City of Lafayette Water Works

Consumer Confidence Report (2020)

Lafayette Water Works currently has two well fields with 14 wells in service, all approximately 80' to 100' deep. The aquifer from which the water is pumped is an enormous buried pre-glacial river valley that was filled in with sand and gravel deposited by melting glaciers thousands of years ago. Water from rain and snow now percolates slowly through the ground to the aquifer, recharging it. This keeps the net amount of available water fairly constant. As water travels through the ground it dissolves naturally occurring minerals and radioactive material, and can pick up substances including contaminants. 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 the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's (EPA) Safe Drinking Water Hotline (800-426-4791).

Government agencies involved in drinking water regulations include: U.S. Environmental Protection Agency (EPA), Indiana Department of Environmental Management (IDEM), and the Indiana State Department of Health (ISDH). Since 1974, drinking water regulations have become more stringent and numerous. Also, testing methods have become more precise. (For example; it is now possible to detect a contaminant at levels of less than 1 part per billion). This is the same as one inch in 15,782 miles, one second in 31.7 years, and one cent in 10 million dollars.

To ensure that tap water provided by public water systems is safe to drink, EPA determines what level of each potential contaminant poses a possible threat to human health and sets a limit, or *standard* . This standard is called the Maximum Contaminant Level (MCL) and is the highest level of a contaminant that is allowed in drinking water. Drinking water that meets this standard is associated with little or no risk to health. *Lafayette's drinking water meets or surpasses all of these Federal and State standards.* Detections of contaminants are listed in the following table.

A Maximum Contaminant Level Goal (MCLG) is also set. This is the level of a contaminant in drinking water below which there is no known or expected risk to health. This goal inlcudes an adequate margin of safety. MCLGs are non-enforcable health goals; however, MCLs are set as close to the MCLGs as feasible using the best available treatment technology. Contaminants that *could potentially* be present in source water (such as tap or bottled water) include:

A) Microbial contaminants such as viruses and bacteria. These may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.

B) Inorganic contaminants such as salts and metals. These 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. These may come from a variety of sources such as agriculture, storm water runoff, and residential uses.

D) Organic chemical contaminants, including synthetic and volatile organics. These are by-products of industrial processes and petroleum production, and can come from gas stations, urban storm water runoff, and septic systems.

E) Radioactive contaminants, which can be naturally occurring or the result of oil and gas production and mining activities.

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 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). Cryptosporidium is a microscopic organism found in surface waters such as rivers and lakes and is not normally associated with groundwater. Lafayette Water Works relies solely on groundwater wells as the source of drinking water. No surface water is used.

Treatment and Testing

Water goes through a treatmen process via the addition of Chlorine and Ammonia for disinfection, Fluoride to promote dental health, and Phosphate for two reasons: 1) to keep Iron and Manganese from precipitating out and staining fixtures and laundry, 2) to help prevent corrosion of lead and copper plumbing.

Mono-Chloramines, Fluoride, and Phosphate levels are tested a minimum of 4 times per day to insure water quality to consumers. Additionally, 70 or more water samples per month from several points around the City are tested for bacteria and correct chloramine levels. In all, Lafayette's water is tested for over 100 paramters several times each year. Parameters include minerals, treatment additives, chemicals, pH, bacteria and natural and man-made contaminants. Analyses are done at the Water Works lab and at independent State-certified labs. Any contaminants detected are listed in the following Table.

We encourage your interest and participation in our community's decisions affecting drinking water. The Board of Public Works and Safety meets every Tuesday at 9:00am in the Council Chambers at City Hall, and the public is invited.

You can contact the Lafayette Water Works at (765) 807-1700 twenty-four hours per day; however, your inquiries and requests for information can be handled most efficiently Monday - Friday, 8am to 4pm, when the complete staff is present. You can also call the EPA Safe Drinking Water Hotline at 800-426-4791 for more information.

This report was prepared by the Lafayette Water Works lab personnel with technical assistance provided by the American Water Works Association and Indiana Department of Environmental Management.

Thank you,
Steve Moore
Water Works Superintendent

El informe contiene información importante sobre la calidad del agua en su comunidad. Tradúzcalo ó hable con alquien que lo entienda bien.

City of Lafayette Web Address: www.lafayette.in.gov

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CCR Detections 2020

Definitions

ppm = Parts per Million
ppb = Parts per Billion
pCi/L = Picocurie per Liter
HLD = Highest Level Detected
MCL = Maximum Contaminant Level Allowed
MCLG = Maximum Contaminant Level Goal
µg/L = Micrograms per Liter
AL = Action Level
Range = Lowest and Highest Readings Detected

TTHM/HAA5	Annual Average	Range	Units	MCL	MCLG	Likely Sources	Violation
Total Trihalomethanes	2.5	0.0 - 5.1	ppb	80	No MCLG	Byproduct of chlorination	NO
Total HAA5	3.8	1.4 - 6.5	ppb	60	No MCLG		NO

Some people who drink water containing trihalomethanes in excess of the MCL over many years experience problems with their liver, kidneys, or central nervous systems, and may have increased risk of getting cancer.

Volatile Organic Compounds	HLD	Range	Units	MCL	MCLG	Likely Sources	Violation
Tetrachloroethylene	0.0	0.0 - 0.0	µg/L	5	0	Industries	NO
1,1,1 - Trichloroethane	0.7	0.0 - 0.7	µg/L	200	0	Industries	NO
Trichloroethylene	0.7	0.0 - 0.7	µg/L	5	0	Industries	NO

Note: 41 additional organics were tested for and not detected. < 0.5 = BDL

Synthetic Organic Compounds	HLD	Range	Units	MCL	MCLG	Likely Sources	Violation
No Detections	~	~	~	~	~	Farming runoff	NO

Note: 120 SOCs are tested for every three years. None were detected.

Inorganic Compounds	HLD	Range	Units	MCL	MCLG	Possible Sources	Violation
Barium	0.19	0.10 - 0.19	ppm	2	2	Erosion from natural deposits	NO
Chromium	0.00	0.00 - 0.00	ppm	100	100	Industries	NO
Fluoride (Total)	0.46	0.40 - 0.46	ppm	4	4	Naturally Occuring Mineral	NO
Nitrate	1.24	0.28 - 1.24	ppm	10	10	Fertilizer, Sewage	NO
Sodium	44.00	19.9 - 44.0	ppm	No MCL	No MCLG	Naturally Occuring Mineral	NO
Arsenic	0.0017	0.0000 - 0.0017	ppb	10	No MCLG	Industry, Naturally Occuring	NO

Note: 11 additional inorganic compounds were tested for and not detected.

Nitrate in drinking water at levels above 10 ppm is a health risk for infants of less than six months of age. High nitrate levels in drinking water can cause blue baby syndrome. Nitrate levels may rise quickly for short periods of time due to rainfall and agricultural activity. If you are caring for an infant you should ask advice from your health care provider.

Sources of arsenic include leaching from natural deposits, wood preservatives, pesticides, industrial deposits, petroleum production, semiconductor manufacture and coal power plants. Potential health effects include skin problems, endocrine disruptor, cancer, and harm to cardiovascular and nervous system.

Coliform Bacteria

Positive Samples	Samples per-month	% of positive samples	Allowable %	MCLG	Likely Source of Contamination
0	70	0	5.0% per-month	0	Naturally occuring bacteria. May indicate sanitation problem.

Disinfection

Residual Disinfectant	Residual	Units	MRDL	MRDLG	Violation
Chlorine	1.0 - 1.4	ppm	4	4	NO

MRDL (Maximum Residual Disinfection Level) is the highest level of a disinfectant allowed.

MRDLG (Maximum Residual Disinfection Level Goal) is the level of a drinking water disinfectant below which there is no known or expected risk to health.

Lead and Copper

Contaminant	90th Percentile Level	Units	Maximum Level Allowed (AL)	MCLG	Number of Samples over 'AL'	Likely Sources	Violation
Lead	1.1	ppb	15	0	0	Plumbing	NO
Copper	0.672	ppm	1.3	1.3	0	Plumbing	NO

AL (Action Level) is the concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

Lead and **Copper** do not exist naturally in Lafayette's water, but can leach into it by corrosion of plumbing. EPA requires periodic testing of water from 30 residences of which 90% must test at or below the regulated 'Action Levels'.

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 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*** *.*

Radioactive Contaminants

Contaminant	HLD	Range	Units	MCL	MCLG	Possible Sources	Violation
Alpha Activity	1.6	1.5 - 1.6	pCi/L	5	0	Erosion of Natural Deposits	NO
Beta Activity	5.5	3.2 - 5.5	pCi/L	50	0	Erosion of Natural Deposits	NO
Uranium	0.002	<0.0005 - 0.002	pCi/L	0.03	0	Erosion of Natural Deposits	NO

Unregulated Contaminants

In accordance with the Safe Drinking Water Act, Lafayette collected 74 samples for the UCMR (Unregulated Contaminant Monitoring Rule). The samples were tested by a State approved laboratory and data was sent to the EPA. The data being collected will be used to set standards and regulations for the future. This report requires us to report any contaminant that has been detected during testing.

	Collection Location		
Contaminant	Canal	Glick	Distribution
Bromide	78.5 µg/L	53.9 µg/L	~
Total Organic Carbon (TOC)	1230 µg/L	1140 µg/L	~
Manganese	262 µg/L	242 µg/L	~
Bromochloroacetic Acid	~	~	1.45 µg/L
Dibromoacetic Acid	~	~	1.02 µg/L
Dichloroacetic Acid	~	~	1.98 µg/L