LYONS TOWN OF 2022 Drinking Water Quality Report
Covering Data for Calendar Year 2021

Public Water System ID: CO0107496

Esta es información importante. Si no la pueden leer, necesitan que alguien se la traduzca.

We are pleased to present to you this year's water quality report. Our constant goal is to provide you with a safe and dependable supply of drinking water. Please contact VICTORIA SIMONSEN at 303-823-6622 with any questions or for public participation opportunities that may affect water quality. **Please see the water quality data from our wholesale system(s) (either attached or included in this report) for additional information about your drinking water.**

General Information

All 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 Safe Drinking Water Hotline (1-800-426-4791) or by visiting epa.gov/ground-water-and-drinking-water.

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 of infections. These people should seek advice about drinking water from their health care providers. For more information about contaminants and potential health effects, or to receive a copy of the U.S. Environmental Protection Agency (EPA) and the U.S. Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and microbiological contaminants call the EPA Safe Drinking Water Hotline at (1-800-426-4791).

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, 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:** viruses and bacteria that may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- **Inorganic contaminants:** salts and metals, which can be naturally-occurring or result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- **Pesticides and herbicides:** may come from a variety of sources, such as agriculture, urban storm water runoff, and residential uses.
- **Radioactive contaminants:** can be naturally occurring or be the result of oil and gas production and mining activities.
- **Organic chemical contaminants:** including synthetic and volatile organic chemicals, which are byproducts of industrial processes and petroleum production, and also may come from gas stations, urban storm water runoff, and septic systems.

In order to ensure that tap water is safe to drink, the Colorado Department of Public Health and Environment prescribes regulations limiting the amount of certain contaminants in water provided by public water systems. The Food and Drug Administration regulations establish limits for contaminants in bottled water that must provide the same protection for public health.

Lead in Drinking Water

If present, elevated levels of lead can cause serious health problems (especially for pregnant women and young children). It is possible that lead levels at your home may be higher than other homes in the community as a result of materials used in your home's plumbing. If you are concerned about lead in your water, you may wish to have your water tested. 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. Additional information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline (1-800-426-4791) or at epa.gov/safewater/lead.

Source Water Assessment and Protection (SWAP)

The Colorado Department of Public Health and Environment may have provided us with a Source Water Assessment Report for our water supply. For general information or to obtain a copy of the report please visit wqcdcompliance.com/ccr. The report is located under "Guidance: Source Water Assessment Reports". Search the table using 107496, LYONS TOWN OF, or by contacting VICTORIA SIMONSEN at 303-823-6622. The Source Water Assessment Report provides a screening-level evaluation of potential contamination that ***could*** occur. It ***does not*** mean that the contamination ***has or will*** occur. We can use this information to evaluate the need to improve our current water treatment capabilities and prepare for future contamination threats. This can help us ensure that quality finished water is delivered to your homes. In addition, the source water assessment results provide a starting point for developing a source water protection plan. Potential sources of contamination in our source water area are listed on the next page.

Please contact us to learn more about what you can do to help protect your drinking water sources, any questions about the Drinking Water Quality Report, to learn more about our system, or to attend scheduled public meetings. We want you, our valued customers, to be informed about the services we provide and the quality water we deliver to you every day.

Our Water Sources

Sources (Water Type - Source Type)	Potential Source(s) of Contamination
PURCHASED WATER FROM LONGMONT (Surface Water-Consecutive Connection) that includes: CBT PIPELINE (Surface Water-Intake) BURCH LAKE (Surface Water-Intake) NORTH ST VRAIN PIPELINE (Surface Water-Intake) SOUTH ST VRAIN PIPELINE (Surface Water-Intake) CBT CANAL (Surface Water-Intake) HIGHLAND DITCH PUMP STATION (Surface Water-Intake)	EPA Hazardous Waste Generators, EPA Chemical Inventory/Storage Sites, Permitted Wastewater Discharge Sites, Aboveground, Underground and Leaking Storage Tank Sites, Existing/Abandoned Mine Sites, Other Facilities, Commercial/Industrial/Transportation, Low Intensity Residential, Row Crops, Fallow, Pasture / Hay, Deciduous Forest, Evergreen Forest, Septic Systems, Road Miles

Terms and Abbreviations

- **Maximum Contaminant Level (MCL)** – The highest level of a contaminant allowed in drinking water.
- **Treatment Technique (TT)** – A required process intended to reduce the level of a contaminant in drinking water.
- **Health-Based** – A violation of either a MCL or TT.
- **Non-Health-Based** – A violation that is not a MCL or TT.
- **Action Level (AL)** – The concentration of a contaminant which, if exceeded, triggers treatment and other regulatory requirements.
- **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 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 Goal (MRDLG)** – The level of a 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.
- **Violation (No Abbreviation)** – Failure to meet a Colorado Primary Drinking Water Regulation.
- **Formal Enforcement Action (No Abbreviation)** – Escalated action taken by the State (due to the risk to public health, or number or severity of violations) to bring a non-compliant water system back into compliance.
- **Variance and Exemptions (V/E)** – Department permission not to meet a MCL or treatment technique under certain conditions.
- **Gross Alpha (No Abbreviation)** – Gross alpha particle activity compliance value. It includes radium-226, but excludes radon 222, and uranium.
- **Picocuries per liter (pCi/L)** – Measure of the radioactivity in water.
- **Nephelometric Turbidity Unit (NTU)** – Measure of the clarity or cloudiness of water. Turbidity in excess of 5 NTU is just noticeable to the typical person.
- **Compliance Value (No Abbreviation)** – Single or calculated value used to determine if regulatory contaminant level (e.g. MCL) is met. Examples of calculated values are the 90th Percentile, Running Annual Average (RAA) and Locational Running Annual Average (LRAA).
- **Average (x-bar)** – Typical value.
- **Range (R)** – Lowest value to the highest value.
- **Sample Size (n)** – Number or count of values (i.e. number of water samples collected).
- **Parts per million = Milligrams per liter (ppm = mg/L)** – One part per million corresponds to one minute in two years or a single penny in $10,000.
- **Parts per billion = Micrograms per liter (ppb = ug/L)** – One part per billion corresponds to one minute in 2,000 years, or a single penny in $10,000,000.
- **Not Applicable (N/A)** – Does not apply or not available.
- **Level 1 Assessment** – 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 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.

Detected Contaminants

LYONS TOWN OF routinely monitors for contaminants in your drinking water according to Federal and State laws. The following table(s) show all detections found in the period of January 1 to December 31, 2021, unless otherwise noted. The State of Colorado requires 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, or the system is not considered vulnerable to this type of contamination. Therefore, some of our data, though representative, may be more than one year old. Violations and Formal Enforcement Actions, if any, are reported in the next section of this report.

Note: Only detected contaminants sampled within the last 5 years appear in this report. If no tables appear in this section then no contaminants were detected in the last round of monitoring.

Disinfectants Sampled in the Distribution System
TT Requirement: At least 95% of samples per period (month or quarter) must be at least 0.2 ppm ***OR***
If sample size is less than 40 no more than 1 sample is below 0.2 ppm
Typical Sources: Water additive used to control microbes

Disinfectant Name	Time Period	Results	Number of Samples Below Level	Sample Size	TT Violation	MRDL
Chlorine	December, 2021	Lowest period percentage of samples meeting TT requirement: 100%	0	2	No	4.0 ppm

Lead and Copper Sampled in the Distribution System

Contaminant Name	Time Period	90th Percentile	Sample Size	Unit of Measure	90th Percentile AL	Sample Sites Above AL	90th Percentile AL Exceedance	Typical Sources
Copper	06/24/2021 to 08/13/2021	0.06	10	ppm	1.3	0	No	Corrosion of household plumbing systems; Erosion of natural deposits
Lead	06/24/2021 to 08/13/2021	1	10	ppb	15	0	No	Corrosion of household plumbing systems; Erosion of natural deposits

Disinfection Byproducts Sampled in the Distribution System

Name	Year	Average	Range Low – High	Sample Size	Unit of Measure	MCL	MCLG	MCL Violation	Typical Sources
Total Haloacetic Acids (HAA5)	2021	18.2	11.3 to 22.7	4	ppb	60	N/A	No	Byproduct of drinking water disinfection
Total Trihalomethanes (TTHM)	2021	47.25	38.3 to 60.1	4	ppb	80	N/A	No	Byproduct of drinking water disinfection

LONGMONT CITY OF routinely monitors for contaminants in your drinking water according to Federal and State laws. The following table(s) show all detections found in the period of January 1 to December 31, 2020 unless otherwise noted. The State of Colorado requires 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, or the system is not considered vulnerable to this type of contamination. Therefore, some of our data, though representative, may be more than one year old. Violations and Formal Enforcement Actions, if any, are reported in the next section of this report.

Note: Only detected contaminants sampled within the last 5 years appear in this report. If no tables appear in this section then no contaminants were detected in the last round of monitoring.

TABLE I - DRINKING WATER QUALITY: REGULATED CONTAMINANTS

Table I shows the most recent test results for contaminants that were detected in Longmont's drinking water and have limits set by EPA or CDPHE regulations. Possible sources of the contaminants are noted in the last column. These are not necessarily the sources of contaminants in Longmont's water.

Contaminant	Range of Levels	MCL	MCLG	Probable Source of Contaminant
Inorganic and Physical				
Barium[1]	0.01 ppm	2 ppm	2 ppm	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Fluoride[1]	0.67 ppm	4 ppm	4 ppm	Erosion of natural deposits; water additive that promotes strong teeth; Discharge from fertilizer and aluminum factories
Turbidity[2]	0.015 to 0.077 NTU 100% of samples <0.3 NTU	1.0 NTU and more than 95% of samples <0.3 NTU	Not Applicable	Soil runoff
Nitrate (NO_3)	<0.10 ppm	10 ppm	10 ppm	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Bacteria and Microorganisms				
Total Coliform Bacteria	Present in 0 samples out of 1,275	Treatment technique used to trigger follow-up assessments of the water system.	Not Applicable	Naturally present in the environment
E. coli Bacteria	Not Detected		0% Present	Human and animal waste
Disinfection and Disinfection Byproducts				
Chlorine[3]	0.27 to 1.35 ppm Max Monthly Average= 0.86 ppm	4 ppm (MRDL)	4 ppm (MRDLG)	Water additive used to control microbes
Total Haloacetic Acids	13.4 to 22.3 ppb Max LRAA= 18.9 ppb	60 ppb	0 ppb	Byproduct of drinking water disinfection
Total Trihalomethanes	24.6 to 46.0 ppb Max LRAA= 35.5 ppb	80 ppb	0 ppb	Byproduct of drinking water disinfection
Radioactivity				
Alpha Emitters[1]	Not Detected	15 pCi/L	0 pCi/L	Erosion of natural deposits
Uranium[1]	Not Detected	30 ppb	0 ppb	Erosion of natural deposits
Combined Radium (226+228)[1]	Not Detected	5 pCi/L	0 pCi/L	Erosion of natural deposits
Total Organic Carbon				
Total Organic Carbon (TOC)	Source Water: 2.70 to 5.45 ppm Average= 3.60 ppm Treated Water: 1.09 to 2.38 ppm Average= 1.47 ppm Removal: 38.8% to 68.8% Average= 58.2%	TOC is a measure of the effectiveness of a treatment technique used by the water treatment plant to remove organic material.[4]		Naturally present in the environment

TABLE II - DRINKING WATER QUALITY: CORROSION CONTROL

The City began a corrosion control program in 1987 to reduce lead and copper levels. Sodium carbonate or sodium hydroxide is added at the treatment plants to adjust pH and alkalinity of the water and reduce its corrosiveness.

Parameter	Range of Levels	Action Level (AL)	MCLG	Probable Source
Lead	90th percentile= 1.27 ppb Max= 3.01 ppb	90th percentile: 15 ppb	0 ppb	Corrosion of household plumbing systems; Erosion of natural deposits
Copper	90th percentile= 0.063 ppm Max= 0.102 ppm	90th percentile: 1.3 ppm	1.3 ppm	Corrosion of household plumbing systems; Erosion of natural deposits
pH	7.1[5] to 8.9 SU Average= 8.3 SU	For Longmont, the CDPHE established allowable range for pH of 7.2 to 9.5 SU.		
Alkalinity	24.6 to 35.2 ppm Average= 29.5 ppm	For Longmont, the CDPHE established allowable range for alkalinity of 7 to 77 ppm.		

TABLE III - DRINKING WATER QUALITY: ADDITIONAL COMPOUNDS

Table III shows test results for parameters that do not have a specific MCL.

Parameter	Range of Levels	Probable Source
Inorganic and Physical		
Sodium	11.8 to 15.3 ppm Average= 13.1 ppm	Erosion of natural deposits and added during treatment
Calcium	5.34 to 7.11 ppb Average= 6.33 ppb	Erosion of natural deposits
Potassium	Not Detected	Erosion of natural deposits
Magnesium	Not Detected to 1.2 ppm Average of Detected Results= 1.1 ppm	Erosion of natural deposits
Manganese	Not Detected to 144 ppb Average of Detected Results= 38.7 ppb	Naturally occurring element and essential nutrient used in fertilizer, steel production, batteries, fireworks and in drinking water and wastewater treatment plants.
Aluminium	22.6 to 52.5 ppb Average of Detected Results= 31.1 ppb	Erosion of natural deposits and byproduct of the drinking water treatment process
Zinc	Not Detected	Erosion of natural deposits; Corrosion of plumbing and fixtures.
Total Hardness	17 to 23 ppm Average= 20 ppm	Erosion of natural deposits
Organic Chemicals		
Chloroform	22.6 to 42.2 ppb Average= 29.6 ppb	Byproduct of drinking water chlorination
Dichloroacetic acid	4.7 to 9.1 ppb Average= 7.3 ppb	Byproduct of drinking water chlorination
Bromodichloromethane	1.7 to 3.6 ppb Average= 2.4 ppb	Byproduct of drinking water chlorination
Trichloroacetic acid	7.3 to 13.2 ppb Average= 10.2 ppb	Byproduct of drinking water chlorination

Definitions of terms

90th percentile: 90% of the samples were below this level.

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

LRAA — Locational Running Annual Average: The average of analytical results for samples taken at a particular monitoring location during the previous four calendar quarters.

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 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.

NFWTP: Nelson Flanders Water Treatment Plant

NTU — Nephelometric Turbidity Unit: Used to describe the cloudiness of water.

pCi/L — PicoCuries per Liter: As a measure of radioactivity.

pH — The measure of how acidic or basic the water is, reported in Standard Units (SU). See SU definition for more information.

ppb — parts per billion: A measure of concentration of a contaminant. Comparable to one penny in $10,000,000.

ppm — parts per million: A measure of concentration of a contaminant. Comparable to one penny in $10,000.

ppt – parts per trillion: A measure of concentration of a contaminant. Comparable to one penny in $10,000,000,000.

SU — Standard Units: The unit of measure for pH. A pH of 7 SU is considered neutral. A pH less than 7 is acidic and a pH greater than 7 is basic.

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

WGWTP: Wade Gaddis Water Treatment Plant

[1] Per State monitoring requirements, Inorganic and Physical Metals last tested in 2020, and Radioactivity last tested in 2012.
[2] Turbidity is a measure of water clarity and is used to monitor treatment plant performance and interference with the disinfection process.
[3] Chlorine. More than 95% of the samples taken in the City's distribution system in any month must have a residual chlorine level at or above 0.2 mg/L.
[4] The required TOC removal is based on alkalinity of the water. For Longmont, the required level of TOC removal ranges between 35% and 45%.
[5] One sample collected in 2021 yielded a pH below the established range of 7.2 SU – 9.5 SU. The follow-up sample collected from this location yielded a result well within the established range. A violation did not occur and no additional action was necessary.

Violations, Significant Deficiencies, and Formal Enforcement Actions

No Violations or Formal Enforcement Actions