2019 Drinking Water Quality Report
For the Livingston Water System TX1870002

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TO OUR CITIZENS: We are pleased to present you with our 2019 Drinking Water Quality Report. This annual report, which is required by the Safe Drinking Water Act, is designed to inform you about the quality of the water we deliver to you every day. This report will be prepared and distributed to our citizens annually. Our constant goal is to provide you with a safe and dependable supply of drinking water. We want you to understand the efforts we make to continually improve the water treatment process and to protect our water resources. We are committed to ensuring the quality of your drinking water.

The City of Livingston's water source is treated surface water from the Lake Livingston Regional Water Supply System (TX1870129), which is operated by the Trinity River Authority (TRA) of Texas. The TCEQ completed a Source Water Susceptibility Assessment of our source water and results indicate that some of our sources are susceptible to certain contaminants. The sampling requirements for our water system are based on this susceptibility and previous sample data. Any detections of these contaminants may be found in this Consumer Confidence Report. Further details about sources and sourcewater assessments are available in Drinking Water Watch at http://dww2.tceq.gov/DWW/ . For more information about your sources of water, please refer to the Source Water Assessment Viewer at the following URL: http://www.tceq.texas.gov/gis/swaview .

OUR 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 the data from the most recent U.S. Environmental Protection Agency (EPA) required tests and is presented in the attached pages. We hope this information helps you become more knowledgeable about what's in your drinking water.

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.

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

Maximum Contaminant Level (MCL) - The highest permissible level of a contaminant 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 health risk. MCLGs allow for a margin of safety.

Maximum Residual Disinfectant Level (MRDL) - The highest level of 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 (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 contamination.

Action Level (AL) - 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.
Level 1 Assessment - 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 very detailed study of the water system to identify potential problems and determine (is 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.
Avg - Regulatory compliance with some MCLs are based on running annual average of monthly samples.

Abbreviations:
na - not applicable.
NTU - Nephelometric Turbidity Units (a measure of turbidity)
MFL - Million fibers per liter (a measure of asbestos)
mrem - millirems per year (a measure of radiation absorbed by the body)
pCi/L - Picocuries per liter (a measure of radioactivity)
ppm - Parts per million, or milligrams per liter (mg/l) or one ounce in 7,350 gallons of water
ppb - Parts per billion, or micrograms per liter (µg/l) or one ounce in 7,350,000 gallons of water
ppq - Parts per quadrillion, or picograms per liter (pg/L)
ppt - Parts per trillion, or nanograms per liter (ng/L)

SPECIAL NOTICE: 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 (1-800-426-4791).

Inorganic Contaminants

Year or Range	Contaminant	Average Level	Minimum Level	Maximum Level	MCL	MCLG	Unit of Measure	Source of Contaminant
2019	Fluoride	0.6	0.5	0.7	4	4	ppm	Erosion of natural deposits; water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories.
2019	Nitrate	1	0.7	0.7	10	10	ppm	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits.
2017	Barium	.0470	.0470	.0470	2	2	ppm	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits.

Synthetic Organic Contaminants

Year or Range	Contaminant	Average Level	Minimum Level	Maximum Level	MCL	MCLG	Unit of Measure	Source of Contaminant
2/6/2018	Simazine	0.08	0.08	0.08	4	4	ppb	Herbicide runoff.
2/6/2018	Atrazine	0.20	0.20	0.20	3	3	ppb	Runoff from herbicide used on row crops.

Maximum Residual Disinfectant Level

Year	Disinfectant	Average Level	Minimum Level	Maximum Level	MRDL	MRDLG	Unit of Measure	Violation	Source of Disinfectant
2017	Chloramine Residual	2.56	0.51	4.1	4	4	ppm	N	Disinfectant used to control microbes.

Unregulated Contaminants

Unregulated contaminants are those for which the 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 future regulations are warranted.

Year or Range	Contaminant	Average Level	Minimum Level	Maximum Level	Unit of Measure	Source of Contaminant
2019	Chloroform	15	15	16	ppb	Byproduct of drinking water disinfection.
2019	Bromoform	1.7	1.7	1.7	ppb	Byproduct of drinking water disinfection.
2019	Bromodichloromethane	13	11	15	ppb	Byproduct of drinking water disinfection.
2019	Dibromochloromethane	6.9	3.8	10.1	ppb	Byproduct of drinking water disinfection.
2015	Manganese	2.85	1.91	3.81	ppb	Naturally present in the environment.
2015	Molybdenum	1.71	1.0	2.20	ppb	Naturally present in the environment.
2015	Strontium	286	232	310	ppb	Naturally present in the environment.
2015	Vanadium	.91	.604	1.09	ppb	Naturally present in the environment.
2015	Chromium-6	.05	.0369	.0625	ppb	Naturally present in the environment.
2015	Chlorate	177.1	20.3	331	ppb	Naturally present in the environment.

Unregulated Initial Distribution System Evaluation for Disinfection Byproducts

This evaluation is sampling required by EPA to determine the range of total trihalomethane and haloacetic acid in the system for future regulations. These samples are not used for compliance, and may have been collected under non-standard conditions. EPA also requires the data to be reported here.

Year	Contaminant	Average Level	Minimum Level	Maximum Level	MCL	Unit of Measure	Source of Contaminant
2019	Total Haloacetic Acids	20	16.2	24.1	60	ppb	Byproduct of drinking water disinfection.
2019	Total Trihalomethanes	37	32.8	42.5	80	ppb	Byproduct of drinking water disinfection.

Lead and Copper

Year	Contaminant	MCLG	The 90th Percentile	# of Sites Over Action Level	Action Level	Unit of Measure	Source of Contaminant
2018	Lead	0	3.8	1	15	ppb	Corrosion of household plumbing systems; erosion of natural deposits.
2018	Copper	1.3	0.31	0	1.3	ppm	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives.

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 plumbing materials.

Violations - 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			

Required 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. We are 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.

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	Contaminant	Highest Single Measurement	Lowest Monthly % of Samples Meeting Limits	Turbidity Limits	Unit of Measure	Source of Contaminant

Coliform Bacteria

Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful, bacteria may be present.

Year	Max Level Goal	Total Coliform Max Level	Highest No. of Positive	Fecal Coliform or E. Coli Max Level	Total of Positive E. Coli or Fecal Coliform Samples	Violation	Likely Source of Contamination
2018	0	1	1		0	N	Naturally present in the environment.

WATER SOURCES:

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. Contaminants that may be present in source water before treatment 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.

When drinking water meets federal standards there may not be any health based benefits to purchasing bottled water or point of use devices. 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 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 Drinking Water Hotline at 1-800-426-4791.

In the water loss audit submitted to the Texas Water Development Board for the period of January-December 2019, our system lost an estimated 260,903,474 gallons of water.

If you have any questions about this report or other matters concerning your water utility, please contact our office at (936) 327-4311. We want you to be informed about your water quality. If you want to learn more, please attend any of the regularly scheduled meetings of the Livingston City Council which are held on the second Tuesday of each month at 5:00 P.M. in Council Chambers at Livingston City Hall, 200 West Church Street.

EN ESPAÑOL: Este reporte incluye información importante sobre el aqua para tomar. Si tiene preguntas o comentarios sobre éste informe en español, favor de llamar al tel. (936) 327-4311 para hablar con una persona bilingüe en español.