



West Side Water System 2019 Annual Water Quality Report

Dear Customer:

We are pleased to present the 22nd annual report summarizing the quality of the drinking water provided to you during the past year. This "Consumer Confidence Report" is required by the Safe Drinking Water Act (SDWA). It tells you where your tap water comes from, what our tests show about it, and includes other things you may wish to know about drinking water.

We encourage public interest and participation in our community's decisions affecting drinking water. The Lansing Township Board of Trustees meets every other Tuesday at 7 p.m. in the Board Room, located at 3209 W. Michigan Avenue, Lansing, MI 48917.

The Bottom Line

During 2019, your West Side Water System drinking water met or exceeded all quality standards issued by the U.S. Environmental Protection Agency (EPA) and the Michigan Department of Environment, Great Lakes, and Energy (EGLE).

Water Source

West Side Water System drinking water is supplied by the Lansing Board of Water & Light, which draws water from 125 wells, drilled about 400 feet into the Earth's surface. The source of this plentiful supply is an underground aquifer called the Saginaw Formation, which underlies much of the mid-Michigan region. Well water is transported through large transmission mains to one of two conditioning plants. There, a process removes about 80 percent of the water hardness. The softened water is then chlorinated, fluoridated, filtered and stored in reservoirs for distribution to our customers.

During 2003, EGLE conducted an assessment of the vulnerability of our aquifer to impacts from human activities. Because there are several known and potential sources of contamination in and near the BWL wellhead protection areas, the aquifer in this region has been assessed as "highly susceptible" to contamination. If you desire more information on this local Source Water Assessment, contact manager Randy Seida at 517-485-5470.

Well Abandonment

As a leader in this program, Lansing Township will offer plugging of any residential well, most at no charge to the homeowner. Educating the public is our primary goal and we believe it is the best way to promote an environmentally sound water supply. Please feel free to contact Lansing Township's Water Department with questions or suggestions to further our program.

Important Information About Lead

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. West Side Water 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 1-800-426-4791 or at <http://www.epa.gov/drink/info/lead>.

How to Read These Tables

The following tables show the results of our water quality tests. Every regulated contaminant we detected in the water, even in the smallest traces, is listed here. The tables contain the name of each substance, the highest level allowed by regulation (MCL), the ideal goals for public health (MCLG), the amount detected, the usual sources of such contamination, footnotes explaining our findings, and a key to units of measurement.

The State allows us to monitor for certain contaminants less than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year. All of the data are representative of the water quality, but some are more than one year old.

The tables do not list the hundreds of contaminants we tested for but did not detect.

Key To Table:

- AL Action Level:** The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
- L1 Level 1 Assessment:** A study of the water supply to identify potential problems and determine (if possible) why total coliform bacteria have been found in our water system.
- L2 Level 2 Assessment:** 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.
- MCL Maximum Contaminant Level:** 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.
- MCLG Maximum Contaminant Level Goal:** 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.
- MRDL Maximum Residual Disinfectant Level:** 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.
- MRDLG Maximum Residual Disinfectant Level Goal:** The level of a disinfectant in drinking water 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 contamination.

PPM parts per million, or milligrams per liter (mg/l)

PPB parts per billion, or micrograms per liter (ug/l)

2019 Substances we measured at the LBWL water conditioning plants

Regulated Contaminant	Unit	MCL	MCLG	Highest Detected Level	Range	Major Sources	Violation?
Barium	PPM	2	2	0.022	0.015 to 0.022	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits	No
Fluoride	PPM	4	4	0.72	0.72 to 0.72	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories	No

Special Monitoring (Not Regulated)

Sodium	PPM	Not Established		89	65-89	Natural constituent of groundwater	No
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Radioactive Contaminants *

Radium 226 & 228	pCi/L	5	0	1.95±0.44	0.84±0.51 to 1.95±0.44	Erosion of natural deposits	No
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*Radium 226 & 228 testing was completed 7/7/2016.

Substances we measured in homes and businesses

Substance	Unit	AL	9 out of 10 homes were below a level of:	# of samples above the action level:	Major Sources	Violation?
Lead	PPB	15 PPB	0.7	0	Corrosion of household plumbing systems; corrosion of lead service lines	No
Copper	PPM	*1.3 PPM at 90th percentile	0.0	0	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives	No

According to the sampling plan submitted to the Michigan Department of Environment, Great Lakes, and Energy, testing for lead and copper was completed September 2017.

Disinfection By-Products

The BWL adds chloramine to its water at the conditioning plant to protect against bacterial growth. Chloramine is used rather than other disinfectant options because it minimizes the number and level of chlorination by-products, persists better in the distribution system, and leaves little or no unpleasant odor and taste. The following table lists the chloramine levels and disinfectant by-products created by the reaction of the BWL’s chloramine treatment and naturally occurring organic compounds. The chloramine levels were measured at the water plant tap and the disinfectant by-products were measured in the distribution system.

Substances we found in the Water Distribution System

Substance	Unit	MCL	MCLG	Highest Average Detected Level	Range of Detected Levels	Major Sources	Violation?
Haloacetic Acids (HAA5)	PPB	60	NA	< 2.0	<2.0 to <2.0	By-product of drinking water chlorination	No
Total	PPB	80	NA	3	3 to 3	By-product of drinking	No

Trihalomethanes (THMs)						water chlorination	
Chloramine	PPM	4	4	1.3	0.1 to 2.4	Water additive used to control microbes	No

Total Coliform Bacteria

As referenced by the EPA, total coliforms are a group of related bacteria that are (with few exceptions) not harmful to humans. A variety of bacteria, parasites and viruses, known as pathogens, can potentially cause health problems if humans ingest them. The EPA considers total coliforms a useful indicator of other pathogens for drinking water. Total coliforms are used to determine the adequacy of water treatment and the integrity of the distribution system.

epa.gov/dwreginfo/revised-total-coliform-rule-and-total-coliform-rule.

Microbial Contaminants	Number Detected	L1 Assessment Triggered	L2 Assessment Triggered	Major Sources	Violation?
Total Coliform Bacteria	1	No	No	Naturally present in the environment	No
E. coli	0	No	No	Human or animal fecal waste	No

Unregulated Contaminants

Unregulated contaminants are those that do not have a MCL or MCLG but are reported to and evaluated by the MDEQ and EPA. Monitoring helps the EPA determine in which areas of the country these contaminants are being detected and whether they should be regulated. As our customers, you may request the results of our tests by contacting Angie Goodman at 517-702-7059 or angie.goodman@lbwl.com.

Unregulated Contaminants	Unit	Average Detected Level	Range	Major Source	Violation?
Chromium	PPB	0.2	0.2-0.3	Natural constituent of groundwater	No
Molybdenum	PPB	1.1	0-1.2	Industrial activities; naturally occurring sources	No
Strontium	PPB	166	120-210	Industrial activities; naturally occurring sources	No
Vanadium	PPB	0.3	0.2-0.4	Industrial activities; naturally occurring sources	No
Chromium, Hexavalent	PPB	0.2	0.14-0.24	Industrial activities; naturally occurring sources	No
Chlorate	PPB	174	32-330	Byproduct of disinfection	No
1,4-Dioxane	PPB	0.14	0.14-0.14	Groundwater contamination from manufacturing process and landfills	No

Unregulated contaminants were tested February and August 2015.

General Health Information Provided by EPA

To ensure that tap water is safe to drink, EPA prescribes limits on the amount of certain contaminants in water provided by public water systems. FDA regulations establish limits for contaminants in bottled water.

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 (800-426-4791).

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 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 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, stormwater runoff, and residential uses.
- (D) Organic chemical contaminants, including synthetic and volatile organics, which are by-products of industrial processes and petroleum production, and can also, come from gas stations, urban stormwater 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, 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 is the general population. Immune-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* are available from the Safe Drinking Water Hotline (800-426-4791).

National Primary Drinking Water Regulation Compliance

For more information about our water quality, please contact utilities manager Randy Seida at 517-485-5470. You may also learn more about Lansing Township's West Side Water System at www.westsidewater.com. Learn more about the Lansing Board of Water & Light water system at www.lbwl.com. For more information about safe drinking water, visit the U.S. Environmental Protection Agency (EPA) at www.epa.gov/safewater/.