Lehigh County Authority

Central Lehigh Division
PWS ID: 3390073

Annual Water Quality Report for 2022

Este informe contiene informacion muy importante sobre su agua potable. Traduzcalo o hable con alguien que lo entienda bien.

Lehigh County Authority's Commitment to Safe Drinking Water

Lehigh County Authority (LCA) is a public, nonprofit water and sewer utility dedicated to a single mission – to protect public health and the environment by providing high quality, safe, and reliable water and wastewater services.

Continuous improvement comes from our ongoing participation in programs and associations such as the Partnership for Safe Water program, Lehigh Valley Water Suppliers, American Water Works Association, the PA-DEP Source Water Protection Technical Assistance Program, and the Pennsylvania Association of Accredited Environmental Laboratories. It also comes from our professional staff of water plant operators, laboratory technicians, customer service personnel and distribution system operators who provide the highest quality service possible every single day.

This report contains detailed information about your water quality. As you review this information, please feel free to contact LCA to ask questions and learn more about our commitment to our customers. **Thank you!**

Service Area: Portions of Upper Macungie, Lower Macungie, Salisbury, South Whitehall, Upper Milford, Weisenberg and Lowhill townships.

Number of Customers: 18,805 properties served.

Where Your Drinking Water Comes From:

14 wells located throughout the service area, plus an interconnection with LCA's Allentown Division water system, produce an average of 11.5 million gallons of water per day. The Allentown Division draws its water from two large springs, the Little Lehigh Creek and the Lehigh River.

Water Treatment:

Water from LCA's wells is disinfected with chlorine to kill bacteria. No other treatment is necessary in order to ensure a safe supply of drinking water. The Allentown Division water supply is treated at LCA's full-scale water filtration plant located in Allentown.

Why is this report important?

The information contained in this report may be especially important for some groups of people, such as the elderly, people with compromised immune systems and infants (see "A Note From EPA" on pages 3 - 4). If you are viewing this report, but the water LCA provides is actually provided to tenants, patients, customers, or employees who use your property, please make a copy of this report available to them as well. Thank you!

We Protect the Source

The Pennsylvania Department of Environmental Protection (PA-DEP) completed a Source Water Assessment of the groundwater wells that supply water to your system in 2004. In 2011, a comprehensive Source Water Protection Plan was approved by the DEP through PA-DEP's Source Water Protection Technical Assistance Program. Completed reports are available for review by LCA customers, municipalities served by LCA's water systems, and local planning agencies. The assessment found that LCA's sources of water are located within residential, commercial, and industrial areas and, therefore, are susceptible to potential sources of contamination from related activities. Examples include leaking underground storage tanks, wintertime road salt applications, and household activities such as lawn fertilizing and improper disposal of household hazardous wastes. A summary of the report is available by contacting LCA. Additional information is available on the PA-DEP website at www.dep.state.pa.us (use Keyword "Source Water Assessment and Protection").

Visit our interactive webpage on Source Water Protection to learn ways you can help protect drinking water at https://www.lehighcountyauthority.org/source-water-protection/

Ways You Can Help Protect the Source

Here are some ways you and your family can help protect source water:

Don't Dump: Anything you put on the ground or down a storm drain can make its way into our groundwater or other water sources. Contact the Lehigh County Office of Solid Waste at 610-799-4177 to find out how to dispose of household hazardous wastes.

Lawn Care: Use only as much fertilizer as your lawn or garden really needs and be sure to pick up after your pets!

Care for Your Car: Oil spots left on driveways and parking lots can wash away with the rain and will end up back in the environment.

Report Spills: Call 9-1-1 if you witness accidental or intentional dumping of unknown substances into our environment!

A Note from EPA

What Is in Your Drinking Water

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 runoff, 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 Environmental Protection Agency (EPA) prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. The Food and Drug Administration (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 EPA's Safe Drinking Water Hotline at 800-426-4791.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised 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 at 800-426-4791. ***If you are viewing this report, but the water LCA provides is actually provided to tenants, patients, customers or employees who use your property, please make a copy of this report available to them as well. Thank you!***

What's NOT in your drinking water?

In addition to the substances shown in this report, LCA tests your water for many other substances which were NOT detected in your water. These tests are routinely conducted according to schedules and procedures outlined in state and federal regulations for safe drinking water.

Substances LCA tests for include:

- Microbiological Contaminants
- Disinfection By-Products
- Radioactive Contaminants
- Volatile Organic Contaminants
- Inorganic Contaminants
- Synthetic Organic Contaminants

Except for those listed in the charts in this report, none of the substances we have tested for have been detected in your drinking water. For detailed information about our water quality monitoring program, please give us a call at 610-398-1444.

Water Testing Frequency

The monitoring results shown in this report includes information from calendar year 2022. Annual testing is not required for all contaminants. Some are on multi-year cycles based on schedules determined by state and federal regulations. We also test for some contaminants such as total coliform and chlorine many times throughout the year as results may change as environmental conditions change.

Cryptosporidium

Cryptosporidium is a microbial parasite commonly found in surface water, and the City of Allentown has monitored for it in both the surface water sources – the Little Lehigh Creek and the Lehigh River. This monitoring concludes that Cryptosporidium is present in low concentrations, and DEP has determined that no additional treatment is needed for effective removal. Customers should be aware that cryptosporidium is capable of causing a disease called cryptosporidiosis. Symptoms include diarrhea, abdominal cramping and nausea. Healthy individuals usually overcome the illness in a few weeks. However, immunocompromised individuals are at greater risk of developing serious, chronic illness. These people should consult a physician to discuss precautions to avoid infection. Cryptosporidium must be ingested to develop disease, and it may be spread through means other than drinking water.

Nitrates in Drinking Water

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 advice from your health care provider.

Any Water Quality Violations in 2022?

LCA monitors your drinking water for specific contaminants and treatment chemicals on a regular basis. We do this to ensure public health and safety, and we strive to meet or exceed all regulatory requirements. The results of regular monitoring are an indicator of whether your drinking water meets health standards.

During the 4th quarter of 2022, we received a “failure to report or monitor” violation for Nitrate-Nitrite testing on entry point #106. All required Nitrate-Nitrite sampling for entry point #106 was performed on December 12, 2022. All results were within compliance limits. However, upon further investigation, we determined our contract laboratory misreported the sample as entry point #105. Because of this error, the results from this sample were discarded. Upon discovery of the error, entry point #106 was immediately sampled again for Nitrates-Nitrites on January 18, 2023, and all results were within compliance limits.

Water Quality Test Results

See pages 11-12 for abbreviations and definitions.

Chemical Contaminants

Contaminant Name	MCL (Maximum Allowed)	MCLG (Goal)	LCA's Water Test Results	Range of LCA's Test Results	Sample Date	Pass or Fail?	Typical Source
Chlorine (as Cl2) (ppm)	MaxRDL = 4	MaxRDLG = 4	1.16	0.90 – 1.16	2022	Pass	Water additive used to kill bacteria
Total Trihalomethanes (ppb)	80	N/A	41.4 (running annual average)	4.8 – 42.0	2022	Pass	By-product of water chlorination
Haloacetic Acids (ppb)	60	N/A	28.2 (running annual average)	ND – 24.8	2022	Pass	By-product of water chlorination
Barium (ppm)	2	2	0.068	0.014 – 0.068	2021	Pass	Erosion of natural deposits
Chromium (ppb)	100	100	33	7.4 – 33	2022	Pass	Erosion of natural deposits; discharge from steel and pulp mills
Nitrate (ppm)	10	10	7.07	2.00 – 7.07	2022	Pass	Fertilizer runoff; Leaching from septic tanks
Fluoride (ppm) *	2	2	0.63	0.48 – 0.63	2022	Pass	Water additive which promotes strong teeth
Asbestos (MFL)	7	7	0.17	ND – 0.17	2021	Pass	Decay of asbestos cement water mains; Erosion of natural deposits
Tetrachloroethylene (ppb)	5	0	2.8	ND – 2.8	2022	Pass	Discharge from factories and dry cleaners

** Fluoride: LCA adds fluoride to the drinking water in Allentown as a requirement of the lease of the water system from the City of Allentown. The Allentown water typically contains fluoride levels up to 0.6 ppm, which is blended with well water to serve your home. Customers may be receiving a blended amount of fluoride at any time that ranges from 0 – 0.6 ppm.*

Total Chlorine Residual

Entry Point Disinfectant Residual

Contaminant Name	MCL (Maximum Allowed)	MCLG (Goal)	LCA's Water Test Results	Range of LCA's Test Results	Sample Date	Pass or Fail?	Typical Source
Chlorine (as Cl2) (ppm)	MinRDL = Not less than 0.40 for more than 4 hours	N/A	Lowest Detected Level = 0.41	0.41 – 2.00	2.22	Pass	Water additive used to kill bacteria

Radioactive Contaminants

Contaminant Name	MCL (Maximum Allowed)	MCLG (Goal)	LCA's Water Test Results	Range of LCA's Test Results	Sample Date	Pass or Fail?	Typical Source
Combined Radium (pCi/L)	5	0	1.9	ND – 1.9	2019	Pass	Erosion of natural deposits
Gross Beta (pCi/L)	50 *	0	3.1	ND – 3.1	2019	Pass	Decay of natural and man-made deposits

* EPA considers 50 pCi/L to be the level of concern for beta particles

Lead and Copper Testing

Tested throughout the Central Lehigh Division. Testing is done every [number] years. Most recent tests were done in 2022.

Contaminant Name	MCL (Maximum Allowed)	MCLG (Goal)	LCA's Water Test Results	Range of LCA's Test Results	Sample Date	Pass or Fail?	Typical Source
Copper (ppm)	AL = 1.3	1.3	0.139	All samples were < AL	2022	Pass	Corrosion of household plumbing
Lead (ppb)	AL = 15	0	2	All samples were < AL	2022	Pass	Corrosion of household plumbing

Other Contaminants

Turbidity

A Measure of Clarity (Tested at Allentown Treatment Plant).

Contaminant Name	MCL (Maximum Allowed)	MCL G (Goal)	LCA's Water Test Results	Range of LCA's Test Results	Sample Date	Pass or Fail?	Typical Source
Turbidity (NTU)	TT = 1 . TT = at least 95% of monthly samples ≤ 0.3 NTU	0	0.071 100%	N/A	2022	Pass	Measure of water cloudiness, caused by soil runoff. An indicator of filter performance

NTU - *Nephelometric Turbidity Units: Turbidity is measured with an instrument called a nephelometer. Measurements are given in nephelometric turbidity units.*

Unregulated Contaminant Monitoring

Unregulated contaminants are those for which EPA 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.

All results are from the 2018-2020 Unregulated Contaminant Monitoring Rule 4 (UCMR4) testing.

Contaminant Name	Reported Level (Average)	Range of Results
Manganese (ppb)	0.62	ND – 3.19
HAA6Br (ppb)	7.91	1.20 – 16.22
HAA9 (ppb)	21.99	2.30 – 57.13

Lead In Drinking Water

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. LCA 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 (800-426-4791) or at http://www.epa.gov/safewater/lead.

Ways You Can Impact Your Water Quality

Run Water After Vacation

Water quality in your home is affected by how "stale" the water is from standing. When you leave your home or business for a long time, as you may when you take a vacation, the water in the pipes and plumbing doesn't move. When water has been sitting in the pipes for days, bacteria can grow, and if you have lead or copper plumbing, those metals can start to seep into the water. The best thing to do when you get back from being away after a long time is to run the water on full blast for 30 seconds to two minutes before using it for drinking or cooking. And always use cold water for cooking, to draw in fresh water from the outside.

Safely Connect Outdoor Hoses

Connections to your water outside your home can also impact water quality. The outdoor spigot connection to a hose provides a potential way for pollutants to enter your plumbing. If you use the hose to spray chemicals on your yard by connecting the nozzle to a spray bottle, or if you have a sprinkler system connected, there is the potential for chemicals from the bottle or the lawn to be accidentally sucked back into your internal plumbing. To prevent this from happening, we recommend (and in some states it is the law) that you have a backflow prevention device installed to prevent that from happening.

Water Hardness, pH & Other Useful Info

Water "hardness" is a measure of the mineral content in your water. These minerals, such as calcium and magnesium, are essential to human health and do not need to be removed from your drinking water. However, some customers prefer to remove these minerals with a water softener to avoid mineral deposits on faucets and other fixtures.

Hardness Scale:
0 - 5 grains per gallon = Soft Water
6 - 10 grains per gallon = Moderately Hard Water
> 11 grains per gallon = Hard Water

Water Hardness, pH & Other Useful Info
Secondary Contaminant Analysis

Contaminant Name	MCL	Your Water – Average	Range of Results
Alkalinity (ppm)	N/A	187	141 – 247
Calcium (ppm)	N/A	67.4	46.3 – 107
Iron (ppm)	0.3	0.061	ND – 0.079
Magnesium (ppm)	N/A	22.5	11.5 – 40.5
Manganese (ppm)	0.05	0.010	ND – 0.076
pH (standard units)	6.5 – 8.5	7.48	7.18 7.74
Sodium (ppm)	N/A	28.0	18.6 – 49.7
Total Dissolved Solids (ppm)	500	353	306 – 408
Total Hardness (grains per gallon)	N/A	15	12 – 19

Secondary contaminants are associated with the aesthetic qualities of drinking water, such as taste, smell, color, and formation of deposits on plumbing fixtures. When a secondary contaminant MCL is exceeded, you may notice a change in the color, smell, or taste of your tap water.

LCA Mission: ***To protect public health and the environment by providing high-quality, safe, and reliable water and wastewater services.***

Additional Resources

Information on lead in drinking water: www.epa.gov/safewater/lead

Information on groundwater: https://waterdata.usgs.gov/nwis and http://www.epa.gov/ground-water-and-drinking-water/

Delaware River Basin Commission: https://www.nj.gov/drbc/

The Safe Drinking Water Act: www.epa.gov/sdwa

CDC Guide to Understanding your Water Quality Report (also known as the Consumer Confidence Report): http://www.cdc.gov/healthywater/drinking/public/understanding_ccr.html

American Water Works Association: http://www.awwa.org

Water Environment Federation: http://www.wef.org

Pennsylvania Department of Health: 1-877-724-3258 | https://www.health.pa.gov/

Abbreviations & Definitions

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.

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.

TT - Treatment Technique: A required process intended to reduce the level of a contaminant in drinking water.

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

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

MaxRDL - 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.

MaxRDLG - Maximum Residual Disinfectant Level Goal: This is the lowest amount of cleaning chemical drinking water should have because it is the lowest amount needed to make sure bacteria and viruses can't live.

Level 1 Assessment - A Level 1 assessment is a study of the water system to identify potential problems and determine (if possible) why total coliform bacteria have been found in our water system.

Level 2 Assessment - A Level 2 assessment is 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.

pCi/L - Picocuries per liter (a measure of radioactivity)

NA - Not applicable

N/D - Not detected

NR - Monitoring not required, but recommended

NTU - Nephelometric Turbidity Units: Turbidity is measured with an instrument called a nephelometer. Measurements are given in nephelometric turbidity units.

PPM - Part Per Million = 1 drop of water in a hot tub

PPB - Part Per Billion = 1 drop of water in an Olympic size swimming pool

Lehigh County Authority

Keep in Touch with LCA!

Monthly Board Meetings

We need your understanding and support to be successful, so we hope you will get involved with us all the ways you can on projects, programs, and policies. You are welcome to attend our Board meetings. We meet two times each month and a meeting agenda is posted at our website before each meeting. We always make time to hear from guests and answer questions so please join us to learn more about what we're working on. Your input is important to us! Details may be found on our website at https://www.lehighcountyauthority.org/meetings-minutes.

Social Media

One way to stay connected with us is by following us on Facebook, Twitter, Instagram, or LinkedIn. We share the latest news about big projects we're working on, updates on service interruptions, and helpful tips on conservation, landscaping, and how to protect your pipes and water meter.

Projects and Rates

Infrastructure projects and our rates go hand in hand. We can't keep the system in top shape without your help, so we want you to be as informed as possible about what we need and why. Check out our website to learn about projects and ways you can have input to them.

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