

## TOWN OF BERTHOUD 2011 Drinking Water Consumer Confidence Report (CCR) For Calendar Year 2010

*Public Water System ID:* CO0135138

**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 **Michael Hart** at **970-532-3651** with any questions about the Drinking Water Consumer Confidence Report or for public participation opportunities that may affect the water quality.

### 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).

Some people may be more vulnerable to contaminants in drinking water than the general population. 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 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**, such as viruses and bacteria that 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**, that may come from a variety of sources, such as agriculture, urban stormwater runoff, and residential uses.
- Radioactive contaminants**, that 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 <http://www.epa.gov/safewater/lead>.

<b><u>Terms and Abbreviations</u></b>		
<b><u>Term</u></b>	<b><u>Abbreviation</u></b>	<b><u>Definition</u></b>
Maximum Contaminant Level Goal	MCLG	The 'Goal' is 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 Contaminant Level	MCL	The 'Maximum Allowed' is 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.
Treatment Technique	TT	A treatment technique is a required process intended to reduce the level of a contaminant in drinking water.
Action Level	AL	The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
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.
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.
Average of Individual Samples	No Abbreviation	The typical value. Mathematically it is the sum of values divided by the number of samples.
Range of Individual Samples	No Abbreviation	The lowest value to the highest value.
Number of Samples	No Abbreviation	The number or count of values.
Gross Alpha, Including RA, Excluding RN & U	No Abbreviation	This is the gross alpha particle activity compliance value. It includes radium-226, but excludes radon 222 and uranium.
Microscopic Particulate Analysis	MPA	An analysis of surface water organisms and indicators in water. This analysis can be used to determine performance of a surface water treatment plant or to determine the existence of surface water influence on a ground water well.
Variance and Exemptions	V/E	Department permission not to meet an MCL or a treatment technique under certain conditions.
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.
Parts per trillion = Nanograms per liter	ppt = nanograms/L	One part per trillion corresponds to one minute in 2,000,000 years, or a single penny in \$10,000,000,000.
Parts per quadrillion = Picograms per liter	ppq = picograms/L	One part per quadrillion corresponds to one minute in 2,000,000,000 years or one penny in \$10,000,000,000,000.
Picocuries per liter	pCi/L	Picocuries per liter is a measure of the radioactivity in water.
Nephelometric Turbidity Unit	NTU	Nephelometric turbidity unit is a measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.
Not Applicable	N/A	Not Applicable
Violation	No Abbreviation	A failure to meet a Colorado Primary Drinking Water Regulation.
Formal Enforcement Action	No Abbreviation	An escalated action taken by the State (due to the number and/or severity of violations) to bring a non-compliant water system back into compliance by a certain time, with an enforceable consequence if the schedule is not met.

## Our Water Source(s)

The Colorado Department of Public Health and Environment has provided us with a Source Water Assessment Report for our water supply. You may obtain a copy of the report by visiting <http://www.cdphe.state.co.us/wq/sw/swapreports/swapreports.html>, clicking on **Larimer** County and selecting **135138; Berthoud Town Of** or by contacting **Michael Hart** at **970-532-3651**. For general information about Source Water Assessment please visit <http://www.cdphe.state.co.us/wq/sw/swaphom.html>.

Potential sources of contamination in our source water area come from:

EPA Hazardous Waste Generators, Chemical Inventory/Storage Sites, Toxic Release Inventory Sites; Permitted Wastewater Discharge Sites; Aboveground, Underground and Leaking Storage Tank Sites; Solid Waste Sites; Existing/Abandoned Mine Sites; Other Facilities; Commercial/Industrial/Transportation; Low Intensity Residential; Urban Recreational Grasses; Row Crops; Fallow; Small Grains; Pasture/Hay; Deciduous Forest; Evergreen Forest; Mixed Forest; Septic Systems; Oil/Gas Wells; Road Miles.

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. Please contact **Michael Hart** at **970-532-3651** to learn more about what you can do to help protect your drinking water sources, any questions about the Drinking Water Consumer Confidence 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.

Water Sources			
Source	Source Type	Water Type	Location
BERTHOUD RESERVOIR VIA COLORADO-BIG THOMPSON WATER PROJECT	Consecutive Connection	Surface Water	Berthoud Reservoir is located in the Town of Berthoud
WATER PROVIDED FROM LITTLE THOMPSON WATER DISTRICT (LTWD) – (SOURCE WATER) CARTER LAKE VIA COLORADO-BIG THOMPSON WATER PROJECT		Surface Water	Carter Lake is located west of the Town of Berthoud

### Detected Contaminant(s)

The Town of Berthoud 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, 2010 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. Any additional information may be found in the final 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, that means the Town of Berthoud did not detect any contaminants in the last round of monitoring.

Lead and Copper Sampled in the Distribution System									
Analyte Name	Monitoring Period	90th Percentile	Number of Samples	Unit of Measure	Action Level	Sample Sites Above Action Level	AL or TT Violation?	Typical Sources	Potential Health Effects from Long-Term Exposure Above the Action Level (unless specified as short-term)
COPPER	01/01/2008 to 12/31/2010	0.17	20	ppm	1.3	0	No	Corrosion of household plumbing systems; Erosion of natural deposits.	Copper is an essential nutrient, but some people who drink water containing copper in excess of the action level over a relatively short amount of time could experience gastrointestinal distress. Some people who drink water containing copper in excess of the action level over many years could suffer liver or kidney damage. People with Wilson's Disease should consult their personal doctor.
LEAD	01/01/2008 to 12/31/2010	2.8	20	ppb	15	0	No	Corrosion of household plumbing systems; Erosion of natural deposits.	Infants and children who drink water containing lead in excess of the action level could experience delays in their physical or mental development. Children could show slight deficits in attention span and learning abilities. Adults who drink this water over many years could develop kidney problems or high blood pressure.

Disinfection By Products (TTHMs, HAA5, and Chlorite) Sampled in the Distribution System										
Analyte Name	Year	Average of Individual Samples	Range of Individual Samples (Lowest - Highest)	Number of Samples	Unit of Measure	MCL	MCLG	MCL Violation?	Typical Sources	Potential Health Effects from Long-Term Exposure Above the MCL (unless specified as short-term)
TOTAL HALOACETIC ACIDS (HAA5)	2010	29.3	20.1 - 37.9	4	Ppb	60	N/A	No	By-product of drinking water disinfection.	Some people who drink water containing haloacetic acids in excess of the MCL over many years may have an increased risk of getting cancer.
TTHM	2010	34.975	28.8 - 47.3	4	Ppb	80	N/A	No	Byproduct of drinking water disinfection.	Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous systems, and may have an increased risk of getting cancer.

Turbidity Sampled at the Entry Point to the Distribution System										
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Analyte Name	Sample Date	Level Found	TT Requirement	TT Violation?	Typical Sources	Potential Health Effects from Long-Term Exposure Above the TT Level (unless specified as short-term)
TURBIDITY	Date: July 6, 2010	Highest single measurement: 0.28 NTU	Maximum 1 NTU for any single measurement	No	Soil Runoff	Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea and associated headaches.
TURBIDITY	Month: December, 2010	Lowest monthly percentage of samples meeting TT requirement for our technology: 100%	In any month, at least 95% of samples must be less than 0.3 NTU	No	Soil Runoff	See Above

**Total Organic Carbon (Disinfection By Products Precursor) Percentage Removal Ratio of Raw & Finished Water**

Analyte Name	Year	Average of Individual Ratio Samples	Range of Individual Ratio Samples (Lowest - Highest)	Number of Ratio Samples	Unit of Measure	TT Minimum Ratio	TT Violation?	Typical Sources	Potential Health Effects from Long-Term Exposure Below the TT Level (unless specified as short-term)
CARBON, TOTAL	2010	1.086	0.829 - 1.424	12	Ratio	The TT Minimum Level is a Ratio of 1	Yes	Naturally present in the environment.	Total organic carbon (TOC) has no health effects. However, total organic carbon provides a medium for the formation of disinfection by products. These byproducts include trihalomethanes (THMs) and haloacetic acids (HAAs). Drinking water containing these byproducts in excess of the MCL may lead to adverse health effects, liver or kidney problems, or nervous system effects, and may lead to an increased risk of getting cancer.

**Regulated Contaminants Sampled at the Entry Point to the Distribution System**

Analyte Name	Year	Average of Individual Samples	Range of Individual Samples (Lowest - Highest)	Number of Samples	Unit of Measure	MCL	MCLG	MCL Violation?	Typical Sources	Potential Health Effects from Long-Term Exposure Above the MCL (unless specified as short-term)
BARIUM	2010	0.009	0.009 - 0.009	1	ppm	2	2	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.	Some people who drink water containing barium in excess of the MCL over many years could experience an increase in their blood pressure.
ETHYLENE DIBROMIDE	2010	12.667	0 - 19	3	ppt	50	0	No	Discharge from petroleum refineries.	Some people who drink water containing ethylene dibromide in excess of the MCL over many years could experience problems with their liver, stomach, reproductive system, or kidneys, and may have an increased risk of getting cancer.
FLUORIDE	2010	0.85	0.25-1.20	13	ppm	4	4	No	Erosion of natural deposits; Water additive that promotes strong teeth; Discharge from fertilizer and aluminum factories.	Some people who drink water containing fluoride in excess of the MCL over many years could get bone disease, including pain and tenderness of the bones. Fluoride in drinking water at half the MCL or more may cause mottling of children's teeth, usually in children less than nine years old. Mottling, also known as dental fluorosis, may include brown staining and/or pitting of the teeth, and occurs only in developing teeth before they erupt from the gums.

Secondary Contaminants**						
Analyte Name	Year	Average of Individual Samples	Range of Individual Samples (Lowest - Highest)	Number of Samples	Unit of Measure	Secondary Standard
MPA WTP RAW AND FINISHED	2010	N/A	4 - 4	1	Units	N/A
SODIUM	2010	7.7	7.7 - 7.7	1	ppm	N/A

\*\*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. EPA recommends these standards but does not require water systems to comply.

## Violation(s) and Formal Enforcement Action(s)

### Formal Enforcement Actions

No Formal Enforcement Actions to Report

Violations							
Type	Category	Analyte Name	Monitoring Period	Federal Period	Health Effects	Compliance Result	MCL or TT Level
INADEQUATE DBP PRECURSOR REMOVAL	Treatment Technique Violation	CARBON, TOTAL	01/01/2010 to 01/31/2010	01/01/2010 to 03/31/2010	Total organic carbon (TOC) has no health effects. However, total organic carbon provides a medium for the formation of disinfection by products. These byproducts include trihalomethanes (THMs) and haloacetic acids (HAAs). Drinking water containing these byproducts in excess of the MCL may lead to adverse health effects, liver or kidney problems, or nervous system effects, and may lead to an increased risk of getting cancer.	0.96 Ratio	1 Ratio
INADEQUATE DBP PRECURSOR REMOVAL	Treatment Technique Violation	CARBON, TOTAL	04/01/2010 To 04/30/2010	04/01/2010 To 06/30/2010	Total organic carbon (TOC) has no health effects. However, total organic carbon provides a medium for the formation of disinfection by products. These byproducts include trihalomethanes (THMs) and haloacetic acids (HAAs). Drinking water containing these byproducts in excess of the MCL may lead to adverse health effects, liver or kidney problems, or nervous system effects, and may lead to an increased risk of getting cancer.	0.93 Ratio	1 Ratio
INADEQUATE DBP PRECURSOR REMOVAL	Treatment Technique Violation	CARBON, TOTAL	05/01/2010 to 05/31/2010	04/01/2010 to 06/30/2010	Total organic carbon (TOC) has no health effects. However, total organic carbon provides a medium for the formation of disinfection by products. These byproducts include trihalomethanes (THMs) and haloacetic acids (HAAs). Drinking water containing these byproducts in excess of the MCL may lead to adverse health effects, liver or kidney problems, or nervous system effects, and may lead to an increased risk of getting cancer.	0.9 Ratio	1 Ratio

INADEQUATE DBP PRECURSOR REMOVAL	Treatment Technique Violation	CARBON, TOTAL	06/01/2010 to 06/30/2010	04/01/2010 to 06/30/2010	Total organic carbon (TOC) has no health effects. However, total organic carbon provides a medium for the formation of disinfection by products. These byproducts include trihalomethanes (THMs) and haloacetic acids (HAAs). Drinking water containing these byproducts in excess of the MCL may lead to adverse health effects, liver or kidney problems, or nervous system effects, and may lead to an increased risk of getting cancer.	0.91 Ratio	1 Ratio
MONITORING, ROUTINE MINOR	Failure to Monitor Violation	ENDRIN (ppb)	01/01/2008 to 12/31/2010	01/01/2008 to 12/31/2010	Some people who drink water containing Endrin in excess of the MCL over many years could experience liver problems.	1 <sup>st</sup> test BDL (6/8/2010) 2 <sup>nd</sup> test N/A	2
MONITORING, ROUTINE MINOR	Failure to Monitor Violation	LINDANE (ppt)	01/01/2008 to 12/31/2010	01/01/2008 to 12/31/2010	Some people who drink water containing Lindane in excess of the MCL over many years could experience problems with their kidneys or liver.	1 <sup>st</sup> test BDL (6/8/2010) 2 <sup>nd</sup> test N/A	200
MONITORING, ROUTINE MINOR	Failure to Monitor Violation	METHOXYCHLOR (ppb)	01/01/2008 to 12/31/2010	01/01/2008 to 12/31/2010	Some people who drink water containing Methoxychlor in excess of the MCL over many years could experience reproductive difficulties.	1 <sup>st</sup> test BDL (6/8/2010) 2 <sup>nd</sup> test N/A	40
MONITORING, ROUTINE MINOR	Failure to Monitor Violation	TOXAPHENE (ppb)	01/01/2008 to 12/31/2010	01/01/2008 to 12/31/2010	Some people who drink water containing Toxaphene in excess of the MCL over many years could have problems with their kidneys, liver, or thyroid, and may have an increased risk of getting cancer.	1 <sup>st</sup> test BDL (6/8/2010) 2 <sup>nd</sup> test N/A	3
MONITORING, ROUTINE MINOR	Failure to Monitor Violation	DALAPON (ppb)	01/01/2008 to 12/31/2010	01/01/2008 to 12/31/2010	Some people who drink water containing Dalaon well in excess of the MCL over many years could experience minor kidney changes.	1 <sup>st</sup> test BDL (6/8/2010) 2 <sup>nd</sup> test N/A	200
MONITORING, ROUTINE MINOR	Failure to Monitor Violation	DIQUAT (ppb)	01/01/2008 to 12/31/2010	01/01/2008 to 12/31/2010	Some people who drink water containing Diquat in excess of the MCL over many years could get cataracts.	1 <sup>st</sup> test BDL (6/8/2010) 2 <sup>nd</sup> test N/A	20
MONITORING, ROUTINE MINOR	Failure to Monitor Violation	ENDOTHALL (ppb)	01/01/2008 to 12/31/2010	01/01/2008 to 12/31/2010	Some people who drink water containing Endothall in excess of the MCL over many years could experience problems with their stomach or intestines.	1 <sup>st</sup> test BDL (6/8/2010) 2 <sup>nd</sup> test N/A	100
MONITORING, ROUTINE MINOR	Failure to Monitor Violation	DI (2-ETHYLHEXYL) ADIPATE (ppb)	01/01/2008 to 12/31/2010	01/01/2008 to 12/31/2010	Some people who drink water containing Di (2-ethylhexyl) adipate well in excess of the MCL over many years could experience general toxic effects such as weight loss, liver enlargement or possible reproductive difficulties.	1 <sup>st</sup> test BDL (6/8/2010) 2 <sup>nd</sup> test N/A	400

MONITORING, ROUTINE MINOR	Failure to Monitor Violation	OXAMYL (VYDATE)) (ppb)	01/01/2008 to 12/31/2010	01/01/2008 to 12/31/2010	Some people who drink water containing Oxamyl in excess of the MCL over many years could experience slight nervous system effects.	1 <sup>st</sup> test BDL (6/8/2010) 2 <sup>nd</sup> test N/A	200
MONITORING, ROUTINE MINOR	Failure to Monitor Violation	SIMAZINE (ppb)	01/01/2008 to 12/31/2010	01/01/2008 to 12/31/2010	Some people who drink water containing Simazine in excess of the MCL over many years could experience problems with their blood.	1 <sup>st</sup> test BDL (6/8/2010) 2 <sup>nd</sup> test N/A	4
MONITORING, ROUTINE MINOR	Failure to Monitor Violation	Di (2-ETHYLHEXYL) PHTHALATE (ppb)	01/01/2008 to 12/31/2010	01/01/2008 to 12/31/2010	Some people who drink water containing Di (2-ethylhexyl) phthalate well in excess of the MCL over many years may have problems with liver, or experience reproductive difficulties, and may have an increased risk of getting cancer.	1 <sup>st</sup> test BDL (6/8/2010) 2 <sup>nd</sup> test N/A	6
MONITORING, ROUTINE MINOR	Failure to Monitor Violation	PICLORAM (ppb)	01/01/2008 to 12/31/2010	01/01/2008 to 12/31/2010	Some people who drink water containing Picloram in excess of the MCL over many years could experience problems with their liver.	1 <sup>st</sup> test BDL (6/8/2010) 2 <sup>nd</sup> test N/A	500
MONITORING, ROUTINE MINOR	Failure to Monitor Violation	DINOSEB (ppb)	01/01/2008 to 12/31/2010	01/01/2008 to 12/31/2010	Some people who drink water containing Dinoseb well in excess of the MCL over many years could experience reproductive difficulties.	1 <sup>st</sup> test BDL (6/8/2010) 2 <sup>nd</sup> test N/A	7
MONITORING, ROUTINE MINOR	Failure to Monitor Violation	HEXACHLOROCYCLO-PENTADIENE (ppb)	01/01/2008 to 12/31/2010	01/01/2008 to 12/31/2010	Some people who drink water containing Hexachlorocyclopentadiene well in excess of the MCL over many years could experience problems with their kidneys or stomach.	1 <sup>st</sup> test BDL (6/8/2010) 2 <sup>nd</sup> test N/A	50
MONITORING, ROUTINE MINOR	Failure to Monitor Violation	CARBOFURAN (ppb)	01/01/2008 to 12/31/2010	01/01/2008 to 12/31/2010	Some people who drink water containing Carbofuran in excess of the MCL over many years could experience problems with their blood, or nervous or reproductive systems.	1 <sup>st</sup> test BDL (6/8/2010) 2 <sup>nd</sup> test N/A	40
MONITORING, ROUTINE MINOR	Failure to Monitor Violation	ATRAZINE (ppb)	01/01/2008 to 12/31/2010	01/01/2008 to 12/31/2010	Some people who drink water containing Atrazine well in excess of the MCL over many years could experience problems with their cardiovascular system or reproductive difficulties.	1 <sup>st</sup> test BDL (6/8/2010) 2 <sup>nd</sup> test N/A	3
MONITORING, ROUTINE MINOR	Failure to Monitor Violation	HEPTACHLOR (ppt)	01/01/2008 to 12/31/2010	01/01/2008 to 12/31/2010	Some people who drink water containing Heptachlor in excess of the MCL over many years could experience liver damage and may have an increased risk of getting cancer.	1 <sup>st</sup> test BDL (6/8/2010) 2 <sup>nd</sup> test N/A	400
MONITORING, ROUTINE MINOR	Failure to Monitor Violation	HEPTACHLOR EPOXIDE (ppt)	01/01/2008 to 12/31/2010	01/01/2008 to 12/31/2010	Some people who drink water containing Heptachlor Epoxide in excess of the MCL over many years could experience liver damage, and may have an increased risk of getting cancer.	1 <sup>st</sup> test BDL (6/8/2010) 2 <sup>nd</sup> test N/A	200

MONITORING, ROUTINE MINOR	Failure to Monitor Violation	2,4-D (ppb)	01/01/2008 to 12/31/2010	01/01/2008 to 12/31/2010	Some people who drink water containing the weed killer 2,4-D well in excess of the MCL over many years could experience problems with their kidneys, liver, or adrenal glands.	1 <sup>st</sup> test BDL (6/8/2010) 2 <sup>nd</sup> test N/A	70
MONITORING, ROUTINE MINOR	Failure to Monitor Violation	2,4,5-TP (SILVEX) (ppb)	01/01/2008 to 12/31/2010	01/01/2008 to 12/31/2010	Some people who drink water containing Silvex in excess of the MCL over many years could experience liver problems.	1 <sup>st</sup> test BDL (6/8/2010) 2 <sup>nd</sup> test N/A	50
MONITORING, ROUTINE MINOR	Failure to Monitor Violation	HEXACHLOROBENZENE (ppb)	01/01/2008 to 12/31/2010	01/01/2008 to 12/31/2010	Some people who drink water containing Hexachlorobenzene in excess of the MCL over many years could experience problems with their liver or kidneys, or adverse reproductive effects, and may have an increased risk of getting cancer.	1 <sup>st</sup> test BDL (6/8/2010) 2 <sup>nd</sup> test N/A	1
MONITORING, ROUTINE MINOR	Failure to Monitor Violation	BENZO(A)PYRENE (PAH's) (nanograms/L)	01/01/2008 to 12/31/2010	01/01/2008 to 12/31/2010	Some people who drink water containing Benzo(a)pyrene in excess of the MCL over many years may experience reproductive difficulties and may have an increased risk of getting cancer.	1 <sup>st</sup> test BDL (6/8/2010) 2 <sup>nd</sup> test N/A	200
MONITORING, ROUTINE MINOR	Failure to Monitor Violation	PENTACHLOROPHENOL (ppb)	01/01/2008 to 12/31/2010	01/01/2008 to 12/31/2010	Some people who drink water containing Pentachlorophenol in excess of the MCL over many years could experience problems with their liver or kidneys, and may have an increased risk of getting cancer.	1 <sup>st</sup> test BDL (6/8/2010) 2 <sup>nd</sup> test N/A	1
MONITORING, ROUTINE MINOR	Failure to Monitor Violation	TOTAL POLYCHLORINATED BIPHENYLS (PCB's) (ppt)	01/01/2008 to 12/31/2010	01/01/2008 to 12/31/2010	Some people who drink water containing Total Polychlorinated Biphenyls (PCB) in excess of the MCL over many years could experience changes in their skin, problems with their thymus gland, immune deficiencies, or reproductive or nervous system difficulties, and may have an increased risk of getting cancer.	1 <sup>st</sup> test BDL (6/8/2010) 2 <sup>nd</sup> test N/A	500
MONITORING, ROUTINE MINOR	Failure to Monitor Violation	1,2-DIBROMO-3-CHLOROPROPANE (ppt)	01/01/2008 to 12/31/2010	01/01/2008 to 12/31/2010	Some people who drink water containing Dibromochloropropane in excess of the MCL over many years could experience reproductive difficulties and may have an increased risk of getting cancer.	1 <sup>st</sup> test BDL (6/8/2010) 2 <sup>nd</sup> test N/A	200
MONITORING, ROUTINE MINOR	Failure to Monitor Violation	ETHYLENE DIBROMIDE (ppt)	01/01/2008 to 12/31/2010	01/01/2008 to 12/31/2010	Some people who drink water containing Ethylene Dibromide in excess of the MCL over many years could experience problems with their liver, stomach, reproductive system, or kidneys, and may have an increased risk of getting cancer.	1 <sup>st</sup> test 19 (6/8/2010) Re-test BDL (12/8/2010) 3 <sup>rd</sup> test N/A	50

MONITORING, ROUTINE MINOR	Failure to Monitor Violation	CHLORDANE (ppb)	01/01/2008 to 12/31/2010	01/01/2008 to 12/31/2010	Some people who drink water containing Chlordane in excess of the MCL over many years could experience problems with their liver or nervous system, and may have an increased risk of getting cancer.	1 <sup>st</sup> test BDL (6/8/2010) 2 <sup>nd</sup> test N/A	2
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**Additional Violation Information**

Note: If any violation relates to failing to install adequate filtration or disinfection equipment or processes, or have had a failure of such equipment or processes then the water may be inadequately treated. Inadequately treated water may contain disease-causing organisms. These organisms include bacteria, viruses, and parasites, which can cause symptoms such as nausea, cramps, diarrhea, and associated headaches.

Town of Berthoud is required to include an explanation of the violation(s) and the steps taken to resolve the violation(s) with this report.

**Inadequate DBP precursor removal** - Total Organic Carbon (TOC) – A ratio < 1.0 resulted in a treatment technique violation in the months of January, April, May and June of the year 2010. The Berthoud Water Treatment Plant continued to sample for TOC’s regularly and met compliance with a ratio ≥ 1.0 from July 2010 to current. **THE BERTHOUD WATER TREATMENT PLANT IS IN COMPLIANCE WITH CURRENT DBP PRECURSOR REMOVAL REQUIREMENTS.** You do not need to use an alternative water supply. However, if you have specific health concerns, consult your doctor. This is not an emergency. If it had been, you would have been notified immediately. Total organic carbon (TOC) has no health effects. However, total organic carbon provides a medium for the formation of disinfection byproducts. These byproducts include trihalomethanes (THMs) and haloacetic acids (HAAs). Drinking water containing these byproducts in excess of the MCL may lead to adverse health effects, liver or kidney problems, or nervous system effects, and may lead to an increased risk of getting cancer. The Berthoud Water Treatment Plant has implemented changes and will continue to meet or exceed the TOC ratio of 1.0 when the water treatment plant is returned to service.

**Failure to monitor violation** - The Berthoud Water Treatment Plant was required to sample for Synthetic Organic Chemicals (SOC’s) two (2) times in different quarters of one year between the years of 2008-2010. SOC’s were sampled only one (1) time per year for the years 2009 and 2010. We are required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not your drinking water meets health standards. During 2010, we did not complete all monitoring or testing for Synthetic Organic Chemicals (SOC’s), and therefore cannot be sure of the quality of your drinking water during that time. You do not need to use an alternative water supply. However, if you have specific health concerns, consult your doctor. This is not an emergency. If it had been, you would have been notified immediately. Although **SOC’s WERE SAMPLED IN 2010 WITH NO VIOLATIONS OF MAXIMUM CONTAMINANT LEVELS (MCL’s) DETECTED**, except for Ethylene Dibromide which was detected but well below the mcl. Repeat sample results were BDL, (results are reported above), **SOC’s SAMPLED IN 2010 WERE BELOW DETECTION LIMITS (BDL)**. The lack of collecting two (2) samples in one year lead to the “Failure to Monitor Violation” and must be reported as so to the public. The Berthoud Water Treatment Plant has corrected the reason for this violation and will sample for SOC’s as per state of Colorado Monitoring Schedule requirements when the water treatment plant is returned to service.

**You may request more information about your drinking water by calling Michael Hart at 970-532-3651 or P.O. Box 1229, Berthoud CO 80513.**

**Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in public places or by distributing copies by hand.**

**Additional Information**

Additional information provided by the Town of Berthoud:

**The Town of Berthoud Water Treatment Plant was temporarily shut down February 7 2011 for a “tune-up” and will remain off-line for the remainder of the year 2011. The Town of Berthoud will be supplied water from the Little Thompson Water District (LTWD). Please contact LTWD at 970 532-2096 if you require more information about Little Thompson Water District and the water they supply.**

