

LEBANON WATER QUALITY REPORT 2017

Each year, Lebanon Utilities conducts thousands of tests on the drinking water we serve you to make sure it is safe. The format of this report follows the guidelines set by the United States Environmental Protection Agency (USEPA) as part of the Safe Drinking Water Act. The USEPA requires all public water providers to deliver this information to all customers on an annual basis in a single report that provides water quality data to the public in an understandable manner. We are pleased to provide you with the results of these tests. Listed below are detected contaminants in Lebanon's drinking water in 2017. All are below allowed levels. We don't list hundreds of other contaminants for which we tested that were not detected.

The most important information contained in this report is that our drinking water quality continues to meet all state and federal regulations. We are committed to providing the highest quality drinking water to our customers. Our laboratory tests our water at the wellhead, at various stages of treatment and within the distribution system for bacteria and a wide range of inorganic and organic chemicals. In fact, we test our drinking water for far more chemicals than required and at a frequency far in excess of local, state and federal regulations. Because of these stringent safeguards, we can reassure all our customers that the water we deliver to them meets all drinking water standards and guidelines. This Drinking Water Quality Report contains extensive water quality information.

Lebanon's General		Range for Lebanon			(EPA's MCL)	Ideal Goals (EPA's MCLG)	Sources of Contaminants		
Water Quality Characteristics		Min	Max	Avg.					
Secondary Contaminants									
	Year								
Total Hardness	2017	270 ppm tested on 03/28/2017 equal to 15.8 grains			n/a	n/a	Erosion of Natural Deposits		
Alkalinity (CaCO3)	2017	370 ppm tested on 03/28/2017							
pH	2017	S.U.	7.0	7.3	7.03				
Sodium	2017	ppm	1.2	60	30.6	n/a	n/a	Erosion of Natural Deposits	
Chloride	2017	30 ppm tested on 03/28/2017			250	n/a	Water additive used to control microbes.		
Primary Contaminants									
Antimony	2017	ppb	BDL	.7	BDL	6		Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder; test addition	
Arsenic	2017	ppb	1	4.5	2.5	10	n/a	Erosion of Natural Deposits; Runoff from orchards; Runoff from glass and electronics production wastes.	
Barium	2017	ppm	.296	.365	.365	2	2	Discharge of drilling waste; Discharge from metal refineries; Erosion of natural deposits	
Fluoride (Natural)	2017	ppm	.66	.878	.77	4.0		Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories.	
Nitrate [measured as Nitrogen]	2017	ppm	.563	1.19	.875	10.0	10.0	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.	
Selenium	2017	ppb	BDL	1.3	BDL	50	50	Discharge from petroleum and metal	
Radioactive Contaminants									
Gross Beta	2008	pCi/l	0.33	2		4		Decay of natural or man-made deposits	
Corrosion from Household plumbing					90%				
Copper	2017	ppm			.999	1.3	1.3	Erosion of natural deposits; Leaching from wood preservatives; Corrosion of household plumbing systems.	
Distribution results – 90 Percentile									
Lead	2017	ppb				2.5	15	0	Corrosion of household plumbing systems; Erosion of natural deposits.
Distribution results – 90 th Percentile									
Disinfection and Byproducts		Range of Levels Detected			(RA)				
Chlorine Residual	2017	ppm	.13	1.98		4	n/a		
						MRDL			
Total Trihalomethanes	2017	ppb	2.7	16.4	28.8	80	n/a	By-product of drinking water disinfection.	
Haloacetic Acids	2017	ppb	0.0	24.9	24.8	60	n/a	By-product of drinking water disinfection.	
Total Coliform	2017		1			1	0	Human and Animal Waste	
								Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful, bacteria may be present	

Revised Total Coliform Rule (RTCR)

The Revised Total Coliform rule (RTCR) seeks to prevent waterborne diseases caused by E. coli. E. coli are bacteria whose presence indicates the water may be contaminated with human or animal wastes. Human pathogens in these wastes can cause short-term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a greater health risk for infants, young children.

Violation Type	Violation Begin	Violation End	Violation Explanation
MONITORING, ROUTINE, MINOR (RTCR)	12/01/2017	12/31/2017	We failed to test our drinking water for the contaminant and period indicated. Because of this failure, we cannot be sure of the quality of our drinking water during the period indicated.

Total Trihalomethanes (TTHM's) and Haloacetic Acids (HAA5's) are based on a running average (RA) of samples taken from both plants from the 4th quarter of 2016 thru the 4th quarter of 2017. The range is the low and highest detection levels.

Lead & Copper are reported at the 90th percentile. Sample levels ranged from 0.012 to 1.4 ppm for copper testing and the lead testing ranged from less than 1.0 to 6.4 ppb.

Definitions: The above table contains scientific terms and measures, some of which may require explanation.

Action Level Goal (ALG): The level of a contaminant in drinking water below which there is no known or expected risk to health. ALGs allow for a margin of safety.

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

Avg: Regulatory compliance with some MCLs are based on running annual average of monthly samples.

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.

Level 1 Assessment: A Level 1 assessment is a study of the water system to identify potential problems and determine (if possible) why total coliform bacteria have been found in our water system.

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 a margin of safety.

Level 2 Assessment: A Level 2 assessment is a very detailed study of the water system to identify potential problems and determine (if possible) why an E. coli MCL violation has occurred and/or why total coliform bacteria have been found in our water system on multiple occasions.

Maximum Residual Disinfectant Level (MRDL): The highest level of 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 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.

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

mrem: millirems per year (a measure of radiation absorbed by the body)

na: not applicable

ppb: micrograms per liter or parts per billion – or one ounce is 7,350,000 gallons of water

pCi/L: picocuries per liter (a measure of radioactivity)

ppm: milligrams per liter or parts per million – or one ounce in 7,350 gallons of water

BDL: below detectable levels

Sources of Drinking Water

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. 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. More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline at (800) 426-4791.

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. FDA regulations establish limits for contaminants in bottled water which must provide the same protection for public health. Some people may be more vulnerable to contaminants in drinking water than the general population. 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 on taste, odor, or color of drinking water, please contact the system's business office. 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 (800-426-4791). 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. We 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>.

Lead and Copper

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. We are responsible for providing high quality drinking water, but we 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>.

OUR WATER SOURCE

The City of Lebanon's drinking water comes from a confined underground aquifer. Before distribution, the drinking water is processed at either our Chicago Street Treatment Facility or our Sugar Creek Treatment Facility. Each facility has five groundwater wells ranging from 90 to 180 feet deep that draw water from the aquifer. The total daily pumping capacity of these wells is just over 4 million gallons a day.

The well water is treated using aeration to reduce volatile organic compounds, hydrogen sulfide (an odor causing compound) and iron. The water is then run through filters to remove the iron. The water is then disinfected (using chlorine gas), prior to sending it into the distribution system and to you, the consumer.

If you would like to attend one of our Utility Service Board meetings they are normally scheduled for the first Wednesday after the first Monday of the month with another meeting following two weeks later again on Wednesday at 5:00 PM.

Please visit our website to keep informed of changes going on at the Lebanon Utilities.

If you have any questions about your water or this report, please do not hesitate to contact us.

PWS: 5206003

