



2008 Water Quality Report

City of Lebanon Department of Public Works

Utility Operations Group - Water Treatment Facility

EPA Identification Number: 1321010

What is the quality of my drinking water?

The City of Lebanon Utility Operations Group is pleased to report that our drinking water meets or exceeds all federal and state requirements. We strive to deliver safe drinking water to our customers and to keep the utility secure and protected. We are proud to deliver this annual Water Quality Report covering the year 2008.

Lebanon's Water Source and Assessment

Lebanon's surface water comes from the Greater Mascoma River Watershed, which encompasses 195 square miles to include Mascoma Lake, Goose Pond, and Crystal Lake. Based on United States Geological Data the usable capacity of these reservoirs is 7.93 billion gallons. In 2008 the Lebanon water plant processed 644.9 million gallons of water. This is 7 % less water than was processed in 2007. The average daily production in 2008 was 1.76 million gallons.

The protection of our source water is a very important objective. The goals of our Source Water Protection Program are to protect public health by preventing episodes of drinking water contamination, and to maintain and improve water quality in order to reduce treatment costs. Components of the program include delineation and mapping of the watershed, inventory and inspection of potential contamination sources, educational activities, and mailings. As a result of our programs success we receive a reduced frequency of monitoring by regulatory agencies.

NH Department of Environmental Services has prepared a Source Assessment Report for the source serving this public water system, assessing the sources' vulnerability to contamination. The results of the assessment, prepared on May 6, 2002 are as follows: for the Mascoma River, (4) susceptibility factors were rated as high, (4) were rated medium, and (4) were rated low. For more information, about the susceptibility factors contact NH-DES at (603) 271-3139 or contact the Water Treatment Plant Superintendent at 448-2514. The complete assessment report is available for review at the City of Lebanon Water Plant, 65 Pumping Station Rd. Lebanon.

The Water Treatment Plant

Lebanon treats your water with a conventional treatment process that utilizes coagulation, flocculation, sedimentation, filtration and disinfection to remove or reduce harmful contaminants that are or may be present in the source water. The facility provides a series of treatment steps; processes of coagulation, flocculation and sedimentation utilize polyaluminum chloride and activated carbon to remove naturally occurring contaminants that include algae that may affect color and taste as well as reducing turbidity, total organic carbon and bacteria. Multi-media filtration, (sands and anthracite coal) is used to remove particles and microbes, which escape the sedimentation process. Sodium Hypochlorite (a liquid form of chlorine), is used to disinfect water. In addition, to minimize lead and copper leaching from plumbing materials, we treat your water for corrosion control. Sodium carbonate is added to raise pH and sodium bicarbonate is added to raise alkalinity to provide softer, less corrosive water. Sodium Fluoride is added to promote dental health.

Where Can I get More Information?

For more information about your drinking water contact the Water Treatment Plant Superintendent by calling (603) 448-2514, e-mail water@lebcity.com, or by writing to this address: 65 Pumping Station Road, Lebanon, NH 03766. Also, you may visit our website at www.lebcity.com. Additional information is available from the Safe Drinking Water Hotline (800-426-4791). You are welcome and encouraged to attend Lebanon City Council meetings on the 1st and 3rd Wednesdays of each month. The meetings begin at 7:00 p.m. and are held in City Council Chambers unless otherwise announced. City Council Chambers are located in City Hall, 51 North Park Street, Lebanon, NH 03766.

Additional information on Lead

It is possible that lead levels at your home may be higher than at other homes in the community as a result of materials used in your home's plumbing. If you are concerned about elevated lead levels in your home's water, you may wish to have your water tested and flush your tap for 30 seconds to 2 minutes before using tap water. Additional information is available from the Safe Drinking Water Hotline (800-426-4791).

Do I need to take special precautions?

Some people may be more vulnerable to contaminants than the general population. Immunocompromised 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 (1-800-426-4791).

Why are contaminants in my water?

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the US Environmental Protection Agency's Safe Drinking Water Hotline (1-800-426-4791).

Dispose of unused pharmaceuticals properly. Do not flush or dispose in drains or toilets as these contaminants may find their way into drinking water supplies.

Description of Drinking Water Contaminants

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 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.

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. The United States Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

The Water Quality Table

The table contains the most recent results up to December 2008. It lists only the drinking water contaminants we detected that are applicable for the calendar year of this report. NH-DES has a testing cycle prescribed for the City and all testing is performed in accordance to regulations.

Terms and Definitions:

The following definitions explain abbreviations used in the Water Quality Table:

¹**MCL**: Maximum Contaminant Level: The highest level of a contaminant that is allowed in drinking water. They are set as close to the MCLG's as feasible using the best available treatment technology.

²**MCLG**: Maximum Contaminant Level Goal, or the level of a contaminant in drinking water below which there is no known or expected risk to health. MCLG's allow for a margin of safety.

³**NTU**: Nephelometric Turbidity Unit, Turbidity is a measure of the cloudiness of the water. It is monitored by surface water systems because it is a good indicator of water quality and thus helps measure the effectiveness of the treatment process. High turbidity can hinder the effectiveness of disinfectants.

⁴**TT**: Treatment Technique or a required process intended to reduce the level of a contaminant in drinking water.

⁵**N/A**: Not Applicable

⁶**PPM**: parts per million

⁷**AL**: Action Level, or the concentration of a contaminant which, when exceeded, triggers treatment or other requirements which a water system must follow.

⁸**BDL**: Below Detectable testing Limits

⁹**PPB**: parts per billion

¹⁰**RAA**: Running Annual Average is used when a contaminant's compliance with the MCL is determined on a system wide-basis by a running annual average of all samples at all sampling points.

¹¹**MRDL**: Maximum Residual Disinfectant Level or 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.

¹²**MRDLG**: Maximum residual disinfectant level goal or the level of a drinking water disinfectant 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 contaminants.

2008 Water Quality Table

Contaminant	Level Detected	Range	Unit	¹ MCL	² MCLG	Violation (yes/no)	Year Sampled	Likely Source of Contamination and Health Effects
Microbial Contaminants								
Turbidity	0.069 NTU average	0.028 to 0.746 NTU	³ NTU	⁴ TT <0.3 NTU 95% of operating time and always below 1.0	⁵ N/A	NO	2008	Soil runoff. Turbidity has no health effects. However turbidity can interfere with disinfection and provide a medium for microbial growth.
Total Organic Carbon (TOC)	1.6 PPM average	1.2 to 2.2 PPM	⁶ PPM	TT	N/A	NO	2008	Naturally present in the environment. TOC has no health effects. However TOC provides a medium in the formation of disinfection byproducts.
Inorganic Contaminants								
Barium	0.010 PPM		PPM	2	2	NO	2008	Erosion of natural deposits, discharge from drilling wastes and metal refineries.
Copper	0.11 PPM @ the 90 th percentile	0.014 to 0.13 PPM	PPM	⁷ AL= 1.3 PPM @ 90 th percentile	1.3 PPM	NO	2008	Erosion of natural deposits. Corrosion of piping and household plumbing. Leaching from wood preservatives.
Lead	0.011 PPM @ the 90 th percentile	0.001 to 0.016PPM	⁹ PPM	AL= 0.015 PPM @ 90 th percentile	0	NO	2008	Erosion of natural deposits. Corrosion of fittings and household plumbing systems.
Fluoride	1.08 PPM average	0.9 to 1.4 PPM	PPM	4	4	NO	2008	Erosion of natural deposits. Water additive to promote strong teeth. Discharge from fertilizers and aluminum factories.
Volatile Organic Contaminants								
Haloacetic Acids (HAA5's)	0.028 PPM ¹⁰ RAA	0.010 to 0.058 PPM	PPM	0.060 PPM	N/A	NO	2008	Disinfection byproduct, a result of drinking water chlorination.
Total Trihalomethanes	0.059 PPM RAA	0.032 to 0.085 PPM	PPM	0.080 PPM	N/A	NO	2008	Disinfection byproduct, a result of drinking water chlorination.
Contaminant	Level Detected	Range	Unit	¹¹ MRDL	¹² MRDLG	Violation (yes/no)	Year Sampled	Likely Source of Contamination and Health Effects
Chlorine	1.11 PPM Average	0.73 to 1.3 PPM	PPM	4	4	NO	2008	Water disinfectant additive used to control microbes.

