



Federal Heights

2024 DRINKING WATER QUALITY REPORT For Calendar Year 2023

Public Water System Identification # CO-0101055

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 the Public Works Department at 303-412-3539 to learn more about what you can do to help protect your drinking water resources, with any questions about this report, to learn more about our water system or for public participation opportunities that may affect water quality. We want you, our valued customers, to be informed about your water utility, the services we provide, and the quality water we deliver to you every day.

Approximately 99% of our supplied water was treated surface water purchased from the City of Westminster. Their source water is from Standley Lake, which is located west of the city. The remaining 1% was provided by an 800-foot-deep well, located within the city limits of Federal Heights, drawing groundwater from the Arapahoe aquifer. Due to our distribution system design and varying flows, residents may receive water from an individual source, or a blending of these sources.

All sources are routinely monitored for constituents in your drinking water according to Federal and State regulations. In order to ensure that tap water is safe to drink, the Colorado Department of Public Health and Environment (CDPHE) prescribes regulations limiting the amount of certain contaminants in water provided by public water systems. The FDA regulations establish limits for contaminants in bottled water that must provide the same protection for public health.

The sources of drinking water (both tap 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. It can also 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** – 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 also may come from gas stations, urban stormwater runoff and septic systems.
- **Radioactive Contaminants** – Can be naturally occurring or be the result of oil and gas production and mining activities.

Health Information About Water Quality

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. Some individuals 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. For more information about contaminants and potential health effects, or to receive a copy of the U.S. EPA and U.S. 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 or visit <http://water.epa.gov/ground-water-and-drinking-water>

Lead in Drinking Water:

Lead can cause serious health problems, especially for pregnant women or young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. We are responsible for providing high quality drinking water and removing lead pipes, but cannot control the variety of materials used in plumbing components in your home. You share the responsibility for protecting yourself and your family from the lead in your home plumbing. You can take responsibility by identifying and removing lead materials within your home plumbing and taking steps to reduce your family's risk. Before drinking tap water, flush your pipes for several minutes by running your tap, taking a shower, doing laundry or a load of dishes. You can also use a filter certified by an American National Standards Institute accredited certifier to reduce lead in drinking water. If you are concerned about lead in your water and wish to have your water tested, contact Federal Heights Public Works at 303-412-3539. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available at <http://www.epa.gov/safewater/lead>.

Radioactive Contaminants:

Certain minerals are radioactive and may emit forms of radiation known as photons and beta radiation. Some people who drink water containing beta particles and photon radioactivity in excess of the MCL over many years may have an increased risk of getting cancer. All detected radioactive contaminants were below the recommended "Maximum Contaminant Level" (MCL) allowed.

Secondary Standards

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.

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 the 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 UCMR4 sampling and the corresponding analytical results are provided in this report.

More information about the contaminants that were included in UCMR monitoring can be found at: <https://drinktap.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 <https://www.epa.gov/ground-water-and-drinking-water>

Source Water Assessment Protection (SWAP) Information:

The Colorado Department of Public Health and Environment (CDPHE) 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 <https://www.colorado.gov/pacific/cdphe/swap-assessment-phase>. The report is located under “Find your public water system’s report”. Search the table using **101055**; (Federal Heights City of). You can also contact the Public Works Department at 303-412-3539 with any questions.

Potential sources of contamination in our source water area come from:

- **Commercial/Industrial Areas** such as: Dry cleaning businesses; Food processing plants; Gas stations and fueling areas; Commercial & Industrial transportation; Machine or maintenance & repair shops; Aboveground, Underground and Leaking storage tank sites.
- **Residential/Municipal Areas** such as: High and Low Intensity residential areas; Parks & Recreational areas; Historic landfills; Transportation corridors and utility stations
- **Agricultural/Rural Areas** such as: Row Crops and Urban Recreational Grasses
- **Other Type Areas** such as: Septic Systems & Roads & other facilities

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. We have and continue to utilize related information to increase the protection of our water supply and distribution systems.

Violations, Significant Deficiencies, and Formal Enforcement Actions

The City of Federal Heights routinely monitors for contaminants in your drinking water according to Federal and State laws. Violations and Formal Enforcement Actions, if any, are included in this report.

- **Federal Heights/Westminster** – No Violations, Deficiencies, or Formal Enforcements for the calendar year 2023

Detected Contaminants Table

The following table shows all detections found for all source waters in the period of January 1st, 2023, to December 31st, 2023, unless otherwise noted. The Federal Heights column includes testing dates for all detected contaminants. The “Range” column in the table will show a single value for those contaminants that were sampled only once. Only **detected** contaminants sampled within the last 5 years appear in this report. The State of Colorado requires monitoring 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. Some of our data, though representative, may be more than one year old. Suppliers may be required to test for different contaminants due to the source of the water. (Surface water for Westminster and groundwater for Federal Heights)

DETECTED CONTAMINANTS

Contaminant	Unit	MCL & MRDL	MCLG & MRDLG	Maximum Contaminant Level Detected		Range	Violation
				Federal Heights	Westminster		
INORGANIC CONTAMINANTS							
Barium	ppm	2	2	0.04 (9/19/22)	0.051 (2023)	0.04- 0.051	No
Chromium	ppb	100	100	Not Detected (9/19/22)	1.1 (2023)	0 – 1.1	No
Copper (30 samples in 2021)	ppm	90% <1.3	1.3	0.28 (8/3/21) 90th Percentile = 0.1	0.21 (2021) 90th Percentile =0.15	0 – 0.28	No
Fluoride	ppm	4	4	1.0 (9/19/22)	0.56 (2023)	0.55 – 1.0	No
Lead (30 samples in 2021)	ppb	90% <15	0	3.2 (7/29/21) 90th Percentile = 0.8	23 (2021) 90th Percentile = 2.0	0 – 23	No
Nickel	ppb	N/A	N/A	Not Detected (9/19/22)	1.1 (2023)	0 – 1.1	No
Nitrate	ppm	10	10	0.23 (7/26/23)	0.20 (2020)	0.20 – 0.23	No
Nitrite	ppm	1	1	0.01 (7/26/23)	0.20 (2020)	0.01 – 0.20	No
MICROBIOLOGICAL CONTAMINANTS							
Total Coliform Bacteria	ct/ml	<5% positive	0	Not Detected (99 samples in 2023)	Not Detected	0	No
Total Organic Carbon	ppm	TT=RAA <2	N/A	Not Tested	1.54 (2023)	1.54 – 1.54	No
Turbidity	NTU	TT	N/A	0.43 (7/17/23) RAA = 0.16	0.036 (2023)	0.012–0.43	No
RADIOACTIVE CONTAMINANTS							
Alpha Emitters	pCi/L	15	0	Not Detected (9/4/19)	0.68 (2021)	0 – 0.68	No
Beta Emitters	pCi/L	50	0	Not Detected (9/4/19)	4.9 (2021)	0 – 4.9	No
Radium -226	pCi/L	5	0	0.3 (9/4/19)	N/A	0.3 – 0.3	No
Radium -228	pCi/L	5	0	2.2 (9/4/19)	N/A	2.2 – 2.2	No
Combined Radium -226/-228	pCi/L	5	0	2.5 (9/4/19)	0.44 (2021)	0.14 – 2.5	No
Uranium	ppb	30	0	0.64 (9/4/19)	0.90 (2021)	0.32 – 0.90	No
ORGANIC CONTAMINANTS							
Chloramines/Chlorine (0.2 mg/l min & 4.0 mg/l max)	ppm	MRDL=4 RAA < 4	MRDLG =4	2.20 (9/6/23) RAA = 1.92	2.04 (2023)	0.85 – 3.0	No
Total Haloacetic Acids (17 samples in 2023)	ppb	60 RAA <60	N/A	19.0 (9/15/23) RAA = 11.56	15.0 (2023) RAA = 11.9	7.6 – 19.0	No
Total Trihalomethanes (17 samples in 2023)	ppb	80 RAA <80	N/A	32.4 (9/15/23) RAA = 29.73	37.4 (2023) RAA = 32.6	24.4 – 37.4	No

SECONDARY CONTAMINANTS AND OTHER MONITORING

Contaminant	Unit	Secondary Standard	Level Detected		Range
			Federal Heights	Westminster	
Alkalinity	ppm	N/A	Not Tested	50 – 64 (2023)	50 – 64
Conductivity	umhos/cm	N/A	Not Tested	344 - 451 (2023)	344 – 451
pH	#	6.5 – 8.5	8.67 (1/30/23) RAA = 8.58	8.4 – 8.8 (2023)	8.4 – 8.8
Sodium	ppm	10,000	154 (9/19/22)	27 - 28 (2023)	27 – 154
Total Dissolved Solids	ppm	500	427 (9/4/19)	209 – 263 (2023)	209 – 427
Total Hardness	ppm	N/A	Not Tested	109 – 139 (2023)	109 - 139

UCMR CONTAMINANTS MONITORING

(Includes 2024 Sample Testing Information)

Contaminant	Unit	Federal Heights Average	Maximum Level & Date Detected		Range
			Level	Date	
Lithium – Test Station Site	ppb	19.2	21.3	7/26/23	17.5 – 21.3
Lithium – Well Site	ppb	32.2	34.2	7/26/23	30.2 – 34.2

2020/2023 PFAS SAMPLING

Please Note: The below listed detections were also tested for, and **not detected**, in the above noted UCMR sampling completed on 7/26/23, 10/2/23, 1/10/24 & 4/9/24.

Contaminant	MCL	MCLG	Federal Heights	Date Sampled	Information
PFOS	4.0 ppt	0	0.62 ppt Not Detected	3/25/20 6/22/23	Federal Heights sampling data can be found here , by using the drop-down list and click on "Federal Heights City of"
PFOA	4.0 ppt	0	0.61 ppt Not Detected	3/25/20 6/22/23	
PFBS	EPA's health advisory of 70 parts per trillion (ppt), in total, represents an amount in drinking water likely to be without risk of health impacts over a lifetime.		0.56 ppt	3/25/20	
PFHpA			0.67 ppt	6/22/23	
			0.43 ppt	3/25/20	
PFHxA			0.47 ppt	6/22/23	
			0.83 ppt	3/25/20	
PFPeA			Not Detected	6/22/23	
PFPeA		0.90ppt	6/22/23		

DETECTED CONTAMINANTS

POSSIBLE SOURCE AND GENERAL TESTING INFORMATION

INORGANIC CONTAMINANTS

Barium – Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.

Chromium – Discharge from steel and pulp mills; Erosion of natural deposits

Copper – Corrosion of household plumbing systems; Erosion of natural deposits, leaching from wood preservatives – 90% of all samples taken must be within the MCL

Fluoride – Water additive which promotes strong teeth; Erosion of natural deposits; Discharge from fertilizer & aluminum factories

Lead – Corrosion of household plumbing systems; Erosion of natural deposits – 90% of all samples taken must be within the MCL

Nickel – Corrosion of plumbing materials

Nitrate – Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits

Nitrite – Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits

MICROBIOLOGICAL CONTAMINANTS

Total Coliform Bacteria – Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful bacteria may be present. Standards are not violated if not detected in repeat samples at first detect site(s)

Total Organic Carbon (TOC) – Naturally present in the environment

Turbidity – Soil runoff – Differing source waters can require differing MCL requirements dependent on the type of treatment used.

RADIOACTIVE CONTAMINANTS

Alpha Emitters – Erosion of natural deposits

Beta Emitters – Decay of natural and man-made deposits

Radium -226 & Radium -228 & Combined Radium – Erosion of Natural Deposits

Uranium - Erosion of natural deposits

ORGANIC CONTAMINANTS – DISINFECTION BYPRODUCTS

Chloramines/Chlorine – Water additive used to control microbes – Measured in the distribution system – **TT Requirement** – At least 95% of samples per period (month or quarter) must be at least 0.2 ppm OR if sample size is less than 40 no more than one sample is below 0.2ppm

Total Haloacetic Acids (HAA5) – By-products of drinking water disinfection

Total Trihalomethanes (TTHM) – By-products of drinking water disinfection

SECONDARY CONTAMINANTS/OTHER MONITORING – POSSIBLE SOURCES

Alkalinity – A measure of water's capacity to neutralize acids and is also known as the buffering capacity.

Conductivity – A measure of the ability of a solution (water) to carry an electric current. Utilized in corrosion control processes

pH – A measure of the acidity or alkalinity of water. pH less than 7 is considered acidic and pH greater than seven is considered basic

Sodium – Erosion of natural deposits; a byproduct of water softeners

Total Dissolved Solids – Erosion of natural deposits

Total Hardness – Naturally dissolved Calcium and Magnesium from soil & lime – 100 ppm is equal to approximately 6 grains per gallon
75 to 150 mg/l or ppm is considered moderately hard water

UCMR CONTAMINANTS

Lithium – A naturally occurring element that has numerous commercial uses including as a pharmaceutical drug, an industrial chemical catalyst, a sanitizing agent for swimming pools and hot tubs, and increasingly, as a component of lithium-ion batteries for electronics and electric vehicles

2020/2023 PFAS SAMPLING

PFAS (Including PFOS, PFOA, PFBS, PFHpA, PFHxA & PHPeA) – Per- and polyfluoroalkyl substances (PFAS) are a family of human-made chemicals that do not occur naturally in the environment. They have been used for decades as an ingredient to make products that resist heat, oil, stains, grease, and water. They are used in various products including firefighting foams, coating additives, and surface protection products for carpets and clothing. These chemicals can also be found in certain types of food packaging, dental floss, and cosmetic products. The main way people come into contact with PFAS is through food and personal care products. In fact, human contact with PFAS is widespread; nearly all people have measurable levels in their blood.

DEFINITIONS OF TERMS & ABBREVIATIONS USED IN THIS REPORT

AL – Action Level is the concentration of a contaminant, which if exceeded, triggers treatment and other regulatory requirements. For lead & copper, 90% of all samples taken must be within the MCL.
Average – Typical Value
CDC – (United States) Center for Disease Control
Compliance Value – Single or calculated value used to determine if regulatory contaminant level (e.g. MCL) is met. Examples of calculated values are the 90 th Percentile, Running Annual Average (RAA) and Locational Running Annual Average (LRAA)
ct/ml – Count per milliliter
EPA – (United States) Environmental Protection Agency
FDA – The Food and Drug Administration
Formal Enforcement Action – 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.
Gross Alpha – Gross alpha particle activity compliance value. It includes Radium-226, but excludes Radon 222, and Uranium
Health-Based – A violation of either a MCL or TT (Treatment Technique)
MCL – Maximum Contaminant Level – The “Maximum” allowed is the highest level of a contaminant that is allowed in drinking water.
MCLG – Maximum Contaminant Level Goal – 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.
MRDL – Maximum Residual Disinfectant Level – 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.
MRDLG – Maximum Residual Disinfectant Level Goal – The level of a drinking water disinfectant, below which there is no known or expected risk to health. MRDLG’s do not reflect the benefits of the use of disinfectants to control microbial contaminants.
N/A – Not Applicable – Does not apply or not available
Non-Health-Based – A violation that is not a MCL or TT (Treatment Technique) violation
NTU – Nephelometric Turbidity Unit is a measurement of water clarity. Turbidity in excess of 5 NTU is just noticeable to the typical person
pCi/L – Picocuries per liter is a measurement of the radioactivity in water.
ppb – Parts per billion or Micrograms per liter(ug/L)-One part per billion corresponds to one minute in 2,000 years, or a single cent in \$10,000,000
ppm – Parts per million or Milligrams per liter (mg/l) – One part per million corresponds to one minute in 2 years, or a single cent in \$10,000
ppt - Parts per Trillion – One part per trillion corresponds to about thirty seconds out of every million years or a single cent in 10 billion dollars.
RAA – Running Annual Average – An average of monitoring results for the corresponding 12 calendar months.
Range – Lowest Value to Highest Value
Sample Size – Number or Count of values (i.e. number of water samples collected)
TT – A Treatment Technique is a required process intended to reduce the level of a contaminant in drinking water. Differing source waters can require differing MCL requirements and treatment processes dependent on the water source and the type of treatment used.
umhos/cm – Micromhos per centimeter
Variance and Exemptions – Department permission not to meet a MCL or Treatment Technique under certain conditions
Violation – Failure to meet a Colorado Primary Drinking Water Regulation
< – Less than; usually indicating lower than the testing ability of the laboratory equipment