



2009 ANNUAL DRINKING WATER QUALITY REPORT CITY OF LEBANON AUTHORITY LEBANON, PENNSYLVANIA

City of Lebanon Authority Public Water System Identification Number: 7380010

Summary

We are pleased to present to you the Annual Drinking Water Quality Report. This report is designed to inform you about the quality 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 to protect our water resources. We are committed to ensuring the quality of your water.

If you have any questions about this report or the Lebanon water system, please contact Jonathan R. Beers, Executive Director, City of Lebanon Authority, at (717) 272-2841 or jbeers@lebanonauthority.org. We want our customers to be informed about their water utility. If you want to learn more about the Lebanon water system, please attend any of our regularly scheduled meetings. They are held at 3:00 p.m. on the second Monday of each month at the Authority's office, located at 2311 Ridgeview Road in Lebanon or visit our website at www.lebanonauthority.org.

In order to ensure the quality of your tap water, the U.S. Environmental Protection Agency (EPA) prescribes regulations that limit the amount of certain contaminants in water provided by public water supply systems. Standards are set in two categories. Primary standards relate to public health. Secondary standards relate to aesthetic qualities, such as taste, odor, and color.

We are proud that your drinking water not only meets, but is better than Federal and State requirements. Through our monitoring and testing programs, some constituents have been detected; however, the EPA has determined that your water is safe at these levels for the general population.

Landlords, apartment managers, businesses, schools, and others are encouraged to share this 2009 Annual Drinking Water Quality Report with all water consumers at their respective locations. We thank you for your cooperation in distributing this important information.

Este informe contiene informacion muy importante sobre su agua beber. Traduzcalo o hable con alguien que lo entienda bien.

Water Supply Sources and Distribution System

All of our water supply is surface water from Swatara Creek and/or the Christian E. Siegrist Reservoir, which has a total storage capacity of 1.2 billion gallons. Raw water from these sources is treated at the Authority water treatment plant before being pumped to water system customers in the distribution system. The Lebanon water system serves about 57,000 people through over 15,100 residential service connections. Water is also provided to commercial, industrial, institutional, and bulk customers, including Cornwall Borough, West Lebanon Township, the Village of Fredericksburg, the Indiantown Gap Military Reservation, and Pennsylvania American Water.

Potential Contaminants

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 stormwater 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 stormwater runoff, and residential uses.
- Organic chemical contaminants, including synthetic and volatile organic chemicals, which are byproducts of industrial processes and petroleum

production, but can also come from gas stations, urban stormwater runoff, and septic systems.

- Radioactive contaminants, which can be naturally-occurring or the result of oil and gas production and mining activities.

Contamination Potential

All sources of drinking water are subject to potential contamination by constituents that are naturally occurring or manmade. 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 (800-426-4791) or visiting the EPA Office of Water website at www.epa.gov/OGWDW.

Vulnerability

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) or the EPA website at www.epa.gov/OGWDW.

Monitoring

The City of Lebanon Authority routinely monitors for constituents in your drinking water according to Federal and State laws. The following tables show our monitoring results for the period January 1 to December 31, 2009. These tables show only the contaminants that were detected and the levels at which they were detected. There are many other contaminants that we tested for in 2009 and previous years that were not detected. For example, samples for volatile organic chemicals collected in 2009, samples for synthetic organic chemicals collected in 2006, and samples for radiologicals collected in 2005 indicated concentrations of these contaminants below the detection level.

Because the Authority is not required to sample for all contaminants every year, the data shown in the following tables are for the most recently collected sample for each contaminant. For example, samples for sulfate were last collected in 2004, and samples for lead and copper were last collected in 2007. All other data shown in the tables are from samples collected in 2009. Remember that the presence of certain constituents does not necessarily pose a health risk. All drinking water may be reasonably expected to contain at least small amounts of some constituents.

Lead in Drinking Water

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. The City of Lebanon Authority 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 (800-426-4791) or the EPA website at www.epa.gov/safewater/lead.

Notice of Reporting Violation

In 2009 we are pleased to report that there were no reported violations of water quality limitations.

Definitions

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

- **Action Level (AL)** - The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.
- **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 no known or expected risk to health. MCLGs allow for a margin of safety.
- **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.
- **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.

- **Nephelometric Turbidity Unit (NTU)** - A measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.
- **Non-Detect (ND)** - Laboratory analysis indicates the constituent is not present.
- **Not Applicable (n/a)** - Does not apply.
- **Parts per billion (ppb) or Micrograms per liter (ug/l)** - One part per billion corresponds to 1 minute in 2,000 years, or a single penny in \$10,000,000. 1,000 ppb = 1 ppm.
- **Parts per million (ppm) or Milligrams per liter (mg/l)** - One part per million corresponds to 1 minute in 2 years, or a single penny in \$10,000. 1 ppm = 1,000 ppb.
- **Treatment Technique (TT)** - A treatment technique is a required process intended to reduce the level of a contaminant in drinking water.
- **<** - Less than the value indicated.

TABLE 1 - DETECTED PRIMARY CONTAMINANTS

Contaminant (Unit of measurement)	Violation (Y/N)	Level Detected	Range	MCLG/MRDLG	MCL/ MRDL	Likely Source of Contamination
Total Coliform Bacteria (Percent of monthly samples positive)	N	0% of samples positive	0	0	5%	Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other potentially harmful bacteria may be present.
Turbidity (NTU)	N	100% of samples <0.1	0.04 to 0.09	n/a	TT = 95% of samples <0.3	Soil runoff.
Chlorine (Entry Point) (ppm)	N	1.25	1.25 to 1.57	4	4	Water additive used to control microbes.
Chlorine (Distribution System) (ppm)	N	1.53 (a)	1.31 to 1.53 (a)	4	4	Water additive used to control microbes.
Copper (ppm) (2007)	N	0.008 (b)	(c)	1.3	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives.
Fluoride (ppm)	N	0.98 (d) (f)	0.94 to 1.03 (a) (f)	2 (e)	2 (e)	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories.
Haloacetic Acids (HAA5) (ppb)	N	18.4 (g)	10.7 to 26.3 (h)	n/a	60	By-product of drinking water chlorination.
Lead (ppb) (2007)	N	<2 (b)	(c)	0	AL=15	Corrosion of household plumbing systems; erosion of natural deposits.
Nitrate (ppm)	N	0.20	n/a	10	10	Runoff from fertilize use; leaking from septic tanks, sewage; erosion of natural deposits.
Arsenic (ppm)	N	0.0031	n/a	n/a	0.010	Naturally present in the environment.
Total Organic Carbon (ppm)	N	1.5 (g)	1.2 to 1.8 (g)	n/a	TT <2.0	Naturally present in the environment.
Total Trihalomethanes (TTHMs) (ppb)	N	44.8 (g)	16.6 to 60.3 (h)	n/a	80	By-product of drinking water chlorination.

(a) Monthly average values.

(b) 90th percentile value.

(c) No samples exceeded the Action Level (AL).

(d) Annual average value.

(e) State standard of 2 ppm is less than Federal standard of 4 ppm.

(f) Fluoride is added to the water at the treatment plant.

(g) Running annual average value.

(h) Range includes samples collected for special monitoring, which are not included in the "Level Detected" Running Annual Average value used for compliance determination.

TABLE 2 - DETECTED SECONDARY CONTAMINANTS

Contaminant (Unit of measurement)	Violation (Y/N)	Level Detected (a)	Range (b)	Recommended Limit (c)
Alkalinity (ppm)	N	25	19 to 36	n/a
Aluminum (ppb)	N	80	60 to 100	200
Hardness (ppm)	N	49	45 to 54	Soft Water < 75 Hard Water >150
Iron (ppb)	N	20	0 to 20	300
Manganese (ppb)	N	10	0 to 10	50
pH	N	9.9 (d)	9.8 to 9.9 (d)	6.5 - 8.5
Sulfate (ppm) (2004)	N	26	n/a	250

(a) Annual average value.

(b) Monthly average values.

(c) Recommended limits on compounds that might be a nuisance to the customer. These compounds affect aesthetic quality (appearance, taste, odor, etc.), but do not pose a health risk.

(d) A higher pH is maintained to help control corrosion in the distribution system mains.