

## 2018 Consumer Confidence Report for Public Water System CITY OF CONROE

This is your water quality report for January 1 to December 31, 2018

CITY OF CONROE provides surface water and ground water from the Jasper & Catahoula aquifers as well as surface water from lake Conroe, all of which are located in Montgomery County.

For more information regarding this report contact:

Name: Daniel Roberts

Phone: 936-522-3885

Este reporte incluye información importante sobre el agua para tomar. Para asistencia en español, favor de llamar al telefono (936)522-3885.

### Definitions and Abbreviations

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The following tables contain scientific terms and measures, some of which may require explanation.

Action Level:

The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which 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 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 or 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 or 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 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.

MFL

million fibers per liter (a measure of asbestos)

mrem:

millirems per year (a measure of radiation absorbed by the body)

na:

not applicable.

NTU

nephelometric turbidity units (a measure of turbidity)

pCi/L

picrouries per liter (a measure of radioactivity)

## Definitions and Abbreviations

|                            |   |
|----------------------------|---|
| ppb:                       | micrograms per liter or parts per billion - or one ounce in 7,350,000 gallons of water. |
| ppm:                       | milligrams per liter or parts per million - or one ounce in 7,350 gallons of water.     |
| 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.     |

## 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 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. 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>.

'This is an alert about your drinking water and a cosmetic dental problem that might affect children under nine years of age. At low levels, fluoride can help prevent cavities, but children drinking water containing more than 2 milligrams per liter (mg/L) of fluoride may develop cosmetic discoloration of their permanent teeth (dental fluorosis). The drinking water provided by your community water system City of Conroe has a fluoride concentration of 0.15 – 2.15 mg/L.' Additional information concerning fluoride in the drinking water can be found on the City of Conroe website at: <http://www.cityofconroe.org/Home/Components/News/News/1406/17?backlist=%2f>.

'Dental fluorosis, in its moderate or severe forms, may result in a brown staining and/or pitting of the permanent teeth. This problem occurs only in developing teeth, before they erupt from the gums. Children under nine should be provided with alternative sources of drinking water or water that has been treated to remove the fluoride to avoid the possibility of staining and pitting of their permanent teeth. You may also want to contact your dentist about proper use by young children of fluoride-containing products. Older children and adults may safely drink the water.'

'For more information, please call Daniel Roberts of City of Conroe at 936-522-3885. Some home water treatment units are also available to remove fluoride from drinking water. To learn more about available home water treatment units, you may call NSF International at 1-877-8-NSF-HELP.'

Of the 3.7 billion gallons of water reported during calendar year 2018, the City of Conroe's water loss percentage was approximately 2%.

#### **Information about Source Water**

CITY OF CONROE purchases water from SJRA GRP SW TREATMENT PLANT. SJRA GRP SW TREATMENT PLANT provides purchase surface water from Lake Conroe located in Montgomery County.

#### **Turbidity**

Texas Administrative Code (TAC) Title 30, Part 1, Chapter 290, Subchapter F, Rule §290.111 – Surface Water Treatment requires continuous monitoring of effluent turbidity level. Turbidity values are a direct measure of water quality for membrane treatment of surface water. The most likely source of contamination of turbidity is soil runoff.

Maximum allowable turbidity values for membrane plants:

- Must never exceed 0.3 Nephelometric Turbidity Units (NTU) in two consecutive 15-minute readings;
- Must be 0.15 NTU or less in at least 95% of samples tested each month

Monthly turbidity measurements follow. There were no violations noted for the reporting period.

| 2018 Delivery Month | Maximum Turbidity Reading (NTU) | Minimum Turbidity Reading (NTU) | Average Turbidity Value (NTU) | CFE 95 % Value (NTU) |
|---------------------|---------------------------------|---------------------------------|-------------------------------|----------------------|
| January             | 0.05                            | 0.03                            | 0.03                          | 0.04                 |
| February            | 0.05                            | 0.03                            | 0.03                          | 0.04                 |
| March               | 0.04                            | 0.02                            | 0.03                          | 0.04                 |
| April               | 0.05                            | 0.03                            | 0.04                          | 0.04                 |
| May                 | 0.05                            | 0.03                            | 0.04                          | 0.04                 |
| June                | 0.05                            | 0.03                            | 0.04                          | 0.04                 |
| July                | 0.05                            | 0.03                            | 0.04                          | 0.05                 |
| August              | 0.06                            | 0.03                            | 0.04                          | 0.05                 |
| September           | 0.05                            | 0.03                            | 0.04                          | 0.05                 |
| October             | 0.05                            | 0.03                            | 0.04                          | 0.04                 |
| November            | 0.04                            | 0.02                            | 0.03                          | 0.04                 |
| December            | 0.04                            | 0.03                            | 0.03                          | 0.04                 |

### Total Organic Carbon

The percentage of Total Organic Carbon (TOC) removal was measured each month and the system met all TOC removal requirements set.

### Cryptosporidium Monitoring

TCEQ is in the process of determining a bin classification for the surface water treatment facilities. The classification process is not yet complete, however the Consumer Confidence Report rules require reporting results of any *cryptosporidium* detections. There were no *cryptosporidium* detections during the reporting period.

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 [insert water system contact][insert phone number]

### Coliform Bacteria

| Maximum Contaminant Level Goal | Total Coliform Maximum Contaminant Level | Highest No. of Positive | Fecal Coliform or E. Coli Maximum Contaminant Level | Total No. of Positive E. Coli or Fecal Coliform Samples | Violation | Likely Source of Contamination        |
|--------------------------------|--|-------------------------|---|---|-----------|---------------------------------------|
| 0                              | 5% of monthly samples are positive.      | 1.1                     |   | 0   | N         | Naturally present in the environment. |

| Lead and Copper | Date Sampled | MCLG | Action Level (AL) | 90th Percentile | # Sites Over AL | Units | Violation | Likely Source of Contamination  |
|-----------------|--------------|------|-------------------|-----------------|-----------------|-------|-----------|---|
| Copper          | 11/08/2017   | 1.3  | 1.3               | 0.43            | 1               | ppm   | N         | Erosion of natural deposits; Leaching from wood preservatives; Corrosion of household plumbing systems. |
| Lead            | 11/08/2017   | 0    | 15                | 4.7             | 0               | ppb   | N         | Corrosion of household plumbing systems; Erosion of natural deposits.                                   |

## 2018 Water Quality Test Results

| Disinfection By-Products | Collection Date | Highest Level Detected | Range of Individual Samples | MCLG                  | MCL | Units | Violation | Likely Source of Contamination             |
|--------------------------|-----------------|------------------------|-----------------------------|-----------------------|-----|-------|-----------|--|
| Haloacetic Acids (HAA5)  | 2018            | 5.4                    | 2.1 - 5.4                   | No goal for the total | 60  | ppb   | N         | By-product of drinking water disinfection. |

\*The value in the Highest Level or Average Detected column is the highest average of all HAA5 sample results collected at a location over a year'

|                              |      |      |            |                       |    |     |   |  |
|------------------------------|------|------|------------|-----------------------|----|-----|---|--|
| Total Trihalomethanes (TTHM) | 2018 | 19.6 | 9.6 - 19.6 | No goal for the total | 80 | ppb | N | By-product of drinking water disinfection. |
|------------------------------|------|------|------------|-----------------------|----|-----|---|--|

\*The value in the Highest Level or Average Detected column is the highest average of all TTHM sample results collected at a location over a year'

| Inorganic Contaminants         | Collection Date | Highest Level Detected | Range of Individual Samples | MCLG | MCL | Units | Violation | Likely Source of Contamination   |
|--------------------------------|-----------------|------------------------|-----------------------------|------|-----|-------|-----------|--|
| Barium                         | 2018            | 0.138                  | 0.0447 - 0.138              | 2    | 2   | ppm   | N         | Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.                                |
| Fluoride                       | 2018            | *2.15                  | 0.15 - 2.15                 | 4    | 4.0 | ppm   | N         | Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories. |
| Nitrate [measured as Nitrogen] | 2018            | 0.35                   | 0.01 - 0.35                 | 10   | 10  | ppm   | N         | Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.                               |

\*The City of Conroe exceeded the secondary constituent level of 2.0 mg/l but was below the maximum level of 4.0 mg/l for Fluoride during 2018. See explanation on page 4 of this report.

|                                |      |      |       |   |   |     |   |  |
|--------------------------------|------|------|-------|---|---|-----|---|--|
| Nitrite [measured as Nitrogen] | 2018 | 0.01 | <0.01 | 1 | 1 | ppm | N | Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits. |
|--------------------------------|------|------|-------|---|---|-----|---|--|

| Radioactive Contaminants | Collection Date | Highest Level Detected | Range of Individual Samples | MCLG | MCL | Units  | Violation | Likely Source of Contamination          |
|--------------------------|-----------------|------------------------|-----------------------------|------|-----|--------|-----------|---|
| Beta/photon emitters     | 2018            | 8.1                    | 4.2 - 8.1                   | 0    | 50  | pCi/L* | N         | Decay of natural and man-made deposits. |

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

|   |            |      |           |   |    |       |   |                              |
|---|------------|------|-----------|---|----|-------|---|------------------------------|
| Combined Radium 226/228                 | 05/18/2017 | <1.0 | <1.0      | 0 | 5  | pCi/L | N | Erosion of natural deposits. |
| Gross alpha excluding radon and uranium | 2018       | 3.2  | <3.0- 3.2 | 0 | 15 | pCi/L | N | Erosion of natural deposits. |

| Synthetic organic contaminants including pesticides and herbicides | Collection Date | Highest Level Detected | Range of Individual Samples | MCLG | MCL | Units | Violation | Likely Source of Contamination                |
|--|-----------------|------------------------|-----------------------------|------|-----|-------|-----------|---|
| Di (2-ethylhexyl) phthalate  | 2018            | 2.9                    | <0.6 - 2.9                  | 0    | 6   | ppb   | N         | Discharge from rubber and chemical factories. |

| Volatile Organic Contaminants | Collection Date | Highest Level Detected | Range of Individual Samples | MCLG | MCL | Units | Violation | Likely Source of Contamination   |
|-------------------------------|-----------------|------------------------|-----------------------------|------|-----|-------|-----------|--|
| Ethylbenzene                  | 2018            | 0.6                    | <0.5 - 0.6                  | 700  | 700 | ppb   | N         | Discharge from petroleum refineries.                                   |
| Xylenes                       | 2018            | 5.1                    | <0.5 - 5.1                  | 10   | 10  | ppm   | N         | Discharge from petroleum factories; Discharge from chemical factories. |

#### Disinfectant Residual

'A blank disinfectant residual table has been added to the CCR template, you will need to add data to the fields. Your data can be taken off the Disinfectant Level Quarterly Operating Reports (DLQOR).'

| Disinfectant Residual | Year | Average Level | Range of Levels Detected | MRDL | MRDLG | Unit of Measure | Violation (Y/N) | Source in Drinking Water                 |
|-----------------------|------|---------------|--------------------------|------|-------|-----------------|-----------------|--|
| Chlorine              | 2018 | .96           | 0.88 - 1.02              | 4    | 4     | ppm             | N               | Water additive used to control microbes. |