

City of Lubbock

Water Quality Report 2006

July 2007

Conservation - Even in a Wet Year

Sitting high atop the Caprock, the City of Lubbock is the largest city on the Great Plains. Extending from Canada to Mexico this large, arid expanse of grasslands and agriculture is dependant on the limited surface water found upon it and the Ogallala Aquifer located below it.

This year the City of Lubbock has benefited from high levels of precipitation. As of June 6, 2007, the city has received almost three times the normal amount of precipitation with 15.75 inches of rain. However, as we enjoy our green lawns and spectacular roadside wildflowers, it is important to keep conservation in mind.

For a number of years drought has impacted area water supplies. Even with recent rains, Lake Meredith has not recovered and is currently only about 14 percent full. The steady decline of water stored in Lake Meredith has resulted in decreased water allocations for Lubbock and the other ten Canadian River Municipal Water Authority (CRMWA) member cities. Beginning in 2002, CRMWA has made up the difference with Roberts County groundwater. The City owned Bailey County Well Field, like the CRMWA Roberts County well field, pumps water from the Ogallala Aquifer. The City desires the Bailey County Well Field to last another 50 years, so conservation is a must to minimize the continued decline of water in the aquifer.

Routinely checking your home for leaks and replacing water fixtures and appliances with more efficient models is important to limiting water waste. Even more water can be saved just outside your home. During summer months, Americans use twice as much water as they do during other times of the year. Water consumption can be greatly reduced by applying a few conservation minded gardening practices to your landscape. Select native and drought tolerant plants that are well suited to our climate. A list of such plants can be found at www.txsmartscape.com. Water grass and turf areas infrequently and deeply and use mulch in flower beds to maintain soil moisture and discourage water hungry weeds. Applying 1 inch of water to Bermuda grass and 1.5 inches to fescue each week should be sufficient. For more conservation tips visit the City of Lubbock's Water Utilities website at <http://water.ci.lubbock.tx.us>.

Where Does Our Water Come From?

The City of Lubbock's drinking water comes from both surface and groundwater sources. The Canadian River Municipal Water Authority (CRMWA) provides 75-85 percent of Lubbock's water supply from Lake Meredith and from Roberts County well field. Lake Meredith is located by Sanford, Texas about 164 miles north of Lubbock, and the Roberts County well field is located about 40 miles east of Lake Meredith. The City owned Bailey County Well Field (BCWF) provides 15-25 percent of the City's water supply and is located about 65 miles northwest of Lubbock. During 2006, the citizens of Lubbock used 13.9 billion gallons of water with 10.5 billion gallons supplied by CRMWA and 3.5 billion gallons from BCWF.

Information on Backflow

Simply put, backflow means there is a potential for contamination in the water distribution system. Common causes for backflow are main breaks and high rates of water withdrawal (fire fighting), however these incidents can be avoided with the use of backflow prevention devices. The City of Lubbock works hard to prevent backflow through ordinances requiring backflow prevention devices on home irrigation systems and at commercial businesses.

Preventing backflow is an important part of maintaining a healthy water supply. The City of Lubbock's water distribution system is designed to carry water from the water treatment plant to the consumer. Cross connections, or connections between potable water in the distribution system to any non-potable water, exist. These connections make the water distribution system susceptible to backflow, which is the reversal of water flow from its intended direction.

There are two types of backflow: Backpressure backflow, which occurs when the pressure outside the water distribution system exceeds the pressure within the system and backsiphonage, which occurs when a partial vacuum is created in the system drawing non-potable water back into it. For more information, please visit the City of Lubbock Water Utilities website at <http://water.ci.lubbock.tx.us> or call 806-775-2589.

Source Water Assessment

TCEQ completed an assessment of your source water and results indicate that some of our sources are susceptible to certain contaminants. The sampling requirements for your water system are based on this susceptibility and previous sample data. Any detection of these contaminants will be found in this Water Quality Report. For more information on source water assessments and protection efforts in our system, contact the numbers located on the back of this report.

Este reporte incluye informacion importante sobre el agua potable. Para asistencia en espanol, favor de llamar al telefono 775-2592.

Drinking Water Meets or Exceeds All Federal (EPA) Drinking Water Requirements

This report is a summary of the quality of the water Lubbock provides to its customers. The analysis was made by using data from the most recent EPA required tests and is presented in the attached pages. We hope this information helps you become more knowledgeable about what is in your drinking water. This report represents data for the year 2006.

Helpful Definitions for Reading this Report

Maximum Contaminant Level Goal (MCLG) – The level of a contaminant, or substance, in drinking water below which there is no known or expected risk to health. MCLG's allow for a margin of safety.

Maximum Contaminant Level (MCL) – The highest level of a contaminant, or substance, that is allowed in drinking water. MCL's are set as close to the MCLG's as feasible using the best available technology.

Action Level (AL) – The concentration of a contaminant, or substance, which, if exceeded, triggers treatment or other requirement which a water system must follow.

Treatment Technique (TT) – A required process intended to reduce the level of a contaminant in drinking water.

Part per million (ppm) – One part per million. For example, if you had one million dollars, one part per million would equal one dollar.

Part per billion (ppb) – One part per billion. For example, if you had one billion dollars, one part per billion would equal one dollar.

mrem/year – 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)

MRDL – Maximum Residual Disinfection Level. The highest level of a disinfectant allowed in drinking water. There is convincing evidence that the addition of a disinfectant is necessary for control of microbial contaminants.

MRDLG – Maximum Residual Disinfection Level Goal. The level of a drinking water contaminant below which there is no known or expected risk to health. MRDLG's do not reflect the benefits of the use of disinfectants to control microbial contamination.

Important Information for Your Consideration

Special Information for People with Weakened Immune Systems

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. EPA/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 at 1-800-426-4791.

What Do You Know About Bottled Water?

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 water poses a health risk. 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 about on taste, odor or color of drinking water, please call 775-2587. 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.

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SUBSTANCE	MONITORING DATE	RANGE DETECTED	HIGHEST LEVEL DETECTED	MCL	MCLG	SOURCES OF CONTAMINATION
ARSENIC	2004 - 2005	2.1 – 3.9 ppb	3.9 ppb	10 ppb**	0	Erosion of natural deposits; runoff from orchards
BARIUM	2004 - 2005	0 – 0.15 ppm	0.15 ppm	2 ppm	2 ppm	Erosion of natural deposits
FLUORIDE	2005 - 2006	0.77 – 1.21 ppm	1.21 ppm	4 ppm	4 ppm	Erosion of natural deposits
NITRATE	2006	0.85 -1.17ppm	1.17 ppm	10 ppm	10 ppm	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion
NITRITE	2005	0.01 – 0.13 ppm	0.13 ppm	1 ppm	1 ppm	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion
TURBIDITY	2006	0.02 -0.23 NTU	0.23 NTU	TT = 5 NTU	0	Soil runoff
			100 %	TT = % of samples <0.3 NTU		
TOTAL ORGANIC CARBON	2006	1.7 –3.0 ppm	3.0 ppm	TT	TT	Naturally present in environment
CHLORAMINES	2004	2.4-3.1 ppm	2.5 ppm annual avg	MRDL = 4 ppm	MRDLG = 4 ppm	Disinfectant used to control microbes
ALPHA EMITTERS	2002-2005	N/A	5 pCi/L	15 pCi/L	0	Erosion of natural deposits.
BETA/ PHOTON EMITTERS	2002-2005	N/A	6.5 pCi/L	50 pCi/L	0	Decay of natural and manmade deposits.
COMBINED RADIUM	2004-2005	N/A	0.7 pCi/L	5 pCi/L	0	Erosion of natural deposits
TOTAL TRIHALOMETHANES	2006	0 – 26.8 ppb	12.8 ppb average	80 ppb	N/A	By-product of drinking water chlorination
TOTAL COLIFORM	2006	0 – 1 %	1 %	(Systems that collect greater than or equal to 40 samples per month) 5 % of monthly samples are positive.	0	Naturally present in environment
HALOACETIC ACIDS (5)	2006	0 – 14.4 ppb	1.8 ppb average	60 ppb	N/A	By-product of drinking water chlorination
LEAD	2006	< 0.3-5.7 ppb	1.1 ppb (90 th percentile) No sites exceeded AL	15 ppb AL	0	Erosion of natural deposits; corrosion of household plumbing systems
COPPER	2006	0.008-0.302 ppm	0.108 ppm (90 th percentile) No sites exceeded AL	1.3 ppm AL	1.3 ppm	Erosion of natural deposits; corrosion of household plumbing systems
CHLOROFORM	2006	0-1.52 ppb	0.76 ppb average	Not Regulated	Not Regulated	Component of Total Trihalomethanes
BROMODICHLOROMETHANE	2006	0 -4.96 ppb	2.48 ppb average	Not Regulated	Not Regulated	Component of Total Trihalomethanes
DIBROMOCHLOROMETHANE	2006	0 -12.3 ppb	6.14 ppb average	Not Regulated	Not Regulated	Component of Total Trihalomethanes
BROMOFORM	2006	0 – 7.05 ppb	3.53 ppb average	Not Regulated	Not Regulated	Component of Total Trihalomethanes
SULFATE	2005 - 2006	27 – 215 ppm	215 ppm	300 ppm^	Not Regulated	Mineral and Nutrient

The state allows us to monitor for some substances less than once per year because the concentrations of these substances do not change frequently.

Some of our data, though representative, are more than one year old.

*The MCL for Beta/Photon Emitters is 4 mrem/year. The EPA considers 50 pCi/L to be a level for concern.

**These arsenic values are effective January 23, 2006. Until then, the MCL is 50 ppb and there is no MCLG.

^Secondary Constituent Levels set by the Texas Commission of Environmental Quality.

^^Exceed Secondary Constituent Levels . Substances that exceed secondary levels generally pose no health risks but may cause aesthetic problems relating to taste, odor, and other nuisance conditions.

SUBSTANCE	MONITORING DATE	RANGE DETECTED	HIGHEST LEVEL DETECTED	MCL	MCLG	SOURCES OF CONTAMINATION
Additional Monitoring						
ALUMINUM	2004-2005	0 - 0.06 ppm	0.06 ppm^^	0.05-0.2 ppm^	N/A	Water Treatment Chemical
CHLORIDE	2005 - 2006	10.2 - 319 ppm	319 ppm	300 ppm^	N/A	Naturally occurring
TOTAL DISSOLVED SOLIDS	2005 - 2006	372 - 998 ppm	998 ppm	1000 ppm^	N/A	Naturally occurring
AMMONIA	2006	0.169-0.485 ppm	0.485 ppm	Not Regulated	N/A	Water Treatment Chemical
CALCIUM	2004 - 2005	59 - 62 ppm	62.4 ppm	Not Regulated	N/A	Naturally occurring
MAGNESIUM	2004 - 2005	14.1 - 35 ppm	35 ppm	Not Regulated	N/A	Naturally occurring
SODIUM	2004 - 2005	33.1 - 232 ppm	232 ppm	Not Regulated	N/A	Naturally occurring
NICKEL	2004- 2005	0.002 ppm	0.002 ppm	Not Regulated	N/A	Erosion of Natural Deposits
ZINC	2004- 2005	0 - 0.004 ppm	0.004 ppm	5 ppm^	N/A	Naturally occurring
HARDNESS	2005 - 2006	214 - 273 ppm	273 ppm	Not Regulated	N/A	Naturally occurring
CONDUCTANCE	2006	N/A	1740 micromhos/cm	Not Regulated	N/A	Naturally occurring
TOTAL ALKALINITY	2005 - 2006	177 - 233 ppm	233 ppm	Not Regulated	N/A	Naturally occurring

We Welcome Your Comments

If you have any questions regarding water quality issues, please contact:

- The Safe Drinking Water Hotline at 1-800-426-4791
- For questions about Lubbock's water quality, call 775-2614
Monday – Friday between 7:30 am and 4:30 pm
- For general questions about Lubbock Water Utilities, or additional copies of this brochure, call 775-2592
Monday – Friday between 8 am and 5 pm
- City Council meetings are held the 2nd and 4th Thursday of each month.
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We're on the Web!!!
<http://water.ci.lubbock.tx.us>

Your Annual Water Quality Report

