

# 2010 **Paint Brush Hills Metropolitan District - PWSID #C00221690**

## **ANNUAL WATER QUALITY REPORT for the CALENDAR YEAR 2009**

*EN ESPANOL: Esta es informacion importante. Si no la pueden leer, necesitan que alguien se la traduzca.*

Paint Brush Hills Metropolitan District (PBHMD) is pleased to present you with this year's Annual Water Quality Report. This report is designed to inform you about the quality of water and services we deliver to you. As a public water utility, our constant goal is to provide you with a clean, safe, pleasant and dependable supply of drinking water. If you have questions about this report or the District in general, or wish to learn more about our system or what you can do to help protect your drinking water sources, please contact Ellen Robley, District Administrator, at Paint Brush Hills Metropolitan District, 9548 Waterbury Drive, Falcon, CO 80831, [pbhmd@pbhmd.com](mailto:pbhmd@pbhmd.com) or (719) 495-8188.

### **WHERE DOES OUR WATER COME FROM?**

During the year 2009 PBHMD obtained its water from eight deep groundwater wells and also from Meridian Service Metropolitan District (MSMD) through an interconnection facility. Five of the deep wells draw water from the Arapahoe aquifer and range in depth from 1700 to 2200 feet. Three wells draw water from the Laramie-Fox Hills aquifer at depths of 2500 to 2700 feet. MSMD obtains its water primarily from these same two aquifers. PBHMD operates and maintains its own water distribution and wastewater collection systems plus two water tanks with a combined storage capacity of 1.5 million gallons. Production of a safe drinking water supply for PBHMD is accomplished through on-site disinfection (chlorination) at each well site within the District. PBHMD obtains finished water from MSMD through the interconnection but monitors flows the same as a raw water source. In-line sand separators constitute the only other treatment your drinking water receives prior to reaching your tap.

All public water systems participated in a state-wide Source Water Assessment and Protection (SWAP) program, a preventative approach to protecting public drinking water supplies from contamination. The Colorado Department of Public Health and Environment (CDPHE) has provided us with a Source Water Assessment Report for our water supply. You may obtain a copy of the report at [www.cdphe.state.co.us/wq/sw/swaphom.html](http://www.cdphe.state.co.us/wq/sw/swaphom.html) or contact the PBHMD District Administrator, as listed above, to learn more about what you can do to help protect your drinking water sources. Potential sources of contamination in our source water area come from: existing/abandoned mine sites, commercial/industrial/transportation, fallow, and pasture/hay land uses, and 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 Report also provides a starting point for developing a source water protection plan.

### **WHAT ABOUT CONTAMINATION?**

To ensure that tap water is safe to drink, the CDPHE prescribes regulations limiting the amount of certain contaminants in water provided by public water systems. Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water that must provide the same protection for public health. 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 untreated source water include:

- **Microbial contaminants**, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife. *None were found in PBHMD's water.*
- **Inorganic contaminants**, such as salts and metals, which can occur naturally or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming. *The few inorganics that were found in PBHMD's water are listed in the table at the end of this report. None were found that exceeded permissible levels.*
- **Pesticides and herbicides**, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses. *None were found in PBHMD's water.*
- **Organic chemical contaminants**, including synthetic and volatile organic chemicals, which are byproducts of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, and septic systems. *The few organics that were found in PBHMD's water are listed in the table at the end of this report. None were found that exceeded permissible levels.*
- **Radioactive contaminants**, which can occur naturally or result from oil and gas production and mining activities. *None were found in PBHMD's water that exceeded permissible levels.*

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. 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's *Safe Drinking Water Hotline* at (800) 426-4791 or visit their website at [www.epa.gov/safewater](http://www.epa.gov/safewater).

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 your 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's *Radon Hotline* (800) SOS-RADON.

### **SPECIAL CONCERNS:**

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 for infections. These people should seek advice from their health care providers about drinking water. 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 and/or flush your tap for 0.5 to 2 minutes before using tap water. Additional information is available from the EPA's *Safe Drinking Water Hotline* at (800) 426-4791.

### **SO WHAT'S IN OUR WATER?**

The production of safe drinking water, free of harmful bacteria and toxic materials, is our top priority. PBHMD routinely monitors for contaminants in your drinking water according to Federal and State laws. The table below shows all detections of the few contaminants found in your water through laboratory testing. The table lists both regulated and unregulated substances, all present at or below levels allowed by the EPA for public drinking

water, for the period of January 1 to December 31, 2009 unless otherwise noted. CDPHE 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. The 'Range' column in the table below will show a single value for those contaminants that were sampled only once. According to State requirements, PBHMD is exempt from testing for the following substances: asbestos, dioxin, cyanide, glyphosate, and nitrite. Violations are reported below.

Your drinking water continues to meet or exceed all Federal and State standards, although one sampling, but not water-quality, violation occurred during 2009. The testing violation was not an emergency, but as a customer, you have a right to know what happened and what has been done to correct the situation. PBHMD did not perform one of the monitoring tests for nitrate on our newer wells during the first quarter of 2009. The Failure to Monitor for Nitrate (1<sup>st</sup> Quarter) triggered an automatic violation. The District has since performed all required nitrate sampling/testing during the remaining three quarters of 2009. All samples confirmed that your drinking water was safe and meets regulatory drinking water standards. PBHMD will continue to perform all necessary sampling on these wells and for our other water sources per State requirements.

There is nothing you need to do concerning the above violation. The District will continue performing the required sampling/testing as scheduled during 2010 and beyond, as per Federal and State requirements. You will be notified if any water quality concerns arise. Secondary standards, like those for fluoride, are non-enforceable guidelines for contaminants that may cause cosmetic effects (such as tooth discoloration or skin) or aesthetic effects (such as taste, odor or color) in drinking water. The EPA recommends these standards but does not require water systems to comply. A complete listing of all tests and data is available upon your request. Knowledge of the following terms/abbreviations is helpful in understanding the tabulated data:

- **Action Level (AL):** The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
- **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.
- **Non-Detects (ND):** Laboratory analysis indicates that the constituent is not present.
- **Maximum Contaminant Level (MCL):** The highest level of contaminant that is allowed in drinking water.
- **Maximum Contaminant Level Goal (MCLG):** The level of a contaminant in drinking water below which there is no known or expected risk to health.
- **Parts per Million (ppm) = milligrams per liter (mg/L) -** one part per million corresponds to one minute in two years, or one penny in \$10,000.
- **Parts per Billion (ppb) = micrograms per liter (ug/L) -** one part per billion corresponds to one minute in 2,000 years, or one penny in \$10,000,000.
- **Picocuries per Liter (pCi/L):** A measure of the radioactivity in water.
- **Running Annual Average (RAA):** An average of monitoring results for the previous 12 calendar months.

Contaminant	Year Sampled	Highest Value or RAA	Range Detected or 90 <sup>th</sup> Percentile	MCL	MCLG	Likely Source
<b>DISINFECTION BY-PRODUCTS</b>						
Total Haloacetic Acids (HAA5, ppb)	2008	2.6	1.5 – 3.6	60	N/A	By-product of drinking water disinfection
Total Trihalomethanes (TTHM, ppb)	2008	15.27	4.28 – 22.82	80	N/A	By-product of drinking water chlorination
<b>INORGANIC CONTAMINANTS</b>						
Barium, (ppm)	2008	0.0156	0.0103 – 0.0156	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Chromium, (ppb)	2008	12	2.29 – 12	100	100	Discharge from steel and pump mills; erosion of natural deposits.
Copper, (ppm) - at customer tap	2008	none exceeding AL	0.11	AL=1.3	1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Fluoride, (ppm)	2008	2	1.2 – 2	4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Lead, (ppb) - at customer tap	2008	none exceeding AL	2	AL=15	0	Corrosion of household plumbing systems
Nickel, (ppm)	2008	0.11	0.0238 – 0.11	N/A	N/A	NOTE: This is a secondary standard contaminant.
Nitrate	2009	0.16	0.01 - 0.16	10	10	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of Natural deposits
Sodium, (ppm)	2008	171	52 – 171	10,000	N/A	NOTE: This is a secondary standard contaminant.
Solids, Total Dissolved, (ppm)	2008	466	130 -- 466	500	N/A	NOTE: This is a secondary standard contaminant.
<b>ORGANIC CONTAMINANTS</b>						
Di(2-ethylhexyl)adipate, (ppb)	2008	1.1	1.1	400	400	Discharge from chemical factories.
Di(2-ethylhexyl)phthalate, (ppb)	2009	1.7	0.89 – 1.7	6	0	Discharge from rubber and chemical factories.
<b>RADIOLOGICAL CONTAMINANTS</b>						
Gross Alpha, (pCi/L)	2008	1.5	0.1 – 1.5	15	0	Erosion of natural deposits
Gross Beta, (pCi/L)	2008	0.7	0.7	4	0	Decay of natural and man-made deposits
Radium, Comb. (226, 288, pCi/L)	2008	1.3	0.1 – 1.3	5	0	Erosion of natural deposits
Radon, (pCi/L)	2006	300	300	N/A	N/A	NOTE: This is a secondary standard contaminant.
Uranium, Comb. (pCi/L)	2008	0.5	0.4 – 0.5	30	0	Erosion of natural deposits

## YOUR VALUABLE INPUT:

PBHMD is committed to ensuring a high quality of drinking water and utility service to our customers. The District encourages and invites your interest and participation in decision-making processes affecting your drinking water. The Board of Directors holds its regularly scheduled monthly meetings on the third Thursday of each month at 7:00 p.m. with the location posted on our website. Please call our office if you have any questions about this report. Your comments about the District in general are also welcome. You may visit our website at [www.pbhmd.com](http://www.pbhmd.com) or contact our District Administrator at the District's office at (719) 495-8188 or by email to [pbhmd@pbhmd.com](mailto:pbhmd@pbhmd.com). Thank you for your continued support of PBHMD.

## Paint Brush Hills Metropolitan District