



LITTLE THOMPSON
WATER DISTRICT

2016

ANNUAL WATER QUALITY REPORT

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

**LITTLE THOMPSON WATER DISTRICT
2016 ANNUAL WATER QUALITY REPORT
PWSID CO-0135477**

This report and other important information about Little Thompson Water District can be found on the District's website, www.ltwd.org.

Our Office Location

Little Thompson Water District
835 E State Highway 56,
Berthoud, CO 80513

Office Hours

Our office is open from 7:00 a.m. to 5:00 p.m., Monday through Friday.

Contact Us

Contact us at 970-532-2096 or email info@ltwd.org.

Emergencies:

After hours, call 970-532-2096 to reach on-call personnel.

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About This Report and General Information

About this Report

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.

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>.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised persons such as those with cancer undergoing chemotherapy, those 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 stormwater 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 stormwater 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 (CDPHE) 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 the 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 because of materials used in your home's plumbing.

In the first half of 2016, based on results of 87 samples taken from homes, there were elevated lead levels in some homes. The calculated value used for compliance was 22.2 micrograms per liter. The Action Level for lead is 15 micrograms per liter. These higher levels triggered an Action Level Exceedance and the District released a Public Education Notice on methods to reduce your exposure to lead contamination. This notice can be found on our website: www.ltwd.org.

Changes to the treatment process were made at the Carter Lake Filter Plant to reduce the corrosiveness of the water. Corrosive water can leach lead from pipe fittings and fixtures and increase the level of lead in the home's tap water.

During the second half of 2016, 79 samples were submitted for analysis and the calculated value was 6.9 micrograms per liter.

Even though the results were below the Action Level, the District continues to recommend following the 7 tips to reduce possible exposure as stated in the Public Education Notice on our website.

If you are concerned about lead in your water, you may wish to have your water tested. When your water has been sitting in the pipes 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 [http:// www.epa.gov/safewater/lead](http://www.epa.gov/safewater/lead).

A summary of the results of the 2016 Lead and Copper testing can be found in the table on page 10; Compounds Regulated in the Distribution System.



Did you know?

You can minimize the potential for lead exposure by simply 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.

Source Water Assessment and Protection Report (SWAP)

The Colorado Department of Public Health and Environment has 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 <http://wqcdcompliance.com/ccr>. The report is located under "Source Water Assessment Reports", and then "Assessment Report by County". Select LARIMER County and find 135476: Carter Lake Filter Plant SW or by contacting Ken Lambrecht at 970-532-2096.

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 page 8. Please contact us to learn more about what you can do to help protect your drinking water sources, any questions about the 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.

The Big Thompson Watershed Forum is a group of private citizens and government agencies united with the common goal of protecting the quality of source water throughout the Big Thompson Watershed. The Big Thompson Watershed contains the watershed of Carter Lake. The Forum is working in partnership with Colorado State University and Northern Water to operate a water quality monitoring network for the watershed. More information may be obtained at www.btwatershed.org.

Where does your water come from?

The District's raw water (untreated) comes primarily from Carter Lake, a water reservoir of Northern Water's Colorado-Big Thompson Project or C-BT.

C-BT water is collected in western slope reservoirs and transported through the Alva B. Adams Tunnel to Mary's Lake, Lake Estes, Pinewood and Flatiron Reservoirs and finally pumped to Carter Lake.

The water treatment facilities are the North and South Carter Lake Filter Plants (PWSID CO-0135476), jointly owned by Little Thompson Water District (PWSID CO-0135477) and Central Weld County Water District (PWSID CO-0162122).

Both Little Thompson Water District and Central Weld County Water District receive treated water from the Carter Lake Filter Plants through metered connections from shared water transmission lines. In addition, the District maintains supplemental and emergency connections with other water supply systems and can receive supplemental water in various parts of our service area from the City of Loveland. For more information on the water quality of these supplemental systems, please contact the District.



Carter Lake | Photo credit: Northern Water



Did you know?

The District provides an average of 5 million gallons of water per day (MGD).

Our constant goal is to provide our customers with a safe and dependable supply of drinking water at the lowest possible cost.

Terms and Abbreviations

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

Average (x-bar) – Typical value.

Compliance Value – Single or calculated value used to determine if regulatory level (e.g. MCL) is met. Examples of calculated values are the 90th Percentile, Running Annual Average (RAA) and Locational Running Annual Average (LRAA).

Formal Enforcement Action – 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.

Gross Alpha – Gross alpha particle activity compliance value. It includes radium-226, but excludes radon 222 and uranium.

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 drinking water disinfectants, 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 (BTL) – 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 (ug/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 (mg/L) – One part per million corresponds to one minute in two years or one penny in \$10,000.

Picocuries per liter (pCi/L) – Measure of the radioactivity in water.

Range (R) – Lowest value to the highest value.

Sample Size (n) – Number or count of values (i.e. number of water samples collected).

Treatment Technique (TT) – A treatment technique is a required process intended to reduce the level of a compound in drinking water.

Variance and Exemptions (V/E) – Department permission not to meet a MCL or treatment technique under certain conditions.

Violation – Failure to meet a Colorado Primary Drinking Water Regulation.

Waiver – State permission not to test for a specific compound.

Detected Contaminants

Is fluoride or chlorine in your water?

Small amounts of chlorine and fluoride are added to the water as it leaves the Carter Lake Filter Plant.

Chlorine is added to disinfect the water and prevent any bacterial growth in the distribution system.

Fluoride is added to help reduce tooth decay. In 2011, based on the recommendation from the Department of Health and Human Services (HHS) and the Environmental Protection Agency (EPA), Carter Lake Filter Plant began reducing the level of fluoride to 0.7 parts per million (ppm).

Have other contaminants been found in the District's water?

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

Inorganic compounds that were tested for, but not detected, include antimony, arsenic, beryllium, cadmium, chromium, mercury (inorganic), nickel, nitrate/nitrite (as nitrogen), selenium and thallium. Compounds that were detected are shown in the following tables.

21 Volatile Organic Compounds (VOC's) were tested in January 2016. All were below detectable limits.

32 Synthetic Organic Compounds (SOC's) were tested in October 2014. All were below detectable limits.

Bromodichloromethane and Chloroform were not detected.

Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other potentially-harmful bacteria may be present.

2016 Water Quality Test Results for Little Thompson Water District

The following tables show the results of water quality analyses performed on water supplied by the District. Every regulated substance detected in the water, even in the most minute amounts, is listed.

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 table contains the name of each detected regulated substance, the highest level allowed (MCL), the ideal goals for public health (MCLG), the amount and/or range of amounts detected, and the usual sources of such substances and an explanation of the units of measure.

Compounds Regulated at the Treatment Plant

Compound	MCL	MCLG	Unit	Level Detected	Sample Date	Violation	Likely Sources of Contamination
Barium	2	2	mg/L	0.15	1/25/2016	No	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Fluoride	4	4	mg/L	0.63	1/25/2016	No	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Nickel	0.10	0.10	mg/L	0.0024	1/25/2016	No	Likely source of nickel: 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.
Nitrate	10	10	mg/L	0.057	1/25/2016	No	Erosion of natural deposits, runoff from fertilizer use, leaching from septic tanks, sewage.
Thallium	.002	NA	mg/L	0.0017	1/25/2016	No	Leaching from ore-processing sites; discharge from electronics, glass and drug factories.
Turbidity ¹	TT ≤ 1.0	NA	NTU	0.21	12/16	No	Naturally present in the environment
	TT ≤ 0.3	NA	NTU	95% < 0.1	Continuous	No	

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 – 0.19 NTU.

Compounds Regulated in the Distribution System

Compound	MCL	MCLG	Unit	Level Detected	Sample Date	Violation
Total Coliform Bacteria	No more than 5% positive monthly samples	0	Absent/ Present	0	Monthly	No
Fecal Coliform and E Coli	1 positive monthly sample	0	Absent/ Present	0	Monthly	No
Chlorite	1.0	0.8	ppb	0.32	Daily	No

² 2016 Sample Data. Single level detected is 90th percentile; the range is for all samples. The District is required to sample for Copper and Lead every 6 months.

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 Exceeded	Typical Sources
Copper	11/28/2016 to 12/02/2016	0.23	79	ppm	1.3	0	No	Corrosion of household plumbing systems; Erosion of natural deposits
Lead	01/12/2016 to 06/09/2016	22.2	87	ppb	15	12	Yes	Corrosion of household plumbing systems; Erosion of natural deposits
Copper	01/12/2016 to 06/09/2016	0.27	87	ppm	1.3	0	No	Corrosion of household plumbing systems; Erosion of natural deposits
Lead	11/28/2016 to 12/02/2016	6.9	79	ppb	15	2	No	Corrosion of household plumbing systems; Erosion of natural deposits

Disinfection By-products in the Distribution System (DBP2)

Compounds that result from reactions between organic and inorganic matter in water with chemical treatment agents during the water disinfection process.

Contaminant Name	Average	Range Low-High	Sample Size	Unit of Measure	MCL	MCLG	Highest Compliance Value	MCL Violation	Typical Sources
Total Haloacetic Acids (HAA5)	26.02	16.2-38.17	16	ppb	60	NA	38.17	No	Byproduct of drinking water disinfection
Total Trihalomethanes (TTHM)	37.69	21.3-47.2	16	ppb	80	NA	47.2	No	Byproduct of drinking water disinfection

Secondary Contaminants

Secondary standards are non-enforceable guidelines for contaminants that may cause cosmetic effects (such as skin, or tooth discoloration) or aesthetic effects (such as taste, odor, or color) in drinking water.

Contaminant Name	Year	Average	Range Low-High	Sample Size	Unit of Measure	Secondary Standard
Dichloroacetic Acid	2016	8.92	2.5-13.3	8	N/A	
Monochloroacetic Acid	2016	1.28	0-2.86	8	N/A	
Trichloroacetic Acid	2016	15.83	9.3-20.2	8	N/A	

Unregulated Contaminants (UCMR₃)

EPA has implemented the Unregulated Contaminant Monitoring Rule (UCMR) to collect data for contaminants that are suspected to be present in drinking water and do not have health-based standards set under the Safe Drinking Water Act. EPA uses the results of UCMR monitoring to learn about the occurrence of unregulated contaminants in drinking water and to decide whether or not these contaminants will be regulated in the future. We performed monitoring and reported the analytical results of the monitoring to EPA in accordance with its Third Unregulated Contaminant Monitoring Rule (UCMR₃). Once EPA reviews the submitted results, the results are made available in the EPA's National Contaminant Occurrence Database (NCOD) (<http://www.epa.gov/dwucmr/national-contaminant-occurrence-database-ncod>). Consumers can review UCMR results by accessing the NCOD. Contaminants that were detected during our UCMR₃ sampling and the corresponding analytical results are provided below. Results are from samples taken quarterly during 2014 and 2015.

Compound Name	Max Level Detected	Likely Source of Contamination
Sodium	7 ppb	Naturally occurring, non-regulated, 2016
Strontium	46 ug/L	Strontium is an alkaline earth metal that is found naturally in the minerals celestine and strontianite.
Vanadium	0.2 ug/L	Vanadium is a natural element in the earth occurs naturally in fuel oils and coal.
Chromium, Hexavalent	0.06 ug/L	Hexavalent chromium occurs naturally. Trivalent chromium can be oxidized to hexavalent chromium during water disinfection.
Chlorate	71 ug/L	Chlorate ion is a known byproduct of the drinking water disinfection process, forming when sodium hypochlorite or chlorine dioxide are used in the disinfection process.

More information about the contaminants that were included in UCMR₃ monitoring can be found at:

<http://www.drinktap.org/water-info/whats-in-my-water/unregulated-contaminant-monitoring-rule.aspx>. Learn more about the EPA UCMR at: <http://www.epa.gov/dwucmr/learn-about-unregulated-contaminant-monitoring-rule> or contact the Safe Drinking Water Hotline at (800) 426-4791 or <http://water.epa.gov/drink/contact.cfm>.

Violations, Significant Deficiencies, & Formal Enforcement Actions

No Violations or Formal Enforcement Actions in 2016.

First half of 2016, Lead Action Level Exceedance. Little Thompson Water District issued a Public Education Notice.

What if I have questions about my water?

Please contact us if you have any questions about this report or our water system. You can reach Ken Lambrecht, District Operations Manager, at 970-532-2096 or by email: klambrecht@ltwd.org.

District Board Meetings

If you would like to attend our monthly public meetings, the District's Board of Directors meets monthly at the District's office. Visit our website www.ltwd.org for the schedule and Notice of Meetings.



Did you know?

We have been serving customers in Larimer, Weld, and Boulder counties since 1962.



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WATER DISTRICT

835 E. Highway 56
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