



**TOWN OF PALMER LAKE  
2009 DRINKING WATER  
CONSUMER CONFIDENCE REPORT  
FOR CALENDAR YEAR 2008**

**PUBLIC WATER SYSTEM ID# CO0121575**

*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 Quality Water Report. Our constant goal is to provide you with a safe and dependable supply of 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 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.

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/swaphome.html](http://www.cdphe.state.co.us/wq/sw/swaphome.html) or by calling the Town of Palmer Lake at 719-481-2953

**OUR WATER SOURCE(S)**

Source	Water Type
North Monument Creek	Surface Water
Well NO 1 (AKA D2)	Ground Water
Well NO 2 (AKA A2)	Ground Water

**Surface Water Treatment Plant**



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

- ▲ Wells - Low Intensity Residential, Road Miles,
- ▲ Surface Water- Existing/ Abandoned Mine Sites, Commercial Industrial/Transportation, Low Intensity Residential Deciduous Forest, Evergreen Forest, Road Miles, Row Crops, Fallow

## Ground Water Treatment Plant



Please contact *Steve Orcutt - 719-488-3740* 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 services we provide and the quality water we deliver to you every day.

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.

### Terms & Abbreviations

The following definitions will help you understand the terms and abbreviations used in this report:

- \* 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 quadrillion corresponds to one minute in 2,000,000,000 years or one penny in \$10,000,000,000,000.
- \* Picocuries per liter (pCiL) – 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.
- \* 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 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.
- \* Gross Alpha, Including RA, Excluding RN & U – 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 surface water treatment plant or to determine the existence of surface water influence on a ground water well.

Detected Contaminants

TOWN OF PALMER LAKE routinely monitors for constituents in your drinking water according to Federal and State laws. The following tables show the results of our monitoring for the period of January 1<sup>st</sup> to December 31<sup>st</sup>, 2008, 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 contaminations. Therefore, some of our data, though representative, may be more than one year old. The "Range" column in the table(s) below will show a single value for those contaminants that were sampled only once. Violations, if any, are reported in the next section of this report.

NOTE: Only detected contaminants appear in this report. If no tables appear in this section, that means that TOWN OF PALMER LAKE did not detect any contaminants in the last round of monitoring.

Organics and Inorganics	Collection Date	Highest Value	Range	Unit	MCL	MCLG	Typical Source
BARIUM	1/17/2008	0.014	0.014	ppm	2	2	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
FLUORIDE	1/17/2008	1.7	1.7	ppb	4	4	Discharge from steel and pulp mills; Erosion of natural deposits
NITRATE	1/17/2008	0.076	0.046-0.076	ppm	10	10	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits

Disinfection By-Products	Date	Average	Range	Highest RAA	Unit	MCL	MCLG	Typical Source
TOTAL TRIHALOMETHANES (TTHM)	2008	12.58333	4.15-20.45	21	ppb	80	N/A	By-products of drinking water chlorination
TOTAL HALOACETIC ACIDS (HAA5)	2008	13.44889	1.8-22.08	17	ppb	60	N/A	By-product of drinking water disinfection

Turbidity	Sample Date	Level Found	TT Requirement	Likely Source of Contamination
TURBIDITY	8/18/08	Highest single measurement 0.18	Maximum <u>1</u> NTU for any single measurement	Soil Runoff
	Month 1	Lowest monthly percentage of samples meeting TT standard for our technology: 100%	In any month, at least 95% of samples must be less than <u>0.3</u> NTU	

Disinfection By-Products	Average	Range	Units	MCL	MCLG	Typical Source
CHLORITE	0.28	0.03-0.5	ppb	1.0	0.8	By product of drinking water disinfection

Lead and Cooper	Collection Date	90 <sup>th</sup> Percentile	Unit	AL	Typical Source
COOPER, FREE	2005-2007	0.69	ppm	1.3	Corrosion of household plumbing systems; Erosion of natural deposits.
LEAD	2005-2007	6.4	ppb	15	Corrosion of household plumbing systems; Erosion of natural deposits.

Radionuclides	Collection Date	High est Value	Range	Unit	MCL	MCLG	Typical Source
COMBINED RADIUM (-226 & -228)	7/23/2008	3.7	3.7	pCi/L	5	0	Erosion of natural deposits
GROSS ALPHA, EXCL. RADON & U	4/17/2006	4.2	1-4.2	pCi/L	15	0	Erosion of natural deposits
GROSS BETA PARTICLE ACTIVITY	8/22/2005	7.2	6-7.2	pCi/L	Trigger level = 15	0	Decay of natural and man-made deposits

Secondary Contaminants /Other Monitoring	Collection Date	Highest Value	Range	Unit	Secondary Standard
MPA WTP RAW AND FINISHED	4/7/2008	3.3	3.3	UNITS	N/A
RADON	8/22/2005	420	380-420	pCi/L	N/A
SODIUM	1/17/2008	4.6	4.6	MG/L	10000
SOLIDS, TOTAL DISSOLVED (TDS)	2/22/2006	148	148	MG/L	500

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.

**Health Information About Water Quality**

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 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 and flush your tap for 30 second to 2 minutes before using tap water.

Additional information is available from the Safe Drinking Water Hotline (800)426-4791.

Radon is a radioactive gas that you cannot see, taste, or smell. It is found in the soil throughout the United States. Radon can move up through the ground and into a home through cracks and holes in the foundation. Radon can reach high levels in all types of homes. Radon can also be released from tap water from showering, washing dishes, and other household activities. Compared to radon entering the home through the soil, radon entering the home through tap water will be, in most cases, a small source of radon in indoor air. Radon is a known human carcinogen. Breathing air that contains radon can lead to lung cancer. Drinking water that contains radon may also cause increased risk of stomach cancer. If you are concerned about radon in your home, test the air in you home. Testing is inexpensive and easy. Fix your home if the level of radon in your air is four (4) picocuries per liter of air (pCi/L) or higher. There are simple ways to fix a radon problem that are relatively inexpensive. For additional information, call the state radon program at 303-692-3030 or call the EPA Radon Hotline 1-800-SOS-RADON.

Certain minerals are radioactive and may emit form of radiation known as photons and beta radiation. Some people who drink water containing beta particle and photon radioactivity in excess of the MCL over many years may have an increase risk of getting cancer.

**Violations**

Type	Category	Analyte	Compliance Period
Monitoring and Reporting	LT2ESWTR	-	12/1/2008 - 12/31/2008

Town of Palmer Lake is required to include an explanation of the violation(s) in the above table and the steps taken to resolve the violation (s) with this report.

The Town of Palmer Lake failed to sample the raw water for e.coli, on December 1, 2008 (within the 5 day window allowed by the rule). The system did collect a sample on December 22, 2008 to make up for the missed sample. A monitoring schedule has been implemented, so no further samples will be missed. The sample result was zero (less than 1 MPN/100ml).

The purpose of the sampling is to characterize the source water to determine appropriate treatment. There are no precautions that the consumer needs to take to protect themselves regarding this violation since the sampling was conducted on the raw water, the water is then treated. For more information, please call Steve Orcutt at 719-488-3740.

*Palmer Lake Reservoir*

