

# 2016 Water Quality Report



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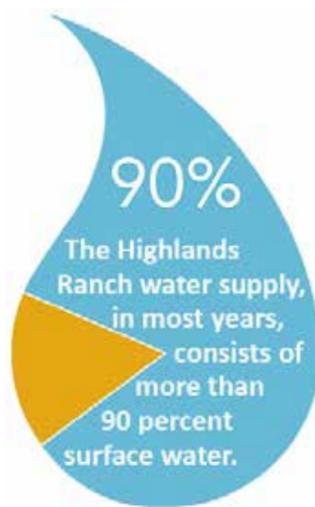
## SWAP Program

The Source Water and Assessment Program (SWAP) was initiated to protect the quality of groundwater and surface water supplies. The Colorado Department of Public Health and Environment provided Centennial Water with a SWAP report for both our surface and groundwater supply. You may obtain a copy of the report by visiting <http://wqcdcompliance.com/ccr> (click on Source Water Assessment Reports (Listed by County)), or by contacting Centennial Water at 303-791-2185, ext. 3523.

Potential sources of contamination in our source water may come from 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, above ground, 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 contamination has or will occur. This information is useful in evaluating the need to improve water treatment capabilities and prepare for future contamination threats. This can help ensure quality finished water is delivered to your home. 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 Highlands Ranch has a clean and secure water supply. For more information about these programs and procedures, please visit [www.centennialwater.org](http://www.centennialwater.org), or contact Centennial Water at 303-791-2185, ext. 3523.



## Tips to maintain healthy water quality

More than 70 miles of trails connect Highlands Ranch from north to south, east to west. But did you know those open space areas the trails travel through serve more than one purpose? They are not only a pedestrian thoroughfare and a wildlife habitat; but also stormwater channels that serve as open space drainage ways, providing flood control and water quality enhancement. More than one third of the water drains to McLellan Reservoir, our raw water storage facility.

Stormwater is runoff from rain and melting snow. In urban areas like Highlands Ranch, stormwater runoff comes from streets, parking lots, sports fields, homes and more. Factor in all the places stormwater drains from and imagine the possibility for pollution of our water.

Improving stormwater quality starts at home. Homeowners can take simple steps when caring for landscape to limit the amount of fertilizers, pesticides, herbicides, grass clippings and fallen leaves that find their way into stormwater.

- Use fertilizer sparingly; many plants do not need as much fertilizer as you may think.
- Keep chemicals off streets, sidewalks and driveways to prevent water pollution.
- Fertilizer or chemicals that fall on impervious surfaces should be swept back onto the lawn.
- Do not fertilize before a rain storm.
- Do not over water the lawn.
- Use organic fertilizers which release nutrients more slowly.
- Select native plants for the landscape. Native plants use less water, fertilizer and pesticides.

By monitoring the fertilizer used, the quantity and its location, combined with collecting grass clippings and garden trimmings and disposing of them properly, the stormwater quality in our community can be greatly improved.

To learn more about stormwater management, visit the Highlands Ranch Metro District's website at [www.highlandsranch.org](http://www.highlandsranch.org).

# Q&A about the quality of your water

Centennial Water & Sanitation District's goal is to provide a safe and dependable supply of drinking water. 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 sources are the South Platte River with diversions through the City Ditch, Nevada Ditch, Last Chance Ditch and South Platte Alluvial Wells, transported to storage in McLellan Reservoir or the South Platte Reservoir. Our secondary water source is nontributary wells in Denver Basin aquifers.

### Is our community's drinking water regularly tested?

Yes. Centennial Water & Sanitation District routinely monitors constituents in drinking water according to federal and state laws. The table in this report shows the monitoring results for the period of Jan. 1 through Dec. 31, 2015.

### Are there contaminants in drinking water?

All drinking water, including bottled drinking water, may contain trace amounts of contaminants. The presence of 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 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.

To ensure 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 regulations establish limits for contaminants in bottled water, which must provide the same protection for public health.

### How can I learn more about Highlands Ranch water?

If you have questions about this report or your water services, please contact Centennial Water at 303-791-2185, ext. 3523. We want you to be informed about your water utility. Attending a board meeting is a great way to learn more about Centennial Water's water supply. Meetings are held at the District Office Building, 62 W. Plaza Dr., Highlands Ranch, CO 80129. Please visit [www.centennialwater.org](http://www.centennialwater.org) for a board meeting schedule.

### Centennial Water & Sanitation District Board of Directors

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## A GLANCE AT CENTENNIAL WATER'S WATER INFRASTRUCTURE



# 2016 Highlands Ranch Water Quality Report

The Water Quality Data Table to the right contains many terms and abbreviations that may be unfamiliar. The following definitions should 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 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 the constituent was not detected above laboratory detection limits.

**Parts per billion (ppb):** One part per billion corresponds to one minute in 2,000 years, or a single penny in \$10,000,000.

**Parts per million (ppm):** One part per million corresponds to one minute in two years, or a single penny in \$10,000.

**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 calculated each quarter.

**Secondary Maximum Contaminant Level (SMCL):** Non-enforceable, recommended limits for substances that affect the taste, odor, color or other aesthetic qualities of drinking water, but do not pose a health risk.

## Not Available (NA)

### Deficiency Description

During a routine sanitary survey on Sept. 28, 2015, the Colorado Department of Health and Environment (CDPHE) noted that Centennial Water & Sanitation District did not submit plans and specifications for a change in water treatment process and equipment used at our groundwater treatment plants which is a violation of the Colorado Primary Drinking Water Regulation (Regulation 11, Section 11.4(1)).

Centennial Water submitted plans and specifications on Feb. 25, 2016 for the treatment system for the two groundwater treatment facilities and has received approval from CDPHE.

## 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. It 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. It is a known human carcinogen. Breathing air containing radon can lead to lung cancer. Drinking water containing radon may 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

Pregnant women and young children are typically more vulnerable to lead in drinking water than the general population. It is possible 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 or online at [www.epa.gov/safewater/lead](http://www.epa.gov/safewater/lead).

## Centennial Water and 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 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, 2015. 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 (2014)	Results at the 90th Percentile	AL	MCLG	Meets EPA Standards	Likely Source
Copper (ppm) (0 of 30 samples exceeded the AL)	0.45	1.3	1.3	Yes	Corrosion of household plumbing systems
Lead (ppb) (0 of 30 samples exceeded the AL)	3.0	15	0	Yes	Corrosion of older household plumbing systems

Regulated Disinfectants and Disinfection Byproducts	Range (all data) Average =	Highest Locational RAA Level	MCL (MRDL)	MCLG (MRDLG)	Meets EPA Standards	Likely Source
Chloramines (ppm)	0.6-3.5 Average = 2.2	NA	4	4	Yes	Water additive used to control microbes
Haloacetic Acids (ppb)	6.7-23.1 Average = 14.8	18.0	60	NA	Yes	Byproduct of drinking water disinfection
Total Trihalomethanes (ppb)	27.6-52.4 Average = 38.3	42.5	80	NA	Yes	Byproduct of drinking water disinfection

Regulated Radioactive Substances	Range	Highest Level	MCL	MCLG	Meets EPA Standards	Likely Source
Gross Beta (pCi/L) Particle Activity	0.0-2.0	2.0	50	0	Yes	Decay of natural and man-made deposits
Radium (combined 226/228) (pCi/L)	0.1-2.5	2.5	5	0	Yes	Erosion of natural deposits
Combined Uranium (ppb)	1.0-7.8	7.8	30	0	Yes	Erosion of natural deposits
Gross Alpha (pCi/L)	1.7-4.7	4.7	15	0	Yes	Erosion of natural deposits

Regulated Microbiological	Range	Highest Level	MCL	MCLG	Meets EPA Standards	Likely Source
Total Coliform (% positive samples/month)	ND-1.1	1.1	5	0	Yes	Naturally present in the environment

Regulated Turbidity	Sample Date	Level Found	TT Requirement	Likely Source
Turbidity (NTU)	7-10-15	Highest single measurement: 0.08	Maximum 1 NTU for any single measurement.	Soil runoff
Turbidity (%)	Every 4 hours	Lowest monthly percentage of samples less than 0.3 NTU: 100%	In any month, at least 95% of samples must be less than 0.3 NTU.	Soil runoff

Disinfection Byproducts	Range	Lowest Level	TT Minimum Ratio	Meets TT Requirements?	Likely Source
Total Organic Carbon Ratio	1.13-2.96	1.13	1.0	Yes	Natural organic material that is present in the environment.

Regulated Inorganic Substances	Range	Highest Level	MCL	MCLG	Meets EPA Standards	Likely Source
Barium (ppb)	55-110	110	2,000	2,000	Yes	Erosion of natural deposits
Fluoride (ppm)	0.78-0.89	0.89	4	4	Yes	Erosion of natural deposits
Nitrate (ppm)	0.04-0.06	0.06	10	10	Yes	Erosion of natural deposits

Regulated Synthetic Organic Substances	Range	Highest Level	MCL	MCLG	Meets EPA Standards	Likely Source
Hexachlorocyclopentadiene (ppb)	<0.095-0.13	0.13	50	50	Yes	Industrial discharges

Other Monitoring	Range	Highest Level	MCL	MCLG	Likely Source
Nickel (ppb)	<1.0-1.2	1.2	NA	NA	Naturally present in the environment
Sodium (ppm)	28-62	62	NA	NA	Naturally present in the environment
Total Dissolved Solids (ppm)	178-507	507	500 (SMCL)	NA	Erosion of natural deposits
Radon (pCi/L)	8-3290	3290	NA	NA	Naturally present in the environment

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**CENTENNIAL**  
WATER AND SANITATION DISTRICT

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.