

Director's Message

Water is the basis of life and our Colorado lifestyle. Our bodies are 60% water and need daily hydration. Our agricultural economy thrives on water because irrigated agriculture can be four to six times more valuable than dry land farming. We use water to produce things of value like beef, milk, cheese, beer, semiconductors or oil. Another major value is our Colorado recreation. Skiing, rafting, fishing, or just hiking through the mountains, all depend on water. Out here on the prairie, where Greeley has such beautiful views of the mountains, trees need extra water to survive and provide us shade in the semi-arid climate. Our lawns provide an oasis of green in our city. The control and beneficial use of water makes all this possible today. But in the future? Greeley is expected to double in size in the next forty years, to what Aurora is today. Making sure our citizens will have enough water for our Colorado lifestyle is quite a challenge. Meeting that challenge will require continued focus on water conservation and maintenance of what we already have. Meeting the challenge will also require investing tens of millions of your dollars in new pipelines and plant expansions, new water supplies and reservoirs over the next twenty years. Our forebearers provided us with a pure bountiful water supply for our Colorado lifestyle. We are working hard to pass along that legacy intact for our future.



Jon Monson
Water & Sewer Director

2011 Watering Restrictions

Greeley allows three days-per-week watering. Water customers must follow the mandatory schedule below and refrain from watering during the heat of the day. Call 970-336-4134 or visit www.greeleygov.com/wc for more information.



Single Family Even Addresses 0, 2, 4, 6, 8	Single Family Odd Addresses 1, 3, 5, 7, 9	Commercial Multi-Family Nonprofit
Tuesday Thursday Sunday	Monday Wednesday Saturday	Tuesday Friday Sunday

No Lawn Watering: Noon - 5 p.m.

Protecting Our Water Sources

Source water is untreated raw water from streams, rivers, lakes, or underground aquifers which is used to supply public drinking water. The Colorado Source Water Assessment and Protection (SWAP) program encourages community-based protection and preventive management strategies to ensure that all public drinking water resources are kept safe from future contamination.



The SWAP Program has completed its assessment of Colorado's source waters however, a report from the State has not yet been completed for the Greeley Water Department. When Greeley's SWAP Report is finalized, it will be available by calling the contact listed or accessing the SWAP website: www.cdphe.state.co.us/wq/sw/swapreports/swapreports.html. If you have questions or concerns about the SWAP report, please call John Dugan, with the Colorado Department of Public Health and Environment, at 303- 692-3534.

Securing Our Water Future

Water is a precious commodity. Thanks to the vision of Greeley's forefathers, the community has enjoyed a safe, high-quality and reliable water supply for more than 100 years. The system they created provided a strong foundation that has proven reliable through periods of drought, rapid growth, and increased demand, and has allowed us to thrive, even through times of economic recession.

Like other Colorado communities, Greeley is facing future challenges. Increasing demand for this scarce resource, increasing competition for limited supplies, escalating prices for additional water and a growing population mean that we must take action to ensure a secure water future for our children and grandchildren. That's why Greeley Water and Sewer developed a long-term, comprehensive Four Point Plan that includes four main components: improving conservation, strengthening infrastructure, continuing acquisition, and expanding water storage. Learn more about the Four Point Plan at www.greeleygov.com/water.

Get More Information

Please contact Colleen Young at 970-350-9846 with any questions about this report or for public participation opportunities that may affect the water quality. To view the report online, visit www.greeleygov.com/ccr. Access information about drinking water in general on the EPA's drinking water web site at www.epa.gov/safewater.



Additionally, the public is welcome to attend meetings of Greeley's Water and Sewer Board, which are usually held on the third Wednesday afternoon of every month at Lincoln Park Annex Nussbaum Room, located at 919 7th Street. For more information on times, dates and locations of the Board meetings, please contact Lory Stephens at 970-350-9812.

Contact Directory	
Water & Sewer Department www.greeleygov.com/water water@greeleygov.com	350-9811
Conservation/ Restrictions www.greeleygov.com/wc	336-4134
Water Emergencies (Daytime)	350-9811
Water Emergencies (After Hours)	350-9600
Taste and Odor Concerns	350-9324
Utility Billing	350-9720



City of Greeley

Annual Drinking Water Report

Reporting Year
2010



June 2011

Issue #13

In compliance with the Colorado Primary Drinking Water Regulations, the Greeley Water and Sewer Department is pleased to present our annual Drinking Water Quality Report. Our constant goal is to provide you with a safe and dependable supply of drinking water.

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

Cross-Connection Control Program

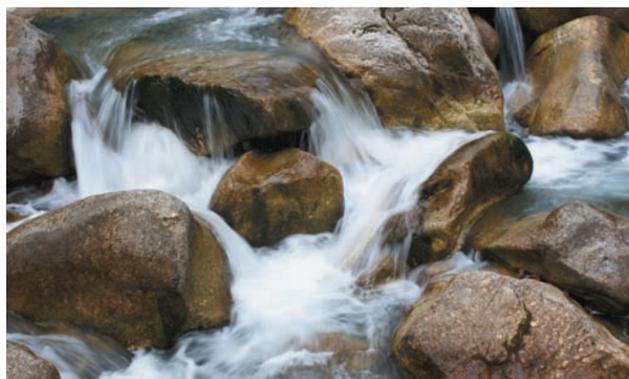
As part of our continuing effort to provide and maintain safe, clean drinking water, the Greeley Water Department has a Cross-Connection Control Program.

A cross-connection is any connection that could introduce contaminants such as pesticides, fertilizers, used water, fluids, gases, or other contaminants into the water distribution system. Water normally flows out of the public water distribution system under pressure. When a cross-connection exists, a drop in water pressure can cause a reversal of flow, allowing harmful substances to enter the public water system. Some common residential sources of cross-connection contamination include irrigation systems, fertilizer injection systems, hoses connected to chemical spray bottles, chemicals in water beds, hot tubs, swimming pools, water features, aquariums, and swamp coolers. Examples of commercial or industrial sources of cross-connection contamination are cooling systems, boilers, solvents and chemicals used in manufacturing processes, sprinkler systems, and the sources of residential cross-connection contaminants listed above.

What can you do to protect our public water system?

- Be observant. Check for potential sources of cross connection around your home, business, or industrial site. Never leave hoses in buckets, pools or sinks.
- If you suspect a cross-connection, contact a qualified plumber who is familiar with cross-connections, hydraulics and pollution factors.
- Install backflow prevention assemblies to prevent potential cross-connections and have a certified backflow tester inspect and test your assemblies annually to ensure they work properly. A list of certified backflow testers is available in the office of the Greeley Water Department or www.greeleygov.com/backflow.

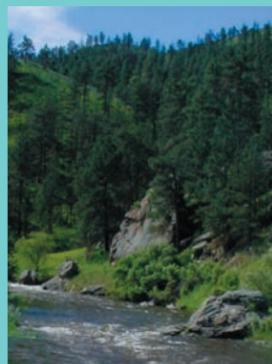
The Greeley Water and Sewer Department have been surveying commercial, industrial and multifamily sites. Each site's water service system was inspected for potential cross-connection hazards. Commercial and industrial customers must install backflow prevention assemblies on their water service lines, fire sprinkler systems and irrigation systems.



Greeley Drinking Water Sources

Greeley drinking water comes from surface water located in four river basins: Cache la Poudre River, Laramie River, Big Thompson River, and Colorado River.

Greeley uses six high-mountain reservoirs in the Poudre basin (Barnes Meadow, Comanche, Hourglass, Peterson, Milton Seaman, and Twin Lake) to retain water from spring snowmelt for redistribution during the summer and fall when water demand is high but river flows are low. In addition, the city uses a plains reservoir system (Boyd Lake, Lake Loveland and Horseshoe Lake) to provide storage for summer demands. Greeley owns a portion of the Colorado-Big Thompson (C-BT) and Windy Gap Projects. We store our portion from the C-BT Project in Lake Granby, Horsetooth Reservoir and Carter Lake and can deliver water to either the Poudre or Big Thompson basins to meet water demand.



Greeley treats water at the Boyd Lake Water Treatment Plant in Loveland and the Bellvue Water Treatment Plant located north of Fort Collins. Treated water is then piped to Greeley where it is distributed to customers or stored in one of three finished water reservoirs.

2010 Drinking Water Quality Results

Greeley routinely monitors for contaminants in your drinking water according to federal and state laws. The following table shows all detections found in the period of January 1 to December 31, 2010 unless otherwise noted. 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. Therefore, some of our data, though representative, may be more than one year old. Only detected contaminants sampled within the last 5 years appear in this report.



Disinfectants Sampled in the Distribution System

Contaminant	Monitoring Period	Results	Samples	TT Requirement	Typical Sources	Violation?
Chlorine	12/01/10 to 12/31/10	Lowest monthly percentage of samples meeting TT requirement: 98%	91	For any two consecutive months, at least 95% of samples (per month) must be greater than 0.001 ppm	Water additive used to control microbes	No

Microbiological Contaminants in the Distribution System

Contaminant	Monitoring Period	Results	Number of Samples	MCL	MCLG	Typical Sources	Violation?
Coliform (TCR)	01/01/10 to 01/31/10	1.1% false positive samples	94	No more than 5% positive samples per period	0	Naturally present in the environment	No

Lead and Copper Sampled in the Distribution System

Contaminant	Monitoring Period	90th Percentile	Number of Samples	Action Level	Sample Sites Above Action Level	Typical Sources	Violation?
Copper	01/01/08 to 12/31/10	0.21 ppm	31	1.3 ppm	0	Corrosion of household plumbing systems, erosion of natural deposits	No
Lead	01/01/08 to 12/31/10	4 ppb	31	15 ppb	0		No

Disinfection Byproducts Sampled in the Distribution System

Contaminant	Average of Individual Samples	Range of Individual Samples	Samples	MCL	MCLG	Typical Sources	Violation?
Chlorite	0.306 ppm	0.22 - 0.39 ppm	21	1 ppm	0.8 ppm	Byproduct of drinking water disinfection	No
Total Haloacetic Acids (HAA5)	26.781 ppb	13.9-39.8 ppb	32	60 ppb	N/A		No
TTHM	49.256 ppb	21-86 ppb	32	80 ppb	N/A		No

Turbidity Sampled at the Entry Point to the Distribution System

Contaminant	Sample Date	Level Found (highest single measurement)	TT Requirement	Typical Sources	Violation?
Turbidity	06/20/10	0.14 NTU	Maximum 1 NTU for any single measurement	Soil runoff, human activities	No
	7/12/10	0.09 NTU			
Turbidity	Month 12/10	Lowest monthly percentage of samples meeting TT requirement for our technology: 100%	In any month, at least 95% of samples must be less than 0.3 NTU		No

Total Organic Carbon (Disinfection ByProducts Precursor)

Contaminant	Average of Individual Ratio Samples	Range of Individual Ratio Samples	Samples	TT Minimum Ratio	Typical Sources	Violation?
Carbon	1.195	1 - 1.77	19	1	Naturally present in the environment	No

Regulated Contaminants Sampled at the Entry Point to the Distribution System

Contaminant	Average of Individual Samples	Range of Individual Samples	Samples	MCL	MCLG	Typical Sources	Violation?
Barium	0.053 ppm	0.025 - 0.081 ppm	2	2 ppm	2 ppm	Discharge of drilling wastes, discharge from metal refineries, erosion of natural deposits	No
Fluoride	0.855 ppm	0.84 - 0.87 ppm	2	4 ppm	4 ppm	Erosion of natural deposits, water additive that promotes strong teeth, discharge from fertilizer and aluminum factories	No

Secondary Contaminants**

Contaminant	Average of Individual Samples	Range of Individual Samples	Number of Samples	Secondary Standard
*MPA WTP Raw and Finished	N/A	3.4 - 4.1 Units	2	N/A
Sodium	20.25 ppm	10.6 - 29.9 ppm	2	N/A

* Bellvue Water Treatment Plant (WTP) detected one cryptosporidium cell using Protocol 1623, in March 2010; however, in the 12 months since then, has not detected any cryptosporidium cells.

**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.

General Information

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.

Cryptosporidium is a microbial pathogen found in source water in Colorado. It must be ingested to cause disease and may be spread through means other than drinking water. Symptoms of infection include nausea, diarrhea, and abdominal cramps. Most healthy individuals can overcome the disease within a few weeks. Cryptosporidium is eliminated from drinking water by an effective treatment combination utilized by the Greeley Water Department which includes coagulation, sedimentation, filtration, and disinfection.

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.

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*, which may come from a variety of sources, such as agriculture, urban stormwater runoff, and residential uses.
- *Radioactive contaminants*, that can be naturally occurring or be the result of oil and gas production and mining activities.
- *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.

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. For more information about contaminants and potential health effects, or to receive a copy of the U.S. Environmental Protection Agency 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.

Lead in Drinking Water

If present, elevated levels of lead can cause serious health problems (especially for pregnant women and young children). 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 lead in your water, you may wish to have your water tested. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. Additional information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline 1-800-426-4791 or at www.epa.gov/safewater/lead.

Terms and Abbreviations

Action Level (AL): The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

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 (MRDL): The highest level of a disinfectant allowed in drinking water. The addition of a disinfectant is necessary for control of microbial contaminants.

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.

Microscopic Particulate Analysis (MPA): 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 to determine the existence of surface water influence on a ground water well.

Nephelometric Turbidity Unit (NTU): Nephelometric turbidity unit is a measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

Parts per million (ppm): One part per million corresponds to 1 milligram per liter (mg/l), a very dilute concentration of substance.

Parts per billion (ppb): One part per billion corresponds to 1 microgram per liter (µg/l), a very dilute concentration of substance.

Treatment Technique (TT): A treatment technique is a required process intended to reduce the level of a contaminant in drinking water.