

# Longs Peak Water District

## 2016 Water Quality Report

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

We are pleased to present to you this year's Annual Water Quality Report. This report is designed to inform you about the quality water and services we deliver to you every day. Our constant goal is to provide you with a safe and dependable supply of drinking water at the lowest possible cost. If you know customers who live in apartments or other living units that are not billed directly for water, please share this report with them. If you have any questions about this report or concerning your water utility, please contact Gary Allen at (303)776-3847.

### 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 <http://water.epa.gov/drink/contaminants>.

**The District's raw water** comes from Carter Lake. The water treatment facilities are the Kugel Plant (PWSID CO0107486), and metered connections from Little Thompson Water District (PWSID CO0135477). The water from Little Thompson is treated at the Carter Lake Filter Plant (PWSID CO0135476). Carter Lake is a part of the Northern Colorado Water Conservancy District's (NCWCD) Colorado Big Thompson Project. The water is collected in Western Slope reservoirs and transported through the Alva B. Adams Tunnel to Mary's Lake, Lake Estes, Pinewood Reservoir, Flatiron Reservoir, and finally pumped to Carter Lake. Our water sources are considered surface water.

**Safe drinking water is an essential resource.** The Longs Peak Water District and Carter Lake Filter Plants strive to consistently meet or exceed state and federal water quality standards.

**The Colorado Department of Public Health and Environment** has provided a Source Water Assessment Report for the Carter Lake Filter Plant water supply. The Source Water Assessment Report provides a screening-level evaluation of potential contamination that could occur. It does not mean that contamination has or will occur. Rather, this information is used to evaluate the need to improve water treatment capabilities and to prepare for future contamination threats. This information is used to ensure that quality finished water is delivered to you. In addition, the source water assessment results provide a starting point from which a source water protection plan may be developed. Potential sources of contamination within the source water area include EPA hazardous waste generators, EPA chemical inventory/storage sites, EPA toxic release inventory sites, permitted wastewater discharge sites, aboveground, underground and leaking storage tank sites, solid waste sites, existing/abandoned mine sites and other facilities, commercial/industrial/transportation, low intensity residential, urban recreational grasses, row crops, fallow, small grains, pasture/hay, forests, septic systems, oil/gas wells and road miles. You may obtain a copy of the report by visiting [www.cdphe.state.co.us/wq/sw/swaphom.html](http://www.cdphe.state.co.us/wq/sw/swaphom.html).

**The source water** from Carter Lake is tested annually for both Cryptosporidium and Giardia. There has never been a positive test for either organism in the source water or treated water during the period of testing.

**Some people may be more vulnerable** to contaminants in drinking water than the public in general. All drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some compounds. The presence of these compounds does not necessarily indicate that the water poses a health risk. 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 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 compounds call the EPA Safe Drinking Water Hotline at 1-800-426-4791.

**In order to ensure** that tap water is safe to drink, EPA prescribes regulations limiting the number of certain compounds in water provided by public water systems. The U.S. Food and Drug Administration (FDA) regulations establish limits for compounds in bottled water that must provide the same protection for public health.

**The compound table** contains many terms and abbreviations that may be unfamiliar. To help you better understand these terms we've provided the following definitions:

- **Action Level (AL):** The concentration of a compound, if exceeded, triggers treatment or other requirements a water system must follow.
- **Maximum Contaminant Level (MCL):** The "maximum allowed" is the highest level of a compound that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.
- **Maximum Contaminant Level Goal (MCLG):** The "goal" is the level of a compound 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. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.
- **Not Applicable (NA):** Not applicable.
- **Non-Detects (ND) or Below Detection Level (BDL):** Laboratory analysis indicates that the constituent is not present. ("<" Symbol for less than, the same as ND or BDL)
- **Nephelometric Turbidity Unit (NTU):** Nephelometric turbidity unit is a measure of the clarity of water. Turbidity in excess of five NTU is just noticeable to the average person.
- **Parts per billion (ppb) or Micrograms per liter ( $\mu\text{g/l}$ ):** One part per billion corresponds to one minute in 2,000 years, or one penny in \$10,000,000.
- **Parts per million (ppm) or Milligrams per liter ( $\text{mg/l}$ ):** One part per million corresponds to one minute in two years or one penny in \$10,000.
- **Treatment Technique (TT):** A treatment technique is a required process intended to reduce the level of a compound in drinking water.
- **Waiver:** State permission not to test for a specific compound.

**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. Compounds that may be present in source water include:

- **Microbial compounds**, such as viruses and bacteria that may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- **Inorganic compounds**, such as 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** that may come from a variety of sources, such as agriculture, urban storm water runoff, and residential uses.
- **Organic chemical compounds**, 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.
- **Radioactive compounds**, that can be naturally occurring or be the result of oil and gas production and mining activities.
- **Coliforms are bacteria** that are naturally present in the environment and are used as an indicator that other, potentially-harmful bacteria may be present.

**Infants and young children** are typically more vulnerable to lead in drinking water than the general population. It is possible that the lead levels at your home may be higher than at other homes in the community as a result of materials used in your home's plumbing. If you are concerned about elevated lead levels in your home's water, you may wish to have your water tested. Flush your tap for 30 seconds to 2 minutes before using tap water. Additional information is available from the EPA Safe Drinking Water Hotline at 1-800-426-4791, or at <http://www.epa.gov/safewater/lead>.

**The state 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. Some of our data, though representative, may be more than one year old. This report presents the results of our monitoring for the period January 1 to December 31, 2016 unless otherwise noted.

**The Colorado Department of Public Health and Environment (CDPHE)** does not require the Carter Lake Filter Plant or the District to test for the following compounds: asbestos, cyanide, dioxin, glyphosphate, and nitrite.

**Inorganic Compounds regulated** that were tested for, but not detected, include antimony, arsenic, beryllium, cadmium chromium, mercury (inorganic), nickel, nitrate/nitrite (as nitrogen), selenium, and thallium.

**Synthetic Organic Compounds regulated** were tested for in 2016 and **none** of the 32 compounds of concern were detected.

**Volatile Organic Compounds regulated** were tested for in 2016 and **none** of the 21 compounds of concern were detected.

Compounds Regulated at the Carter Lake Treatment Plant							
Compound	MCL	MCLG	Unit	Level Detected	Sample Date	Violation	Likely Source of Compound
Barium	2	2	ppm	0.15	1/25/16	No	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Fluoride	4	4	ppm	0.63	1/25/16	No	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Nickel	0.10	.010	ppm	0.0024	1/25/16	No	Nickel is released into the environment by power plants, metal factories and waste incinerators. It is also used in fertilizers and enters groundwater from farm runoff.
Thallium	.002	NA	ppm	0.0017	1/25/16	No	Leaching from ore-processing sites; discharge from electronics, glass and drug factories.
Nitrate	10	10	ppm	0.057	1/25/16	No	Erosion of natural deposits, runoff from fertilizer use, leaching from septic tanks, sewage.
Turbidity <sup>1</sup>	TT ≤ 1	NA	NTU	0.21	12/16	No	Soil runoff
	TT ≤ 0.3	NA	NTU	95%<0.1	Continuous	No	

Compounds Regulated in the Little Thompson District Distribution System							
Compound	MCL	MCLG	Unit	Level Detected	Sample Date	Violation	Likely Source of Compound
Total Coliform Bacteria	No more than 5% positive monthly samples	0	Absent/ Present	0	Monthly	No	Naturally present in the environment
Fecal Coliform and E Coli	1 pos. monthly sample	0	Absent/ Present	0	Monthly	No	Human and animal fecal waste
Copper <sup>2</sup> 1 <sup>st</sup> half 2016	AL = 1.3	0	ppm	0.29 0-0.42	Feb 2016	No	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Copper <sup>2</sup> 2 <sup>nd</sup> half 2016	AL = 1.3	0	ppm	0.23 0-0.6	Oct 2016	No	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead <sup>2</sup> 1 <sup>st</sup> half 2016	AL = 15	0	ppb	22.2 0-65.8	Jan-Jun 2016	AL Exceeded	Corrosion of household plumbing systems; erosion of natural deposits
Lead <sup>2</sup> 2 <sup>nd</sup> half 2016	AL = 15	0	ppb	6.9 0-16.4	Jul-Dec 2016	No	Corrosion of household plumbing systems; erosion of natural deposits
Chlorite	1.0	0.8	ppb	0.32	Daily	No	By-product of drinking water disinfection

- 1 There are two standards for turbidity. The reported monthly turbidity must be less than or equal to 0.3 NTU at least 95% of the time. Also, turbidity must never be higher than 1.0 NTU at any time. Turbidity readings ranged from 0.01 – 0.21 NTU.
- 2 2016 Data. Single level detected is 90<sup>th</sup> percentile; the range is for all samples. The District is required to sample for Copper and Lead every 6 months.

Compounds	Level Detected	Sample Size	Unit	MCL	MCLG	Violation	Typical Source
HAA5*	26.02	16	ppb	60	N/A	No	Byproduct of drinking water disinfection
	16.2-38.17						
TTHM*	37.69	16	ppb	80	N/A	No	Byproduct of drinking water disinfection
	21.3-47.2						

\*Compounds that result from reactions between organic and inorganic matter in water with chemical treatment agents during the water treatment process. Total Haloacetic Acids (HAA5), and Total Trihalomethanes (TTHM)

**Regulated Compounds in the Longs Peak Water District Distribution System**

Compounds	Level Detected	Sample Date	Unit	MCL	MCLG	Violation	Typical Source
HAA5	22.49	Quarterly	ppb	60	N/A	NO	By-product of drinking water disinfection
	13.9-31.91						
TTHM	51.17	Quarterly	ppb	80	N/A	NO	By-product of drinking water disinfection
	36.8-60.6						
LEAD	90 <sup>th</sup> Percentile	January	ppb	AL=15	0	AL Exceedance	Corrosion of household plumbing systems; erosion of natural deposits
	4					NO	
LEAD	90 <sup>th</sup> Percentile	November	ppb	AL=15	0	AL Exceedance	Corrosion of household plumbing systems; erosion of natural deposits
	1					NO	
COPPER	90 <sup>th</sup> Percentile	January	ppm	AL=1.3	0	AL Exceedance	Corrosion of household plumbing systems; erosion of natural deposits
	.02					NO	
COPPER	90 <sup>th</sup> Percentile	November	ppm	AL=1.3	0	AL Exceedance	Corrosion of household plumbing systems; erosion of natural deposits
	.02					NO	

The District is required to sample for Copper and Lead every 6 months.

**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 -- Chlorine

**The Longs Peak Water District samples 3 sites per month and met the TT Requirement 100% of the time for year 2016.**

**Regulated Compounds at the Longs Peak Water District Kugel Plant (Entry Point)**

Compounds	Date	Level Detected	Sample Date	Unit	MCL	MCLG	Violation	Typical Source
TURBIDITY <sup>4</sup>	2016	0.28	November	NTU	TT≤1	N/A	no	Soil runoff
		95%	Continuous				TT≤.3	
GROSS ALPHA	2014	0.3	1 sample every 9 years	pCi/L	15	0	no	Erosion of Natural Deposits
BARIUM	2016	0.02	Annually	ppm	2	2	no	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
FLUORIDE	2016	0.1	Annually	ppm	4	4	no	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
NITRATE-NITRITE	2014	0.1	1 sample every 9 years	ppm	10	10	no	Runoff from fertilize use; leaching from septic tanks, sewage; erosion of natural deposits

**Disinfectants Sampled at the Entry Point to the Distribution System -- Chlorine**

**TT/MRDL Requirement** = No more than 4 hours with a sample below 1.6 MG/L

**Longs Peak Water District took 1996 samples in 2016, and results were ≥ 1.6 MG/L 100% of the time.**

Raw Water Source E. coli				
Contaminant Name	Year	Sample Size	Number of Positives	Violation
E. Coli	2016	7	3	NO

- 4 There are two standards for turbidity. The reported monthly turbidity must be less than or equal to 0.3 NTU at least 95% of the time. Also, turbidity must never be higher than 1.0 NTU at any time. Turbidity readings ranged from 0.01 – 0.28 NTU.

**There are no additional required health effects notices. This report reflects no violations or formal enforcement actions.**