



LTWD

Annual Water Quality Report

2011 Water Quality Report for Little Thompson Water District (PWSID CO-0135477)

June 2012

Office Hours and Location

The LTWD office is located at 835 E State Highway 56, Berthoud, CO. Office hours are from 7:00 a.m. to 5:00 p.m., Monday through Friday. The phone number is 970-532-2096.

Emergencies

Customers in need of emergency service can call 970-532-2096 after regular office hours. Emergency calls are routed to on-call personnel.

For Your Information

This report and other important information about LTWD can be found on the District's website. The address is: www.ltwd.org

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

Introduction

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.

Where does LTWD water come from?

The District's raw water comes primarily from 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). The filter plants receive water from Carter Lake, a part of 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, and Flatiron Reservoir and finally pumped to Carter Lake. Both Little Thompson and Central Weld County Water Districts receive water from the

Carter Lake Filter Plants through metered connections to shared water transmission lines. In addition, the District maintains supplemental and emergency connections with a number of other water supply systems and receives some supplemental water in various parts of our service area from the City of Loveland. Customers can receive water quality information for Little Thompson Water District or these supplemental sources by contacting the District directly or by viewing the information on the District's web site at www.ltwd.org. Safe drinking water is an essential resource. The Little Thompson Water District and Carter Lake Filter Plants strive to consistently meet or exceed state and federal water quality standards.

Source Water Assessment Report

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.

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. Also in 2000, the source water and treated water were tested for but did not detect methyl tert-butyl ether (MTBE).

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 NCWCD to operate a water quality monitoring network for the watershed. More information may be obtained at www.btwatershed.org.

What contaminants might be in drinking water?

In order to ensure that tap water is safe to drink, EPA prescribes regulations limiting the amount 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 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.

Have contaminants been found in LTWD'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. Barium, Fluoride and Sodium were detected and are shown in the table on page 3.

Synthetic Organic Compounds were tested for in 2011 and none of the 29 compounds of concern were detected.

Volatile Organic Compounds were tested for and 53 of the 55 compounds of concern were not detected.

Bromodichloromethane and Chloroform were detected and are

shown in the table on page 4.

Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially-harmful bacteria may be present. There were no water quality violations in 2011.

The physical water quality in the distribution system was not in danger at any time in 2011.

Is LTWD's water safe for everyone?

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. 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.

Is there fluoride or chlorine in LTWD's 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).

2011 Water Quality Test Results for Little Thompson Water District

The following tables shows the results of water quality analyses performed on water supplied by LTWD. 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, 2011 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 Source of Contamination
Barium	2	2	ppm	0.015	2/2/11	No	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Fluoride	4	4	ppm	0.85	2/2/11	No	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Turbidity ¹	TT ≤ 1.0	NA	NTU	0.31	Jan 2011	No	Soil runoff
	TT ≤ 0.3	NA	NTU	95%	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 – 0.31 NTU.

Compounds Regulated in the Distribution System							
Compound	MCL	MCLG	Unit	Level Detected	Sample Date	Violation	Likely Source of Contamination
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 ²	AL = 1.3	1.3	ppm	0.30	September 2009	No	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
				0.00 – 0.6			
Lead ²	AL = 15	0	ppb	6.01	September 2009	No	Corrosion of household plumbing systems; erosion of natural deposits
				0.22– 22.65			
TTHM ³	80	0	ppb	40.6	Quarterly	No	By-product of drinking water chlorination
				19.6 - 61.9			
HAA ⁴	60	NA	ppb	50.0	Quarterly	No	By-product of drinking water chlorination.
				27.0 - 81.9			

² No single sample for Copper or Lead exceeded the Action Level. Single level detected is 90th percentile; the range is for all samples. The District is required to sample for Copper and Lead every 3 years.

³ TTHM = Total Trihalomethanes. Level detected is annual average; the range is for all samples.

⁴ HAA = Haloacetic Acids. Level detected is annual average; the range is for all samples.

2011 Water Quality Test Results for Little Thompson Water District

Unregulated compounds are those for which EPA has not established drinking water standards. The purpose of unregulated compound monitoring is to assist EPA in determining the occurrence of unregulated compounds in drinking water and whether future regulation is warranted.

Unregulated Compounds		
Compound	Level Detected	Likely Source of Contamination
Chloroform	8.3 ppb	By-product of drinking water chlorination
Bromodichloromethane	1.4 ppb	By-product of drinking water chlorination
Sodium	6.1 ppb	Naturally occurring, nonregulated
Methyl Tert-Butyl Ether (MTBE)	Not tested	Underground storage tanks

Important Definitions

The above tables contain 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 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 (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 (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.

What if I have questions about my water?

If you have any questions about the information contained in this report or the services provided by LTWD, please contact Jim Hibbard, LTWD's

District Manager, at 970-532-2096. You are also invited to attend any regularly scheduled meeting of the District Board. Directors hold their

Meetings on the second or third Thursday of the month at the District Office, 835 E State Highway 56, Berthoud. See our website www.ltwd.org for Notice of Meetings.