



To all residents:

Attached you will find the Town of Milliken, City of Greeley, and Central Weld Annual Drinking Water Quality Report (i.e., Consumer Confidence Report) for the 2018 reporting year. As a purchaser of Greeley and Central Weld drinking water, you are entitled to information about the quality of the water you purchase and where it comes from. As a purchaser, The Town of Milliken is therefore required to submit the drinking water quality data for the report to you every year. We recommend, however, that you review the entire report to ensure that the language contained in it meets all of the EPA and CDPHE requirements for Consumer Confidence Reports.

Thank you.

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MILLIKEN TOWN OF 2019 Drinking Water Quality Report For Calendar Year 2018

Public Water System ID: CO0162511

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 DON STONEBRINK at 970-660-5029 with any questions or for public participation opportunities that may affect 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 storm water 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 storm water 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 may have 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 www.colorado.gov/cdphe/ccr. The report is located under "Guidance: Source Water Assessment Reports". Search the table using 162511, MILLIKEN TOWN OF, or by contacting DON STONEBRINK at 970-660-5029. 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 Quality 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

<u>Sources (Water Type - Source Type)</u>	<u>Potential Source(s) of Contamination</u>
PURCHASED FROM GREELEY 162321 SW (Surface Water-Consecutive Connection) PURCHASED FROM CENTRAL WELD 162122 SW (Surface Water-Consecutive Connection)	There is no SWAP report, please contact us regarding potential sources of contamination.

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.
- **Health-Based** – A violation of either a MCL or TT.
- **Non-Health-Based** – A violation that is not a MCL or TT.
- **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.
- **Level 1 Assessment** – A study of the water system to identify potential problems and determine (if possible) why total coliform bacteria have been found in our water system.
- **Level 2 Assessment** – A very detailed study of the water system to identify potential problems and determine (if possible) why an E. coli MCL violation has occurred and/or why total coliform bacteria have been found in our water system on multiple occasions.

Detected Contaminants

MILLIKEN TOWN OF 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, 2018 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.

Disinfectants Sampled in the Distribution System						
TT Requirement: At least 95% of samples per period (month or quarter) must be at least 0.2 ppm <u>OR</u>						
If sample size is less than 40 no more than 1 sample is below 0.2 ppm						
Typical Sources: Water additive used to control microbes						
Disinfectant Name	Time Period	Results	Number of Samples Below Level	Sample Size	TT Violation	MRDL
Chlorine	December, 2018	<u>Lowest period</u> percentage of samples meeting TT requirement: 100%	0	7	No	4.0 ppm

Lead and Copper Sampled in the Distribution System								
Contaminant Name	Time Period	90 th Percentile	Sample Size	Unit of Measure	90 th Percentile AL	Sample Sites Above AL	90 th Percentile AL Exceedance	Typical Sources
Copper	08/06/2018 to 08/22/2018	0.29	20	ppm	1.3	0	No	Corrosion of household plumbing systems; Erosion of natural deposits
Lead	08/06/2018 to 08/22/2018	1	20	ppb	15	0	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	MCL Violation	Typical Sources
Total Haloacetic Acids (HAA5)	2018	17.9	3.1 to 30.7	8	ppb	60	N/A	No	Byproduct of drinking water disinfection
Total Trihalome	2018	57.24	28.6 to 76.6	8	ppb	80	N/A	No	Byproduct of drinking water disinfection

Disinfection Byproducts Sampled in the Distribution System									
Name	Year	Average	Range Low – High	Sample Size	Unit of Measure	MCL	MCLG	MCL Violation	Typical Sources
thanes (TTHM)									

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
Nitrate	2014	5.7	5.7 to 5.7	1	ppm	10	10	No	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
<p>Nitrate: <i>Nitrate in drinking water at levels above 10 ppm</i> 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.</p>									



Violations, Significant Deficiencies, Backflow/Cross-Connection, and Formal Enforcement Actions

No Violations or Formal Enforcement Actions

CENTRAL WELD CNTY WD 2019 Drinking Water Quality Report For Calendar Year 2018

Public Water System ID: CO0162122

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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 STAN LINKER at 970-352-1284 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).

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- 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.

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 WELD County and find 162122; CENTRAL WELD CNTY WD or by contacting STAN LINKER at 970-352-1284. 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

<u>Source</u>	<u>Source Type</u>	<u>Water Type</u>	<u>Potential Source(s) of Contamination</u>
PURCHASED WATER From CARTER LAKE CO0135476 SW	Consecutive Connection	Surface Water	See SWAP Report for Carter Lake CO0135476

Terms and Abbreviations

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- **Gross Alpha (No Abbreviation)** – Gross alpha particle activity compliance value. It includes radium-226, but excludes radon 222, and uranium.
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- **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.

Violations, Significant Deficiencies, and Formal Enforcement Actions

**Non-Health Based Violation at Carter Lake Filter Plant:
Failure to Distribute Public Notification or Timely Report:
The certificate of delivery and notification were submitted to the CDPHE on June 20, 2018 and the matter has been
resolved.
04-28-2018 – 06-20-2018**

Detected Contaminants

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Disinfectants Samples in the Distribution System – TT Requirement: At least 95% of samples per period must be at least 0.2ppm OR if sample size is less than 40 no more than 1 sample is below 0.2ppm. Typical Source is water additive used to control microbes.

Disinfectant Name	Time Period	Typical Source	# of samples above level	Sample Size	TT Violation	MRDL
Chlorine	December 2018	Water additive used to control microbes	0	7	NO	4.0 ppm

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)	2018	33.19	25.4 to 48.9	8	ppb	60	N/A		No	Byproduct of drinking water disinfection
Total Trihalomethanes (TTHM)	2018	38.92	27.1 to 59.5	8	ppb	80	N/A		No	Byproduct of drinking water disinfection

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
Sodium	2018	7.3	7.3 to 7.3	1	ppm	N/A

Unregulated Contaminants***

***More information about the contaminants that were included in UCMR3 monitoring can be found at: <http://www.drinktap.org/water-info/whats-in-my-water/unregulated-contaminant-monitoring-rule.aspx>. Learn more about the EPA UCMR at: <http://www.epa.gov/dwucmr/learn-about-unregulated-contaminant-monitoring-rule> or contact the Safe Drinking Water Hotline at (800) 426-4791 or <http://water.epa.gov/drink/contact.cfm>.

EPA has implemented the Unregulated Contaminant Monitoring Rule (UCMR) to collect data for contaminants that are suspected to be present in drinking water and do not have health-based standards set under the Safe Drinking Water Act. EPA uses the results of UCMR monitoring to learn about the occurrence of unregulated contaminants in drinking water and to decide whether or not these contaminants will be regulated in the future. We performed monitoring and reported the analytical results of the monitoring to EPA in accordance with its Third Unregulated Contaminant Monitoring Rule (UCMR3). Once EPA reviews the submitted results, the results are made available in the EPA’s National Contaminant Occurrence Database (NCOD) (<http://www.epa.gov/dwucmr/national-contaminant-occurrence-database-ncod>) Consumers can review UCMR results by accessing the NCOD. Contaminants that were detected during our UCMR3 sampling and the corresponding analytical results are provided below.

VOC’s and SOC’s

The 21 Volatile Organic Compounds (VOC’s) tested for in 2018 were all below detection limits.
The 32 Synthetic Organic Compounds (SOC’s) tested for in 2018 were all below detection limits.

Detected Contaminants at Carter Lake Filter Plant:

The Carter Lake Filter Plant routinely monitors for contaminants in your drinking water according to Federal and State laws. The following tables show all detections found in the period of January 1 to December 31, 2018 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 re-reported in the next section of this report.

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Inorganic Compounds Sampled at the Entry Point to the Distribution System							
Compound Name	MCL	MCGL	Unit	Average	Sample Date	Violation	Likely Source of Contamination
BARIIUM	2	2	MCL	0.015	2018	No	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
FLUORIDE	4	4	MCL	0.61	2018	No	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Summary of Turbidity Sampled at the Treatment Plants							
Contaminant Name	Sample Date	Level Detected		TT Requirement	TT Violation	Typical Sources	
Turbidity	Aug	Highest single measurement 0.59 NTU		Maximum 1 NTU for any single measurement	No	Soil Runoff	
Turbidity	Dec	Lowest monthly percentage of sample meeting TT requirement for our technology: 100%		In any month, at least 95% of samples must be less than 0.1 NTU	No	Soil Runoff	

Lead in Drinking Water

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. The Carter Lake Filter Plant is responsible for providing high quality drinking water, **but cannot control the variety of materials used in plumbing components. 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.** 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 or at <http://www.epa.gov/safewater/lead>.

Lead and Copper Sampled in the Distribution System					
Contaminant Name	Time Period	90 th Percentile	Units of Measure	No. of Samples	Typical Sources
LEAD	4/1/18 to 4/30/18	0.0028	Mg/L	60	Corrosion of household plumbing systems; erosion of natural deposits
	10/1/18 to 10/31/18	0.0027	Mg/L	60	Corrosion of household plumbing systems; erosion of natural deposits
COPPER	4/1/18 to 4/30/18	0.22	Mg/L	60	Corrosion of household plumbing systems; erosion of natural deposits
	10/1/18 to 10/31/18	0.21	Mg/L	60	Corrosion of household plumbing systems; erosion of natural deposits

GREELEY CITY OF 2019 Drinking Water Quality Report For Calendar Year 2018

Public Water System ID: CO0162321

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Our Water Sources

<u>Sources (Water Type - Source Type)</u>	<u>Potential Source(s) of Contamination</u>
<p style="text-align: center;">PURCHASED FROM:</p> <p>EAST LARIMER COUNTY WATER DISTRICT-CO0135233 (Surface Water- Consecutive Connection) NORTH WELD-CO0162553 (Surface Water-Consecutive Connection) HORSETOOTH RESERVOIR (Surface Water-Intake) BOYD LAKE (Surface Water-Intake) CACHE LA POUUDRE RIVER (Surface Water-Intake) LAKE LOVELAND (Surface Water-Intake) CITY OF FORT COLLINS-CO0135291 (Surface Water-Intake) WEST FORT COLLINS-CO0135290 (Surface Water-Consecutive Connection) CITY OF LOVELAND-CO0135485 (Surface Water-Consecutive Connection)</p>	<p>Moderate Susceptibility To: EPA Hazardous Waste Generators, High Susceptibility To: EPA Chemical Inventory/Storage Sites, Moderate Susceptibility To: EPA Toxic Release Inventory Sites, Moderately High Susceptibility To: Permitted Wastewater Discharge Sites, High Susceptibility To: Aboveground, Underground and Leaking Storage Tank Sites, High Susceptibility To: Solid Waste Sites, High Susceptibility To: Existing/Abandoned Mine Sites, High Susceptibility To: Concentrated Animal Feeding Operations, High Susceptibility To: Other Facilities, Moderately Low Susceptibility To: Commercial/Industrial/Transportation, Moderately Low Susceptibility To: High Intensity Residential, Moderately Low Susceptibility To: Low Intensity Residential, Moderately Low Susceptibility To: Urban Recreational Grasses, Moderately Low Susceptibility To: Quarries / Strip Mines / Gravel Pits, Moderately Low Susceptibility To: Row Crops, Moderately Low Susceptibility To: Fallow, Moderately Low Susceptibility To: Small Grains, Moderately Low Susceptibility To: Pasture / Hay, Moderately Low Susceptibility To: Deciduous Forest, Moderate Susceptibility To: Evergreen Forest, Moderately Low Susceptibility To: Mixed Forest, Moderate Susceptibility To: Septic Systems, Moderate Susceptibility To: Oil / Gas Wells, Moderate Susceptibility To: Road Miles</p>

Terms and Abbreviations

- **Action Level (AL)** – The concentration of a contaminant which, if exceeded, triggers treatment and other regulatory requirements.
- **Average (x-bar)** – Typical value.
- **Maximum Contaminant Level (MCL)** – The highest level of a contaminant allowed in drinking water.
- **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 (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)** – Measure of the clarity or cloudiness of water. Turbidity in excess of 5 NTU is just noticeable to the typical person.
- **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 = µg/L)** – One part per billion corresponds to one minute in 2,000 years, or a single penny in \$10,000,000.
- **Range (R)** – Lowest value to the highest value.
- **Sample Size (n)** – Number or count of values (i.e. number of water samples collected).

- **Treatment Technique (TT)** – A required process intended to reduce the level of a contaminant in drinking water.
- **Violation (No Abbreviation)** – Failure to meet a *Colorado Primary Drinking Water Regulations*.

Detected Contaminants

GREELEY CITY OF 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, 2018 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.

Disinfectants Sampled in the Distribution System						
TT Requirement: At least 95% of samples per period (month or quarter) must be at least 0.2 PPM <i>OR</i> If sample size is less than 40 no more than 1 sample is below 0.2 PPM						
Typical Sources: Water additive used to control microbes						
Disinfectant Name	Time Period	Results	Number of Samples Below Level	Sample Size	TT Violation	MRDL
Chlorine	December, 2018	<u>Lowest period</u> percentage of samples meeting TT requirement: 100%	0	101	No	4.0 PPM

Lead and Copper Sampled in the Distribution System								
Contaminant Name	Time Period	90 th Percentile	Sample Size	Unit of Measure	90 th Percentile AL	Sample Sites Above AL	90 th Percentile AL Exceedance	Typical Sources
Copper	07/12/2018 to 07/20/2018	0.27	50	PPM	1.3	0	No	Corrosion of household plumbing systems; Erosion of natural deposits
Lead	07/12/2018 - 07/20/2018	4.6	50	PPB	15	0	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	MCL Violation	Typical Sources
Total Haloacetic Acids (HAA5)	2018	23.27	12.5 to 29.9	32	PPB	60	N/A	No	Byproduct of drinking water disinfection
Total Trihalomethanes (TTHM)	2018	39.85	17.4 to 63.7	32	PPB	80	N/A	No	Byproduct of drinking water disinfection
Chlorite	2018	0.27	0.13 to 0.35	12	PPB	1.0	.8	No	Byproduct of drinking water disinfection

Total Organic Carbon (Disinfection Byproducts Precursor) Removal Ratio of Raw and Finished Water									
Contaminant Name	Year	Average	Range Low – High	Sample Size	Unit of Measure	TT Minimum Ratio	TT Violation	Typical Sources	
Total Organic Carbon Ratio	2018	1.24	0.99 to 1.5	19	Ratio	1.00	No	Naturally present in the environment	
*If minimum ratio not met and no violation identified then the system achieved compliance using alternative criteria.									

Disinfectants Sampled at the Entry Point to the Distribution System (Chlorine/Chloramine Row is Optional, Chlorine Dioxide Row is Required)							
Disinfectant Name	Year	Number of Samples Above or Below Level	Sample Size	TT/MRDL Requirement	TT/MRDL Violation	Typical Sources	
Chlorine/Chloramine	2018	0	2899	TT = No more than 4 hours with a sample below 0.2 MG/L	No	Water additive used to control microbes	
Chlorine Dioxide	2018	0	319	MRDL = 800 PPB	No	Water additive used to control microbes	

Summary of Turbidity Sampled at the Entry Point to the Distribution System					
Contaminant Name	Sample Date	Level Found	TT Requirement	TT Violation	Typical Sources
Turbidity	Date/Month: May	<u>Highest single</u> measurement: 0.26 NTU	Maximum 1 NTU for any single measurement	No	Soil Runoff
Turbidity	Month: Dec	<u>Lowest monthly</u> 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	Soil Runoff

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
Barium	2018	0.04	0.01 to 0.07	2	PPM	2	2	No	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Fluoride	2018	0.62	0.6 to 0.63	2	PPM	4	4	No	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Nitrate	2018	0.01	0.01 to 0.02	2	PPM	10	10	No	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Selenium	2018	0.7	0 to 1.4	2	PPB	50	50	No	Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines

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
Di(2-ethylhexyl) phthalate	2018	1.57	0 to 4.7	3	PPB	6	0	No	Discharge from rubber and chemical factories

Secondary Contaminants**						
**Secondary standards are <u>non-enforceable</u> 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
Sodium	2018	22.85	7.5 to 38.2	2	PPM	N/A

Unregulated Contaminants***					
EPA has implemented the Unregulated Contaminant Monitoring Rule (UCMR) to collect data for contaminants that are suspected to be present in drinking water and do not have health-based standards set under the Safe Drinking Water Act. EPA uses the results of UCMR monitoring to learn about the occurrence of unregulated contaminants in drinking water and to decide whether or not these contaminants will be regulated in the future. We performed monitoring and reported the analytical results of the monitoring to EPA in accordance with its Unregulated Contaminant Monitoring Rule (UCMR). Once EPA reviews the submitted results, the results are made available in the EPA's National Contaminant Occurrence Database (NCOD) (http://www.epa.gov/dwucmr/national-contaminant-occurrence-database-ncod) Consumers can review UCMR results by accessing the NCOD. Contaminants that were detected during our 2018 UCMR sampling and the corresponding analytical results are provided below.					
Contaminant Name	Year	Average	Range Low – High	Sample Size	Unit of Measure
Anatoxin-a	2018	<0.03	N/A	16	µg/L
Cylindrospermopsin	2018	<0.09	N/A	16	µg/L
Total Microcystins & Nodularins	2018	<0.3	N/A	16	µg/L
Bromide	2018	43.18	<20.0 – 68.9	4	µg/L
Germanium	2018	<0.30	N/A	6	µg/L
Manganese	2018	1.74	0.69 – 4.79	7	µg/L
Butylated hydroxyanisole	2018	<0.03	N/A	3	µg/L
o-Toluidine	2018	<0.07	N/A	3	µg/L

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Contaminant Name	Year	Average	Range Low – High	Sample Size	Unit of Measure
Quinoline	2018	0.03	0.02 – 0.05	4	µg/L
1-Butanol	2018	<2.00	N/A	3	µg/L
2-Methoxyethanol	2018	<0.40	N/A	3	µg/L
2-Propen-1-ol	2018	<0.50	N/A	3	µg/L
Alpha-Hexachlorocyclohexane	2018	<0.01	N/A	6	µg/L
Chlorpyrifos	2018	<.03	N/A	6	µg/L
Dimethipin	2018	<0.20	N/A	6	µg/L
Ethoprop	2018	<0.03	N/A	6	µg/L
Oxyfluorfen	2018	<0.05	N/A	6	µg/L
Profenofos	2018	<0.30	N/A	6	µg/L
Tebuconazole	2018	<0.20	N/A	6	µg/L
Permethrin, cis & tran	2018	<0.04	N/A	6	µg/L
Tribufos	2018	<0.07	N/A	6	µg/L
Bromochloroacetic acid	2018	2.77	1.58 – 7.10	24	µg/L
Bromodichloroacetic acid	2018	1.89	0.63 – 4.14	24	µg/L
Chlorodibromoacetic acid	2018	0.42	<0.30 – 0.85	24	µg/L
Dibromoacetic acid	2018	0.44	<0.30 – 1.25	24	µg/L
Dichloroacetic acid	2018	16.35	8.30 – 32.30	24	µg/L
Monobromoacetic acid	2018	0.33	<0.30 – 0.50	24	µg/L
Monochloroacetic acid	2018	2.01	0.33 – 3.79	24	µg/L
Tribromoacetic acid	2018	<2.00	N/A	24	µg/L

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Contaminant Name	Year	Average	Range Low – High	Sample Size	Unit of Measure
Trichloroacetic acid	2018	9.82	6.88 – 14.40	24	µg/L

***More information about the contaminants that were included in UCMR monitoring can be found at: <https://drinktaps.org/Water-Info/Whats-in-My-Water/Unregulated-Contaminant-Monitoring-Rule-UCMR>. Learn more about the EPA UCMR at: <http://www.epa.gov/dwucmr/learn-about-unregulated-contaminant-monitoring-rule> or contact the Safe Drinking Water Hotline at (800) 426-4791 or <http://water.epa.gov/drink/contact.cfm>.

Violations, Significant Deficiencies, Backflow/Cross-Connection, and Formal Enforcement Actions

No Violations or Formal Enforcement Actions



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