

Southern Utilities Company

2020 Drinking Water Quality Report

We are pleased to present you with our 2020 Drinking Water Quality Report. This report is designed to inform you about the quality water and services we deliver to you every day. The Safe Drinking Water Act requires us to prepare and deliver this report to you on an annual basis. Southern Utilities is committed to ensuring the quality of your drinking water.

En Español

This report includes important information about your drinking water. To receive a copy of this information or have it translated into Spanish, please call (903) 566-3511.

Este reporte incluye la información importante sobre el agua para tomar. Para asistencia en español, favor de llamar al teléfono (903) 566-3511.

Southern Utilities' 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 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 is in your drinking water.

Where does our drinking water come from?

Our drinking water is obtained from ground water sources in Smith and Cherokee Counties. The deep wells draw from the Carrizo-Wilcox, Wilcox, Queen City, and Carrizo sand aquifers. In addition, we purchase and resell water from the City of Tyler which blends within our distribution system. The City of Tyler, in addition to wells, treats water from Lake Tyler, Lake Tyler East and Lake Palestine. A copy of their water quality report is available in our office. Please contact us if you would like a copy.

A Source Water Susceptibility Assessment for your drinking water source(s) has been updated by the Texas Commission on Environmental Quality. The report describes the susceptibility and types of constituents that may come into contact with your drinking water source based on human activities and natural conditions. For more information about your sources of water, please refer to the Source Water Assessment Viewer available at the following URL: <http://gis3.tceq.state.tx.us/swav/Controller/index.jsp?wtrsrc=>. Further details about sources and source-water assessments are available in Drinking Water Watch at the following URL: <http://dww.tceq.texas.gov/DWWW>.

For more information on source water assessments and protection efforts at our system call 903 566-3511.

Public Inquiries

If you have any questions about this report or any other issue concerning your water utility, please contact: Scott Pope at 903 566-3511. We want you to be informed about our water quality. If you want to learn more about opportunities for public participation about decisions that may affect the quality of the water, please call us.

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 immuno-compromised 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. The EPA/Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline (1-800-426-4791).

About the Attached Tables

All drinking water, including bottled drinking water, may be reasonably 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 Environmental Protection Agency's Safe Water Drinking Hotline (1-800-426-4791).

The 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, and in some cases radioactive material and can pick up substances resulting from the presence of animal or human activity.

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.

Inorganic pollutants, such as salts and metals, that may be natural or result from urban stormwater, industrial or domestic wastewater discharges, oil and gas production, mining or agriculture.

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 and odor problems. These types of problems are not necessarily causes for health concerns. The attached tables contain all of the constituents, which have been found in your drinking water for the period of January 1st to December 31st, 2020 unless otherwise noted. The U.S. EPA requires water systems to test up to 97 constituents.

In the following tables you will find many terms and abbreviations you might not know. To help you better understand these terms we've provided the following definitions:

- **Maximum Contaminant Level** - The "Maximum Allowed" (MCL) is the highest level of a contaminant allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.
- **Maximum Contaminant Level Goal** - The "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** (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 a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.
- **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 system on multiple occasions.
- **Treatment Technique (TT)** - A treatment technique is a required process intended to reduce the level of a contaminant in drinking water.
- **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 known or expected risk to health. ALGs allow for a margin of safety.
- **Parts per million (ppm) or Milligrams per liter (mg/l)** - One part per million is equal to one ounce in 7,350,000 gallons of water.
- **Parts per billion (ppb) or Micrograms per liter (µg/l)** - One part per billion is equal to one ounce in 7,350 gallons of water.
- **Highest Running Annual Average (HRA Avg.)** – The highest of four values calculated by averaging each quarter's average result with the three (3) previous quarter's average results.
- **Million Fibers per liter (MFL)** – A measure of asbestos.
- **Millirems per year (mrem)** – A measure of radiation absorbed by the body.
- **Pico curies per liter (pCi/l)** – This property is a measure of the radioactivity of water.
- **Nephelometric Turbidity Units (NTU)** – Measure of Turbidity.
- **Parts per Trillion (ppt)** – Parts per trillion or nanograms per liter
- **Parts per Quadrillion (ppq)** – Parts per quadrillion or Picograms per liter
- **Not Applicable (NA)** – Item does not apply.
- **Non Detectable (ND)** - Measured lower than the minimum testing level for constituent

The State of Texas requires us to monitor for some constituent less often than once per year because the concentrations of these constituents do not change frequently. Some of our data, though representative, is more than one year old.

Table 1. Metals and Inorganic Constituents

Constituent	Southern Utilities Max. Level	MCL	MCLG	Range of Detection	Sample Year	Violation	Typical Sources of Constituent
Barium (ppm)	0.10	2	2	0.003 - 0.1	2020	NO	Erosion of natural deposits; Discharge of drilling wastes; Discharge from metal refineries.
Chromium (ppb)	2.4	100	100	0 – 2.4	2020	NO	Erosion of natural deposits; Discharge from steel & pulp mills
Fluoride (ppm)	0.302	4	4	0.0576 - 0.302	2020	NO	Water additive which promotes strong teeth; Erosion of natural deposits;
Cyanide (ppb)	99.2	200	200	0 – 99.2	*2020	NO	Discharge from plastic and fertilizer factories; Discharge from steel/ metal factories
Combined Radium 226/228 (pCi/L)	1.5	0	5	1.5	*2017	NO	Erosion of natural deposits
Nitrate (ppm) (measured as Nitrogen)	0.269	10	10	0.0 - 0.269	2020	NO	Runoff from fertilizer use; Leaching from septic tank sewage; fertilizers and aluminum factories.

* Year of most recent sample

Table 2. Organic Constituents

Constituent	Southern Utilities Max. Level	MCL	MCLG	Range of Detection	Sample Year	Violation	Typical Sources of Constituent
Methyl Isobutyl Ketone (ppm)	1.26	0	0	0.85 – 1.26	2020	NO	Discharge from chemical factories
Xylenes (ppm)	<0.500	10	10	ND	2020	NO	Discharge from petroleum factories;
Ethylbenzene	<0.500	700	700	ND	2020	NO	Discharge from Petroleum refineries
Endrin (ppb)	<0.01	2	2	ND	2020	NO	Residue of banned insecticide

*Year of most recent sample

Table 3. Disinfection Byproducts & Disinfection Residual

Constituent	Southern Utilities Max. Level	MCL	MCLG	Range of Detection	Sample Year	Violation	Typical Sources of Constituent
Total Trihalomethanes (ppb)	78	80	0	18.8 – 77.6	2020	NO	By product of drinking water Chlorination.
Total Haloacetic Acids (ppb)	44	60	0	5.2 – 38.0	2020	NO	By product of drinking water Chlorination.
Chlorine Disinfectant Residual* (ppm)	1.34 (HRAA)	4		0.30 – 3.90	2020	NO	Disinfectant used to control Microbes.

* Maximum level determined by the highest running annual average (HRAA)

**The water system has exceeded the operational evaluation level (OEL) for Total Trihalomethanes

Additional Information for Total Trihalomethanes

Trihalomethanes are formed when chlorine is used to disinfect the water. Trihalomethanes found at high levels in drinking water may elevate the risks for certain cancers. While there is concern about carcinogens in drinking water, one should note that TTHMs pose no immediate risk, and might only manifest effects after decades of exposure.

Table 4. Lead & Copper

Constituent	Southern Utilities 90 th percentile	AL	MCLG	Number of sites found above the AL	Sample Year	Typical Sources of Constituent
Lead (ppb)	0.0058	15	0	0	2018*	Erosion of natural deposits; Corrosion of household plumbing systems
Copper (ppm)	0.618	1.3	1.3	0	2018*	Erosion of natural deposits; Corrosion of household plumbing systems; Leaching from wood preservatives

*Year of most recent sample

Additional Health Information for Lead

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. This water supply 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 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>.

Table 5. Unregulated Distribution System Evaluation for Disinfection Byproducts

Constituent	Southern Utilities Average Level	MCL	MCLG	Range of Detection	Sample Year	Violation	Typical Sources of Constituent
Total Trihalomethanes (ppb)	78	80	NA	18.8 – 77.6	2020	NO	By product of drinking water chlorination.
Total Haloacetic Acids (ppb)	44	60	NA	5.2 – 38.0	2020	NO	By product of drinking water chlorination.

Table 6. Unregulated Constituents for which Monitoring is Required

Constituent	Southern Util. Max. Level	MCL	MCLG	Range of Detection	Sample Year	Typical Sources of Constituent
Chloroform (ppb)	58.6	None		0 – 58.6	2020	Pulp and paper mills, hazardous waste sites and sanitary landfills
Bromodichloromethane (ppb)	17.2	None		0 – 17.2	2020	By product of drinking water chlorination.
Dibromochloromethane (ppb)	10.7	None		0 – 10.7	2020	By product of drinking water chlorination.
Bromoform (ppb)	1.67	None		0 - 1.67	2020	By product of drinking water chlorination. Discharge from shipbuilding, aircraft and aerospace industries, discharge from fire resistant chemicals

Table 7. Total Coliform Bacteria

Maximum Contaminant Level	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	Typical Sources of Contamination
0	5% of monthly samples are positive	1.4	0	0	NO*	Naturally present in the environment

Table 8. Radioactive Contaminants

Radioactive Contaminants	Highest Level Detected	MCL/ MCLG	Range of Detection	Sample Year	Typical Sources of Constituent
Combined Radium 226/228 (pCi/L)	1.5	0/5	1.5-1.5	*2017	Erosion of natural deposits.

Secondary Constituents

Many constituents (such as calcium, sodium, or iron), 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 the EPA. These constituents are not causes for health concerns. Therefore secondaries are not required to be reported in this document, but they may greatly affect the appearance and taste of your water. For more information on taste, color, and odor of drinking water, please call us.

As you can see by the Table 9 below, **our system had one previous violation from 2011 and three violations in 2020.** TCEQ requires that this violation be reported on this report for a specified number of years. **The violation reporting periods ended in 2020.**

Table 9. Violations

E. coli			
Fecal coliforms and E coli are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Microbes in these wastes can cause short-term effects such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a special health risk for infants, young children, and people with severely compromised immune systems.			
Violation Type	Violation Begin	Violation End	Violation Explanation
Monitor GWR Triggered/ Additional, Major	11/15/2011	2020	We failed to collect follow-up samples within 24 hours of learning of the total coliform- positive sample. These needed to be tested for fecal indicators from all sources that were being used at the time the positive sample was collected
Haloacetic Acids			
Some people who drink water containing haloacetic acids in excess of the MCL over many years may have an increased risk of getting cancer			
Violation Type	Violation Begin	Violation End	Violation Explanation
Monitoring, Routine (DBP), Major	04/01/2020	06/30/2020	We failed to test our drinking water for the contaminant and period indicated. Because of this failure, we cannot be sure of the quality of the drinking water during the period indicated.
Nitrate (measured as Nitrogen)			
Infants below the age of six months who drink water containing nitrate in excess of the MCL could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue baby syndrome.			
Violation Type	Violation Begin	Violation End	Violation Explanation
Monitoring, Routine, Major	04/01/2020	06/30/2020	We failed to test our drinking water for the contaminant and period indicated. Because of this failure, we cannot be sure of the quality of the drinking water during the period indicated.
Total Trihalomethanes (TTHM)			
Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous systems, and may have an increased risk for cancer.			
Violation Type	Violation Begin	Violation End	Violation Explanation
Monitoring, Routine (DBP), Major	04/01/2020	06/30/2020	We failed to test our drinking water for the contaminant and period indicated. Because of this failure, we cannot be sure of the quality of the drinking water during the period indicated.

We are proud that your drinking water **meets or exceeds** all Federal and State requirements. We have learned through our monitoring and testing that some constituents have been detected. The EPA has determined that your water **IS SAFE** at the levels in the above tables. . Please call Scott Pope at our office if you have any questions. He can be reached at (903) 566-3511.

Water Loss for 2020

In the water loss audit submitted to the Texas Water Development Board for the time period of January - December 2020, our system lost an estimated 941,786,439 gallons of water. If you have any questions about the water loss audit please call Southern Utilities Company, 903-566-3511.