



2025

ANNUAL DRINKING WATER QUALITY REPORT

Lancaster City Water is a public utility owned and operated by the City of Lancaster, PA.
PWS ID# 7360058



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Water System Information

The City of Lancaster is committed to ensuring that all residents can access information about their drinking water. The Conestoga and Susquehanna Water Treatment Plants produce about 20 MGD of drinking water each day for the City of Lancaster and its adjacent service area. Water professionals are dedicated to your quality of life, to produce quality drinking water that is essential to life. The plants are staffed 24 hours a day, seven days a week in this work.

This report describes the City of Lancaster's water quality and provides information on what the drinking water testing means. This Consumer Confidence Report has been prepared in accordance with the accessibility expectations outlined in the Environmental Protection Agency's (EPA) 2024 CCR Rule Revisions, which align with the Americans with Disabilities Act (ADA) Title II requirements for digital accessibility. An accessible, screen-reader-friendly version of this report is available on the City's website. If you need this report in an alternative format, require assistance accessing the online version, or need accommodations due to a disability, please contact the City of Lancaster Water Quality Laboratory at 717-291-4818 (Option 3) or visit www.cityoflanasterpa.gov.

Sources of Water

The City of Lancaster's sources of water are the Conestoga River, and the Susquehanna River located in Lancaster County. A Source Water Assessment was completed in 2012 by the PA Department of Environmental Protection (PA DEP). The Assessment found the City's sources are potentially susceptible to agricultural activity, accidental spills along roads and urban runoff. Overall, these sources have a low risk of significant contamination. The assessment is available at:

<http://www.elibrary.dep.state.pa.us/dsweb/Get/Document-59455/RS7360058001%20City%20of%20Lancaster%20BofW.pdf>

Complete drinking water testing reports were distributed to municipalities, water suppliers, local planning agencies and PA DEP offices. Copies of the complete report are available at the PA DEP Regional Office, Records Management Unit at 484-250-5910.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as individuals 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. The 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)

Monitoring Your Water

City staff routinely monitor for chemical contaminants in your drinking water. The monitoring frequency is according to federal and state laws. The following tables show monitoring results for the period of January 1 to December 31, 2025. The PA DEP allows the City to monitor some contaminants and chemicals less than once per year because the concentration of these chemicals does not frequently change. Some of the City’s data is from prior years and is re-stated in accordance with the Safe Drinking Water Act. The date of the testing has been noted on the sampling results table.

The table provides testing information for each water plant that serves the City’s drinking water system. The water service area is supplied by two facilities: the Susquehanna Water Treatment Plant and the Conestoga Water Treatment Plant. The first column lists each chemical that was tested. The next columns provide information on the PA DEP standard, the MCL or the MCLG. An explanation of these standards is found in the definition section below. The next columns provide information on the level of the chemical detected in the plant’s water, the range of detection, and the units. Chemists run these water quality tests in a laboratory. Each test has a level of contamination that can be detected in the water sample. The laboratory reports the detection level. The next column is the date of testing. Following the testing dates column is the violation column. This violation column reports if the containment level exceeded the PA DEP standard. If it does not exceed the standard, there is no violation, and “N” for no violation is reported. The last column provides information on the potential source of the chemicals that can be found in the water.

Definitions

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

Maximum Contaminant Level (MCL) – The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to 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 for a margin of safety.

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 a drinking water disinfectant below which there is no known or expected risk to health.

Minimum Residual Disinfectant Level (MinRDL) – The minimum level of residual disinfectant required at the entry point to the distribution system.

Treatment Technique (TT) – A required process intended to reduce the level of a chemical contaminant in drinking water.

ppb – parts per billion, or micrograms per liter

pCi/L – picocuries per liter, measure of radiation

ppq – parts per quadrillion or picograms per liter

mrem/year – millirems per year

ppm – parts per million or milligrams per liter

ppt – parts per trillion or nanograms per liter

CDC – United States Centers for Disease Control and Prevention

EPA – United States Environmental Protection Agency

FDA – United States Food and Drug Administration

PA DEP – Pennsylvania Department of Environmental Protection

Detected Sample Results: Susquehanna Plant; Entry Point 101

Chemical Contaminants	MCL in CCR Units	MCLG	Level Detected	Range of Detections	Units	Sample Date	Violation Y/N	Source
Barium	2	2	0.023	---	ppm	2025	N	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Fluoride	2*	2	0.56	---	ppm	2025	N	Water additive that promotes strong teeth.
Nickel	NA	NA	0.001	---	ppm	2025	N	Discharge from industrial processes. Erosion of natural deposits.
Gross Alpha	15	0	-0.234	---	pCi/L	2023	N	Erosion of natural deposits
Combined Radium	5	0	0.3222	---	pCi/L	2023	N	Erosion of natural deposits
Perfluorobutanesulfonic Acid	NA [^]	NA	1.86	0 – 1.86	ppt	2025	N	Man-made and used in various products to make items resistant to water, grease, and stains. Industrial discharge and firefighting foam
Perfluorooctanesulfonic Acid	18	14	2.01	0 – 2.01	ppt	2025	N	Man-made and used in various products to make items resistant to water, grease, and stains. Industrial discharge and firefighting foam.
Perfluorooctanoic Acid	14	8	2.02	0 – 2.02	ppt	2025	N	Man-made and used in various products to make items resistant to water, grease, and stains. Industrial discharge and firefighting foam.

* EPA's MCL for fluoride is 4 ppm. However, Pennsylvania has set a lower MCL to protect human health.

[^] An MCL has not been established for these Contaminants, by either EPA or Pennsylvania.

Turbidity						
Contaminant	*MCL	MCLG	Level Detected	Sample Date	Violation Y/N	Source
Turbidity	TT=1 NTU for a single measurement	0	0.07 NTU	07/11/25	N	Soil runoff.
	TT= at least 95% of monthly samples ≤ 0.15 NTU		≤ 0.15 NTU 100% of the time	Jan - Dec 2025	N	

* Note that this MCL is based on the treatment technology.

Total Organic Carbon (TOC)					
Chemical Contaminant	Range of percent Removal Required	Range of percent Removal achieved	Number of quarters out of compliance	Violation Y/N	Source
TOC	0% - 35%	3% - 34%	0	N	Naturally present in environment.

Entry Point Disinfectant Residual: Susquehanna and Conestoga Treatment Plants							
Chemical Contaminant	MinRDL	Lowest Level Detected	Range of Detections	Units	Date of Lowest Sample	Violation Y/N	Source
Susquehanna Plant Chlorine	0.20	0.85	0.85 - 2.67	ppm	03/17/25	N	Water additive used to control microbes.
Conestoga Plant Chlorine	0.20	0.51	0.51 - 1.53	ppm	11/01/25	N	Water additive used to control microbes.

Detected Sample Results: Conestoga Water Plant; Entry Point 102

Chemical Contaminant	MCL in CCR Units	MCLG	Level Detected	Range of Detections	Units	Sample Date	Violation Y/N	Source
Barium	2	2	0.05	---	ppm	2025	N	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposit
Fluoride	2*	2	0.75	---	ppm	2025	N	Water additive to promote strong teeth.
Nitrate	10	10	6.60	Four samples 5.15-6.60	ppm	2025	N	Runoff from fertilizer use.
Gross Alpha	15	0	2.8	---	pCi/L	2023	N	Erosion of natural deposits.
Combined Radium	5	0	0.264	---	pCi/L	2023	N	Erosion of natural deposits.
Perfluorobutanesulfonic Acid	NA [^]	NA	8.04	2.89 - 8.04	ppt	2025	N	Man-made and used in various products to make items resistant to water, grease, and stains. Industrial discharge and fire-fighting foam.
Perfluoroheptanoic Acid	NA [^]	NA	5.64	3.23 - 5.64	ppt	2023	N	Man-made and used in various products to make items resistant to water, grease, and stains. Industrial discharge and fire-fighting foam.
Perfluorohexanesulfonic Acid	NA [^]	NA	3.02	0 - 3.02	ppt	2025	N	Man-made and used in various products to make items resistant to water, grease, and stains. Industrial discharge and fire-fighting foam.

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Detected Sample Results: Conestoga Water Plant; Entry Point 102

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Chemical Contaminant	MCL in CCR Units	MCLG	Level Detected	Range of Detections	Units	Sample Date	Violation Y/N	Source
Perfluorooctanesulfonic Acid	18	14	3.55	3.19 – 3.55	ppt	2025	N	Man-made and used in various products to make items resistant to water, grease, and stains. Industrial discharge and fire-fighting foam.
¹ Perfluorooctanoic Acid	14	8	22.3	7.84 – 22.3	ppt	2025	Y ⁺	Man-made and used in various products to make items resistant to water, grease, and stains. Industrial discharge and fire-fighting foam.
Perfluorohexanoic Acid	NA [^]	NA	15.1	5.77 - 15.1	ppt	2023	N	Man-made and used in various products to make items resistant to water, grease, and stains. Industrial discharge and fire-fighting foam.

* EPA's MCL for fluoride is 4 ppm. However, Pennsylvania has set a lower MCL to protect human health.

+ Violation is based on Running Annual Average.

[^] An MCL has not been established for these Contaminants, by either EPA or Pennsylvania.

¹ Drinking water containing PFOA in excess of the MCL of 14 ng/L may cause adverse health effects, including developmental effects (neurobehavioral and skeletal effects)

Turbidity						
Contaminant	MCL	MCLG	Level Detected	Sample Date	Violation Y/N	Source of Turbidity
Turbidity	TT=1 NTU for a single measurement	0	0.05 NTU	05/12/25	N	Soil runoff.
	TT= at least 95% of monthly samples ≤ 0.15 NTU		≤ 0.15 NTU 100% of the time	Jan - Dec 2025	N	

Total Organic Carbon (TOC)					
	Range of % Removal Required	Range of % Removal Achieved	Number of Quarters Out of Compliance	Violation Y/N	Source
TOC	0% – 35%	-5%* - 37%	0	N	Naturally present in environment.

* Sample collected in June 2025 was outside the range of percent removal, but the sample still met compliance by the running annual average being 1.0 or more and performance ratio being 1.0 or more.

Detected Sample Results: Distribution System

Distribution Disinfectant Residual							
Chemical	MRDL	Highest Average Result	Range of Monthly Avg Results	Units	Month w/ Highest Avg. Result	Violation Y/N	Source
Chlorine	4.0	0.78	0.54 - 0.78	ppb	September 2025	N	Water additive used to control microbes.

Disinfection Byproducts								
Chemical Contaminant	MCL in CCR Units	MCLG	Highest LRAA	Range of Detections	Units	Sample Date	Violation Y/N	Source
Haloacetic Acids	60	n/a	56	9.0 – 93.6	ppb	2025	*N	By-product of disinfection
Trihalomethanes	80	n/a	75.2	11.9 - 148	ppb	2025	*N	By-product of disinfection

* Violation of MCL is based on Running Annual Average

Lead and Copper								
Chemical Contaminant	Action Level (AL)	MCLG	90 th Percentile Value	Units	# of Sites Above AL of Total Sites	Sample Date	Violation Y/N	Source
Lead	15	NA	7.0	ppb	1 of 52	2025	N*	Corrosion of home plumbing.
Copper	1.3	NA	0.235	ppm	0 of 52	2025	N*	Corrosion of home plumbing

* Violation is based on 90th Percentile Value for Lead and Copper.

Detected Sample Results: Distribution System

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Lancaster must also check the water for bacteria. Chlorine is added at the treatment plant and in the distribution system to prevent bacteria from growing in the water system. Microbial tests are conducted daily at the plants and sampling is also conducted in the water distribution system. These tests are required by the PA DEP. In this section, these test results are reported. There were no violations of PA DEP Standards.

Microbial (related to Assessments/Corrective Actions regarding TC positive results)					
Contaminants	TT	MCLG	Assessments/ Corrective Actions	Violation Y/N	Source
Total Coliform Bacteria	Any system that has failed to complete all the required assessments or correct all identified sanitary defects, is in violation of the treatment technique requirement	N/A	0	N	Naturally present in the environment.
Microbial (related to E. coli)					
Contaminants	MCL	MCLG	Positive Sample(s)	Violation Y/N	Sources of Contamination
<i>E. coli</i>	Routine and repeat samples are total coliform-positive and either is <i>E. coli</i> -positive or system fails to take repeat samples following <i>E. coli</i> -positive routine sample or system fails to analyze total coliform-positive repeat sample for <i>E. coli</i> .	0	0	N	Human and animal fecal waste.
Contaminants	TT	MCLG	Assessments/ Corrective Actions	Violation Y/N	Sources of Contamination
<i>E. coli</i>	Any system that has failed to complete all the required assessments or correct all identified sanitary defects is in violation of the treatment technique requirement.	N/A	0	N	Human and animal fecal waste.

Violations

In this section, violations of PA DEP standards or reporting are discussed.

The PADEP issued a violation (ID# 20211) for a reporting error.

In May 2025, the laboratory accidentally submitted 30 days of treatment plant chlorine monitoring data instead of the required 31 days. The missing day was identified quickly, and the report was corrected right away. All required chlorine monitoring was completed, and there was no impact on water quality.

PA DEP issued PFOA exceedance violation ID# 16822, ID# 25042, and ID# 31979 for the Conestoga Water Treatment Plant.

Sample results showed PFOA levels above the Long-Running Annual Average (LRAA) maximum contaminant level of 14 parts per trillion (ppt). Compliance with the drinking water standard is based on the LRAA of the four most recent quarters. As of the end of the 4th quarter of 2025, the City's LRAA is 13.4 ppt, which is below the regulatory limit. The City is continuing all required monitoring in accordance with DEP guidelines and is actively investigating the elevated PFOA levels detected in the Conestoga River. The PFOA is in the Conestoga River. This includes evaluating treatment upgrades at the Conestoga Treatment Plant and assessing potential alternative water sources to ensure long-term compliance and protection of public health.

EPA attributes 20% of PFAS exposure to water. In the EPA's technical fact sheet "*Drinking Water Health Advisories for Four PFAS (PFOA, PFOS, GenX chemicals, and PFBS)*", the EPA reports the interim HAs (health advisories) for PFOA and PFOS using an RSC (relative source contribution) of 0.20, meaning that 20% of the exposure – equal to the RfD (chronic reference dose) – is allocated to drinking water, and the remaining 80% is attributed to all other potential exposure sources (U.S. EPA, 2022a, b; U.S. EPA, 2000). This fact sheet provides information on the science of how USEPA developed the health advisories. It can be found here:

<https://www.epa.gov/system/files/documents/2022-06/technical-factsheet-four-PFAS.pdf>

The EPA's Final PFAS National Primary Drinking Water Regulation can be found here:

<https://www.epa.gov/sdwa/and-polyfluoroalkyl-substances-pfas>

Educational Information

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. 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 stormwater run-off, 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 stormwater 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 stormwater 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, the EPA and PA DEP prescribe regulations which limit the amount of certain chemical and microbial contaminants in water provided by public water systems. FDA and PA DEP 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 (800-426-4791) and consulting the EPA and PA DEP websites on water.

Cryptosporidium Monitoring

Cryptosporidium monitoring was performed for both sources of drinking water, Conestoga River and Susquehanna River. Cryptosporidium is a microbial pathogen found in source water throughout the US.

The monitoring took place from April 2015 to March 2017. Results indicated that Cryptosporidium was present in both sources of water. This was only for our source water. Cryptosporidium was not detected in the finished water delivered to customers. Our water plants do everything to try to ensure NO Cryptosporidium is in our finished water. Ultrafiltration Membrane technology is used by both plants to ensure the removal of this pathogen. This type of filtration can filter out particles and microorganisms much smaller than conventional filtration. Log Inactivation monitoring is also implemented to ensure proper disinfection. Even though 100 percent removal and disinfection of Cryptosporidium cannot be guaranteed, there is no reason to be concerned, based on the results of the Cryptosporidium monitoring of the source water.

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. The City of Lancaster, Bureau of Water is responsible for providing high quality drinking water and removing lead pipes but cannot control the variety of materials used in plumbing components. You share the responsibility for protecting yourself and your family from the lead in your home plumbing. You can take responsibility by identifying and removing lead materials within your home plumbing and taking steps to reduce your family's risk. Before drinking tap water, flush your pipes for several minutes by running your tap, taking a shower, doing laundry or a load of dishes. You can also use a filter certified by an American National Standards Institute accredited certifier to reduce lead in drinking water. The City also treats the water with zinc orthophosphate to condition the water to prevent lead from leaching into the water. If you are concerned about lead in your water and would like to have your water tested, contact the City of Lancaster Water Laboratory at 717-291-4818, and choose Option 3. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available at <http://www.epa.gov/safewater/lead>. You can also do your part by ensuring that you have registered the water line in your home. Please check out the City's website at:

<https://water.cityoflanasterpa.gov/water-quality/water-service-line-inventory/>

The City of Lancaster prepared a service line inventory that includes the type of material contained in each service line in the City's distribution system. This inventory can be accessed online at <https://water-line.cityoflanasterpa.gov/dep-inventory-map/>.

Other Information

About Nitrate: 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 because of rainfall or agricultural activity. If you are caring for an infant, you should ask for advice from your health care provider.

Sodium: Sodium levels were tested on March 27, 2025; the result was 41.2 mg/L. This is above the recommended level of 20 mg/L. This may be a concern for those on sodium restricted diets. If you have concerns, please consult with your health provider.



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