The City of Lakewood
Division of Water

The City of Lakewood owns and operates its water distribution system. This system consists of approximately 106 miles of water main pipelines. The Lakewood Division of Water is responsible for all system maintenance and improvements. To ensure our systems ability to supply the citizens of Lakewood with drinking water of the highest quality, the Division of Water has been involved in an ongoing system improvements program. Since 1960, approximately 69 miles of this aging pipe have been replaced. The remaining 37 miles of pipeline were installed between 1901 and 1959, making them between 58-118 years old. All system improvements are funded by water system user fees. We have a current "unconditional license to operate and maintain a Public Water System" issued by the Ohio EPA.

The City of Lakewood purchases its drinking water in treated form from the City of Cleveland Division of Water. It is introduced into our distribution system through 18 entry points located near the perimeters of our city. The City of Lakewood does not adjust pressure or perform any additional water treatment.

In 2018, the business and residents of Lakewood consumed nearly 1.4 billion gallons of water, an average of about 3.84 million gallons per day.

The source of your drinking water is Lake Erie, a surface water source and one of the five Great Lakes, which collectively store approximately 20% of the world's fresh water supply. 9 5 % of the water entering Lake Erie comes from the upstream great lakes Superior, Michigan, and Huron. The remaining 5% comes from rain and snow in the Lake Erie drainage basin and includes the various streams and rivers that flow into the lake. Since no single treatment process can address all possible contaminants, our water is treated using a multiple barrier process. Implementing measures to protect Lake Erie can only help to improve our water quality. There are a number of ways that we can help to accomplish this:

- Do not deposit trash and debris into storm and sanitary sewers.
- Properly dispose of household wastes such as fertilizers, pesticides, paints, paint thinners, motor oil and anti-freeze.
- Support local watershed and environmental groups.

Additional information, including The City of Cleveland's Drinking Water Source Assessment Report can be found online at

http://wwwapp.epa.ohio.gov/gis/swpa/OH1801212.pdf.

For the purpose of source water assessments, all surface waters are considered to be susceptible to contamination. By their nature surface waters are accessible and can be easily contaminated by chemicals and pathogens from an upstream spill. Contaminants may rapidly arrive at the public drinking water intake with little warning or time to prepare. However, based on the information compiled for this assessment, the Cleveland Critical Assessment Zone (CAZ), must be classified as low susceptibility due to the distance and depth of the intakes from potential contaminant sources.

The sources of drinking water both tap and bottled 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.

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. Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water which shall 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 OEPA Safe Drinking Water Hotline (800) 426-4791.

Some people may be more vulnerable to contaminants in drinking water than the general population. Persons with compromised immune systems

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. USEPA/ Centers for Disease Control and Prevention (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

Lead Information... 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 Lakewood 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 1-2 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. The Safe Drinking Water hotline will provide information on lead testing methods and steps you can take to minimize exposure at (800) 426-4791 or at www.epa.gov/safewater/lead.

Questions concerning this report may be directed to Nicholas Del Vecchio, Division Manager, Lakewood Division of Water and Wastewater Collection at (216) 529-1867. Because Lakewood purchases its drinking water in treated form from the City of Cleveland, questions may also be directed to the City of Cleveland Division of Water Customer Service at (216) 664-3130, or Public Relations at (216) 664-2444. Residents may bring concerns regarding the City's drinking water distribution system to meetings of the Lakewood Public Works Committee. Contact the Lakewood City Council Information Line at (216) 529-6055 for scheduling.

CITY OF LAKEWOOD 2018 WATER QUALITY REPORT

Michael P. Summers, Mayor

Lakewood City Council:

Sam O'Leary, President, Ward 2

David Anderson, Vice-President, Ward 1

John Litten, Ward 3

Daniel O'Malley, Ward 4

Thomas Bullock, At-Large

Meghan F George, At-Large

Tristan Rader, At-Large

CITY OF LAKEWOOD 2018 WATER QUALITY REPORT

Under the Safe Drinking Water Act, each community water system is required to provide its customers with an annual report regarding the quality of their drinking water. In compliance with this Federal regulation, the City of Lakewood Division of Water has produced the following report. Included in this report are details about the source of your drinking water, water quality test results (indicating how your drinking water compares to standards set by regulatory agencies), as well as general health information.

The City of Lakewood
Water Sampling

From June through August of 2018, the City of Lakewood Division of Water collected tap water samples from 33 Lakewood homes. Those samples were then sent to an EPA approved laboratory for analysis of their lead and copper con tent. All test results were well within State and Federal regulations for drinking water quality.

DEFINITIONS

The following definitions will be helpful in interpreting the water quality tables contained in this report:

- *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 for a margin of safety.
- *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.
- *Treatment Technique:*
  A required process intended to reduce the level of a contaminant in drinking water.
- *Action Level:*
  The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
- *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 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.

KEY

AL	= Action Level
MCL	= Maximum Contaminant Level
MCLG	= Maximum Contaminant Level Goal
NTU	= Nephelometric Turbidity Units
mg/L	= Milligrams per liter (or parts per million)
µg/L	= Micrograms per liter (or parts per billion)
TT	= Treatment Technique
MRDL	= Maximum Residual Disinfectant Level
MRDLG	= Maximum Residual Disinfectant Level Goal
N/A	= Not applicable
ND	= Not detected

WATER QUALITY TABLE

Lead & Copper

Contaminant	MCLG	AL	Lakewood Water	# of sites above AL	Violations	Year	Typical Source in Drinking Water
Copper (mg/L)	1.3	1.3	0.052	0 out of 33 sites	No	2018	Corrosion of household plumbing systems
Lead (µg/L)	0	15	0.003	0 out of 33 sites	No	2018	Corrosion of household plumbing systems

Organic Contaminants

Organic Contaminants	MCLG	MCL	Lakewood Water	Range of Detections	Violations	Year	Typical Source in Drinking Water
TTHMs [Total Tri-Halo-Methanes) (µg/L)	N/A	80	23.6	ND – 48.4	No	2018	By-product of drinking water chlorination
HAA (Halo-acetic Acids (µg/L)	N/A	60	8.56	ND - 10.7	No	2018	By-product of drinking water chlorination
IDSE TTHM	N/A	N/A	N/A	5.90 - 42.5	N/A	2008	By-product of drinking water chlorination
IDSE HAAS	N/A	N/A	N/A	0 - 31.2	N/A	2008	By-product of drinking water chlorination
Total Organic Carbon (mg/L)	N/A	TT	1.01	1.01 - 1.4	N/A	2010	Naturally present in the environment

- City of Lakewood Division of Water purchases all water from the City of Cleveland as a finished product. Water supplied comes from one of two plants (Baldwin Water Plant and Morgan Water Plant), see attached document for City of Cleveland Water Quality Data.

Compliance With

Drinking Water Regulations

The City of Lakewood Division of Water is in compliance with all maximum contaminant level requirements.

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, livestock, and wildlife.
- Inorganic contaminants, such as salts and metals, which can
  Occur naturally or result from urban storm water runoff, industrial/domestic wastewater, oil/gas production, mining or farming.
- Pesticides and herbicides from agricultural/residential use, or
  From Storm water runoff.
- Organic chemical contaminants, which are by-products of industrial processes, and can also come from gas stations, urban storm water runoff, and septic systems.
- Radioactive contaminants, either naturally occurring or from oil and gas production and mining activities.

Table of Detected Contaminants

Contaminants (Units)	When We Checked	MCLG	MCL	Baldwin Water Plant		Morgan Water Plant		Violation	Typical Source of Contaminant
				Level Found	Range	Level Found	Range		
Turbidity (NTU)	2018	n/a n/a	TT * (<1 NTU) TT *(%)	0.1 100%	0.02-0.1	0.17 100%	0.04-0.17	No	Soil runoff
Total Organic Carbon	2018	n/a	TT **	1.18	1.13-1.71	1.21	1.13-1.53	No	Naturally present in the environment
Total Chlorine (mg/L)	2018	4 (MRDLG)	4 (MRDL)	1.13	1.03-1.18	1.14	1.07-1.17	No	Water additive used to control microbes
Fluoride (mg/L)	2018	4	4	1.08	0.82-1.28	1.07	0.66 - 1.24	No	Water additive which promotes strong teeth; Erosion of natural deposits; Discharge from fertilizer and aluminum factories.
Nitrate as Nitrogen (mg/L)	2018	10	10	0.99	0.11-0.99	0.54	0.11-0.54	No	Run off from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.

*Turbidity is a measure of the cloudiness of water and an indication of the effectiveness of our filtration system. The turbidity limit set by the EPA is 0.3 NTU in 95% of the samples analyzed each month and shall not exceed 1 NTU at any time for each of our water treatment plants. As reported above, Cleveland Water's highest recorded treated water turbidity result for 2018 was 1.03 NTU and the lowest monthly percentage of samples meeting the turbidity limits was 99.44%.

**The value reported under "Level Found" for Total Organic Carbon (TOC) is the lowest running annual average ratio between the percent of TOC actually removed to the percentage of TOC required to be removed. A value of greater than one (1) indicates compliance with TOC removal requirements. A value less than 1 indicates a violation of the TOC removal requirements. The values reported under under the "Range of Detections" for TOC is the lowest monthly ratio to the highest monthly ratio.

Disinfection Byproducts							
Contaminants (Units)	When We Checked	MCLG	MCL	Level Found	Range	Violation	Typical Source of Contaminant
Total Trihalomethanes (TTHM) (µg/L)	2018	n/a	80	35.32	11-52.3	No	Byproduct of drinking water chlorination
Haloacetic Acids (HAA5) (µg/L)	2018	n/a	60	19.5	6.4-35.4	No	Byproduct of drinking water chlorination

Lead and Copper						
Contaminants (units)	Action Level (AL)	Individual Results over the AL	90% of test levels were less than	Violation	Year Sampled	Typical source of Contaminants
Lead (ppb)	15 ppb	NA	< 5	No	2018	Corrosion of household plumbing systems; Erosion of natural deposits.
	0 out of 55 samples were found to have lead levels in excess of the lead action level of 15 ppb.					
Copper (ppm)	1.3 ppm	NA	0.11	No	2018	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives.
	0 out of 55 samples were found to have copper levels in excess of the copper action level of 1.3 ppm.					

Unregulated Contaminants

Unregulated contaminants are substances for which USEPA has no established drinking water standard. 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.

Contaminants # (Units)	When We Checked	MCLG	Baldwin Water Plant		Morgan Water Plant		Typical Source of Contaminant
			Level Found	Range	Level Found	Range	
Manganese (ppb) #	2018	n/a	0.476	n/a	1.92	n/a	Naturally occuring in water
Bromodichloromethane (ppb)	2018	n/a	3.92	n/a	2.25	n/a	Byproducts of drinking water
Chloroform (ppb)	2018	n/a	3.07	n/a	1.33	n/a	disinfection, measured at
Dibromochloromethane (ppb)	2018	n/a	2	n/a	1.57	n/a	representative points in the distribution system.

This contaminant was detected during Phase 4 of the Unregulated Contaminant Monitoring Rule (UCMR4), which Cleveland Water is required to participate in. Additional contaminants were monitored and not detected. If you would like additional information on results of unregulated contaminant monitoring, please call the Water Quality line at 216-664-2783.