

REGIONAL WATER QUALITY

# DATA

FUTURE DECISION POINTS AND  
CONSUMER CONFIDENCE REPORT  
2024

CHEROKEE'S WATER, PGS 3-23

2024 CONSUMER CONFIDENCE  
REPORT, PGS 24-38

FUTURE DECISION POINTS AND  
CONSUMER CONFIDENCE REPORT  
2024

DATA

REGIONAL WATER QUALITY



PRESENTED BY

# CMD WATER TREATMENT AND PLANNING PROFESSIONALS



## DAILY OBJECTIVES:

- PROTECT THE QUALITY AND QUANTITY OF OUR GROUNDWATER RESOURCES FOR NOW AND INTO THE FUTURE
- PROTECT THE PHYSICAL AND ECONOMIC HEALTH OF CHEROKEE'S CUSTOMERS
- PRIORITIZE CAPITAL SPENDING
- SUPPORT FINANCIAL PLANNING OF REQUIRED AND CRITICAL CAPITAL
- USE SCIENCE AND REGULATORY STANDARDS TO GUIDE WATER TREATMENT AND CAPITAL PLANNING

# GROUNDWATER

Groundwater is contained in what are called 'aquifers'. An aquifer is a geological formation or part of it, consisting of permeable material capable to store/yield significant quantities of water.

Aquifers can consist of different materials: unconsolidated sands and gravels, permeable sedimentary rocks such as sandstones or limestones, fractured volcanic and crystalline rocks, etc.

Groundwater is (naturally) recharged by rainwater and snowmelt or from water that leaks through the bottom of some lakes and rivers. Groundwater also can be recharged when water supply systems leak and when crops are irrigated with more water than required. There are also techniques to manage aquifer recharge and increase the amount of water infiltrating into the ground.

-International Groundwater Resources Assessment Centre

## CONSUMPTION



**About 50% of the world's population depends on groundwater every day.**

# CHEROKEE METROPOLITAN DISTRICT GROUNDWATER

## First Use and Blended Return Flows

**100% of Cherokee's water supply comes from groundwater found in El Paso County.**

**10% comes from non-renewable, first use Denver Basin sources.**

**90% comes from the Upper Black Squirrel (UBS) Designated Groundwater Basin, capturing pristine, first use and blended recharged water from both the UBS and the Denver Basin aquifers.**



Municipal Well Water

# CHEROKEE METROPOLITAN DISTRICT RETURN FLOWS



## First Use and Blended Return Flows

**Cherokee's Water Reclamation Facility is the most sophisticated and innovative domestic wastewater treatment facility in the State of Colorado. It is the largest Membrane Bioreactor (MBR) facility in the state and the only facility of its kind to feature Reverse Osmosis (RO) treatment. The RO system is utilized for the removal of Total Dissolved Solids (TDS). These treatment processes together make it a facility that produces some the best effluent quality possible. This is all achieved with some of the lowest costs for treatment in all of El Paso County.**

**Water is treated through this state-of-the-art system, achieving better than background levels of TDS and lower turbidity than water treatment standards. Those return flows then go through a natural environmental buffer for nearly a year before blending with first use water.**

# REGULATIONS GUIDE THE WORLD OF WATER AND WASTEWATER

**Cherokee Metropolitan District is a Colorado Special District, organized and governed under Title 32 of the Colorado Revised Statutes. Governance of the District is dictated through a 5-member Board of Directors, elected at large by residents and property owners within the legal boundaries of the District.**

**The Board of Directors hires a General Manager, who reports to the Board and handles all management and administrative tasks of the District, including management of all 47 full-time staff members.**

**Clean water production, treatment, distribution and wastewater collection and treatment are heavily regulated processes under State and Federal laws and Cherokee works daily to meet and exceed all such requirements.**





## **SAFE, REGULATED, CLEAN!**

**Cherokee's groundwater quality is monitored daily by State Certified Water Professionals, to meet ALL State and Federal Clean Water Standards.**

**Cherokee publishes its Consumer Confidence Report annually, showing all treatment processes and components and any disclosures required.**

**Key questions that are often asked:**

**What is Cherokee's average TDS?**

**What is Cherokee's average water hardness?**

**What is the amount of chlorine in Cherokee's Water?**

**Are PFAs chemicals in the water?**

**How much water is used for the Golf Course?**



# TOTAL DISSOLVED SOLIDS (TDS)



## WHAT ARE TOTAL DISSOLVED SOLIDS?

Total dissolved solids (TDS) are the measure of dissolved material in a liquid. The most common constituents in water are dissolved salts and minerals such as calcium, sodium, sulfate, magnesium, chloride, and potassium. The Environmental Protection Agency (EPA) has established a “Secondary Drinking Water Standard” for TDS of 500 milligrams per liter (mg/L). As a secondary standard, levels in this category are non-enforceable and have no known detrimental health effects, but only an aesthetic effect.

## TDS LEVELS - RATING

LESS THAN 300mg/L EXCELLENT

300-600 GOOD

600-900 FAIR

900-1,200 POOR

ABOVE 1,200 UNACCEPTABLE

**CHEROKEE’S AVERAGE TDS: 250-350 MG/L.**

**FOR COMPARISON: COLO SPRINGS UTILITIES 2022 AVG:  
57.4-278 MG/L**

# WATER HARDNESS

Water hardness is a part of Total Dissolved Solids (TDS). TDS is everything that is left over after boiling off filtered water and is primarily composed of minerals. Hardness is mostly calcium and magnesium, and Cherokee is over 90% calcium. The other minerals are mostly sodium and chloride, AKA table salt. Although related, TDS and water hardness are not the same thing. Most of the hardness of our alluvial groundwater is from the naturally occurring geology of the groundwater basin. TDS is naturally occurring but is also added to water by residential and commercial uses.

**CHEROKEE'S HARDNESS RANGE IN WELLS BEFORE BLENDING: 84-196 MG/L.**  
**DISTRIBUTED AVG. AFTER BLENDING: 130-180 MG/L**

**FOR COMPARISON:**  
**COLO SPRINGS UTILITIES 2022 AVG: 30-161 MG/L**

**PUEBLO SDS 2023 RAW WATER AVG: 163 MG/L,**  
**FINISHED AT 151 MG/L FOR SOUTHEASTERN COLO SPRINGS**

## HARDNESS RATINGS (UNREGULATED)

According to the US Geological Survey (USGS) water hardness scale:

- Soft water = 0 – 60 mg/L
- Moderately hard water = 61 to 120 mg/L
- Hard water = 121 to 180 mg/L
- Very hard water = levels above 181 mg/L

Water hardness is not regulated by any agency in any part of the world.

# CHLORINATION

Per the Total Coliform Rule, Cherokee must maintain between 0.2-4.0 mg/L Free Chlorine Residual at all points in the distribution system. Free chlorine is the chlorine left over after any required disinfection takes place to make sure any contaminant not initially destroyed is dealt with. This is verified through monthly coliform samples throughout the District, during calls to address customer concerns and more frequently, at every 'entry point' into the distribution system, according to all clean water regulations. The District's current disinfection configuration ensures a chlorine range between 1.2-1.6 mg/L leaving the entry points, with slightly higher values during seasons of lower water consumption (typically fall and winter).



A close-up photograph of a water quality report card. The card is divided into a grid. The central cell contains the text 'Chlorine' in black, '17' in black, 'Cl' in large red letters, '35.45' in black, and '3.0' in black. To the right, another cell contains 'Argon' in black, '18' in black, 'A' in large red letters, and '39.' in black. Other numbers like '3.5', 'fur', '6', '5', '.07', and '2.5' are visible in adjacent cells.

3.5	Chlorine 17 <b>Cl</b> 35.45 3.0	Argon 18 <b>A</b> 39.
fur 6 5 .07 2.5		Kr

Chlorine Content for Clean, Safe Water  
(HEAVILY REGULATED)

Mandate:

- 0.2 - 4.0 mg/L Free Chlorine Residual

Cherokee's Ranges:

- 1.2 - 1.6 mg/L Free Chlorine Residual

# What about these “forever chemicals” I keep hearing about?

**PFAS** are man-made chemicals that have been used in industry and consumer products worldwide since the 1940s. They have been used to make nonstick cookware, water-repellent clothing, stain resistant fabrics and carpets, some cosmetics, some firefighting foams, and products that resist grease, water, and oil.



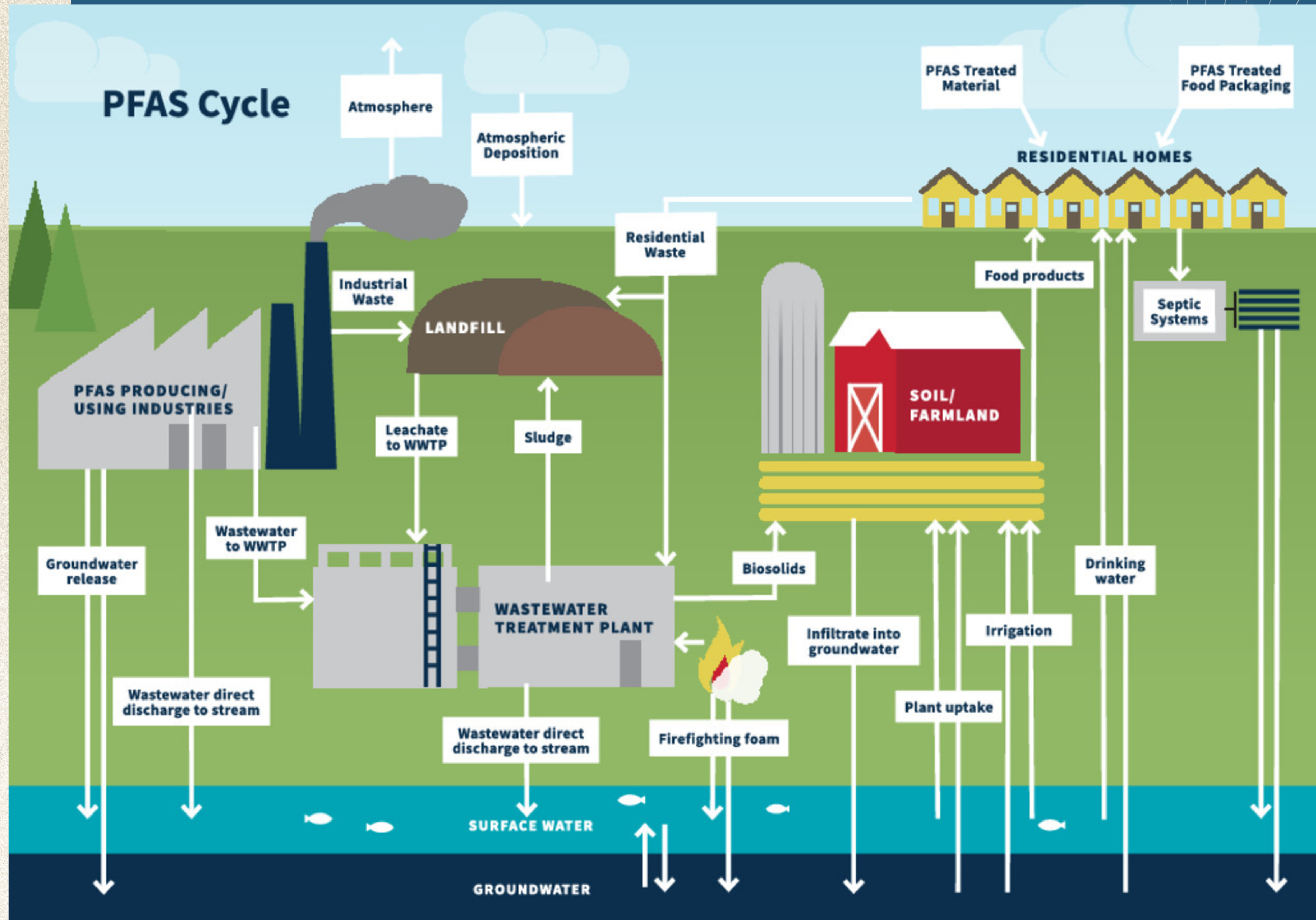
## PFAS

### PER- AND POLYFLUOROALKYL SUBSTANCES

- PFAS are widely used, long lasting chemicals, often used for water resistance, components of which break down very slowly over time.
- Because of their widespread use and their persistence in the environment, many PFAS are found in the blood of people and animals all over the world and are present at low levels in a variety of food products and in the environment.
- PFAS are found in water, rain, air, fish, and soil at locations across the nation and the globe.
- Scientific studies have shown that exposure to some PFAS in the environment may be linked to harmful health effects in humans and animals.
- There are thousands of PFAS chemicals, and they are found in many different consumer, commercial, and industrial products. This makes it challenging to study and assess the potential human health and environmental risks.  
-United States EPA



PFAS  
PER- AND  
POLYFLUOROALKYL  
SUBSTANCES



## PFAS

# PER- AND POLYFLUOROALKYL SUBSTANCES

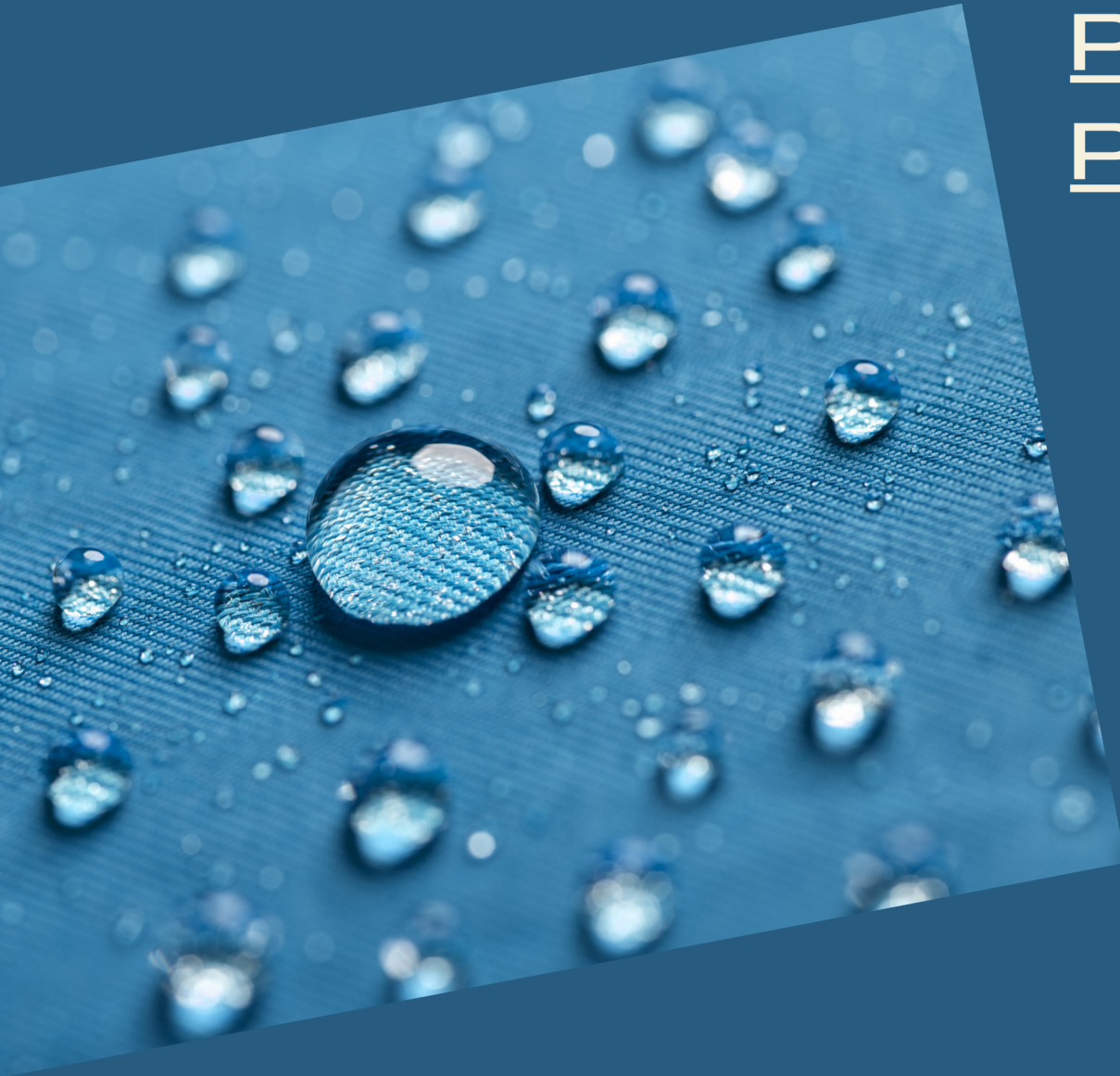
Q: How did these compounds get into the water supply?

A: There are thousands of PFAs compounds which are used in thousands of consumer products. These have found their way into water supplies nationwide through disposal of products, wastewater collections, and a variety of daily use products, etc.

Q: Does Cherokee's water have PFAs?

A: After voluntary testing in 2023, five of twenty-two wells were found to have trace amounts of PFAs compounds and only two of those were over the then recommended limits. All others were non-detect.

In April, 2024, the EPA established a regulatory limit of 4 parts per trillion, the lowest level of reliable detection. This is roughly equivalent to one drop of water in 20 Olympic-sized swimming pools. Cherokee's highest detection was 8.7 parts per trillion, before blending with other non-detect source water.



## PFAS

### PER- AND POLYFLUOROALKYL SUBSTANCES

Q: Is the water safe to drink?

A: According to the EPA, the science is evolving and regulations have just been established. The Colorado Department of Public Health and Environment states these trace amounts *pose no immediate health threat and customers do not need to stop drinking the water.*

Q: Where else could I be exposed to these compounds?

A: Common exposures come from a variety of sources:

**GREASE-RESISTANT PAPER AND OTHER FAST-FOOD WRAPPERS OR CONTAINERS**

**MICROWAVE POPCORN BAGS, PIZZA BOXES, AND CANDY WRAPPERS**

**PLASTIC WATER BOTTLES AND NONSTICK COOKWARE**

**FURNITURE**

**COSMETICS AND WATER-REPELLENT CLOTHING**

**CARPETING, TEXTILES**

**ELECTRONICS**

**DRINKING WATER IN PUBLIC OR PRIVATE SYSTEMS AND WELLS**

**SOIL AND WATER AT OR NEAR WASTE SITES, LANDFILLS, AND DISPOSAL SITES**

**FIRE EXTINGUISHING FOAM USED TO FIGHT FLAMMABLE LIQUID-BASED FIRES**



## PFAS

## PER- AND POLYFLUOROALKYL SUBSTANCES

**Q: Is one-time exposure to these trace amounts harmful?**

**A: According to the EPA, the new limits are for lifetime exposures. Furthermore, the EPA estimates that drinking water may only account for 20 percent of PFAs exposure and the science remains unclear. For reference, with the new limit, an individual would have to drink 2.5 liters of water daily for seventy years with PFAs chemicals found at that level to experience possible detrimental effects due to long-term exposure.**

**([Realclearpolicy.com/articles/2024/03/04](https://realclearpolicy.com/articles/2024/03/04))**

# PFAS

## PER- AND POLYFLUOROALKYL SUBSTANCES

Q: What is Cherokee doing about this?

A: Upon receiving results in 2023, Cherokee immediately began work to re-prioritize capital assets and begin the pilot study that will guide the construction of a new water treatment facility to remove all PFAs compounds.

This pilot study is underway and the District is working to complete the treatment plant by 2027, well in advance of the five-year compliance timeline established by the EPA.



Cherokee did not manufacture these chemicals, but WILL take them out of the water to protect all customers.

# Cherokee's Draft Plan

- Source identification
  - Air Force source unlikely but possible
  - Look at current industrial dischargers
- Increased wastewater and freshwater testing
  - Determine levels over time and examine trends
- Continued regulatory agency monitoring
  - More chemicals likely to be regulated and tested
  - Must adapt treatment plans as situation evolves
- Litigation against manufacturers
  - Class action lawsuits under way against producers
  - Could result in settlement to CMD
- Treatment technology scoping
  - Pricing and scoping of PFAs treatment technologies
  - Review of neighboring utility approaches

2023

- Start source investigation
- Begin new testing strategy
- Review treatment technologies
- Examine manufacturer litigation

2024

- Continue testing strategy
- Determine treatment limits and targets
- Begin treatment selection/design.
- Select location, acquire land

2025

- Complete treatment design
- Begin treatment construction

2026

- Continue treatment construction

2027

- Complete treatment construction
- Begin treating for PFAs

# WATER SAFETY IS OUR BUSINESS AND DAILY MISSION

The Colorado State Certified Water Professionals and management team here at Cherokee take this PFAs issue very seriously, which is why the advanced testing was done, even before there was a regulatory requirement.

With that proactive work, we are ahead of the regulation and will be taking these compounds out of customers' water as soon as design, permitting and construction is complete.

The Cherokee team will do this with the safety and economic health of our customers in mind, which drives us every day.



# CHEROKEE RIDGE GOLF COURSE WATER

Cherokee Ridge Golf Course is owned and operated by the Cherokee Metropolitan District. The course is irrigated using non-potable alluvial well water from two groundwater wells, in conjunction with the Fountain Mutual Irrigation Company Augmentation Program. These wells have an annual allotment of 322.6-acre feet for irrigation of the golf course. These wells are located northwest of the property across Waynoka Road and supply the irrigation storage pond, located on the golf course property. The water is then pumped as needed for irrigating the golf course. The golf course operates solely on its own budget, separate from the Metropolitan District and it budgets \$30,000 annually, within O&M, for water purchases from the District, only in emergency situations. If necessary, this water is billed to the golf course enterprise fund at the standard commercial rate.

Recently, the golf course irrigation software system was upgraded to the Toro Lynx System, which is a state-of-the-art irrigation control system. Allowing for the tuning of all 900+ irrigation heads to the exact second, coupled with a weather station that is constantly gathering data to provide accurate measurements with minute-to-minute weather data, the system maximizes the efficiency of the water applied to the golf course turfgrass.





# **CHEROKEE RIDGE IS A BELOVED COMMUNITY STAPLE**

More than just a golf course, Cherokee Ridge supports our community with programs for all ages.

Cherokee Ridge is more than just a golf course! It is a staple in the community of Cimarron Hills and to the City of Colorado Springs and its surrounding areas. Cherokee Ridge hosts various Junior Golf programs, including PGA Junior League, Pikes Peak Linkers, US Women's Kids Golf, Colorado Deaf and Blind and local middle and high school golf teams. Cherokee Ridge also hosts various leagues 5 days a week from all around the Colorado Springs area, including the Blazer Electric League, City of Colorado Springs League and many others.

To provide such an established, well maintained course and provide the high quality of customer service now known at Cherokee Ridge, we must staff accordingly. Cherokee Ridge Golf Course provides employment for 35+ employees throughout the season every year.

The availability of public golf courses continues to shrink in the Colorado Springs area, coming close to being outnumbered by private clubs. This strengthens Cherokee Ridge's position as one of, if not THE desired place to play public golf in Colorado Springs. We stand firm on our motto, "Country Club Experience, at a Public Golf Rate."



# CONSUMER CONFIDENCE REPORT

Every single year, all water providers in the State of Colorado publish a water quality report with the Colorado Department of Public Health and Environment AND provide this vital information to their customers.

Facilities undergo inspections and rigorous safety checks by third party inspectors. Any violations of the State and Federal Clean Water requirements are required to be published directly to consumers.

The following pages include Cherokee's 2024 Consumer Confidence Report. Any questions may be answered by members of Cherokee's professional staff.

Call 719-597-5080 for support.



## **CHEROKEE MD 2024 Drinking Water Quality Report Covering Data For Calendar Year 2023**

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**Public Water System ID: CO0121125**

**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 Matthew Mevis at 719-597-5080 with any questions or for public participation opportunities that may affect water quality.**

**Please see the water quality data from our wholesale system(s) (attached or included in this report) for additional information about your drinking water.**





## 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 [epa.gov/ground-water-and-drinking-water](http://epa.gov/ground-water-and-drinking-water).

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.

## General Information Continued

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

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. 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 Matthew Mevis at 719-597-5080.

Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available at [epa.gov/safewater/lead](https://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 [wqcdcompliance.com/ccr](http://wqcdcompliance.com/ccr). The report is located under “Guidance: Source Water Assessment Reports”.

Search the table using our system name or ID, or by contacting Matthew Mevis at 719-597-5080. 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>
<p>WELL NO 20 GOSS WELL (Groundwater-Well)            WELL NO 2 (Groundwater-Well)            WELL NO 17 (Groundwater-Well)            WELL NO 19 DUNCAN WELL (Groundwater-Well)            WELL 21 SWEETWATER 5 (Groundwater-Well)            WELL AR-1 (Groundwater-Well)            PURCHASED FROM CO0121150 (Surface Water-Consecutive Connection)            WELL DN-4 (Groundwater-Well)            WELL NO 18 TIPTON (Groundwater-Well)            WELL NO 9 (Groundwater-Well)            WELL NO 10 (Groundwater-Well)            WELL NO 11 (Groundwater-Well)            WELL NO 12 (Groundwater-Well)            WELL NO 13 (Groundwater-Well)            WELL NO 15 (Groundwater-Well)            WELL NO 1 (Groundwater-Well)            WELL NO 16 (Groundwater-Well)            WELL NO 3 (Groundwater-Well)            WELL NO 4 (Groundwater-Well)            WELL NO 5 (Groundwater-Well)            WELL NO 6 (Groundwater-Well)            WELL NO 7 (Groundwater-Well)            WELL NO 8 (Groundwater-Well)</p>	<p>Row Crops, Fallow, Small Grains, Pasture / Hay, Septic Systems, Road Miles</p>

## 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.

## Terms and Abbreviations Continued

- 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

CHEROKEE MD 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, 2023 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 ***OR***

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, 2023	<u>Lowest period</u> percentage of samples meeting TT requirement: 100%	0	25	No	4.0 ppm

**Lead and Copper Sampled in the Distribution System**

Contaminant Name	Time Period	90 <sup>th</sup> Percentile	Sample Size	Unit of Measure	90 <sup>th</sup> Percentile AL	Sample Sites Above AL	90 <sup>th</sup> Percentile AL Exceedance	Typical Sources
Copper	06/21/2021 to 07/28/2021	0.49	30	ppm	1.3	0	No	Corrosion of household plumbing systems; Erosion of natural deposits



Lead and Copper Sampled in the Distribution System								
Contaminant Name	Time Period	90 <sup>th</sup> Percentile	Sample Size	Unit of Measure	90 <sup>th</sup> Percentile AL	Sample Sites Above AL	90 <sup>th</sup> Percentile AL Exceedance	Typical Sources
Lead	06/21/2021 to 07/28/2021	2	30	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)	2023	2.7	2.5 to 2.9	2	ppb	60	N/A	No	Byproduct of drinking water disinfection
Total Trihalomethanes (TTHM)	2023	13.1	11.8 to 14.4	2	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	2022	6.97	6.31 to 7.64	2	pCi/L	15	0	No	Erosion of natural deposits
Combined Radium	2022	2.25	2.1 to 2.4	2	pCi/L	5	0	No	Erosion of natural deposits
Combined Uranium	2022	7.5	7 to 8	2	ppb	30	0	No	Erosion of natural deposits
Gross Beta Particle Activity	2019	4	0 to 8	2	pCi/L*	50	0	No	Decay of natural and man-made deposits

\*The MCL for Gross Beta Particle Activity is 4 mrem/year. Since there is no simple conversion between mrem/year and pCi/L EPA considers 50 pCi/L to be the level of concern for Gross Beta Particle Activity.

**Inorganic Contaminants Sampled at the Entry Point to the Distribution System**

<b>Contaminant Name</b>	<b>Year</b>	<b>Average</b>	<b>Range Low – High</b>	<b>Sample Size</b>	<b>Unit of Measure</b>	<b>MCL</b>	<b>MCLG</b>	<b>MCL Violation</b>	<b>Typical Sources</b>
Arsenic	2022	2	2 to 2	2	ppb	10	0	No	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes
Barium	2022	0.07	0.07 to 0.08	2	ppm	2	2	No	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Chromium	2022	4	4 to 4	2	ppb	100	100	No	Discharge from steel and pulp mills; erosion of natural deposits
Fluoride	2022	0.36	0.35 to 0.36	2	ppm	4	4	No	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories

Nitrate	2023	5.87	0 to 7.5	9	ppm	10	10	No	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Selenium	2022	5	5 to 5	2	ppb	50	50	No	Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines

**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.

### 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	2022	89.55	85.3 to 93.8	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) ([epa.gov/dwucmr/national-contaminant-occurrence-database-ncod](http://epa.gov/dwucmr/national-contaminant-occurrence-database-ncod)) Consumers can review UCMR results by accessing the NCOD. Contaminants that were detected during our UCMR sampling and the corresponding analytical results are provided below.

Contaminant Name	Year	Average	Range Low – High	Sample Size	Unit of Measure

\*\*\*More information about the contaminants that were included in UCMR monitoring can be found at: [drinktap.org/Water-Info/Whats-in-My-Water/Unregulated-Contaminant-Monitoring-Rule-UCMR](http://drinktap.org/Water-Info/Whats-in-My-Water/Unregulated-Contaminant-Monitoring-Rule-UCMR). Learn more about the EPA UCMR at: [epa.gov/dwucmr/learn-about-unregulated-contaminant-monitoring-rule](http://epa.gov/dwucmr/learn-about-unregulated-contaminant-monitoring-rule) or contact the Safe Drinking Water Hotline at (800) 426-4791 or [epa.gov/ground-water-and-drinking-water](http://epa.gov/ground-water-and-drinking-water).

# Violations, Significant Deficiencies, and Formal Enforcement Actions

## Non-Health-Based Violations

These violations do not usually mean that there was a problem with the water quality. If there had been, we would have notified you immediately. We missed collecting a sample (water quality is unknown), we reported the sample result after the due date, or we did not complete a report/notice by the required date.

Name	Description	Time Period
DISINFECTION BYPRODUCTS	FAILURE TO MONITOR AND/OR REPORT	01/01/2023 - 12/31/2023

## Additional Violation Information

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

Describe the steps taken to resolve the violation(s), and the anticipated resolution date: **In November, we discovered that these analytes were due by August. We immediately ordered the required test from an accredited laboratory and sampled the parameters in question. The results are listed above and were not exceedances. The department has reviewed the monitoring plan created by the state and has trained additional staff on DBP sampling to avoid future scheduling failures.**



# SERVICE QUALITY PLANNING STEWARDSHIP

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It is our pleasure to be your water and wastewater provider.