

2011 Annual Water Quality Report

For Calendar Year 2010

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 twelve 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 2010, we delivered 1.059 billion gallons of 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.

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 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 is concerned about protecting our water source and has developed a Ground Water Protection Plan to help 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, 2010 and December 31, 2010. 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	90 th Percentile Value	Units	Number of Samples	Sample Sites Above Action Level	Monitoring Period	Violation	Typical Source of Contaminant
Lead	15	1.9	ppb	26	0	1/1/2008 – 12/31/2010	No	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Copper	1.3	1.1	ppm	26	0	1/1/2008 – 12/31/2010	No	

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 it tested and flush your tap for 30 seconds to 2 minutes before using tap water. Additional information is available from the Safe Drinking Water Hotline (800)426-4791. 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.

Regulated in the Distribution System

Contaminant	MCL	MCLG	Average of Individual Samples	Units	Range of Individual Samples	Number Of Samples	Sample Date	Violation	Typical Source of Contaminant
Organic Disinfection By-Products (TTHM's) Total Trihalomethanes	80	na	27.667	ppb	5.5 – 48.3	6	2010	No	By-product of drinking water chlorination
Haloacetic acids (HAA ₅)	60	na	12.15	ppb	1.1 – 20.5	6	2010	No	By-product of drinking water disinfection

Regulated at System Entry Points

Contaminant	MCL	MCLG	Average of Individual Samples	Units	Range of Individual Samples	Number of Samples	Sample Date	Violation	Typical Source of Contaminant
Arsenic	10	0	2.225	ppb	0 – 5.6	4	2010	No	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes
Barium	2	2	0.138	ppm	0.1 – 0.2	4	2010	No	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes
Chromium	100	100	3.975	ppb	0 – 8.5	4	2010	No	Erosion of natural deposits; Discharge of drilling wastes; discharge from metal refineries
Ethylene Dibromide	50	0	2.175	ppt	0 - 17	8	2010	No	Discharge from petroleum refineries
Fluoride	4	4	1.46	ppm	0.64 – 2.3	4	2010	No	Erosion of natural deposits; Discharge from fertilizer and aluminum factories
Nitrate (as N)	10	10	0.467	ppm	0 – 2.1	7	2010	No	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Nitrate - Nitrite	10	10	0.078	ppm	0.078	1	2009	No	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Selenium	50	50	1.8	ppb	0 – 5.6	4	2010	No	Discharge from petroleum and metal refineries; Erosion of natural deposits; Discharge from mines
Radionuclides									
Combined Radium (-226 & -228)	5	0	2.4	pCi/L	2.4 – 2.4	1	2010	No	Erosion of natural deposits
Gross Alpha, Excl. Radon & Uranium	15	0	1.7	pCi/L	1.7 – 1.7	1	2010	No	Erosion of natural deposits
Gross Beta Particle Activity	50	0	3.0	pCi/L*	3.0 – 3.0	1	2010	No*	Decay of natural and man-made deposits

*The MCL for Gross Beta Particle Activity is 4 mrem/year. Since there is no simple conversion between mrem/year and pCi/L, EPA considers 50 pCi/L to be the level of concern for Gross Beta Particle Activity.

Secondary Contaminants**

Contaminant	SMCL	Average Range of Individual Samples	Units	Range of Individual Samples	Number of Samples	Sample Date
MPA Raw Water Only	na	na	units	0 - 10	7	2009
Sodium	na	36.625	ppm	25.1 – 58.4	4	2010
TDS	500	174 - 174	ppm	174	1	2010

** Secondary standards are non-enforceable guidelines for contaminants that may cause cosmetic effects (such as skin and 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.

Additional Health Information

Contaminant	Potential Health Effects from Long-Term Exposure Above the MCL (unless specified as short term)
Arsenic	While your drinking water meets the EPA's standard for arsenic, it does contain low levels of arsenic. The EPA's standard balances the current understanding of arsenic's possible health effects against the cost of removing arsenic from drinking water. The 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.
Fluoride	<p>This is an alert about your drinking water and a cosmetic dental problem that might affect children under nine years of age. At low levels, fluoride can help prevent cavities, but children drinking water containing more than 2 parts per million (ppm) of fluoride may develop cosmetic discoloration of their permanent teeth (dental fluorosis). The drinking water provided by your community water system, Pinery Water and Wastewater District has a fluoride concentration above 2 parts per million (ppm), but below 4 parts per million (ppm). Dental fluorosis, in its moderate to severe forms, may result in brown staining and/or pitting of the permanent teeth. This problem occurs only in developing teeth, before they erupt from the gums. Children under nine years of age should be provided with alternative sources of water or water that has been treated to remove fluoride to avoid the possibility of staining and pitting of their permanent teeth. You may also want to contact your dentist about proper use by young children of fluoride containing products. Older children and adults may safely drink the water.</p> <p>Drinking water containing more than 4 parts per million (ppm) of fluoride (the Colorado Department of Public Health and Environment's drinking water standard) can increase your risk of developing bone disease. Your drinking water does not contain more than 4 parts per million (ppm) of fluoride, but we are required to notify you when we discover that the fluoride levels in your drinking water exceed 2 parts per million (ppm) because of cosmetic dental problems.</p> <p>For more information, please call Paul Makowski of the Pinery Water and Wastewater district at 303-841-2797. Some home water treatment units are also available to remove fluoride from drinking water. To learn more about available home water treatment units, you may call NSF International at 1-877-867-3435.</p> <p>The Pinery Water and Wastewater District re-tested the well that exceeded the SMCL of 2.0 parts per million (ppm) and the level of fluoride was 1.6 parts per million (ppm). This well is only 3% of the total water that was delivered in 2010.</p>

Waivers

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

Violation(s) and Formal Enforcement Action(s)

Violations: No Violations to Report

Formal Enforcement Actions: No Formal Enforcement Actions to Report

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.

Average of Individual Samples (No Abbreviation): The typical value. Mathematically, it is the sum of values divided by the number of samples.

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.

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.

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): 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.

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.

Microscopic Particle Analysis (MPA Raw Water Only) 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 in our case to determine the existence of surface water influence on a ground water well.

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

Number of Samples (No Abbreviation): The number or count of the values.

Range of Individual Samples (No Abbreviation): The lowest to the highest value.

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.

Violation (No Abbreviation): A failure to meet a Colorado Primary Drinking Water Regulation.

Units of Measurement:

Parts Per Million (ppm): Equivalent to milligrams per liter (mg/l). One ppm corresponds to one minute in two years or a single penny in \$10,000.

Parts Per Billion (ppb): Equivalent to micrograms per liter (ug/l). One ppb corresponds to one minute in 2,000 years, or a single penny in \$10,000.

Parts Per Trillion (ppt): Equivalent to nanograms per liter (ng/l). One ppt corresponds to one minute in 2,000,000 years, or a single penny in \$10,000,000.

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

Pinery Water & Wastewater District
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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

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.