LEBANON WATER QUALITY REPORT 2016

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 2016. 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								
(Year)								
Secondary Contaminants			Min	Max	Avg.			
	Year							
Total Hardness	(12)	ppm	178 or	204 or	191	n/a	n/a	Erosion of Natural Deposits
Divide ppm by 17.1 to get grains			10.4 grains	11.93 grains	11.2			
Alkalinity ($CaCO_3$)	(12)	ppm	317	343	330			
pH	(12)	S.U.	7.5	7.7				
Sodium	(14)	ppm	39.3	48.2	47.95	n/a	n/a	Erosion of Natural Deposits
Chloride	(08)	ppm	7.3	38	22.65	250	n/a	Erosion of Natural Deposits
Primary Contaminants								
Antimony	(14)	ppb	.4	.7		6		Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder; test addition
Arsenic	(14)	ppb	1.2	4.5		10	n/a	Erosion of Natural Deposits; Runoff from orchards; Runoff from glass and electric production waste
Barium	(14)	ppm	.296	.347		2	2	Discharge of drilling waste; Discharge from metal refineries; Erosion of natural deposits
Fluoride (Natural)	(14)	ppm	.66	.861		4.0		Erosion of Natural Deposits
Nitrate	(16)	ppm	1.14	1.16	1.15	10.0	10.0	Erosion of Natural Deposits
Selenium	(14)	ppb	0	1.3		50	50	Discharge from petroleum and metal
Radioactive Contaminants								
Gross Beta	(08)	pCi/l	0.33	2		4		Decay of natural or man-made deposits
Corrosion from Household plumbing					90%			
Copper	(14)	ppm			.814	1.3	1.3	Corrosion from Household Plumbing and Service
Distribution results – 90 Percentile								
Lead	(14)	ppb			1.3	15	0	Corrosion from Household Plumbing and Service
Distribution results – 90th Percentile								
Disinfection and Byproducts			Range of Levels Detected		(RA)			
Chlorine Residual	(16)	ppm	.16	1.22		4	n/a	
						MRDL		
Total Trihalomethanes	(16)	ppb	5.4	62.9	32.6	80	n/a	By-product of drinking water chlorination
Haloacetic Acids	(16)	ppb	3.1	82.4	31.2	60	n/a	By-product of drinking water chlorination
Total Coliform	(16)		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			

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 2015 thru the 4th quarter of 2016. The range is the low and highest detection levels.

Lead & Copper are reported at the 90th percentile. Sample levels ranged from 0.029 to 1.187 ppm for copper testing and the lead testing ranged from less than 0.1 to 11.7 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 that triggers treatment or other requirements that 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.

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.

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.

MFL: million fibers per liter (a measure of asbestos)

NTU: nephelometric turbidity units (a measure of turbidity)

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

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

na: not applicable

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

ppt: parts per trillion, or nanograms per liter (ng/L)

ppq: parts per quadrillion, or pictograms per liter (pg/L)

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 EPAs 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.

PROTECT AND PRESERVE WATER QUALITY

More than one million tons of hazardous waste from products used around the house enters the waters of our continent every year.

To protect water quality:

- Do not flush unused medications down the toilet. Return them to your pharmacist for proper disposal.
- Reduce the use of fertilizers, pesticides and toxic cleaners. As rainwater passes through the ground, it takes pesticides and fertilizers with it which may contaminate water.
- Sweep up debris before it can be washed away with storm water and obstruct the storm drain or contaminate a waterway.
- Use paints or solvents in small amounts, and be sure to clean up spills and properly dispose of rags and brushes. Remember to donate unused paint to community groups or to take it to a recycling center.
- Purchase non-toxic or biodegradable products whenever possible.
- Plant a Rain Garden! Rain gardens reduce the amount of storm water and pollutants that enter streams and lakes. Rain gardens are shallow, perennial gardens that soak up rain water, mainly from your roof but also from your driveway and lawn. For more information on Rain Gardens visit our website or contact our office.
- Controlling what goes down the drain is the easiest and most effective way to protect the environment, and you can start today!

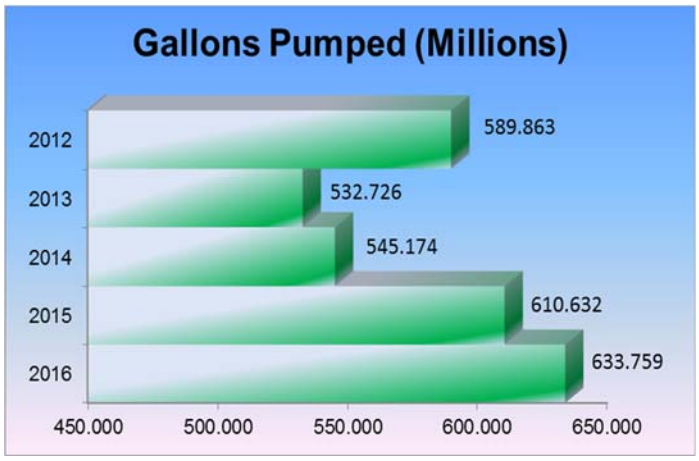
OUR WATER SOURCE

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.



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Lebanon UTILITIES