about the water loss audit please call the GBRA Division Manager at 830-885-2639.

**DEFINITIONS and ABREVIATIONS**

**Action Level (AL)** – the concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.
**Action Level Goal (ALG) –** The level of a contaminant in drinking water below which there is no known or expected risk to health. ALGs allow for a margin of safety.
**Avg –** Regulatory compliance with some MCL's are based on running annual average of monthly samples.
**Maximum Contaminant Level (MCL) –** the highest level of the contaminant allowed in drinking water. MCL's are set as close to the MCLG's 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 health risk. MCLG's allow for a margin of safety.
**Maximum residual disinfectant level or MRDL** – 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.
**Maximum residual disinfectant level goal or 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.
**mrem –** millirems per year (a measure of radiation absorbed by the body)
**NA** – Not Applicable
**ND** – Not Detected
**NTU's** – Nephelometric Turbidity Units
**pCi/L -** picocuries per liter (a measure of radioactivity)
**ppm** – parts per million, or milligrams per liter (mg/L)
**ppb** – parts per billion (ug/L)

# TABLE I - Test results for the GBRA-Western Canyon Water Treatment Plant
# (sampled at the GBRA Western Canyon Water Treatment Plant)

Johnson Ranch purchases water from GBRA Western Canyon Water Supply. GBRA Western Canyon Water Supply provides treated surface water from Canyon Reservoir located in Comal County.

### Inorganic Contaminants (source water)

| Year | Detected Constituent | Measured Concentration | Number of Analyses | MCL | MCLG | Units of Measure | Violation | Source of Constituent |
|---|---|---|---|---|---|---|---|---|
| 2017 | Barium | 0.0309 | 1 | 2 | 2 | ppm | N | Discharge of drilling wastes; erosion of natural deposits. |
| 2017 | Fluoride | 0.2 | 1 | 4 | 4 | ppm | N | Erosion of natural deposits; water additive which promotes strong teeth; runoff from fertilizer use. |
| 2017 | Nitrate | 0.27 | 1 | 10 | 10 | ppm | N | Runoff from fertilizer use; leaching from septic tanks; treated wastewater effluent; erosion of natural deposits. |

### Maximum Residual Disinfectant Level

| Year | Constituent | Average | Range of Detects (Low -High) | MRDL | Violation | Unit of Measure | Source of Constituent |
|---|---|---|---|---|---|---|---|
| 2017 | Chlorine | 0.5 | 0.5 - 0.7 | 4 | N | ppm | Disinfectant used to control microbes. |

### Disinfectant Byproducts

| Year | Constituent | Measured Concentration | Range | No. of Analyses | MCL | Violation | Unit of Measure | Source of Constituent |
|---|---|---|---|---|---|---|---|---|
| 2017 | Total Trihalomethanes | 50 | 49.6 - 49.6 | 1 | 80 | N | ppb | Byproduct of drinking water disinfection. |
| 2017 | Total Haloacetic Acids | 13 | 13.2 - 13.2 | 1 | 60 | N | ppb | Byproduct of drinking water disinfection. |

### Turbidity

Turbidity 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.

| Year | Detected Constituent | Highest Single Measurement | Limit (Treatment Technique) | Lowest Monthly %of Samples Meeting Limits | Turbidity Limits | Violation | Unit of Measure | Source of Constituent |
|---|---|---|---|---|---|---|---|---|
| 2017 | Turbidity | 0.1 | 1 | 100 | 0.3 | N | NTU | Organic particles. |

### Total 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 more hardy than many disease-causing organisms, their absence from water is a good indication that the water is microbiologically safe for human consumption.

| Year | Constituent | Highest Monthly Number of Positive Samples | MCL | Violation | Unit of Measure | Source of Constituent |
|---|---|---|---|---|---|---|
| 2017 | TOTAL COLIFORM | Not Detected | * | N | Presence/ | Naturally present in the environment. |
| 2017 | *E.coli* | Not Detected | * | N | Absence | |

* Two or more "coliform present" samples in any single month

### Secondary and Other Constituents Not Regulated

No associated adverse health effects.

| Year | Constituent | Measured Concentration | Number of Analyses | Secondary Limit | Unit of Measure | Source of Constituent |
|---|---|---|---|---|---|---|
| 2016 | pH | 8.4 | 1 | 7 | units | Measure of corrosivity of water. |
| 2016 | Total Alkalinity as CaCO3 | 167 | 1 | NA | ppm | Naturally occurring soluble mineral salts. |
| 2016 | Bicarbonate | 204 | 1 | NA | ppm | Corrosion of carbonate rocks such as limestone. |
| 2016 | Chloride | 19 | 1 | 300 | ppm | Abundant naturally occurring element, used in water purification, byproduct of oil field activity. |
| 2016 | Sulfate | 19 | 1 | 300 | ppm | Naturally occurring; common industrial byproduct; byproduct of oil field activity. |
| 2016 | Total Dissolved Solids | 232 | 1 | 1000 | ppm | Total dissolved mineral constituents in water. |

# TABLE II - Test results for the Johnson Ranch Water System (sampled in distribution system)

## Inorganic Contaminants (source water)

| Year | Detected Constituent | Highest or Avg. Concentration | Range of Individual Samples | MCLG | MCL | Units of Measure | Violation | Source of Constituent |
|---|---|---|---|---|---|---|---|---|
| 2017 | Nitrate | 0.25 | 0.25 - 0.25 | 10 | 10 | ppm | N | Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits |

## Maximum Residual Disinfectant Level

| Year | Constituent | Average | Range of Detects (Low -High) | MRDL | Violation | Unit of Measure | Source of Constituent |
|---|---|---|---|---|---|---|---|
| 2017 | Chlorine | 1.23 | 0.74 - 1.92 | 4 | N | ppm | Disinfectant used to control microbes. |

## Disinfection Byproducts

| Year | Constituent | Highest Level or Average Concentration | Range | MCLG | MCL | Violation | Unit of Measure | Source of Contaminant |
|---|---|---|---|---|---|---|---|---|
| 2017 | Total Haloacetic Acids | 14 | 10.2 - 14.3 | No Goal | 60 | N | ppb | Byproduct of drinking water disinfection. |
| 2017 | Total Trihalomethanes | 46 | 40.5 - 47.2 | No Goal | 80 | N | ppb | Byproduct of drinking water disinfection. |

## Total 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 more hardy than many disease-causing organisms, their absence from water is a good indication that the water is microbiologically safe for human consumption.

| Year | Constituent | Highest Monthly Number of Positive Samples | MCL | Violation | Unit of Measure | Source of Constituent |
|---|---|---|---|---|---|---|
| 2017 | TOTAL COLIFORM | Not Detected | * | N | Presence/ | Naturally present in the environment. |
| 2017 | *E.coli* | Not Detected | * | N | Absence | |

* Two or more "coliform present" samples in any single month

## Lead and Copper

| Year | Detected Constituent | MCLG | Action Level | 90th Percentile | # Sites Over AL | Unit of Measure | Violation | Source of Constituent |
|---|---|---|---|---|---|---|---|---|
| 2016 | Lead | 0 | 15 | 1.1 | 0 | ppb | N | Corrosion of household plumbing systems; erosion of natural deposits |
| 2017 | Copper | 1.3 | 1.3 | 1.1 | 1 | ppm | Y | Corrosion of household plumbing systems; Leaching from wood preservatives; erosion of natural deposits |

## Violations

**Consumer Confidence Rule**

The Consumer Confidence Rule requires community water systems to prepare and provide to their customers annual consumer confidence reports on the quality of water delivered by the systems.

| Violation Type | Violation Period | Violation Number | Violation Explanation |
|---|---|---|---|
| CCR Adequacy/ Availability/ Content | 7/1/16-6/28/17 | | We failed to provide to you, our drinking water customers, an annual report that adequately informed you about the quality of our drinking water and the risks from exposure to contaminants detected in our drinking water. |

**Important Information About Your Drinking Water**

Public water systems must routinely monitor for drinking water contaminants. GBRA Johnson Ranch Subdivision, TX0460265 failed to monitor for or meet drinking water standards. The table below lists each violation, the time period(s), potential health effects, and associated analytical results (if applicable).

| Violation Type | Violation Period | Violation Number | Violation Explanation |
|---|---|---|---|
| A Lead and Copper (LCR) Source Water Monitoring/Reporting Violation | 4/1/16-7/26/16 | 2017, 21 | Required samples for contaminant or contaminant group were not collected, or samples were not reported to TCEQ, for the specified monitoring period. |
| A Lead and Copper (LCR) Optimal Corrosion Control Recommendation (OCCT), Water Treatment Recommendation (SOWT) or Corrosion Control Study (SCC) violation | 10/1/2016 | 2017, 22 | Required water system study and related recommendation were not performed and/or submitted. |

You do not need to boil your water or obtain alternative water supply (e.g. bottled water) at this time. However, if you have specific health concerns, consult your doctor.
If you have a severely compromised immune system, have an infant, are pregnant, or are elderly, you may be at increased risk and should seek advice from your health care providers about drinking this water. General guidelines on ways to lessen the risk of drinking water contaminants are available from EPA's Safe Drinking Water Hotline at 1-800-426-4791.

**Corrective Action:**
GBRA Johnson Ranch has taken the following action(s) to return the system to compliance:
A corrosion study was performed on our drinking water. Water sampling and analysis were preformed as required. Continued sampling indicates the water is scaling and not corrosive.

For more information or to learn more about protecting your drinking water, please contact the GBRA Johnson Ranch Subdivision TX0460265 representative, GBRA Division Manager, at 830-885-2639.