BURLINGTON CITY OF 2016 Drinking Water Quality Report
For Calendar Year 2015

Public Water System ID: CO0132005

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

We are pleased to present to you this year's water quality report. Our constant goal is to provide you with a safe and dependable supply of drinking water. Please contact JAMES BRADLEY at 719-346-8652 with any questions about the Drinking Consumer Confidence Rule (CCR) or for public participation opportunities that may affect the water quality.

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. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline (1-800-426-4791) or by visiting http://water.epa.gov/drink/contaminants.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised 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. 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 Safe Drinking Water Hotline at (1-800-426-4791).

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:** viruses and bacteria that may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- **Inorganic contaminants:** 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:** may come from a variety of sources, such as agriculture, urban stormwater runoff, and residential uses.
- **Radioactive contaminants:** 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. The Food and Drug Administration regulations establish limits for contaminants in bottled water that must provide the same protection for public health.

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 http://www.epa.gov/safewater/lead.

Source Water Assessment and Protection (SWAP)

The Colorado Department of Public Health and Environment has provided us with a Source Water Assessment Report for our water supply. For general information or to obtain a copy of the report please visit http://wqcdcompliance.com/ccr. The report is located under "Source Water Assessment Reports", and then "Assessment Report by County". Select KIT CARSON County and find 132005; BURLINGTON CITY OF or by contacting JAMES BRADLEY at 719-346-8652. 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 results provide a starting point for developing a source water protection plan. Potential sources of contamination in our source water area are listed on the next page.

Please contact us to learn more about what you can do to help protect your drinking water sources, any questions about the Drinking Water Consumer Confidence Report, to learn more about our system, or to attend scheduled public meetings. We want you, our valued customers, to be informed about the services we provide and the quality water we deliver to you every day.

Our Water Sources

Source	Source Type	Water Type	Potential Source(s) of Contamination
WELL NO 1	Well	Groundwater	**Above ground , underground and leaking storage tank sites, others are commercial/industrial/transportation, high/low intensity residential, row crops, fallow, small grains, pasture/ hay, septic systems, and road miles.**
WELL NO 11 RUDI WELL	Well	Groundwater	
WELL NO 2	Well	Groundwater	
WELL NO 5	Well	Groundwater	
WELL NO 6	Well	Groundwater	
WELL NO 7	Well	Groundwater	
WELL NO 8	Well	Groundwater	
WELL NO 9	Well	Groundwater	
WELL NO 10 CEMETERY	Well	Groundwater	
WELL NO 4	Well	Groundwater	

Terms and Abbreviations

- **Maximum Contaminant Level (MCL)** − The highest level of a contaminant allowed in drinking water.
- **Treatment Technique (TT)** − A required process intended to reduce the level of a contaminant in drinking water.
- **Action Level (AL)** − The concentration of a contaminant which, if exceeded, triggers treatment and other regulatory requirements.
- **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.
- **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.
- **Violation (No Abbreviation)** − Failure to meet a Colorado Primary Drinking Water Regulation.
- **Formal Enforcement Action (No Abbreviation)** − Escalated action taken by the State (due to the risk to public health, or number or severity of violations) to bring a non-compliant water system back into compliance.
- **Variance and Exemptions (V/E)** − Department permission not to meet a MCL or treatment technique under certain conditions.
- **Gross Alpha (No Abbreviation)** − Gross alpha particle activity compliance value. It includes radium-226, but excludes radon 222, and uranium.
- **Picocuries per liter (pCi/L)** − Measure of the radioactivity in water.
- **Nephelometric Turbidity Unit (NTU)** − Measure of the clarity or cloudiness of water. Turbidity in excess of 5 NTU is just noticeable to the typical person.
- **Compliance Value (No Abbreviation)** – Single or calculated value used to determine if regulatory contaminant level (e.g. MCL) is met. Examples of calculated values are the 90th Percentile, Running Annual Average (RAA) and Locational Running Annual Average (LRAA).
- **Average (x-bar)** − Typical value.
- **Range (R)** − Lowest value to the highest value.
- **Sample Size (n)** − Number or count of values (i.e. number of water samples collected).
- **Parts per million = Milligrams per liter (ppm = mg/L)** − One part per million corresponds to one minute in two years or a single penny in $10,000.
- **Parts per billion = Micrograms per liter (ppb = ug/L)** − One part per billion corresponds to one minute in 2,000 years, or a single penny in $10,000,000.
- **Not Applicable (N/A)** – Does not apply or not available.

Detected Contaminants

The CITY OF BURLINGTON routinely monitors for contaminants in your drinking water according to Federal and State laws. The following table(s) show all detections found in the period of January 1 to December 31, 2015 unless otherwise noted. The State of Colorado 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. Violations and Formal Enforcement Actions, if any, are reported in the next section of this report.

Note: Only detected contaminants sampled within the last 5 years appear in this report. If no tables appear in this section then no contaminants were detected in the last round of monitoring.

Lead and Copper Sampled in the Distribution System

Contaminant Name	Time Period	90th Percentile	Sample Size	Unit of Measure	90th Percentile AL	Sample Sites Above AL	90th Percentile AL Exceedance	Typical Sources
Copper	08/14/2013 to 08/28/2013	0.21	20	ppm	1.3		No	Corrosion of household plumbing systems; Erosion of natural deposits
Lead	08/14/2013 to 08/28/2013	1.8	20	ppb	15		No	Corrosion of household plumbing systems; Erosion of natural deposits

Disinfection Byproducts Sampled in the Distribution System

Name	Year	Average	Range Low – High	Sample Size	Unit of Measure	MCL	MCLG	Highest Compliance Value	MCL Violation	Typical Sources
Total Haloacetic Acids (HAA5)	2015	1	1 to 1	1	ppb	60	N/A		No	Byproduct of drinking water disinfection
Total Trihalomethanes (TTHM)	2015	0.57	0 to 3.8	11	ppb	80	N/A		No	Byproduct of drinking water disinfection

Radionuclides Sampled at the Entry Point to the Distribution System									
Contaminant Name	**Year**	**Average**	**Range Low – High**	**Sample Size**	**Unit of Measure**	**MCL**	**MCLG**	**MCL Violation**	**Typical Sources**
Gross Alpha	2015	5.82	3 to 9	11	pCi/L	15	0	No	Erosion of natural deposits
Combined Radium	2015	1.27	0.7 to 1.6	3	pCi/L	5	0	No	Erosion of natural deposits
Combined Uranium	2015	12.64	11 to 18	11	ppb	30	0	No	Erosion of natural deposits

Inorganic Contaminants Sampled at the Entry Point to the Distribution System									
Contaminant Name	**Year**	**Average**	**Range Low – High**	**Sample Size**	**Unit of Measure**	**MCL**	**MCLG**	**MCL Violation**	**Typical Sources**
Arsenic	2015	4.51	3.2 to 6.2	20	ppb	10	0	No	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes
Barium	2015	0.17	0 to 0.2	20	ppm	2	2	No	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Fluoride	2015	1.19	1.1 to 1.4	20	ppm	4	4	No	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Nitrate	2015	10.26	0.69 to 25.9	169	ppm	10	10	Yes	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Selenium	2015	5.56	0.94 to 10	20	ppb	50	50	No	Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines

Arsenic: while your drinking water *meets the EPA's standard for arsenic, it does contain low levels of arsenic*. The EPA's standard balances the current understanding of arsenic's possible health effects against the costs of removing arsenic from

Inorganic Contaminants Sampled at the Entry Point to the Distribution System									
Contaminant Name	**Year**	**Average**	**Range Low – High**	**Sample Size**	**Unit of Measure**	**MCL**	**MCLG**	**MCL Violation**	**Typical Sources**
drinking water. The EPA continues to research the health effects of low levels of arsenic, which is a mineral known to cause cancer in humans at high concentrations and is linked to other health effects such as skin damage and circulatory problems.									
Nitrate: *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 you should ask advice from your health care provider.									

Synthetic Organic Contaminants Sampled at the Entry Point to the Distribution System									
Contaminant Name	**Year**	**Average**	**Range Low – High**	**Sample Size**	**Unit of Measure**	**MCL**	**MCLG**	**MCL Violation**	**Typical Sources**
Picloram	2012	0.09	0 to 0.3	6	ppb	500	500	No	Herbicide runoff

Secondary Contaminants** **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.						
Contaminant Name	**Year**	**Average**	**Range Low – High**	**Sample Size**	**Unit of Measure**	**Secondary Standard**
DIBROMOACETIC ACID	2015	1	1 to 1	1	N/A	

Violations, Significant Deficiencies, and Formal Enforcement Actions

Violations (51 violations total for 2015)					
Name	**Category**	**Time Period** **Well(s) Effected**	**Health Effects**	**Compliance Value**	**TT Level or MCL**
NITRATE	Inorganic Contaminant MCL, AVERAGE - MAXIMUM CONTAMINANT LEVEL 51 violations	1/1/2015 to 12/31/2015 Wells 004T, 005T, 006T, 007T & 008T (Well Number 5, 6, 7, 8 & 9)	Infants below the age of six months who drink water containing nitrate in excess of the MCL could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue baby syndrome.	Ranges from 10.8 MG/L to 20.8 MG/L	10 MG/L

What is Being Done to Correct the Situation?

The City has for many years worked to maintain the level of nitrates in its drinking water first by shutting down wells that were producing the highest levels of nitrates and then implementing water restrictions during high usage months in order to meet the subsequent decrease in available water. The City has implemented a continuous public notification with a posting requirement for all public facilities, including hotels/motels, food service establishments, child care facilities, medical

facilities and other public gathering areas. The City has also retained an engineering firm, Merrick & Company to complete final design on a proposed blending facility and is awaiting contracts for funding for the project through the State Revolving Loan Fund and the Energy and Mineral Impact Fund. Construction of the project is scheduled to begin in October 2016 and with completion anticipated in approximately 6 to 8 months.

Additional Violation Information

From January 1, 2009 through February 28, 2014, the health of infants under six (6) month of age may have been affected by the City of Burlington's drinking water because it exceeded the health-based limit of nitrate.

From January 1, 2009 through February 28, 2015, the City of Burlington operated a drinking water system in a manner that violated the laws governing the operation of drinking water systems, which potentially endangered the residents and visitors of Burlington. During that period, the City of Burlington collected and analyzed 537 samples of drinking water for nitrate. The City did not report the results of 443 of the 537 samples to the Colorado Department of Public Health and Environment. **Of the 443 unreported sample results, 235 exceeded the health-based limit for nitrate.** After receiving the sample results that exceeded the health-based limit, the City of Burlington failed to perform a series of actions that are required by the regulation. The City's failure to comply with the requirements of the regulation has resulted in 2,019 violations of the drinking water regulations.

The following is a list of these violations, including the type of violations and number of violations:

- **235 Violations of the Health-based Limit for Nitrate**: 235 sample results exceeded the health-based limit of nitrate of 10 mg/L. The exceedances ranged from 10.5 mg/L to 18.6 mg/L.
- **705 Violations for Failing to Notify the Public that the Water Exceeded the Health-based Limit for Nitrate:**

To protect public health, the drinking water regulations require drinking water systems to immediately provide the public with information when a sample result for nitrate exceeds the health-based limit. Generally, a public notification includes information about the health-based limit, the population potentially affected by the contaminant, what actions the public should take, what caused the exceedance of the health-based limit, and the actions the drinking water system is planning to take to address the quality of water. The City of Burlington failed to distribute public notification for the 235 sample results that exceeded the health-based limit for nitrate in three (3) required instances per sample result for a total of 705 violations.

- **470 Violations for Failing to Notify the Colorado Department of Public Health and Environment:** The City of Burlington failed to notify the Colorado Department of Public Health and Environment about the 235 sample results that exceeded the health-based limit and about 235 sampling violations.
- **235 Sampling Violations:** The City did not collect confirmation samples for the 235 samples that exceeded the health-based limit for nitrate.
- **443 Reporting Violations:** The City of Burlington did not report 443 of samples results to the Colorado Department of Public Health and Environment. These included all 235 sample results that exceeded the health-based limit for nitrate.
- **16 Violations for Failing to Sample at Proper Frequencies:** The City of Burlington sampled in a manner that did not meet the requirements in the regulation. The City did not request or obtain approval from the Colorado Department of Public Health and Environment to modify its sampling frequency. Sixteen (16) sample results were greater than or equal to 5 mg/L, and the City did not properly increase its sampling frequency.
- **5 Violations for Providing Inadequate Information to Customers in the Supplier's Consumer Confidence Reports from 2009 through 2013:** All drinking water systems are required to provide their customers with annual Consumer Confidence Reports. A Consumer Confidence Report is an annual report that includes information on the quality of the water supplied and characterizes the risks, if any, from exposure to contaminants detected in the drinking water in an accurate and understandable manner. The City of Burlington was required to include a clear and readily understandable explanation of every violation, any potential adverse health effects, and the steps the supplier has taken to correct the violation. The City of Burlington did not include the required information about the violations associated with exceeding the health-based limit for nitrate.

As a result of the City's failure to comply with the requirements of the drinking water regulations from January 1, 2009 through February 28, 2014 and the resulting 2,019 violations, the Colorado Department of Public Health and Environment (CDPH&E) has issued an additional Enforcement Order, DW.07.15.132005 to the City. The City must comply with the requirements of both Enforcement Orders, DW-14-023 and DW.07.15.132005. Enforcement Order DW-14-023 includes specific actions and deadlines that the City must perform to address the elevated nitrate levels in its drinking water with a final compliance deadline of December 1, 2017.

On December 14, 2015, the City of Burlington entered into a Compliance Order on Consent (Number DW.12.15.132005) with the Colorado Department of Public Health & Environment to resolve, without litigation, the violations cited in the above Enforcement Orders and to establish compliance requirements and criteria for the continued operation of the City's drinking water system.