

2010 Drinking Water Quality Report For the Livingston Water System

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TO OUR CITIZENS: We are pleased to present you with our 2010 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 (LLRWSS), which is operated by the Trinity River Authority (TRA) of Texas. A Source Water Susceptibility Assessment for your drinking water source is currently being updated by the Texas Commission on Environmental Quality. The report will describe 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 will allow us to focus on source water protection strategies. Some of this source water assessment information is available on Texas Drinking Water Watch at <http://dww.tceq.state.tx.us/DWW/>. For more information on source water assessments and protection efforts at our system, please contact us.

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.

The City of Livingston routinely monitors for constituents in your drinking water, in accordance with federal and state laws. The following tables, for the period January 1, 2010 through December 31, 2010, show all of the chemical contaminants which have been found in your drinking water. The United States Environmental Protection Agency (EPA) requires water systems to test up to 97 contaminants.

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 EPA. These constituents are not causes for health concerns, therefore, secondaries are not required to be reported in this document, however, they may greatly affect the appearance and taste of your water.

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.

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

ppm - milligrams per liter or parts per million - or one ounce in 7,350 gallons of water.

ppb - micrograms per liter or parts per billion - or one ounce in 7,350,000 gallons of water.

na - not applicable.

Abbreviations:

NTU - Nephelometric Turbidity Units

MFL - Million fibers per liter (a measure of asbestos)

pCi/L - Picocuries per liter (a measure of radioactivity)

ppm - Parts per million, or milligrams per liter (mg/l)

ppb - Parts per billion, or micrograms per liter (µg/l)

ppq - Parts per quadrillion, or picograms per liter

ppt - Parts per trillion, or nanograms per liter

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; 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 health care provider. Additional guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* are available from the Safe Drinking Water Hotline at 1-800-426-4791.

Inorganic Contaminants

Year or Range	Contaminant	Average Level	Minimum Level	Maximum Level	MCL	MCLG	Unit of Measure	Source of Contaminant
2010	Fluoride	0.55	0.55	0.55	4	4	ppm	Erosion of natural deposits; water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories.
2010	Nitrate	0.78	0.78	0.78	10	10	ppm	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits.
2010	Gross beta emitters	5.2	5.2	5.2	50	0	pCi/L	Decay of natural and man-made deposits.

Organic Contaminants

Year or Range	Contaminant	Average Level	Minimum Level	Maximum Level	MCL	MCLG	Unit of Measure	Source of Contaminant
2010	Simazine	0.19	0.19	0.19	4	4	ppb	Herbicide runoff.
2010	Atrazine	0.25	0.25	0.25	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	Source of Disinfectant
2010	Chloramine Residual	2.53	0.5	3.9	4	4	ppm	Disinfectant used to control microbes.

Disinfection Byproducts

Year	Contaminant	Average Level	Minimum Level	Maximum Level	MCL	Unit of Measure	Source of Contaminant
2010	Total Haloacetic Acids	23.2	20.1	26.4	60	ppb	Byproduct of drinking water disinfection.
2010	Total Trihalomethanes	33.1	30.2	36	80	ppb	Byproduct of drinking water disinfection.

Unregulated Contaminants

Bromoform, chloroform, dichlorobromomethane, and dibromochloromethane are disinfection byproducts. There is no maximum contaminant level for these chemicals at the entry point to distribution.

Year or Range	Contaminant	Average Level	Minimum Level	Maximum Level	Unit of Measure	Source of Contaminant
2010	Chloroform	6.1	6.1	6.1	ppb	Byproduct of drinking water disinfection.
2010	Bromoform	2.0	2.0	2.0	ppb	Byproduct of drinking water disinfection.
2010	Bromodichloromethane	9.1	9.1	9.1	ppb	Byproduct of drinking water disinfection.
2010	Dibromochloromethane	6.8	6.8	6.8	ppb	Byproduct of drinking water disinfection.

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
2010	Total Haloacetic Acids	23.3	20.1	26.4	NA	ppb	Byproduct of drinking water disinfection.
2010	Total Trihalomethanes	33.10	30.2	36.0	NA	ppb	Byproduct of drinking water disinfection.

Lead and Copper

Year	Contaminant	The 90th Percentile	Number of Sites Exceeding Action Level	Action Level	Unit of Measure	Source of Contaminant
2010	Lead	1.9	0	15	ppb	Corrosion of household plumbing systems; erosion of natural deposits.
2010	Copper	0.18	0	1.3	ppm	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives.

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. 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>.

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
2010	Turbidity	0.29	100.00	0.3	NTU	Soil runoff.

Coliform Bacteria

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
2010	0	1 positive monthly sample	1		0	N	Naturally present in the environment.

Secondary and Other Constituents Not Regulated (No associated adverse health effects)

Year or Range	Constituent	Average Level	Minimum Level	Maximum Level	Secondary Limit	Unit of Measure	Source of Constituent
2010	Bicarbonate	96	96	96	NA	ppm	Corrosion of carbonate rocks such as limestone.
2010	Chloride	27	27	27	300	ppm	Abundant naturally occurring element; used in water purification; byproduct of oil field activity.
2010	pH	7.7	7.7	7.7	>7.0	units	Measure of corrosivity of water.
2010	Sodium	36	36	36	NA	ppm	Erosion of natural deposits; byproducts of oil field activity.
2010	Sulfate	94	94	94	300	ppm	Naturally occurring; common industrial byproduct; byproduct of oil field activity.
2010	Total Alkalinity as CaCO ₃	79	79	79	NA	ppm	Naturally occurring soluble mineral salts.
2010	Total Dissolved Solids	306	306	306	1000	ppm	Total dissolved mineral constituents in water.

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.

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 informe incluye información importante sobre el agua potable. 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.