

# 2011 Annual Drinking Water Quality Report For Calendar Year 2010

System Name: North Weld County Water District PWSID CO0 162553

*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.

## General Information About Drinking Water

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. 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.

- **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 stormwater runoff, and septic systems.
- **Radioactive contaminants**, that can be naturally occurring or be the result of oil and gas production and mining activities.

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.

## Our Water Source(s)

The system's sources of water are listed below.

Source	Water Type
Horsetooth Reservoir	Surface
Poudre River (seasonal)	Surface

The Tri-Districts (North Weld County WD, East Larimer County WD, and Fort Collins-Loveland WD) drinking water comes from the Cache la Poudre River and Colorado-Big Thompson (C-BT) watersheds. The Tri-Districts have collaborated with other drinking water providers to develop and implement water quality monitoring programs for Horsetooth Reservoir and the upper Cache la Poudre Watershed. We are also a member of the Big Thompson Watershed Forum ([www.btwatershed.org](http://www.btwatershed.org)) and partner with other organizations regionally to monitor and analyze water quality in the C-BT watershed. Monitoring data is used to trend water quality changes in our watersheds over time.

## Terms and Abbreviations

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 [www.cdphe.state.co.us/wq/sw/swaphom.html](http://www.cdphe.state.co.us/wq/sw/swaphom.html) (select Assessment Phase, Assessment Reports, Larimer, Soldier Canyon FP) or by contacting the treatment facility at (970) 482-3143. For questions regarding information in the report, please contact The SWAP Program at (303) 692-3592.

It is important to note that the data in the SWAP report was collected and ranked by the Colorado Department of Health and Environment, not by your water utility. It is also important to note that the susceptibility assessment ranking of your system as identified in the report is NOT a reflection of the quality of the treated drinking water that is supplied to you.

Potential sources of contamination in our source water area (as listed in the SWAP report) **may** come from: Discrete sites including wastewater discharge sites, above ground, underground, and leaking storage tanks, solid waste sites, and existing/abandoned mine sites. Most of the discrete sites have a low to moderately low individual susceptibility. Dispersed sources include land use/cover types such as commercial/industrial/transportation, low intensity residential, grasses, crops, pastures, and forests. Other dispersed sources include septic systems, oil/gas wells, and roads. All of the dispersed sources have a low or moderately low individual susceptibility rating. Our overall vulnerability rating is low.

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 the treatment facility at (970) 482-3143 to learn more about your drinking water sources, the treatment process, or water quality. We want you, our valued customers, to be informed about the services we provide and the quality water we deliver to you every day.

If we used purchased water, this report is required to include water quality data for the purchased water with this report.

To help you understand the terms and abbreviations used in this report, we have provided the following definitions:

- **Parts per million (ppm) or Milligrams per liter (mg/L)** - one part per million corresponds to one minute in two years or a single penny in \$10,000.
- **Parts per billion (ppb) or Micrograms per liter (µg/L)** - one part per billion corresponds to one minute in 2,000 years, or a single penny in \$10,000,000.
- **Parts per trillion (ppt) or Nanograms per liter (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 (ppq) or Picograms per liter (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.
- **Action Level (AL)** - the concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
- **Action Level Goal (ALG)** - The “Goal” is the level of a contaminant in drinking water below which there is no known or expected risk to health. The ALG allows for a margin of safety.
- **Treatment Technique (TT)** - A treatment technique is a required process intended to reduce the level of a contaminant in drinking water.
- **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.
- **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.
- **Running Annual Average (RAA):** An average of monitoring results for the previous 12 calendar months.

## Water Quality Data

We routinely monitor for contaminants in your drinking water according to Federal and State laws. 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. Some of our data, though representative, may be more than one year old.

These tables show the results of our monitoring for the period of January 1 to December 31, 2010 unless otherwise noted.

### Microbiological Contaminants

Contaminant	MCL	MCLG	Unit	Result	Violation (Yes or No)	Sample Date	Likely Source of Contamination
Total Coliform Bacteria for Systems that collect <40 samples per month	No more than 1 positive monthly sample	0	Absent or Present	Absent	NO	Monthly	Naturally present in the environment
Fecal coliform and E. Coli	A routine sample & a repeat sample are total coliform positive, & one is also fecal coliform or <i>E. coli</i> positive	0	Absent or Present	NA	NA	NA	Human and animal fecal waste

### Turbidity

Contaminant	TT Requirement	Level Found	Violation (Yes or No)	Sample Date	Likely Source of Contamination
Turbidity	Maximum <b>1.0</b> NTU for any single measurement	Highest single measurement: NWCWD 0.043 City of Greeley: 0.14 City of Fort Collins: 0.27	NO	Date: 11/15/10	Soil Runoff
	In any month, at least 95% of samples must be less than <b>0.3</b> NTU	Lowest monthly percentage of samples meeting TT standard for our technology:  100%	NO	Month: N/A	

### Lead and Copper

Contaminant	AL	ALG	Units	90 <sup>th</sup> Percentile	Number of Sites over AL	Violation (Yes or No)	Sample Date/Year	Likely Source of Contamination
Copper	1.3	1.3	ppm	0.178	0	NO	6/2009	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead	15	0	ppb	3.7	0	NO	6/2009	Corrosion of household plumbing systems, erosion of natural deposits

### Disinfectants

Contaminant	MRDL	MRDLG	Units	Level Detected & Range	Violation (Yes or No)	Sample Date/Year	Source
Chlorine	4	4	ppm	0.48 0.07-0.95	NO	Monthly	Water additive used to control microbes
Chlorine Dioxide	0.80	0.80	ppm	0.0 0.0 – 0.06	NO	Daily 2010	Water additive used to control microbes

### Disinfection Byproducts

Contaminant	MCL	MCLG	Units	Average	Range	Highest RAA	Violation (Yes or No)	Sample Date/Year	Likely Source of Contamination
Haloacetic Acids (HAA5)	60	N/A	ppb	19.5	12.7-24.0	19.9	NO	Quarterly 2010	By-product of drinking water disinfection
Total Trihalomethanes (TTHM)	80	N/A	ppb	38.5	29.9-48.4	38.5	NO	Quarterly 2010	By-product of drinking water disinfection
Chlorite	1.0	0.80	ppm	0.29	0.15 – 0.58	0.44	NO	Quarterly 2010	By-product of drinking water disinfection

### Total Organic Carbon

Contaminant	Compliance Factor (measurements should not be lower than this factor)	Lowest Running Annual Average (compliance factor)	Running Annual Average Range for the Year (compliance factor)	Violation (Yes or No)	Sample Date/Year	Likely Source of Contamination
Total Organic Carbon (TOC)	1.00	1.22	1.28	NO	Monthly 2010	Naturally present in the environment

### Inorganic Contaminants

Contaminant	MCL	MCLG	Units	Level Detected	Violation (Yes or No)	Sample Date	Likely Source of Contamination
Barium	2	2	ppm	0.019	NO	8/10/10	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Fluoride	4	4	ppm	0.89	NO	8/10/10	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Nitrate (as Nitrogen)	10	10	ppm	0.07	NO	8/10/10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Selenium	0.05	0.05	Ppm	0.0017	NO	8/10/10	Discharge from petroleum and metal refineries; Erosion of natural deposits; Discharge from mines.

### Secondary Contaminants

Secondary standards are non-enforceable guidelines for contaminants that may cause cosmetic effects or aesthetic effects in drinking water. EPA recommends these standards but does not require water systems to comply.

Contaminant	Secondary Standard	MCLG	Units	Level Detected	Violation (Yes or No)	Sample Date	Likely Source
Sodium	N/A	N/A	ppm	10.6	N/A	8/10/10	Runoff

#### Unregulated Contaminants

In 2009-2010, EPA required our system to monitor under the second cycle of the Unregulated Contaminant Monitoring Regulation (UCMR2). Our finished water was monitored quarterly for 10 contaminants that are not yet regulated. EPA plans to use this information for writing new regulations in the future. None of the contaminants were detected in our finished water.

### Health Effects Information About the Above Tables

Note: If a contaminant is not listed above then it has not been detected.

**Nitrate** in drinking water at levels above 10 ppm is a health risk for infants of less than six months of age. High nitrate levels in drinking water can cause blue baby syndrome. Nitrate levels may rise quickly for short periods-of-time because of rainfall or agricultural activity. If you are caring for an infant, and detected nitrate levels are above 5 ppm, you should ask advice from your health care provider.

If **arsenic** is less than the MCL, your drinking water meets EPA's standards. EPA's standard balances the current understanding of arsenic's possible health effects against the costs of removing arsenic from drinking water. EPA continues to research the health effects of low levels of arsenic, which is a mineral known to cause cancer in humans at high concentrations and is linked to other health effects such as skin damage and circulatory problems.

Infants and young children are typically more vulnerable to **lead** in drinking water than the general population. It is possible that 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.



### **Violations**

The following violations were received by our water system or were ongoing in the calendar year 2010.

<b>Type/Description</b>	<b>Compliance Period</b>
None	1/1/2010 – 12/31/2010

An explanation of the violation(s) in the above table, the steps taken to resolve the violation(s) and any required health effects information are required to be included with this report.