

Highlands Ranch

CLEAN & SECURE

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2010 Water Quality Report



Jena Vail conducts water quality tests.

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Centennial Water &
Sanitation District
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For More Information

If you have questions about this report or your water services, please contact Centennial Water at 303-791-2185, ext. 3523. We want you, our valued customer, to be informed about your water utility.

Board meetings are held at the District Office Building, 62 W. Plaza Dr., Highlands Ranch, CO 80129. Please visit www.highlandsranch.org for a board meeting schedule.



Respecting Our Resources, One Drop At A Time

In an average year, Centennial Water & Sanitation District customers use more than 2.5 billion gallons of water for outdoor irrigation. This amount could fill more than 3,900 Olympic-sized swimming pools. We can reduce our consumption by making simple landscape modifications, often referred to as Xeriscape.

Xeriscape is a combination of seven principles that, when used together, create a lush and colorful water saving landscape.

1. Plan and design – Create a plan evolving from a base plan with your current landscape to a final design that identifies site conditions and a planting scheme.
2. Practical turf areas – Place turf only where you need it and avoid areas that are difficult to maintain, such as slopes and narrow strips. For these areas use alternatives such as groundcovers, pathways and decks.
3. Select and group plants appropriately – There are many beautiful plants that do well with very little supplemental water. Group plants together that have similar water requirements.
4. Improve the soil – To improve the soil conditions, amend the soil with organic material. Some native plants prefer soil low in organic material so know your plant characteristics before amending the soil.
5. Use mulch – Mulch minimizes the amount of water lost through evaporation and cools the root zone, reducing the amount of water used. Mulch can also prevent weeds and provide a finished look.
6. Efficient irrigation – Some basic principles of efficient irrigation are: watering during early morning hours, performing regular maintenance and changing your irrigation schedule as the weather dictates.
7. Maintenance – Much like traditional landscapes, Xeriscape requires regular maintenance. You'll need to prune trees and shrubs, deadhead perennials, aerate and fertilize lawns, mow and control pests.



An example of Xeriscape.

For more information about Xeriscape, please visit www.xeriscape.org. For information about Centennial Water's conservation program, please visit www.highlandsranch.org or call 720-240-4917.

Colorado Source Water Assessment & Protection (SWAP) Program

The SWAP program was initiated to protect the quality of groundwater and surface water supplies. The Colorado Department of Public Health and Environment (CDPHE) has provided Centennial Water with a SWAP report for both our surface and groundwater supply. You may obtain a copy of the report by visiting www.cdphe.state.co.us/wq/sw/swaphom.html, or by contacting Centennial Water at 303-791-2185, ext. 3523.

Potential sources of contamination in our source water may come from both discrete sources (Environmental Protection Agency (EPA) abandoned contaminated sites, EPA hazardous waste generators, EPA chemical inventory/storage sites, solid waste sites, permitted wastewater discharge sites, aboveground, underground and leaking storage tank sites, existing/abandoned mine site, and other facilities) and from dispersed sources (land use/cover: commercial/industrial/transportation, high/low intensity residential, urban recreation grasses, row crops, fallow, pasture/hay, quarries/strip mines/gravel pits, deciduous forest, evergreen forest, mixed forest, and septic systems, and roads).

The SWAP report provides a screening level of potential contamination that could occur. It does not mean that 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 from which a source water protection plan may be developed.

Centennial Water maintains a variety of programs and procedures to ensure that Highlands Ranch has a safe and secure water supply. For more information about these programs and procedures, or to learn how to help protect your drinking water sources, please visit www.highlandsranch.org, or contact Centennial Water at 303-791-2185, ext. 3523.

2010 Highlands Ranch Water Quality Report

Centennial Water & Sanitation District presents this year's annual drinking water quality report. This report is designed to inform you about the quality of the water we deliver every day. Our constant goal is to provide a safe and dependable supply of drinking water. We want you to understand the efforts we make to protect our water resources. We are committed to ensuring the quality of your water. Last year, as in years past, your tap water met all U.S. Environmental Protection Agency (EPA) and state drinking water health standards. Our surface water source is the South Platte River with diversion points at Englewood's City Ditch, Chatfield Reservoir, Nevada Ditch, and South Platte Alluvial Wells, transported to storage in McLellan Reservoir or the South Platte Reservoir. Our secondary water source is non-tributary wells in the Denver Basin Aquifer.

Is our community's drinking water regularly tested?

Yes. Centennial Water & Sanitation District routinely monitors for constituents in your drinking water according to federal and state laws. The table in this report shows the results of our monitoring for the period of January 1 through December 31, 2009.

Are there contaminants in drinking water?

All drinking water, including bottled drinking water, may be reasonably expected to contain at least small amounts of some contaminants. *It is important to remember the presence of these contaminants does not necessarily pose a health risk.* Immuno-compromised people such as people with cancer undergoing chemotherapy, people who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly individuals, 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 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.

Why does drinking water sometimes contain contaminants?

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.

- **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**, which 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 can also come from gas stations, urban stormwater runoff and septic systems.
- **Radioactive contaminants**, which can be naturally occurring, or the result of oil and gas production and mining activities.

In order to ensure that tap water is safe to drink, the EPA prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. The Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water, which must provide the same protection for public health.

The Water Quality Data Table to the right contains many terms and abbreviations that may be unfamiliar. We've provided the following definitions to help you better understand these terms:

- **Action Level (AL):** The concentration of a contaminant, if exceeded, triggers treatment or other requirements a water system must follow.
- **Maximum Contaminant Level (MCL):** 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 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.
- **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.
- **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.
- **Non-Detects (ND):** Laboratory analysis indicates that the constituent is not present. (< Symbol for less than, the same as ND).
- **Parts per billion (ppb)**
- **Parts per million (ppm)**
- **PicoCuries per Liter (pCi/L):** A measure of radioactivity in water.
- **Treatment Technique (TT):** A required process intended to reduce the level of a contaminant in drinking water.
- **Running Annual Average (RAA):** An average of monitoring results for the previous 12 calendar months.
- **Secondary Maximum Contaminant Level (SMCL)** is not enforceable.

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Results of Radon Monitoring

Radon is a radioactive gas that can't be seen, tasted or smelled. It is found in 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 get into indoor air when released from showering, washing dishes, and performing other household activities. 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 four picoCuries per liter of air (pCi/L) or higher. There are simple, affordable ways to fix a radon problem. For additional information, call your state radon program at 303-692-3030, or call the EPA's Radon Hotline at 1-800-SOS-RADON. Radon entering the home through tap water, in most cases, is a small source of radon in indoor air, compared to radon entering the home through the soil.

Results of Lead Monitoring

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 seconds to two minutes before using tap water. Additional information is available from the Safe Drinking Water Hotline at 1-800-426-4791.

Centennial Water & Sanitation District's Water Quality Data Table

PWSID # CO 0118015

The table below lists all of the drinking water contaminants detected during the calendar year of this report. The presence of contaminants in water does not necessarily indicate that the water poses a health risk. Unless otherwise noted, the data presented in this table is from testing done from January 1 to December 31, 2009. According to either EPA or state requirements, certain contaminants may be monitored less than once per year because the concentrations of these contaminants do not change frequently. The state has issued waivers for monitoring asbestos, cyanide, dioxin and glyphosate.

Regulated Copper and Lead	Results at the 90th Percentile	AL	MCLG	Meets EPA Standards	Likely Source	
Copper (ppm) (0 of 30 samples exceeded the AL)	0.27	1.3	1.3	Yes	Corrosion of household plumbing systems	
Lead (ppb) (3 of 30 samples exceeded the AL)	2.7	15	0	Yes	Corrosion of older household plumbing systems	
Regulated Disinfectants & Disinfection Byproducts	Range	Highest RAA Level	MCL (MRDL)	MCLG (MRDLG)	Meets EPA Standards	Likely Source
Chloramines (ppm)	1.2-2.7	2.0	4 (MRDL)	4 (MRDLG)	Yes	Water additive used to control microbes
Haloacetic Acids (ppb)	ND-19.6 Average = 11.7	13.5	60	NA	Yes	Byproduct of drinking water disinfection
Total Trihalomethanes (ppb)	3.4-35.7 Average = 24.8	30.4	80	NA	Yes	Byproduct of drinking water disinfection
Regulated Radioactive Substances	Range	Highest Level	MCL	MCLG	Meets EPA Standards	Likely Source
Alpha Emitters (pCi/L)	1.4-7.4	7.4	15	0	Yes	Erosion of natural deposits
Beta/photon Emitters (pCi/L)	3.3-4.1	4.1	Trigger level = 15	0	Yes	Decay of natural and man-made deposits
Uranium (ppb)	ND-8.5	8.5	30	0	Yes	Erosion of natural deposits
Radium (combined 226/228) (pCi/L)	0.3-2.9	2.9	5	0	Yes	Erosion of natural deposits
Regulated Microbiological/ Turbidity	Range	Highest Level	MCL	MCLG	Meets EPA Standards	Likely Source
Total Coliform (% positive samples/month)	ND	ND	5	0	Yes	Naturally present in the environment
Turbidity (NTU)	NA	0.25 (On 3-1-09)	<1 (TT)	NA	Yes	Soil runoff
Turbidity (%)*	NA	100	≥95 (TT)	NA	Yes	Soil runoff

*At least 95% of monthly samples must be <0.3 NTU.

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Disinfection Byproducts	Compliance Description				Requirement	Likely Source
Control of Disinfection Byproduct Precursors	We used enhanced treatment to remove the required amount of natural organic material and/or we demonstrated compliance with alternative criteria.				TT	Natural organic material that is present in the environment.

Regulated Organic and Inorganic Substances	Range	Highest Level	MCL	MCLG	Meets EPA Standards	Likely Source
Barium (ppm)	0.053-0.11	0.11	2	2	Yes	Erosion of natural deposits
Nitrate-Nitrite (ppm as N)	ND-0.44	0.44	10	10	Yes	Erosion of natural deposits, runoff from fertilizer use
Nitrate (ppm as N)	ND-0.44	0.44	10	10	Yes	Erosion of natural deposits, runoff from fertilizer use
Fluoride (ppm)	0.71-1.1	1.1	4	4	Yes	Erosion of natural deposits
Diquat (ppb)	ND-0.48	0.48	20	20	Yes	Runoff from herbicide use

Other Monitoring	Range	Highest Level	MCL	MCLG	Likely Source
Nickel (ppb)	ND-1.7	1.7	NA	NA	Naturally present in the environment
Radon (pCi/L)	6-2260	2260	NA	NA	Naturally present in the environment
Total dissolved solids (ppm)	218-405	405	500 (SMCL)	NA	Erosion of natural deposits



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