

2015 City of Lebanon Drinking Water Quality Report

Your drinking water met all Ohio EPA standards

The City of Lebanon has prepared the following report to provide information to you, the consumer, on the quality of your drinking water. Included within this report is general health information, water quality test results, how to participate in decisions concerning your drinking water and water system contacts. In 2015 your drinking water met all Ohio EPA standards.

Source Water Information

The City of Lebanon and the Greater Cincinnati Water Works (GCWW) have a current, unconditional license to operate the respective water systems from the Ohio Environmental Protection Agency (OEPA). Lebanon and GCWW were in compliance with all state primary drinking water rules in 2015.

The City of Lebanon purchases its potable water supply from GCWW. Your water supplied by GCWW comes from both the Ohio River, which is surface water, and the Bolton Well Field in the Great Miami Aquifer, which is groundwater. The Ohio River water is treated at the Richard Miller Treatment Plant (RMTP) and Great Miami Aquifer groundwater is treated at the Bolton Treatment Plant, and then distributed to customers. Before water comes to your tap GCWW takes many steps to ensure its quality and safety. Their priority is safe drinking water. On average GCWW perform 600 tests a day throughout the treatment process and distribution system to ensure you receive the highest quality water possible. The Miller Treatment Plant uses a treatment combination of presettling, final settling, filtration, and granular activated carbon (GAC) for organics removal. GAC is state of the art technology and serves as a barrier against impurities in raw source water. This is followed by pH adjustment, disinfection with chlorine and UV, and the addition of Fluoride for dental health.

The Bolton Plant utilizes lime softening, settling, and filtration prior to disinfection and the addition of fluoride. If you have any questions about water treatment at GCWW, please contact Bill Fromme at (513) 624-5612.

The City of Lebanon also has emergency backup connections with Western Water and Warren County Water. During 2015 we used no water from these connections.

Mandatory language (which has been italicized) has been included in this report that was developed by the OEPA to provide general information on drinking water. Questions regarding this language should be directed to the OEPA (937) 285-6357.

What are sources of contamination to drinking water?

The sources of drinking water for both tap water and bottled water, includes 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: (A) Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations and wildlife; (B) 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; (C) Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban storm water runoff, and residential uses; (D) 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; (E) 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, USEPA 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.

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 Environmental Protection Agency's Safe Drinking Water Hotline (1-800-426-4791)

Most of GCWW's customers receive water from the Richard Miller Treatment Plant (RMTP) which treats water from the Ohio River. As with all surface waters, the Ohio River has been classified as highly susceptible to contamination by the OEPA. This is because it is open to the environment and pollution may spread quickly with the flow of the river. To address this, GCWW has several barriers between potential pollution and the tap water. The first barrier is a source water protection program, designed to prevent and monitor contamination in the river. The program enables GCWW to work closely with the Ohio River Valley Water Sanitation Commission (ORSANCO) and other utilities to monitor the Ohio River. GCWW is one of only a few water utilities in the nation with treatment facilities that include Granular Activated Carbon (GAC) and Ultra Violet (UV) in the daily treatment process. Both treatments have been recognized as the best available technologies for treating the Ohio River water. Additional barriers utilized by GCWW to protect and treat drinking water range from closing the intake when necessary and only using stored water until pollution passes, to altering a treatment process if needed, in extreme circumstances.

GCWW's Bolton Treatment Plant treats groundwater from the Great Miami Aquifer and provides water to the northwestern area of Hamilton County and parts of Butler and Warren Counties. The OEPA has classified Bolton water as having a high susceptibility to contamination because the Great Miami Aquifer does not have a protective clay layer, the water is shallow, there are potential contamination sources nearby; and there are low levels of nitrate in the aquifer. This does not mean that the aquifer is contaminated; only that it is vulnerable to contamination. Cincinnati recognized the vulnerability of the aquifer over a decade ago and has worked as a member of the Hamilton to New Baltimore Groundwater consortium to develop an award-winning source-water-protection program to protect the aquifer (www.gwconsortium.org). For more information about source water protection or to find out what you can do to help, call (513) 624-5600, e-mail info@gcww.cincinnati-oh.gov or visit www.myGCWW.org.

Who needs to take special precautions?

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 infection. 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).

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 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 at 800-426-4791 or at <http://www.epa.gov/safewater/lead>.

Results of GCWW Voluntary Monitoring for Cryptosporidium:

GCWW has tested for *Cryptosporidium* (*Crypto*) in treated waters and has never detected it. *Crypto* is a microscopic microorganism that, when ingested, can result in diarrhea, fever and other gastrointestinal symptoms. GCWW also tested for *Crypto* in the Ohio River surface water and it was found in 0 of 22 samples during 2015. The organism is found in surface waters and comes from animal and human wastes which enter the watershed. *Crypto* is eliminated by an effective combination including sedimentation, filtration, and disinfection.

Turbidity

GCWW is required to report on the turbidity as an indication of the effectiveness of their filtration system. Turbidity is a measure of the cloudiness of water. The turbidity limit set by the EPA is 0.3 NTU in 95% of the daily samples and shall not exceed 1 NTU at any time. As reported in the table below, GCWW's highest recorded turbidity result for 2015 was 0.15 NTU (Miller Water) and the lowest monthly percentage of samples meeting the turbidity limits was 100%.

GCWW has tested for sodium in treated water as it leaves the treatment plants and has found 33 milligrams per liter (mg/L) in the Miller water and 31 mg/L in the Bolton water. There are approximately 4 cups in a liter.

About your drinking water

The EPA requires regular sampling to ensure drinking water safety. The City of Lebanon conducted sampling for coliform bacteria, chlorine, disinfection byproducts, and unregulated contaminants during 2015. *Unregulated contaminants are those for which USEPA has not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist EPA in determining the occurrence of unregulated contaminants in drinking water and whether future regulation is warranted.* For a complete list of results for the unregulated contaminants please contact John Habig at (513)228-3601. Samples were collected for 32 possible contaminants most of which were not detected in the City of Lebanon water supply. Over 800 water samples were collected for analysis. All of the sample results were in compliance with all drinking water regulations. The OEPA requires us to monitor for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of our data, though accurate, are more than one year old. The following Table contains the most recent testing data done in accordance with the regulations.

CodeRED is an automated emergency notification system that allows the City to send out pre-recorded messages over the telephone to our residents alerting them to certain situations. CodeRED will primarily be utilized to notify citizens of emergency situations such as water boil alerts, utility outages, snow events, and other emergency situations. CodeRED has the capability of notifying all of Lebanon's residents within an hour. We strongly recommend that all Lebanon residents and businesses register their contact information in the CodeRED system. You can register for CodeRED by going to this link: <http://www.lebanonohio.gov/FAQ.aspx?TID=22>

How do I participate in decisions concerning my drinking water?

Public participation and comment are encouraged at regular meetings of Lebanon City Council. Meetings are open to the public and held on the second and fourth Tuesday of each month at 7:00 P.M. in the Council chambers, 2nd floor, Lebanon City Building located at 50 South Broadway. Regularly scheduled Council meetings are broadcast on Channel 6 on the local Telecommunications System.

Please share this information with all other people who drink this water, especially those who may not have received this report directly (for example, people in apartments, nursing homes, schools

and businesses.) You can do this by posting this report in a public place or distributing copies by hand or e-mail.

For more information on your drinking water contact John Habig, 513-228-3601 or visit the City website at www.lebanonohio.gov.

Listed below is information on those contaminants that were found in the City of Lebanon drinking water in 2015

Water Quality Data Report

Lebanon Water System

Contaminants (units)	MCLG	MCL	Level Found	Range of Detection ²	Violation	Year Sampled	Typical Sources of Contaminants
Regulated Contaminants							
<i>Inorganic Contaminants</i>							
Lead (ppb)	0	AL=15	2.01 ¹	NA	No	2013	Corrosion of household plumbing system; Erosion of natural deposits.
	Zero out of 120 samples was found to have Lead levels in excess of the Action Level of 15 ppb						
Copper (ppm)	1.3	AL=1.3	0.041 ¹	NA	No	2013	Corrosion of household plumbing system; Erosion of natural deposits.
	Zero out of 120 samples was found to have Copper levels in excess of the Action Level of 1.3 ppm						
Nitrate (ppm)	10	10	1.66	0.317 - 1.66	No	2012	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
<i>Disinfection By-Products</i>							
Total Trihalomethanes (ppb)	0	80	47.8	26.2 – 62.4	No	2015	By-product of drinking water chlorination.
Haloacetic Acids (ppb)	0	60	1.07	2.3 – 12.2	No	2015	By-product of drinking water chlorination.
<i>Residual Disinfectants</i>							
Total Chlorine (ppm)	MRDL=4	MRDLG=4	0.7	0.7 - 0.9	No	2015	Water additive to control microbes.
<i>Coliform Bacteria</i>	MCL	MCLG	# of Positive Total Coliform Samples	# of Positive Fecal/E. Coli Samples	Violation	Collection Date	
Total Coliform	5% of monthly samples are positive	0	0	0	No	2015	Naturally present in the environment.

¹ sampled at customer's tap. 90% were at or below this reading.

² if only 1 number is given, only 1 sample was collected.

<p>Maximum contaminant level goal (MCLG): 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.</p>	<p>Parts per Million (ppm) or Milligrams per Liter (mg/L): Units of measure for concentration of a contaminant. A part per million corresponds to one second in a little over 11.5 days.</p>	<p>Parts per Billion (ppb) or Micrograms per Liter (ug/L): Units of measure for concentrations of a contaminant. A part per billion corresponds to one second in 31.7 years.</p>	<p>Maximum Residual Disinfection 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 contamination.</p>
<p>Maximum Contaminate Level (MCL): The highest level of a contaminant that is allowed in drinking water. MCL's are set as close to the MCLG as feasible using the best available treatment technology.</p>	<p>Action Level (AL): The concentration of a contaminant which, if exceeded, triggers a treatment or other requirements which a water system must follow.</p>	<p>Not Applicable (NA) Not Detected (ND): Not detected at testing limit. Not regulated (NR)</p>	<p>Maximum Residual Disinfection 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.</p>
<p>NTU: Nephelometric Turbidity Unit, used to measure clarity in drinking water.</p>	<p>Treatment Technique or TT: A required process intended to reduce the level of a contaminant in drinking water.</p>	<p>The < symbol: A symbol which means less than. A result of <5 means that the lowest level that could be detected was 5 and the contaminant in that sample was not detected.</p>	

Unregulated Contaminates						
Substance	Unit	Average Level Detected	Range of Detections	Violation	Year Sampled	Typical Sources of Contaminants
Chromium (Total)	ppb	0.23	0.17 - 0.28	NA	2015	Naturally-occurring element; used in making steel and other alloys. Chromium-3 and -6 forms are used for chrome plating, dyes and pigments, leather tanning, and wood preservation.
Molybdenum	ppb	1.34	0.86 – 2.1	NA	2015	Naturally-occurring elemental found in ores and present in plants, animals and bacteria; commonly used form molybdenum trioxide used as chemical reagent.
Strontium	ppb	217	178 – 264	NA	2015	Naturally occurring element; historically, commercial use of strontium has been in the faceplate glass of cathode-ray tube televisions to block x-rays emissions.
Vanadium	ppb	0.19	0.08 – 0.41	NA	2015	
Chromium-6	ppb	0.62	0.53 – 0.76	NA	2015	Naturally-occurring element; used in making steel and other alloys. Chromium-3 and -6 forms are used for chrome plating, dyes and pigments, leather tanning, and wood preservation.
Chlorate	ppb	11	ND – 34.9	NA	2015	Agricultural defoliant or desiccant; used in production of chlorine dioxide.
1,4-dioxane	ppb	0.17	0.098 - 0.25	NA	2015	Cyclic aliphatic ether; used as a solvent or solvent stabilizer in manufacture and processing of paper, cotton, textile products, automotive coolant, cosmetics and shampoos.
Bromodichloromethane	ppb	11.5	4.7 – 17.5	NA	2015	By-product of drinking water chlorination.
Bromoform	ppb	11.8	0.9 – 25.6	NA	2015	By-product of drinking water chlorination.
Chloroform	ppb	8.7	1.2 – 15.4	NA	2015	By-product of drinking water chlorination.
Dibromochloromethane	ppb	17.8	6.9 – 20.9	NA	2015	By-product of drinking water chlorination.
Bromochloroacetic acid	ppb	4.3	2.0 – 5.0	NA	2015	By-product of drinking water chlorination.
Dibromoacetic acid	ppb	5.3	1.9 – 6.3	NA	2015	By-product of drinking water chlorination.
Dichloroacetic acid	ppb	4.3	ND – 7.2	NA	2015	By-product of drinking water chlorination.
Monochloroacetic acid	ppb	0.6	ND – ND	NA	2015	By-product of drinking water chlorination.
Trichloroacetic acid	ppb	1.4	ND – 3.0	NA	2015	By-product of drinking water chlorination.

2015 CCR Data for GCWW Wholesale Customers

Regulated Contaminants: Contaminants subject to a Maximum Contaminant Level (MCL), Action Level (AL) or Treatment Technique (TT)*

Substance	Unit	Maximum Allowed (MCL, AL, TT)*	MCLG*	Miller Water				Bolton Water				Typical Source of Contamination
				Highest Compliance Level Detected	Range of Detections	Violation	Year Sampled	Highest Compliance Level Detected	Range of Detections	Violation	Year Sampled	
Fluoride	Ppm	4	4	0.97	0.77 - 1.03	No	2015	0.94	0.82 – 0.99	No	2015	Additive which promotes strong teeth. May come from erosion of natural deposits.
Nitrate	Ppm	10	10	1.34	0.49 - 1.34	No	2015	1.55	NA	No	2015	Runoff from fertilizer use, leaching from septic tanks, sewage, erosion of natural deposits.
Turbidity	NTU	TT1 < 1 NTU Max and TT2 < 0.3 NTU 95% of the time	NA	0.15	0.04 - 0.15	No	2015	NR	NR	NA	NA	Soil Runoff
Total Organic Carbon		TT ¹	NA	2.00	1.74 – 3.39	No	2015	NR	NR	NA	NA	Naturally present in the environment.
Barium	Ppm	2	2	0.032	NA	No	2015	0.017	NA	No	2015	Erosion of natural deposits; Discharge of drilling wastes; Discharge from metal refineries

Unregulated Contaminants for which EPA requires monitoring to determine where certain substances occur and whether it needs to regulate those substances.

Substance	Unit	MCLG*	Miller Water				Bolton Water			
			Average Level Detected	Range of Detections	Violation	Year Sampled	Average Level Detected	Range of Detections	Violation	Year Sampled
Chloroform	Ppb	70	1.78	NA	NA	2015	1.67	NA	NA	2015
Bromodichloromethane	Ppb	0	3.90	NA	NA	2015	4.10	NA	NA	2015
Dibromochloromethane	Ppb	60	5.50	NA	NA	2015	5.90	NA	NA	2015
Bromoform	Ppb	0	1.88	NA	NA	2015	4.13	NA	NA	2015
Sulfate	Ppm	NA	85	57-85	NA	2015	NA	NA	NA	NA
Chlorate	Ppb	NA	24	ND-41	NA	2013	ND	NA	NA	2013
Chromium	Ppb	100	ND	ND – 0.56	NA	2013	0.26	0.24 – 0.28	NA	2013
Hexavalent Chromium	Ppb	NA	0.058	0.048 – 0.068	NA	2013	0.205	0.200 – 0.210	NA	2013
1,4-Dioxane	Ppb	NA	0.326	ND – 0.575	NA	2013	0.545	0.276 – 0.814	NA	2013
Molybdenum	Ppb	NA	1.6	1.2 – 2.5	NA	2013	4.2	3.5 – 4.9	NA	2013
Strontium	Ppb	NA	205	190 - 220	NA	2013	170	160 – 180	NA	2013
Vanadium	Ppb	NA	0.29	ND – 0.56	NA	2013	0.66	0.60 – 0.72	NA	2013

¹ The value reported under "Highest Compliance Level Detected" for Total Organic Carbon (TOC) is the lowest ratio between percentage of TOC actually removed to the percentage of TOC required to be removed. A value of greater than one (1) indicates that the water system is in compliance with TOC removal requirements. A value of less than one (1) indicates a violation of the TOC removal requirements.