Lehi City Water Quality Report 2012

We're pleased to present to you this year's Annual Drinking Water Quality Report. This report is designed to inform you about the quality of the water and services we deliver to you every day. 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 protect our water resources. We are committed to ensuring the quality of your water. Our water sources are from four wells and a spring.

The Drinking Water Source Protection Plan for Lehi City is available for your review.

It contains information about source protection zones, potential contamination sources and management strategies to protect our drinking water. Our sources have been determined to have a low level of susceptibility from potential contamination from sources such as agricultural operations, residential pesticides and herbicides, and residential wastewater disposal systems. We have also developed management strategies to further protect our sources from contamination. Please contact us if you have questions or concerns about our source protection plan.

There are many connections to our water distribution system. When connections are properly installed and maintained, the concerns are very minimal. However, unapproved and improper piping changes or connections can adversely affect not only the availability, but also the quality of the water. A cross connection may let polluted water or even chemicals mingle into the water supply system when not properly protected. This not only compromises the water quality but can also affect your health. So, what can you do? Do not make or allow improper connections at your homes. Even that unprotected garden hose lying in the puddle next to the driveway is a cross connection. The unprotected lawn sprinkler system after you have fertilized or sprayed is also a cross connection. When the cross connection is allowed to exist at your home, it will affect you and your family first. If you'd like to learn more about helping to protect the quality of our water, call us for further information about ways you can help.

If you have any questions about this report or concerning your water utility, please contact Lee Barnes at 801-768-7102 ext. 3. We want our valued customers to be informed about their water utility. If you want to learn more, please attend any of our regularly scheduled meetings. They are held on the second and fourth Tuesday of each month at 153 North 100 East in the City Administration Building Council Room at 7pm. Mayor Bert Wilson and council members, Kaye Collins, Johnny Revill, Mark Johnson, Stephen Holbrook and Michael Southwick will be in attendance.

Lehi routinely monitors for constituents in our drinking water in accordance with the Federal and Utah State laws. The following table shows the results of our monitoring for the period of January 1st to December 31st, 2012. All drinking water, including bottled drinking water, may be reasonably expected to contain at least small amounts of some constituents. It's important to remember that the presence of these constituents does not necessarily pose a health risk.

Conservation Tips

• Your culinary water should not be used for landscape watering. You need to use culinary water for children's swimming pools, etc., but in most cases secondary water will meet your outside needs. Culinary water will be reflected on your sewer bill usage, which is billed from your culinary meter reading.
• Keep a pitcher of water in the fridge so that you don't have to run the tap to get a cold drink.
• Nationwide we would save more than 600 billion gallons of water a year if we turned off the tap when we brushed our teeth.

• Run only full loads when using the washing machine or dishwasher.
• Take more showers. A five minute shower uses only 10 to 25 gallons of water and a bath can use up to 70 gallons!
• Fix leaks. A leaky toilet can waste 200 gallons of water per day. A leaky faucet can waste more than 3,000 gallons of water a year.
• Experiment with drought-tolerant plants that require less water. Mulching plants and trees helps the soil retain moisture.
• Avoid over-watering your lawn or garden. An easy way to test the lawn is to step on the grass and notice whether it springs back. If it does, wait a few more days before watering.

Herbicides and Pesticides

When using herbicides:
• Store in a safe place that children can't get in to.
• Mix on an impermeable surface so spills can be cleaned up.
• Measure the total square feet to be treated and use only the amount needed.
• Read the label and follow instructions for mixing the proper amount and strength.
• Treat only the area that is needed, there is no need to overuse the chemical.
• Clean up spills and dispose of any extra chemical properly by following the manufacturer instructions.

When using pesticides:
• Be willing to accept a low level of weed, insect, and plant disease infestation.
• Use pesticides only when absolutely necessary.
• Identify pests correctly and then use the proper pesticide.
• Read and follow label directions-the label is the law.
• Calibrate spreader/sprayer to keep from applying too much.
• Don't over water after application.

Store chemicals in a dry, locked cabinet away from children and pets. Proper storage, mixing, spill cleanup, watering, and disposal procedures are essential in protecting our environment.

Using less water can:
• Prevent weeds
• Help control insect pests
• Grow healthier plants
• Cut down maintenance time
• Prevent concrete and asphalt damage
• Avoid water stains on homes and fences
• Establish good habits for times of water shortage

Less than 1% of the Earth's water is usable, and clean water is a scarce resource for many people around the world. Making small changes help to protect this precious resource.

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Lehi City Resident

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Lehi, Utah 84043
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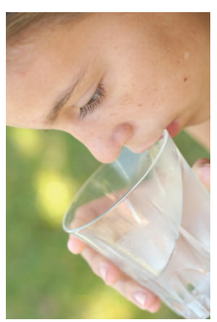
LEHI
Pioneering Utah's Future

Protect our water!
We at Lehi City work around the clock to provide top quality water to every tap. We ask that all our customers help us protect our water sources, which are the heart of our community, our way of life and our children's future.

Lehi City Water Dept.
PWS ID #25015



Lehi Water

Lehi City Water Department

2012 Annual Water Quality Report

LEHI
Pioneering Utah's Future

In the following table you will find many terms and abbreviations you might not be familiar with. To help you better understand these terms we've provided the following definitions:

Non-Detects (ND) - laboratory analysis indicates that the constituent is not present.

ND/Low - High - For water systems that have multiple sources of water, the Utah Division of Drinking Water has given water systems the option of listing the test results of the constituents in one table, instead of multiple tables. To accomplish this, the lowest and highest values detected in the multiple sources are recorded in the same space in the report table.

Parts per million (ppm) or Milligrams per liter (mg/l) - one part per million corresponds to one minute in two years or a single penny in $10,000.

Parts per billion (ppb) or Micrograms per liter (ug/l) - one part per billion corresponds to one minute in 2,000 years, or a single penny in $10,000,000.

Parts per trillion (ppt) or Nanograms per liter (nanograms/l) - one part per trillion corresponds to one minute in 2,000,000 years, or a single penny in $10,000,000,000.

Picocuries per liter (pCi/L) - picocuries per liter is a measure of the radioactivity in water.

Nephelometric Turbidity Unit (NTU) - nephelometric turbidity unit is a measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

Action Level (AL) - the concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

Maximum Contaminant Level (MCL) - The "Maximum Allowed" (MCL) is 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 "Goal" (MCLG) is 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.

Date - Because of required sampling time frames i.e. yearly, 3 years, 4 years and 6 years, sampling dates may seem out-dated.

All sources of drinking water are subject to potential contamination by constituents that are naturally occurring or man made. Those constituents can be microbes, organic or inorganic chemicals, or radioactive materials. All 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.

MCLs are set at very stringent levels. To understand the possible health effects described for many regulated constituents, a person would have to drink 2 liters of water every day at the MCL level for a lifetime to have a one-in-a-million chance of having the described health effect.

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. Lehi 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.

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 microbiological contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

Protect your Water Heater from Thermal Expansion

Without a functioning temperature & pressure relief valve your water heater can explode with the force of dynamite. Most homes are supplied with hot water from an electric or gas heated tank. Until the heating element stops working, and one is faced with a cold shower, the water heater is usually taken for granted. However, if not properly maintained, a water heater may become a safety hazard. Water expands in volume as its temperature rises. The extra volume caused by thermal expansion must go somewhere. If not, the heated water creates an increase in pressure. This is the principle of a steam engine.

The thermostat of the water heater normally maintains the water temperature at about 130° F (54° C). However, if the thermostat fails to shut off the heater, the temperature of the water will continue to increase. If the water temperature increases to more than 212° F (100° C), the water within the tank becomes "super heated". When this super heated water is suddenly exposed to the atmosphere when a faucet is opened, it instantly flashes into steam and a violent reaction may result. As the pressure within the tank continues to build up under super heated conditions, the tank may explode.

Protection from thermal expansion is provided in a plumbing system by the installation of a thermal expansion tank in the hot water system piping downstream of the hot water tank and a *temperature and pressure relief valve* (T & P Valve) at the top of the tank. Water heaters installed in compliance with the current plumbing code will have the required T & P Valve and thermal expansion tank.

The homeowner should check to see that an expansion tank and T&P valve are in place. It is recommended that it is periodically inspected by a licensed plumber to check for corrosion deposits and ensure correct installation and operation.

TEST RESULTS

Contaminant	Violation Y/N	Level Detected ND/Low-High	Unit Measurement	MCLG	MCL	Date Sampled	Likely Source of Contamination
MICROBIOLOGICAL CONTAMINANTS							
Total Coliform Bacteria	N	0	N/A	0	Presence of coliform bacteria in 5% of monthly samples	2012	Naturally present in the environment
Turbidity for Ground Water	N	0-3	NTU	N/A	5	2012	Soil runoff
RADIOACTIVE CONTAMINANTS							
Alpha emitters	N	3-13	pCi/1	0	15	2011	Erosion of natural deposits
Radium 226	N	0-3	pCi/1	0	5	2010	Erosion of natural deposits
Radium 228	N	0-1	pCi/1	0	5	2011	Erosion of natural deposits
INORGANIC CONTAMINANTS							
Barium	N	22-229	ppb	2000	2000	2012	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Copper a. 90% results b. # of sites that exceed the **AL**	N	A .171 b.0	ppt	1300000	AL=1300000	2012	Corrosion of household plumbing systems; erosion of natural deposits
Lead a. 90% results b. # of sites that exceed the **AL**	N	a. 3 b. 0	ppt	0	AL=15000	2012	Corrosion of household plumbing systems, erosion of natural deposits
Fluoride	N	200-500	ppb	4000	4000	2012	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Nitrate (as Nitrogen)	N	200-1600	ppb	10000	10000	2012	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Selenium	N	1-6	ppb	50	50	2012	Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines
Sodium	N	5-45	ppm	None set by EPA	None set by EPA	2012	Erosion of natural deposits; discharge from refineries and factories; runoff from landfills.
Sulfate	N	5-85	ppm	1000	1000	2012	Erosion of natural deposits; discharge from refineries and factories; runoff from landfills, runoff from cropland
TDS (Total Dissolved solids)	N	90-430	ppm	2000	2000	2012	Erosion of natural deposits
DISINFECTION BY-PRODUCTS							
TTHM [Total trihalomethanes]	N	ND	ppb	0	80	2012	By-product of drinking water disinfection
Haloacetic Acids	N	ND	ppb	0	60	2012	By-product of drinking water disinfection
Chlorine	N	200	ppb	4000	4000	2012	Water additive used to control microbes