

# 2005 Annual Water Quality Report

This water quality report applies to the water provided by

**DENVER SE SUBURBAN WSD, PINERY  
PWSID CO0118025**



We are pleased to submit to you this year's Annual Water Quality Report. The United States Environmental Protection Agency (EPA) requires community water systems to prepare and provide to their customers, an Annual Consumer Confidence Report on the quality of the water delivered by their system. 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

The District relies on water from two sources; seven alluvial wells along Cherry Creek and eight wells drilled in the deeper Denver Basin Aquifers. These wells feed a system of pump stations that pump the water to underground storage reservoirs serving homes, parks, schools and other users within the Pinery Water and Wastewater District. In 2005, we delivered 856 million gallons of treated water.

We test the water each year to make sure your tap water meets all EPA and State drinking water health standards. The District safeguards its water supplies and we are proud to report that our system has not violated a maximum contaminant level or any other water quality standard.

## Source Water Assessment Report and Ground Water Protection Plan

The Colorado Department of Public Health and Environment provided us with a Source Water Assessment Report for our water supply. You can 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) or by contacting Paul Makowski at 303-841-2797 ext.202.

Potential sources of contamination in our source water area come from but are not limited to: leaking storage tanks, septic systems, commercial and urban transportation, runoff/leaching of fertilizer used on crops and community lawns and erosion of natural deposits. The Source Water Assessment Report provides a screening-level evaluation of the potential contamination that **could** occur. It does not mean that the contaminant **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. Our District was concerned about protecting our water source and developed a Ground Water Protection Plan to identify potential contaminants and hazards within our ground water protection area. We routinely monitor the water for potential contaminants and enforce the rules and regulations of the Ground Water Protection Plan to ensure that quality finished water is delivered to your homes.

## Help Us-----Help You

We encourage public interest and participation in our community's decisions affecting drinking water. The staff of the Pinery Water & Wastewater District is available to answer questions concerning our water system. Once every month the Board meets to discuss the business of the District and the public is welcome. Board meetings are held at our District office at 6:00 p.m. on the second Wednesday of each month.

## Water Quality Data Tables

The tables below list all of the drinking water contaminants that were detected. Unless otherwise noted, the data presented in these tables are from testing done between January 1, 2005 and December 31, 2005. The State permits us to monitor for certain contaminants less than once per year because the concentrations of these contaminants do not change frequently. All other contaminants that we tested for were un-measurable with current laboratory equipment, so they are not included in this report. The presence of contaminants in the water does not necessarily indicate that the water poses a health risk.

### Regulated at the Customer's Tap

Contaminant	Action Level	MCLG	90 <sup>th</sup> Percentile Value	Units	No. Samples Exceeding Action Level	Sample Date	Violation	Typical Source of Contaminant
Lead	15	0	2	ppb	0 of 20	2003	No	Corrosion of household plumbing
Copper	1,300	0	720	ppb	0 of 20	2003	No	Corrosion of household plumbing

Lead is not found in the source water and copper levels at the source are extremely low. Once water enters the business or home plumbing systems copper and lead levels may increase. We are required by state and federal regulations to test a representative number of "high risk" homes for lead and copper. The regulations require that 90 percent of samples taken at the tap in 20 homes must be below the Action Level of 15 parts per billion for lead and 1.3 parts per million for copper. The Pinery Water District has consistently met those requirements.

### Regulated in the Distribution System

Microbiological	Result	MCL	MCLG	Violation	Typical Source
Coliform, Total (TRC)	In the month of September, 2 sample(s) returned as positive*	(Systems that collect >40 samples/month) No more than 5% positive monthly samples	0	No	Naturally present in the environment

Total Coliform is naturally present in the environment and isn't harmful. However, it is used as an indicator that potentially harmful bacteria may be present. The regulations require that of the samples taken each month no more than five percent may be positive.

\* The Positive Total Coliform Investigation we conducted led us to believe that our drinking water was safe and the sample was contaminated during collection or there was a laboratory error.

Contaminant	MCL	MCLG	Average	Units	Range of Detections	Sample Date	Violation	Typical Source of Contaminant
Organic Disinfection By-Products (THM's) Total Trihalomethanes	80	0	22.684	ppb	8.02 - 31.7	2005	No	By-product of drinking water chlorination
Haloacetic acids (HAA <sub>5</sub> )	60	0	6.9	ppb	4.3 - 8.6	2005	No	

### Regulated at System Entry Points

Contaminant	MCL	MCLG	Highest Value	Units	Range	Sample Date	Violation	Typical Source of Contaminant
Antimony	6	6	1.4	ppb	BDL - 1.4	2000	No	Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder
Arsenic	10	0	4.1	ppb	BDL - 4.1	2000	No	Erosion of natural deposits; Runoff from glass and electronic production wastes
Barium	2	2	0.15	ppm	0.082 - 0.15	8/25/04	No	Erosion of natural deposits; Discharge from metal refineries and drilling wastes
Chromium	100	100	15	ppb	BDL - 15	2002	No	Erosion of natural deposits; Discharge from steel mills
Cyanide	200	200	20	ppb	BDL - 20	2000	No	Discharge from steel/metal factories; Discharge from plastic and fertilizer factories
Selenium	50	50	2.9	ppb	BDL - 2.9	2000	No	Erosion of natural deposits
Di(2-ethylhexyl) phthalate	6	0	0.68	ppb	BDL - 0.68	2000	No	Discharge from rubber and chemical factories
Ethylbenzene	700	700	.80	ppb	BDL - .80	2000	No	Discharge from petroleum refineries
Xylenes	10	10	.0045	ppm	BDL - .0045	2000	No	Discharge from petroleum and chemical factories
Gross Alpha, including RA, excluding RN & U	15	0	3	pCi/L	0.0 - 3.0	6/21/01	No	Erosion of natural deposits
Beta Emitters	50	0	6.8	pCi/L	3.9 - 6.8	2001	No	Decay of natural deposits
Uranium, Combined	30	0	27	ppb	4 - 27	7/28/04	No	Erosion of natural deposits
Radium, Combined (228, 228)	5	0	3	pCi/L	BDL - 3	1/20/04	No	Erosion of natural deposits
Fluoride	4	4	1.6	ppm	1.4 - 1.6	7/16/04	No	Erosion of natural deposits; Discharge from fertilizer and aluminum factories
Nitrate (as N)	10	10	2.6	ppm	0.46 - 2.6	7/20/05	No	Erosion of natural deposits; Runoff from fertilizer use; Leaching from septic tanks
Nitrate/Nitrite (as N)	10	10	2.6	ppm	0.46 - 2.6	7/20/05	No	Erosion of natural deposits; Runoff from fertilizer use; Leaching from septic tanks

## Unregulated Contaminants

Contaminant	MCL	MCLG	Level Detected	Units	Range	Sample Date	Violation	Typical Source of Contaminant
Bromodichloromethane	0.1	na	.002	ppm	BDL – .004	2001	No	By-products of chlorination <sup>1)</sup>
Bromoform	0.1	na	.003	ppm	BDL – .003	2001	No	
Chlorodibromomethane	0.1	na	.006	ppm	BDL – .007	2001	No	
Chloroform	0.1	na	.001	ppm	BDL – .001	2000	No	
Total Trihalomethane (TTHM) <sup>2)</sup>	80/60	na	10.5	ppb		2001	No	
Nickel	100	na	16	ppb	BDL – 16	2002	No	Erosion of natural deposits
Sodium	na	na	56	ppm	53 – 56	8/25/04	No	
Sulfate	250	250	22.7	ppm	14 – 22.7	2000	No	
Radon	na	na	460	pCi/L	260 – 460	2001	No	Naturally present in the environment
<sup>1)</sup> This group is part of the Information Collection Rule. The Rule is intended to assist the EPA with setting future regulations. Potential health effects of these compounds are not completely known. <sup>2)</sup> Our system tested for TTHM's in 2001 as part of the Information Collection Rule. Due to the size of our water system, TTHM was not a regulated contaminant for our system.								

### Additional Health Information about Water Quality

#### Radon

Radon is a radioactive gas that you can't 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 soil, radon entering the home through tap water will, in most cases, be a small source of radon in indoor air."

Radon is a known human carcinogen. Breathing air-containing radon can lead to lung cancer. Drinking water containing radon may also cause increased risk of stomach cancer. If you are concerned about radon in your home, test the air in your home. Testing is inexpensive and easy. Fix your home if the level of radon in your air is 4 picoCuries per liter of air (pCi/L) or higher. There are simple ways to fix a radon problem that aren't too costly. For additional information, call your state radon program at 303-692-3030 or call EPA's Radon Hotline 1-800-SOS-RADON.

#### Waivers

The Colorado Department of Public Health and Environment has issued the District waivers for Cyanide, Nitrite, Glyphosate, Dioxin & Asbestos.

#### Violations

**No violations occurred in 2005.**

## Glossary of Terms and Measurements

#### Terms:

**Action Level (AL):** The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

**Below Detectable Limit (BDL):** Indicates the compound was analyzed for, but was below the lab method detection limit.

**Contaminant:** A potentially harmful physical, biological, chemical or radiological substance in water.

**Maximum Contaminant Level Goal (MCLG):** The level of 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 highest level of contaminant that is allowed in drinking water. MCLs are set as close to the MCLG as feasible using the best available treatment technology.

**Secondary Maximum Contaminant Level (SMCL):** It is a recommendation level and is not enforceable.

**Maximum Residual Disinfectant Level Goal (MRDLG):** The level of a drinking water disinfectant, below which there is no known or expected risk to health.

**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.

**Not Available (na):** Standards for these contaminants do not exist.

**Treatment Technique (TT):** A required process intended to reduce the level of a contaminant in drinking water.

**Variations and Exemptions:** State or EPA permission not to meet an MCL or treatment technique under certain conditions.

#### Units of Measurement:

**Parts Per Million (ppm):** Equivalent to milligrams per liter (mg/l). One ppm is comparable to one-drop of water in 55 gallons.

**Parts Per Billion (ppb):** Equivalent to micrograms per liter (ug/l). One ppb is equivalent to one drop of water in 55,000 gallons.

**PicoCuries Per Liter (pCi/L):** A measure of radioactivity.

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***Pinery Water and Wastewater District  
Annual Water Quality Report  
For Calendar Year 2005***



*If you have any questions or comments please contact us at:*

*Mailing Address – P.O. box 1660 Parker, CO. 80134*

*Water Quality Questions? Call Paul Makowski @ 303-841-2797 ext. 202 or [PaulM@Pinerywater.com](mailto:PaulM@Pinerywater.com)*

*Billing Information? Call Patty Britton @ 303-841-2797 ext. 0*

*Esta informacion es importante. Si no la pueden leer, necesitan que alguien se la pueda traducir.*