

2007

PWSID #C00121950

Annual Water Quality & Consumer Confidence Report

WOODMOOR
Water and Sanitation District No. 1

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

Why Do I Receive This Report?

Congress amended the Safe Drinking Water Act in 1996 to require most drinking water suppliers to provide customers with annual reports on the quality of their drinking water. The first report was required for the calendar year 1998.

We believe that the requirement is beneficial because the report will help educate our customers about the important issues and the decisions that the District faces in ensuring the future integrity of our water supply. Our goal is to provide you with a safe and dependable supply of drinking water. We want our customers to understand the efforts that are made to improve Woodmoor's water system and to protect its water resources.

If you have any questions about this report or concerning your water utility, please contact Randy Gillette at 719-488-2525.

"Our goal is to provide you with a safe and dependable supply of drinking water."

Where Does WWSD Get its Water?

The area we live in is a semi-arid climate which receives an average of approximately 24 inches of precipitation annually. Currently all of the water that the District supplies must be pumped from deep underground aquifers. We have 5 wells that draw from the Dawson aquifer, 2 wells in the Denver aquifer, and 7 wells in the Arapahoe aquifer. The Dawson aquifer is the shallowest at 800-900 feet with average productions at 30-60 gallons per minute of very good quality water, requiring only chlorination before entering the system. The Denver aquifer stores water at depths of 1200-1500 feet with average productions of 150 -200 gallons per minute. The water is more susceptible to naturally occurring iron at low enough levels that it does not require any treatment other than chlorination. The Arapahoe aquifer is the deepest and produces the highest volume of water, approximately 250-450 gallons per minute. It is also has the highest level of iron which requires treatment and filtration, as well as chlorination prior to being introduced to the system.

The water that requires treatment to reduce the iron and manganese is processed at one of the four treatment facilities. The chemicals we use at these facilities are potassium permanganate (KMnO4) and chlorine (CL2) for iron and manganese removal, as well as caustic soda (NaOH) for pH control.

The water is distributed to the community through a distribution system comprised of nearly 85 miles of pipeline of various sizes and materials. The system is supported by two one million gallon storage tanks. The distribution system is divided into three pressure zones that are regulated through 14 pressure reducing stations that help regulate and maintain system pressure.

The Colorado Department of Public Health and Environment has provided us with a Source Water Assessment for our water supply. You may obtain a copy of the report by visiting www.cdphe.state.co.us/wq/sw/swaphom.html or by contacting Randy Gillette at 719-488-2525. 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 home. In addition, the source water assessment results provide a starting point for developing a source water protection plan.

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What Contaminants Are Common in Drinking Water?

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, which 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 storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming ;
- **Pesticides and herbicides**, which may come from a variety of sources such as agriculture, urban storm water 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 storm water 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 the tap water is safe to drink, EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. The U.S. Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water, that must provide the same protection for public health.

Some people may be more vulnerable to contaminants in drinking water than the general public.

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. 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 from their health care providers about the water they drink. 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 1-800-426-4791.

What Does Water Quality Mean?

The table contains many terms and abbreviations that may be unfamiliar. To help you better understand these terms we've provided the following definitions:

- **Action Level (AL)**: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
- **Non-Detects (ND) or Below Detection Level (BDL)**: Laboratory analysis indicates that the constituent is not present. (“<” Symbol for less than, the same as ND or BDL)
- **High Solids (HS)**: High Solids, alpha was not tested.
- **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 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 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.

All drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants.

What Does Water Quality Mean? *(continued)*

- 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.
- Million Fibers per Liter (**MFL**): A measure of the presence of asbestos fibers in water longer than 10 micrometers.
- Millirems per Year (**mrem/year**): A measure of radiation absorbed by the body.
- Nephelometric Turbidity Unit (**NTU**): Nephelometric turbidity unit is a measure of the clarity of water. Turbidity in excess of five NTU is just noticeable to the average person.
- Not Tested (**NT**): Not tested.
- Parts per billion (**ppb**) or Micrograms per liter (**µg/l**): One part per billion corresponds to one minute in 2,000 years, or one penny in \$10,000,000.
- Parts per million (**ppm**) or Milligrams per liter (**mg/l**): One part per million corresponds to one minute in two years or one penny in \$10,000.
- Parts per quadrillion (**ppq**) or picograms per liter (**pg/l**): One part per quadrillion corresponds to one minute in 2,000,000,000 years or one penny in \$10,000,000,000,000.
- Parts per trillion (**ppt**) or Nanograms per liter (**ng/l**): One part per trillion corresponds to one minute in 2,000,000 years or one penny in \$10,000,000,000.
- PicoCuries per Liter (**pCi/l**): A measure of radioactivity in water.
- Treatment Technique (**TT**): A treatment technique is a required process intended to reduce the level of a contaminant in drinking water.
- Variances and Exemptions: State permission not to meet an MCL or a treatment technique under certain conditions.

Our system has a variance, exemption, or waiver for dioxin, glyphosate, nitrite, cyanide, and asbestos

Woodmoor Water and Sanitation District had a violation for failure to monitor nitrate. Well No 2 failed in February prior to collecting a sample. It was put back in service in December and a sample was collected in January 2007

Contaminants that were tested for, but not detected, include: All of the Regulated and Unregulated Volatile Organic Contaminants (VOC) sampled on 11/17/2005, and 11/26/2005; All of the Regulated and Unregulated Synthetic Organic Contaminants (SOC) sampled on 11/17/2005 and 11/26/2005.

Additional information

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 advise from your health care provider.

While your water does contain low levels of arsenic, some people who drink water containing arsenic in excess of the MCL over many years could experience skin damage or problems with their circulatory system and may have an increased risk of getting cancer.

Chromium occurs naturally in drinking water at low levels. Some people who use water containing chromium well in excess of the MCL over many years could experience allergic dermatitis.

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. Flush your tap for 30 seconds to 2 minutes before using tap water. If you are concerned about elevated lead levels in your home's water, you may wish to have your water tested. Additional information is available from the EPA *Safe Drinking Water Hotline* at 1-800-426-4791.

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 your home. Testing is inexpensive and easy. Fix your home if the level of radon in the air is four picocuries per liter of air (4 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 at 1-800-SOS-RADON.

WWS&SD routinely monitors for all regulated and unregulated contaminants as required by Federal and State regulations

Table of Contaminants

The State 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.

Note: Only detected contaminants appear in this report. If no tables appear in this section, Woodmoor Water and Sanitation District did not detect any contaminants in the last round of monitoring

This table shows the results of our monitoring for the period of January 1 to December 31, 2006 unless otherwise noted.

| Microbiological Contaminants | | | | | | |
|------------------------------|---|-------------------|----------------|---------------------|---------------------|--------------------------------------|
| Contaminant | MCL | CCR Unit | Level Detected | Violation Yes or No | Sample Date | Likely Source of Contamination |
| Total Coliform Bacteria | System collects >40 samples: 5% of monthly samples are positive | Absent or Present | Absent | No | 8 samples per month | Naturally present in the environment |

| Radionuclides | | | | | |
|---------------|-----------|-----------------------------|---------------------|-------------|--------------------------------|
| Contaminant | CCR Units | Level Detected/Range | Violation Yes or No | Sample Date | Likely Source of Contamination |
| Radon | pCi/l | High: 950 Range: 390—950 | No | 8/16/00 | Erosion of natural deposits |

| Lead and Copper | | | | | | | |
|-----------------|-----|------|-----------|----------------------|---------------------|--------------------|--|
| Contaminant | MCL | MCLG | CCR Units | Level Detected/Range | Violation Yes or No | Sample Date | Likely Source of Contamination |
| Copper | 1.3 | 1.3 | ppm | 0.15 | No | 8/16/04 8/31/04 | Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives |
| Lead | 15 | 0 | ppb | 4.20 | No | 8/16/04 8/31/04 | Corrosion of household plumbing systems, erosion of natural deposits |

| Organics and Inorganic Contaminants | | | | | | | |
|-------------------------------------|-----|------|-----------|--------------------------------|---------------------|--------------------|---|
| Contaminant | MCL | MCLG | CCR Units | Level Detected/Range | Violation Yes or No | Sample Date | Likely Source of Contamination |
| Arsenic | 50 | 0 | ppb | High: 9.4 Range: 3.4-9.4 | No | 8/19/04 8/24/04 | Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes |
| Barium | 2 | 2 | ppm | High: 0.11 Range: .004-0.11 | No | 8/19/04 8/24/04 | Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits |
| Chromium | 100 | 100 | ppb | High: 18 Range: < 1—18 | No | 8/19/04 8/24/04 | Discharge from steel and pulp mills; erosion of natural deposits |
| Di(2-ethylhexyl)-Phthalate | 6 | 0 | ppb | High: 2..3 Range: 1..5—2..3 | No | 8/8/2006 | Discharge from rubber and chemical factories |
| Fluoride | 4 | 4 | ppm | High: 1.8 Range: .70—1.8 | No | 8/19/04 8/24/04 | Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories |

Table of Contaminants *(continued)*

| Disinfection By-Products | | | | | | | |
|--------------------------|--------|------|-----------|---------------------------------------|---------------------|-------------|---|
| Contaminant | MCL | MCLG | CCR Units | Level Detected/Range | Violation Yes or No | Sample Date | Likely Source of Contamination |
| Total Trihalomethanes | 80.000 | N/A | ppb | Average: 1.97833 Range: 1.02– 3.61 | No | 2006 | By-product of drinking water chlorination |

| Unregulated Inorganic Contaminants—Secondary Monitoring Standards | | | | |
|---|-----------|----------------------------------|-------------|--------------------|
| Contaminant | CCR Units | Level Detected/Range | Sample Date | Secondary Standard |
| Nickel | MG/L | High: 0.017 Range: bdl– 0.017 | 8/24/04 | 0.1 |
| Sodium | MG/L | High: 19 Range: 6.6– 19 | 8/19/04 | 10000 |
| Total Dissolved Solids (TDS) | MG/L | High: 153 Range: 90–153 | 9/8/03 | 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

Keeping Consumers Informed

In order to make this report a valuable resource for our customers, your suggestions and feedback are important. We have received frequent requests concerning the qualities of water that may have a more immediate and direct impact on a daily basis. Most of these parameters are considered secondary standards, which means that they are not an immediate health hazard and are more of an aesthetic nature.

The average chlorine residual in the distribution system is 0.74 mg/l. Typically, if you can smell the chlorine, then the residual has dropped below desired levels, causing taste and/or odor complaints.

The average pH of the water is 7.8-8.10. pH is a measure of acid or base on a scale of 0-14 with 0 being acidic and 14 being alkaline or base. Water is considered neutral at a pH of 7.

The hardness of the water is measured in mg/l or grains per gallon (gpg) and is representative of the amount of calcium and magnesium in the water. The average hardness is 56.9 mg/l or 3.3 gpg. Water is considered “hard” when the hardness number is 120 mg/l (7 gpg) or greater.

The average temperature of the water in the distribution system is 16° C or 41.0° F.

The average iron (Fe) residual in the system is 0.02 mg/l. The secondary MCL is .30 mg/l. Over time, the residual iron in the water develops a biological film within the distribution system piping. When there is a sudden demand on the system, such as a water main break, the use of a fire hydrant, or high consumer usage, this bio-film becomes disassociated with the pipe interior, causing the water to become discolored. While the water would be safe to consume, it is not very appealing. The District conducts a routine flushing program to help alleviate this problem.

If you have any questions or comments about your water quality or the services provided by the District, you may contact the District office at 488-2525.



WE'RE ON THE WEB
WWW.WOODMOORWATER.COM