Parker Water & SANITATION DISTRICT

# 2022 Drinking Water Quality Report Covering Data for Calendar Year 2021

## Public Water System ID: CO0118040

303-841-4627 • info@pwsd.org • 18100 E. Woodman Drive • Parker, CO 80134

## Welcome

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

We are pleased to present to you this year's water quality report. Our constant goal is to provide you with a safe and dependable supply of drinking water. Please contact James Roche at 303-841-2058 with any questions or for public participation opportunities that may affect water quality. Please see the water quality data from our system 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.

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 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 this webpage. 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

| Sources (Water Type - Source Type) | Potential Source(s) of Contamination |
|---|---|
| RUETER-HESS RESERVOIR (Surface Water-Intake)<br>PARKER RIDGE ARAPAHOE (Groundwater-Well)<br>PARKER RIDGE DAWSON (Groundwater-Well)<br>RUETER HESS DENVER (Groundwater-Well)<br>RUETER HESS DAWSON (Groundwater-Well)<br>CC 15 ALLUVIAL (Groundwater-Well)<br>CC 17 ALLUVIAL (Groundwater-Well)<br>HESS I (Groundwater-Well)<br>HESS II (Groundwater-Well)<br>PURCHASED FROM WISE CO0103843 (Surface Water-Consecutive Connection)<br>NEU TOWNE ARAPAHOE (Groundwater-Well)<br>REATA NORTH ARAPAHOE (Groundwater-Well)<br>CANYONS ARAPAHOE WELL (Groundwater-Well)<br>CANYONS DENVER WELL (Groundwater-Well)<br>CANYONS LOWER DAWSON WELL (Groundwater-Well)<br>NEU TOWNE DAWSON (Groundwater-Well)<br>REGENCY ARAPAHOE (Groundwater-Well)<br>REGIONAL ARAPAHOE (Groundwater-Well)<br>REGIONAL DENVER (Groundwater-Well)<br>REGIONAL DAWSON (Groundwater-Well)<br>REGIONAL LARAMIE FOX HILLS (Groundwater-Well)<br>SALISBURY ARAPAHOE (Groundwater-Well)<br>SALISBURY DAWSON (Groundwater-Well)<br>CC7 (Groundwater-Well)<br>CC9 (Groundwater-Well)<br>CC13 (Groundwater-Well)<br>REUTER HESS ARAPAHOE (Groundwater-Well)<br>NEWLIN GULCH ARAPAHOE (Groundwater-Well)<br>RIDGEGATE ARAPAHOE WELL (Groundwater-Well)<br>RIDGEGATE DENVER WELL (Groundwater-Well)<br>RIDGEGATE LOWER DAWSON WELL (Groundwater-Well)<br>CLARKE FARMS ARAPAHOE (Groundwater-Well)<br>HIDDEN RIVER ARAPAHOE (Groundwater-Well)<br>CLARK FARMS A2 (Groundwater-Well)<br>KOA2 CC (Groundwater-Well)<br>BRADBURY ARAPAHOE (Groundwater-Well)<br>BRADBURY DAWSON (Groundwater-Well)<br>BRADBURY LFH (Groundwater-Well)<br>BRADBURY DENVER (Groundwater-Well)<br>PARKER NORTH DAWSON (Groundwater-Well)<br>PARKER NORTH DENVER (Groundwater-Well)<br>PARKER NORTH ARAPAHOE (Groundwater-Well)<br>PARKER NORTH LFH (Groundwater-Well)<br>KOA 1 CC (Groundwater-Well)<br>STROH RANCH ALLUVIAL (Groundwater-Well)<br>STROH RANCH DAWSON (Groundwater-Well)<br>STROH RANCH DENVER (Groundwater-Well)<br>ROBINSON RANCH ARAPAHOE (Groundwater-Well)<br>STROH RANCH ARAPAHOE (Groundwater-Well)<br>ROWLEY DOWNS ARAPAHOE (Groundwater-Well)<br>RUSTIC DAWSON (Groundwater-Well) | Aboveground, Underground and Leaking Storage Tank Sites, Other Facilities, Commercial/Industrial/Transportation, High Intensity Residential, Low Intensity Residential, Urban Recreational Grasses, Row Crops, Fallow, Small Grains, Pasture / Hay, Evergreen Forest, Septic Systems, Road Miles |

## An Explanation of the Water Quality Data Table

The table shows the results of water quality analysis from 2020 routine samplings. Every **regulated** contaminant **detected**, even in minute traces, is listed. The table contains the name of each substance; the highest level allowed by the Safe Drinking Water Act, the ideal goals for public health, the amount detected, the usual source of such contamination, footnotes explaining the findings, and a key to units of measurement. **Contaminants that are not detected are not listed**. If you are interested in the full list of analytes tested, please contact the Parker Water and Sanitation District's Laboratory. For more current water quality data visit our Water Quality Map (https://parkerwater.maps.arcgis.com/apps/MapSeries/index.html?appid=0d0c0989659e4358b9587b610d9a5399).

## Important Terms and Abbreviations

- **Microbial contaminants:** viruses and bacteria that may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- **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 90$^{th}$ 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.
- **Gross Alpha, Including RA, Excluding RN & U:** This is the gross alpha particle activity compliance value. It includes radium-226, but excludes radon 222 and uranium.

## Detected Contaminants

PARKER WSD 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, 2020, 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 |
|---|---|---|---|---|---|---|
| Chloramine | December, 2021 | Lowest period percentage of samples meeting TT requirement: 100% | 0 | 71 | No | 4.0 ppm |

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

| Contaminant Name | Time Period | 90th Percentile | Sample Size | Unit of Measure | 90th Percentile AL | Sample Sites Above AL | 90th Percentile AL Exceedance | Typical Sources |
|---|---|---|---|---|---|---|---|---|
| Copper | 10/09/2021 to 10/20/2021 | 0.2 | 74 | ppm | 1.3 | 0 | No | Corrosion of household plumbing systems; Erosion of natural deposits |
| Lead | 01/10/2021 to 04/27/2021 | 3.4 | 80 | ppb | 15 | 0 | No | |
| Copper | 04/10/2021 to 04/27/2021 | 0.18 | 80 | ppm | 1.3 | 0 | No | |
| Lead | 10/09/2021 to 10/20/2021 | 3.7 | 74 | ppb | 15 | 0 | No | |

| 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) | 2021 | 3.99 | 0 to 26.6 | 32 | ppb | 60 | N/A | No | Byproduct of drinking water disinfection |
| Total Trihalomethanes (TTHM) | 2021 | 8.79 | 0 to 33 | 32 | ppb | 80 | N/A | No | |
| Chlorite | 2021 | 0.02 | 0 to 0.37 | 36 | ppb | 1.0 | .8 | No | |

| 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: Oct | Highest single measurement: 0.095 NTU | Maximum 0.5 NTU for any single measurement | No | Soil Runoff |
| Turbidity | Month: Dec | Lowest monthly percentage of samples meeting TT requirement for our technology: 100 % | In any month, at least 95% of samples must be less than 0.1 NTU | No | |

| 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 | 2021 | 3.17 | 1 to 5.7 | 9 | pCi/L | 15 | 0 | No | Erosion of natural deposits |
| Combined Radium | 2021 | 3.84 | 1.7 to 7.5 | 10 | pCi/L | 5 | 0 | No | |
| Gross Beta Particle Activity | 2021 | 3.39 | 0 to 7.1 | 8 | 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 | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Contaminant Name** | **Year** | **Average** | **Range Low – High** | **Sample Size** | **Unit of Measure** | **MCL** | **MCLG** | **MCL Violation** | **Typical Sources** |
| Arsenic | 2021 | 0.29 | 0 to 2 | 7 | ppb | 10 | 0 | No | Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes |
| Barium | 2021 | 0.13 | 0.08 to 0.17 | 7 | ppm | 2 | 2 | No | Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits |
| Fluoride | 2021 | 1.01 | 0.46 to 1.35 | 13 | ppm | 4 | 4 | No | Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories |
| Nitrate | 2021 | 0.01 | 0 to 0.2 | 14 | ppm | 10 | 10 | No | Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits |
| Selenium | 2021 | 1.29 | 0 to 3 | 7 | 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) adipate | 2021 | <0.6 | 0 to <0.6 | 11 | ppb | 400 | 400 | No | Discharge from chemical factories |

**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. Results are collected from the Distribution System.

| **Contaminant Name** | **Year** | **Average** | **Range Low – High** | **Sample Size** | **Unit of Measure** | **Secondary Standard** |
|---|---|---|---|---|---|---|
| Sodium | 2021 | 47.6 | 19.9 to 88.8 | 456 | ppm | N/A |
| Total Dissolved Solids | 2021 | 215.7 | 116.5 to 447.6 | 901 | mg/L | 500 mg/L |
| Iron | 2021 | 76.4 | 0 to 1977 | 457 | µg/L | 300 µg/L |
| Alkalinity | 2021 | 108.3 | 74 to 151 | 910 | mg/L as $CaCO_3$ | N/A |
| Hardness | 2021 | 95.5 | 43.6 to 176.5 | 456 | mg/L as $CaCO_3$ | N/A |
| pH | 2021 | 8.18 | 5.59 to 9.24 | 924 | SU | 6.5 to 8.5 |
| Manganese | 2021 | 15.6 | 0 to 281.8 | 457 | µg/L | 50 µg/L |

**Unregulated Contaminant Monitoring Rule 4 (UCMR4)**

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 UCMR sampling and the corresponding analytical results are provided below.

| **Contaminant Name** | **Year** | **Average** | **Range Low – High** | **Sample Size** | **Unit of Measure** | **Sample Location** |
|---|---|---|---|---|---|---|
| Total Organic Carbon | 2018 | 6723 | 5880 to 7160 | 4 | ppb | Raw Water Site |
| Bromide | 2018 | 194 | 191 to 198 | 4 | ppb | Raw Water Site |
| HAA5 | 2018 | 4.05 | 0 to 8.94 | 32 | ppb | Distribution System |
| HAA6Br | 2018 | 6.84 | 0 to 16.89 | 32 | ppb | Distribution System |
| HAA9 | 2018 | 8.78 | 0 to 19.714 | 32 | ppb | Distribution System |
| Cyanotoxins | 2018 | Not Detected | Not Detected | 8 | ppb | Surface Water Entry Point |
| Manganese | 2019 | 21.68 | 0.66 to 76.30 | 18 | ppb | All Entry Points |
| 1-Butanol | 2019 | 0.16 | 0 to 2.89 | 18 | ppb | All Entry Points |

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 http://water.epa.gov/drink/contact.cfm.

**IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER**

Parker WSD

**Monitoring Requirements Not Met**

*Este informe contiene información muy importante sobre su agua potable. Tradúzcalo o hable con alguien que lo entienda bien.*

Our water system recently violated a drinking water requirement. Although this situation is not an emergency, as our customers you have a right to know what happened, what you should do, and what we are doing to correct this situation.

We are required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not our drinking water meets health standards. During 4th Quarter, 2021 we did not complete all monitoring or testing for Alkalinity and therefore cannot be sure of the drinking water quality during that time.

**What does this mean? What should I do?**

- There is nothing you need to do at this time**.** If a situation arises where the water is no longer safe to drink, you will be notified within 24 hours.

**What is being done?**

- There were two actions taken in response to this violation. The first action was to train staff on monitoring requirements at EP082. The second action taken was to update our monitoring field sheet to clearly denote if either of our combined sources are operating, water quality samples must be taken.

The violation will be resolved during the 6-month period of 1/1/2022 – 6/30/2022 when the reporting requirements are met for this violation. For more information, please contact **Benjamin Emerson** at **bemerson@pwsd.org** or **720-842-4246**, or **18100 E. Woodman Dr**. **Parker, CO 80134**

**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.**

This notice is being sent to you by: Parker WSD - CO0118040
Date distributed: **This notice will be shared with the public alongside our 2022 Consumer Confidence Report posted at PWSD.org on May 1st, 2022.**