

City of Strawn 2018 Annual Drinking Water Report

(Also known as the Consumer Confidence Report)

Water System Identification Number – TX1820005

Annual Water Quality Report for the period of January 1 to December 31, 2018

City of Strawn purchases treated surface water from Lake Tucker.

For more information regarding this report contact: Danny Miller, manager at (254) 672-5311

Este reporte incluye informacion sobre el agua para tomar. Para asistencia en espanol, favor de llamar at

telephono (254) 672-5311

PUBLIC PARTICIPATION OPPORTUNITIES

Date: Second Monday of the month. **Time:** 6:00 pm

Location: City Hall, Strawn, Texas 76475

Sources of 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>.

Information about Source Water Assessments

A Source Water Susceptibility Assessment for your drinking water source has been completed by the Texas Commission on Environmental Quality. This information describes the susceptibility and types of constituents that may come into contact with your drinking water source based on human activities and natural conditions. The information contained in the assessment allows us to focus source water protection strategies. 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 Danny Miller at (254) 672-5311.

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/DWW>

Source Water	Name	Type of Water	Report Status	Location
Intake 1 -	LAKE TUCKER	SW	Complete	Lake Tucker four miles west of Strawn

Water Quality Test Results Explanation of Acronyms Used in this Report: The following tables contain scientific terms and measures, some of which may require explanation.

Avg: Regulatory compliance with some MCLs are based on running annual average of monthly samples.

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.

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.

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

MFL: million fibers per liter (a measure of asbestos)

na: not applicable

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

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-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.

ppt: parts per trillion, or nanograms per liter (ng/L)

ppq: parts per quadrillion, or picograms per liter (pg/L)

Disinfectant (Chloramine) levels Testing Results in the City of Strawn Drinking Water

Disinfectant	Year of Range	Average Level	Minimum Level	Maximum Level	MRDL	MRDLG	Unit of Measurement	Violation	Source of Chemical
Chloramines	2018	2.45	1.1	4.38	4.0	4.0	ppm	N	Disinfectant used to control microbes

Microbiological (Coliforms) Testing Results in the City of Strawn Drinking Water

Maximum Contaminant level Goal	Total Coliform Maximum Contaminant Level	Highest No. of Positive Samples	Fecal coliform or E. coli Maximum Contaminant Level	Total Number of Positive E. coli or Fecal Coliform Samples	Violation	Likely Source of Contaminant
0	1 positive	Two or more samples collected in a month which are Total Coliform positive	0	0	N	Naturally present in environment

2018 Water Loss Audit Information

Time Period Covered by Audit	Estimated Gallons of Water Lost During 2018	Comments and/or Explanations
January to December 2018	3,881,558	Most of the water lost during 2018 was the result of flushing to maintain water quality or leaks in the distribution system

Regulated Contaminants Detected

Lead and Copper

Definitions:

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

Lead and Copper	Date Sampled	MCLG	Action Level(AL)	90 th Percentile	#Sites Over AL	Units	Violation	Likely Source of Contamination
Copper	2018	1.3	1.3	0.209	0	ppm	N	Erosion of natural deposits; Leaching from wood preservatives; Corrosion of household plumbing systems.
Lead	2018	0	15	1.53	0	ppb	N	Corrosion of household plumbing systems; Erosion of natural deposits.

Regulated Contaminants in the City of Strawn Drinking Water

Disinfectants and Disinfection By-Products	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Haloacetic Acids (HAA5)	2018	217	72.6-408	No Goal for the Total	60	ppb	N	By-product of drinking water disinfection.
Total Trihalomethanes (TTHM)	2018	263	189-367	No Goal for the Total	80	ppb	N	By-product of drinking water disinfection.
Inorganic Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination

Nitrate [measured as Nitrogen]	2018	0.23	0.23–0.23	10	10	ppm	N	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
Barium	2018	0.09	0.09- 0.09	2	2	ppm	N	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.
Cyanide	2018	46.7	46.7-46.7	200	200	ppb	N	Discharge from plastic and fertilizer factories; Discharge from steel/metal factories.
Fluoride	2018	0.0841	0.0841 – 0.0841	4	4.0	ppm	N	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories.
<u>Radioactive Contaminants</u>	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Beta/photon emitters	2018	4.3	4.3 – 4.3	0	50	pCi/L	N	Erosion of natural and man-made deposits.

Turbidity

	Limit (Treatment Technique)	Level Detected	Violation	Likely Source of Contamination
Highest single measurement	1 NTU	1.0 NTU	N	Soil runoff
Lowest monthly % meeting limit	0.3 NTU	100%	N	Soil runoff

Information Statement: Turbidity is a 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.

Total Organic Carbon

The percentage of Total Organic Carbon (TOC) removal was measured each month and the system met all TOC removal requirements set, unless a TOC violation is noted in the violations section.

Violations Table

Lead and Copper Rule			
The Lead and Copper Rule protects public health by minimizing lead and copper levels in drinking water, primarily by reducing water corrosivity. Lead and copper enter drinking water mainly from corrosion of lead and copper containing plumbing materials.			
Violation Type	Violation Begin	Violation End	Violation Explanation
LEAD CONSUMER NOTICE (LCR)	12/30/2018	2018	We failed to provide the results of lead tap water monitoring to the consumers at the location water was tested. These were supposed to be provided no later than 30 days after learning the results.
Public Notification Rule			
The Public Notification Rule helps to ensure that consumers will always know if there is a problem with their drinking water. These notices immediately alert consumers if there is a serious problem with their drinking water (e.g., a boil water emergency).			
Violation Type	Violation Begin	Violation End	Violation Explanation
Public Notice Rule Linked to Violation	12/12/2017	04/26/2018	We failed to adequately notify you, our drinking water consumers, about a violation of the drinking water regulations.
Public Notice Rule Linked to Violation	03/20/2018	04/26/2018	We failed to adequately notify you, our drinking water consumers, about a violation of the drinking water regulations.
Public Notice Rule Linked to Violation	04/01/2018	06/30/2018	We failed to adequately notify you, our drinking water consumers, about a violation of the drinking water regulations.
Public Notice Rule Linked to Violation	12/28/2018	2018	We failed to adequately notify you, our drinking water consumers, about a violation of the drinking water regulations.

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 of getting cancer.

Violation Type	Violation Begin	Violation End	Violation Explanation
FAILURE TO SUBMIT OEL REPORT FOR TTHM	03/12/2018	11/04/2018	We failed to submit our operational evaluation level (OEL) report to our regulator. The Report is needed to determine the best treatment practices necessary to minimize possible future exceedances of TTHM.
FAILURE TO SUBMIT OEL REPORT FOR TTHM	09/13/2018	12/24/2018	We failed to submit our operational evaluation level (OEL) report to our regulator. The Report is needed to determine the best treatment practices necessary to minimize possible future exceedances of TTHM.
FAILURE TO SUBMIT OEL REPORT FOR TTHM	12/11/2018	2018	We failed to submit our operational evaluation level (OEL) report to our regulator. The Report is needed to determine the best treatment practices necessary to minimize possible future exceedances of TTHM.
MCL, LRAA	01/01/2018	03/31/2018	Water samples showed that the amount of this contaminant in our drinking water was above its standard (called a maximum contaminant level and abbreviated MCL) for the period indicated.
MCL, LRAA	04/01/2018	06/30/2018	Water samples showed that the amount of this contaminant in our drinking water was above its standard (called a maximum contaminant level and abbreviated MCL) for the period indicated.
MCL, LRAA	07/01/2018	09/30/2018	Water samples showed that the amount of this contaminant in our drinking water was above its standard (called a maximum contaminant level and abbreviated MCL) for the period indicated.
MCL, LRAA	10/01/2018	12/31/2018	Water samples showed that the amount of this contaminant in our drinking water was above its standard (called a maximum contaminant level and abbreviated MCL) for the period indicated.

Haloacetic Acids (HAA5)

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
FAILURE TO SUBMIT OEL REPORT FOR HAA5	03/12/2018	11/04/2018	We failed to submit our operational evaluation level (OEL) report to our regulator. The Report is needed to determine the best treatment practices necessary to minimize possible future exceedances of HAA5.
FAILURE TO SUBMIT OEL REPORT FOR HAA5	09/13/2018	12/24/2018	We failed to submit our operational evaluation level (OEL) report to our regulator. The Report is needed to determine the best treatment practices necessary to minimize possible future exceedances of HAA5.
FAILURE TO SUBMIT OEL REPORT FOR HAA5	12/11/2018	2018	We failed to submit our operational evaluation level (OEL) report to our regulator. The Report is needed to determine the best treatment practices necessary to minimize possible future exceedances of HAA5.
MCL, LRAA	01/01/2018	03/31/2018	Water samples showed that the amount of this contaminant in our drinking water was above its standard (called a maximum contaminant level and abbreviated MCL) for the period indicated.
MCL, LRAA	04/01/2018	06/30/2018	Water samples showed that the amount of this contaminant in our drinking water was above its standard (called a maximum contaminant level and abbreviated MCL) for the period indicated.
MCL, LRAA	07/01/2018	09/30/2018	Water samples showed that the amount of this contaminant in our drinking water was above its standard (called a maximum contaminant level and abbreviated MCL) for the period indicated.
MCL, LRAA	10/01/2018	12/31/2018	Water samples showed that the amount of this contaminant in our drinking water was above its standard (called a maximum contaminant level and abbreviated MCL) for the period indicated.

Interim Enhanced SWTR

The Interim Enhanced Surface Water Treatment Rule improves control of microbial contaminants, particularly Cryptosporidium, in systems using surface water, or ground water under the direct influence of surface water. The rule builds upon the treatment techniques requirements of the Surface Water Treatment Rule.

Violation Type	Violation Begin	Violation End	Violation Explanation
MONITOIRNG, ROUTINE (IESWTR/LT1) MAJOR	05/01/2018	05/31/2018	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 our drinking water during the period indicated.

Surface Water Treatment Rule (SWTR)

The Surface Water Treatment Rule seeks to prevent waterborne diseases caused by viruses, Legionella, and Giardia lamblia. The rule requires that water systems filter and disinfect water from surface water sources to reduce the occurrence of unsafe levels of these microbes.

Violation Type	Violation Begin	Violation End	Violation Explanation
MONITOIRNG, RTN/RPT MAJOR (SWTR-FILTER)	05/01/2018	05/31/2018	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 our drinking water during the period indicated.

Total Organic Carbon

Total organic carbon has no health effects. However, total organic carbon provides a medium for the formation of disinfection byproducts. These byproducts include Trihalomethanes (THMS) and haloacetic acids (HAAs). Drinking water containing these byproducts in excess of the MCL may lead to adverse health effects, liver and kidney problems, or nervous system effectd, and may lead to an in

Violation Type	Violation Begin	Violation End	Violation Explanation
MONITOIRNG, ROUTINE (IESWTR/LT1) MAJOR	05/01/2018	05/31/2018	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 our drinking water during the period indicated.