

# City of Lewisville

## 2008 Water Quality Report



### Contaminants

The presence of contaminants in the untreated water does not necessarily pose a health risk. Drinking water, including bottled water, may contain small amounts of these contaminants. 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.

### Source Water Assessment and Protection

A Source Water Susceptibility Assessment for your drinking water sources(s) is currently being updated by the Texas Commission on Environmental Quality and will be provided to us this year. 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 our source water protection strategies. The sampling requirements for our water system are based on this susceptibility and previous sample data. The sampling requirements for Dallas' water system (purchased treated water) are based on their susceptibility and previous data. Any detections of these contaminants will be found in this Consumer Confidence Report. This comprehensive assessment will enhance the ability of the City of Lewisville's Public Water System to protect its source water and ensure its continued reliability. For more information on source water assessments and protection efforts at our system, please contact the Environmental Control Services Laboratory at (972) 219-3548.

More information about contaminants and potential health effects may be obtained by calling the U.S. Environmental Protection Agency Safe Drinking Water Hotline at (800) 426-4791.

The City of Lewisville's drinking water meets or exceeds all Federal drinking water requirements. This report is based on data collected throughout 2008, as required by the U. S. Environmental Protection Agency's Water Consumer's Right to Know Rule. The report includes information on what your drinking water contained, where it came from, how it was treated, and general sources of contamination and special information for people with weakened immune systems.

If you have questions on the quality of your water, would like information on source water protection and how you can become involved in the public participation process, please contact the Department of Public Services, Utilities Section at 972/219-3504 or visit our website [www.cityoflewisville.com](http://www.cityoflewisville.com).

### Where Do We Get Our Water?

The City of Lewisville pumps water from Lewisville Lake to its Water Treatment Plant for treatment processing prior to distribution to consumers. Drinking water is also purchased from Dallas Water Utilities.

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 might be in source water include microbiological contaminants such as viruses and bacteria; inorganic contaminants, such as salts and metals; pesticides and herbicides; organic contaminants from industrial processes and petroleum production; and radioactive contaminants that may be naturally occurring or the result of oil and gas production and mining activities.



## Bacteriological Sample Collection and Analysis



The City of Lewisville collects and analyzes a minimum of 90 samples each month throughout the city's water system. The samples are collected and analyzed following Texas Commission on Environmental Quality guidelines and methods. These samples are analyzed for total coliform, an indicator of contamination in the drinking water. The City of Lewisville has not had any violations of drinking water standards.

### Special Notice for the Elderly, Infants, Cancer Patients, People with HIV/Aids or Other Immune Problems

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. The EPA/Centers for Disease Control and Prevention (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).

### Cryptosporidium

Since 1998, the City of Lewisville has monitored for Cryptosporidium, a microscopic intestinal parasite found naturally in human and animal wastes. Cryptosporidium has never been detected in either the untreated or treated drinking water. When ingested from contaminated water or food, or through exposure to contaminated wastes, the Cryptosporidium can cause flu-like symptoms. Not everyone exposed to the organism becomes ill. Individuals with weakened immune systems may be at higher risk of contracting the illness and should consult their physician regarding the appropriate precautions to prevent infection. You may request more information on Cryptosporidium by web site at [www.epa.gov/safewater/contaminants/index.html](http://www.epa.gov/safewater/contaminants/index.html). or by calling the U.S. EPA's Safe Drinking Water Hotline at (800) 426-4791.

## 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 regulation. The 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 or Range	Contaminant	Average Level	Minimum Level	Maximum Level	MCL	Unit of Measure	Source of Contaminant
2007	Total Haloacetic Acids	13.5	0	36.2	N/A	ppb	byproduct of drinking water disinfection.
2007	Total Tri halomethanes	17.1	8.8	33.2	N/A	ppb	byproduct of drinking water disinfection.

## Unregulated Contaminant Monitoring Rule Data (UCMR)

The City of Lewisville has participated in gathering data under the UCMR in order to assist EPA in determining the occurrence of possible drinking water contaminants. Unregulated contaminants are those for which EPA has not established drinking water standards. If any unregulated contaminants were detected, they are shown in the table below. This data may also be found on the EPA's web site at <http://www.epa.gov/safewater/data/nod.html>, or you can call the Safe Drinking Water Hotline at (800) 426-4791.

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 system. Unit of measure ppb is parts per billion.							
Year or Range	Contaminant	Average Level	Minimum Level	Maximum Level	Unit of Measure	Source of Contaminant	
2008	Chloroform	14.15	4.39	48.01	ppb	byproduct of drinking water disinfection.	
2008	Bromodichloromethane	2.79	1.68	3.17	ppb	byproduct of drinking water disinfection.	
2008	Dibromochloromethane	0.26	0	1.53	ppb	byproduct of drinking water disinfection.	
Other characteristics and contaminants (average provided) were detected in the treated water such as sodium, (22 ppm); total hardness (121 ppm); total alkalinity, (78 ppm); bromate, (<5 ppb); Chloride, (28 ppm); and Sulfate, (67 ppm).							

## Understanding the Water Quality Table



**Maximum Contaminant Level (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 (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.

**NTU** - Nephelometric turbidity units. This is the unit used to measure water turbidity.

**ppb** - Parts per billion or micrograms per liter. (One part per billion is equal to one packet of artificial sweetener sprinkled into an Olympic size swimming pool.)

**ppm** - Parts per million or milligrams per liter. (One part per million is equal to one packet of artificial sweetener sprinkled into 250 gallons of iced tea.)

**pCi/L** - Pico-curies per liter is a measure of radioactivity in water. (A pico-curie is 10-12 curies and is the quantity of radioactive material producing 2.22 nuclear transformations per minute.)

**SUVA (Specific Ultraviolet Absorption)** - An indirect indicator of whether the organic carbon in water is humic or non-humic.

**Total Organic Carbon (TOC)** - Has no health effects. However, TOC provides a medium for the formation of disinfection by-products. These by-products include trihalomethanes (THMs) and haloacetic acids (HAAs). Drinking water containing these by-products in excess of the maximum contaminant level (MCL) may lead to adverse health effects, liver or kidney problems, or nervous system effects, and may lead to an increased risk of getting cancer.

**Turbidity** - A measure of water clarity. The goal is to produce water at turbidity levels as low as possible with efficient treatment technology and effective operations.

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

For more information on safe drinking water, visit [www.epa.gov/safewater](http://www.epa.gov/safewater).

Inorganic Contaminants								
Constituent	Date Tested	Unit	MCL	MCLG	Highest Level Detected	Range	Major Sources	Violation
Barium	2006	ppm	2	2	0.027	0.014 - 0.027	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits	No
Fluoride	2008	ppm	4	4	0.62	0.4 - 0.62	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories	No
Nitrate	2008	ppm	10	10	1.05	0.28 - 1.05	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits	No
Constituent	Date Tested	Unit	Action Level	MCLG	90th Percentile	# of Sites Exceeding A.L.	Major Sources	Violation
Lead	2007*	ppb	15	0	5.8	1	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives	No
Copper	2007*	ppm	1.3	1.3	1.07	0	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives	No
Radioactive Contaminants								
Constituent	Date Tested	Unit	MCL	MCLG	Level Detected	Range	Major Sources	Violation
Beta Emitters	2005	pCi/L**	50**	0	5.2	0 - 5.2	Decay of natural and man-made deposits	No
Synthetic Organic Contaminants Including Pesticides and Herbicides								
Constituent	Date Tested	Unit	MCL	MCLG	Highest Level Detected	Range	Major Sources	Violation
Simazine	2008	ppb	4	4	1.37	0.00 - 1.37	Herbicide runoff	No
Atrazine	2008	ppb	3	3	0.49	0.00 - 0.49	Runoff from herbicide used on row crops	No
Volatile Organic Contaminants								
Constituent	Date Tested	Unit	MCL	MCLG	Level Detected	Range	Major Sources	Violation
TTHM's (total Trihalomethanes)	2008	ppb	80	0	18.34***	8.6 - 47.5	By-product of drinking water chlorination	No
Total Haloacetic Acids	2008	ppb	60	0	18.09***	11.2 - 31.4	By-product of drinking water chlorination	No
Microbiological Contaminants								
Constituent	Date Tested	Unit	Highest monthly % of Positive Samples	Action Level	MCLG	Major Sources	Violation	
Total Coliform	2008	sample	0	>5%	0	Naturally present in the environment	No	
Treatment Requirements								
Constituent	Date Tested	Unit	MRDL	MRDLG	Level Detected	Range	Major Sources	Violation
Chloramines	2008	ppm	4.0	4.0	3.00***	2.5 - 3.39	Water additive used to control microbes	No
Constituent	Date Tested	Unit	Action Level	Highest Single Measurement	Lowest Monthly % Samples Meeting Limits	Major Sources	Violation	
Turbidity	2008	NTU	0.3	0.09	100	Soil Runoff	No	
Constituent	Date Tested	Unit	MCL	Average	Range	Major Sources	Violation	
Total Organic Carbon Removal	2008	L/mg-m	Average SUVA < 2%	1.48	1.09 - 1.81	Total organic carbon is naturally present in the environment	No	
Additional Information								
*Lead and copper testing is conducted every three years at the customers tap in compliance with the Federal guidelines for this program. ** 50 pCi/L = 4mrem/year ***Annual running averages								
Lead & Copper Reporting: 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 <a href="http://www.epa.gov/safewater/lead">http://www.epa.gov/safewater/lead</a> .								

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## POSTAL CUSTOMER

### *Your 2008 Water Quality Report* *Su 2008 Informe de la Calidad del Agua*

#### Water Conservation Facts:

- ◆ Letting your faucet run for five minutes uses about as much electricity as a 60-watt light bulb does in 14 hours.
- ◆ In the U.S., a typical American uses an average of 101 gallons of water per day; the average European uses 53 gallons.
- ◆ The average annual household water use is 127,400 gallons, which is about 350 gallons per day.
- ◆ It takes about 2,500 gallons to put an inch of water on a 4,000 square-foot yard.

#### Average Indoor Water Use:

Non-conserving home: 69.3 gallons per person per day			Conserving home: 45.2 gallons per person per day		
Toilets	26.7%	18.5 gal	Toilets	18.0%	8.2 gal
Showers	16.8%	11.6 gal	Showers	19.5%	8.8 gal
Faucets	15.7%	10.9 gal	Faucets	23.9%	10.8 gal
Bathtub	1.7%	1.2 gal	Bathtub	2.7%	1.2 gal
Clothes Washer	21.7%	15.0 gal	Clothes Washer	22.1%	10.0 gal
Leaks	13.7%	9.5 gal	Leaks	8.8%	4.0 gal
Other	2.2%	1.6 gal	Other	3.4%	1.6 gal

## The Drinking Water Treatment Process

Water Treatment or water purification is the removal of contaminants from untreated water to produce drinking water that is pure for human consumption. Substances that are removed during the process of drinking water treatment may include particulate sand; suspended particles of organic material; microorganisms, viruses, minerals such as iron and sulfur, and man-made chemical pollutants. Water is treated through a series of purification steps. Both the State and Federal government dictate the standards for drinking water quality. These standards require minimum / maximum set points of contaminants and the inclusion of control elements that produce safe drinking water. The City of Lewisville's Water Treatment Plant is capable of producing 20 million gallons of treated water each day.

