

## DEBEQUE TOWN OF 2023 Drinking Water Quality Report Covering Data For Calendar Year 2022

*Public Water System ID:* CO0139205

**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 CARE MCINNIS at 970-283-5475 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 [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.

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 CARE MCINNIS at 970-283-5475. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available at [epa.gov/safewater/lead](http://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 system name or ID, or by contacting CARE MCINNIS at 970-283-5475. 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>
COLORADO RIVER DIVERSION (Surface Water-Intake)	EPA Superfund Sites, EPA Abandoned Contaminated Sites, EPA Hazardous Waste Generators, EPA Chemical Inventory/Storage Sites, EPA Toxic Release Inventory Sites, Permitted Wastewater Discharge Sites, Aboveground, Underground and Leaking Storage Tank Sites, Solid Waste Sites, Existing/Abandoned Mine Sites, Concentrated Animal Feeding Operations, Other Facilities, Commercial/Industrial/Transportation, High Intensity Residential, Low Intensity Residential, Urban Recreational Grasses, Quarries / Strip Mines / Gravel Pits, Row Crops, Pasture / Hay, Deciduous Forest, Evergreen Forest, Mixed Forest, Septic Systems, Oil / Gas Wells, Road Miles

### 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 90<sup>th</sup> 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**

DEBEQUE 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, 2022 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						
<b>TT Requirement:</b> At least 95% of samples per period (month or quarter) must be at least 0.2 ppm <b><i>OR</i></b> If sample size is less than 40 no more than 1 sample is below 0.2 ppm <b>Typical Sources:</b> Water additive used to control microbes						
Disinfectant Name	Time Period	Results	Number of Samples Below Level	Sample Size	TT Violation	MRDL
Chlorine	December, 2022	<u>Lowest period</u> percentage of samples meeting TT requirement: 100%	0	1	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	09/13/2021 to 09/15/2021	0.08	11	ppm	1.3	0	No	Corrosion of household plumbing systems; Erosion of natural deposits
Lead	09/13/2021 to 09/15/2021	1.5	11	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)	2022	22.86	9.7 to 41.7	5	ppb	60	N/A	No	Byproduct of drinking water disinfection
Total Trihalomethanes (TTHM)	2022	54.38	26.3 to 88.8	5	ppb	80	N/A	No	Byproduct of drinking water disinfection

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: Aug	<u>Highest single measurement:</u> 0.08 NTU	Maximum 0.5 NTU for any single measurement	No	Soil Runoff
Turbidity	Month: Dec	<u>Lowest monthly percentage of samples meeting TT requirement for our technology:</u> 100 %	In any month, at least 95% of samples must be less than 0.1 NTU	No	Soil Runoff

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
Combined Uranium	2022	1.4	1.4 to 1.4	1	ppb	30	0	No	Erosion of natural deposits

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

Contaminant Name	Year	Average	Range Low – High	Sample Size	Unit of Measure	MCL	MCLG	MCL Violation	Typical Sources
Barium	2022	0.06	0.06 to 0.06	1	ppm	2	2	No	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Nitrate	2022	0.08	0.08 to 0.08	1	ppm	10	10	No	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Nitrite	2022	0.03	0.03 to 0.03	1	ppm	1	1	No	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Nitrate-Nitrite	2022	0.11	0.11 to 0.11	1	ppm	10	10	No	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits

**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	164	164 to 164	1	ppm	N/A
Total Dissolved Solids	2019	437	158 to 716	2	ppm	500



**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
STORAGE TANK RULE	FAILURE TO MEET STORAGE TANK REQUIREMENTS - F330	05/03/2022 - 05/03/2022
CROSS CONNECTION RULE	FAILURE TO MEET CROSS CONNECTION CONTROL AND/OR BACKFLOW PREVENTION REQUIREMENTS - M610	05/03/2022 - 05/03/2022
CHLORINE	EQUIPMENT VERIFICATION OR CALIBRATION - R531	05/03/2022 - 05/03/2022

**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: All violations listed above were resolved by May 3, 2022. See letter from Colorado Department of Health and Environment attached with this report.



**COLORADO**  
 Department of Public  
 Health & Environment

May 3, 2022

Care Mcinnis  
 Town of Debeque  
 PO Box 60  
 Debeque, CO 81630

Subject: Sanitary Survey of Town of Debeque  
 Public Water System Identification No. CO0139205  
 Mesa County

Dear Care Mcinnis:

A sanitary survey was performed on April 8, 2022 by the Field Services Section of the Colorado Department of Public Health & Environment’s Water Quality Control Division (the department) at Town of Debeque (the supplier) in accordance with the *Colorado Primary Drinking Water Regulations, 5 CCR 1002-11* (Regulation 11), Sections 11.38(1)(b) and 11.38(2). This letter serves to provide the supplier with written notification of the sanitary survey findings, including any identified significant deficiencies and violations of Regulation 11. The assistance provided was very helpful and is greatly appreciated. Table 1 identifies the parties present during the sanitary survey.

**Table 1: Parties Present**

Name	Organization
Jim Taylor Mark King	Town of Debeque
Kristina Quick, EIT	Colorado Department of Public Health & Environment

In response to this letter, the supplier must provide a written response, documenting resolution of all significant deficiencies and violations, and/or propose a corrective action plan with a corrective action schedule, as required by Regulation 11, Section 11.38(3)(d,f). Also, for findings that are violations of Regulation 11, the supplier must comply with the public notification requirements described in Section V, below. The supplier’s written response is due within forty-five (45) days and should be submitted to the department electronically through the drinking water portal at <https://wqcdcompliance.com/login> under the category “Sanitary Survey Inspection”. If a corrective action plan is proposed, it must outline the course of action that has been or will be taken and the date(s) of the completed corrective action(s) and/or the date(s) by which the supplier proposes to correct each significant deficiency and violation of Regulation 11. Table 2 summarizes the number of findings and the required written response and resolution dates.

**Table 2: Sanitary Survey Findings**

Severity Category	Number Identified	Written Response Due (within 45 days of letter date)	Resolution Due (within 120 days of letter, or department-approved alternate date)	Public Notice Required (Violations of Regulations 11)
Significant Deficiencies	0	No response required	Not applicable	Not required
Violations	3	Resolved	Resolved	Required
Observations - Recommendations	7	No response required	Not applicable	Not applicable





Failure to adequately address all significant deficiencies referenced above may result in additional violations of Regulation 11. A list of the findings for each category in Table 2 can be found in the following sections:

### **Section I: Significant Deficiencies**

According to Regulation 11, Section 11.3(72), a significant deficiency means:

*any situation, practice, or condition in a public water system with respect to design, operation, maintenance, or administration, that the state determines may result in or have the potential to result in production of finished drinking water that poses an unacceptable risk to health and welfare of the public served by the water system.*

**No significant deficiencies were identified.**

### **Section II: Violations**

The items in this category are violations of Regulation 11. Violations remain open until the supplier demonstrates the violations are resolved. Please direct questions regarding resolution of the following items to the department inspector.

#### **1. F330 - Management:**

**Storage Tank Inspection Plan (T3):** Supplier has not developed or maintained a finished water storage tank inspection plan. This is a violation of Regulation 11, Section 11.28(4)(a).

In accordance with Regulation 11, Section 11.28(2)(a), suppliers of water are required to develop and maintain a written inspection plan for finished water storage tanks. At the time of the sanitary survey, the department inspector found that the supplier had a storage tank inspection plan but upon review found it to be grossly inadequate. The plan was missing the following:

- Details of the individual storage tanks
- Tank inspection methods for performing and documenting tank inspections,
- Identification of qualified personnel to perform periodic and comprehensive tank inspections,
- Schedule for performing comprehensive (every five years) tank inspections,
- Corrective action schedules for any sanitary defect identified during a tank inspection.

Additionally, the records for previous periodic inspections provided minimal information regarding the inspections and the lack of complete inspection methods in the program made it unclear if the periodic inspections were being properly performed. Inspection summaries must include the following:

- Date and type of inspection performed
- Inspection findings and tank conditions
- Any sanitary defects identified
- Corrective action schedules and corrective actions and completion dates for identified sanitary defects.

The current operator had taken over in February 2022 and was still sorting through the records left behind from the previous operator. Prior to the issuance of this letter, the supplier provided an updated storage tank plan that contained all of the required elements as well as copies of the most recent tank inspections, which demonstrated proper tank inspection methods. This provides resolution to the violation; no further response is needed. Public notice is required.

This violation also requires Tier 3 public notice in accordance with Regulation 11, Section 11.33 (Public Notification Rule) as directed in the public notice instructions section below.

#### **2. R531 - Monitoring & Recordkeeping and Data Verification:**

**Disinfectant Monitoring Equipment Verification (T3):** Supplier was not using an EPA accepted test method, using an expired or incorrect DPD reagent or not verifying or operating disinfectant monitoring analytical equipment in accordance with manufacturer requirements. This is a violation of Regulation 11, Section 11.46.

At the time of the sanitary survey, the department inspector observed that the supplier did not have record of performing verification checks on their online chlorine analyzers on a weekly basis, in accordance with 40 CFR 141.74(a). The current operator had taken over in February 2022; the previous operator had not left any previous verification records and no historical verification records have been located. The supplier did have records that the online analyzer had been calibrated and maintained by the manufacturer at least once per year. In accordance with Regulation 11, Section 11.46, the department expects the supplier to calibrate or check their online chlorine analyzers per manufacturer's recommendations or at least once weekly. The online chlorine analyzers should be checked with secondary standards and the results recorded in a logbook to indicate any issues with the instruments. The department also recommends that the supplier calibrate or check their portable chlorine analyzers per manufacturer's recommendations or at least once annually.

The supplier had records that weekly chlorine verifications had been performed starting in February 2022. This provides resolution for the violation; no further response is needed. Public notice is required.

This violation of Regulation 11 requires Tier 3 public notice in accordance with Regulation 11, Section 11.33 (Public Notification Rule) as directed in the public notice instructions section below.

### **3. M610 - Management:**

*Backflow Prevention and Cross-Connection Control Program (T3):* Supplier has failed to develop or implement a written backflow prevention and cross-connection control program (BPCCC). This is a BPCCC violation of Regulation 11, Section 11.39(6)(b)(i).

In accordance with Regulation 11, Section 11.39(2)(a), suppliers of water must develop and implement a written Backflow Prevention and Cross-connection Control (BPCCC) program. At the time of the sanitary survey, the department inspector found that the supplier had a written program that did not contain all the requirements as specified under Regulation 11, Section 11.39(2)(a), which constitutes a BPCCC violation in accordance with Regulation 11, Section 11.39(6)(b)(i). It is noted that the supplier did have records of surveys performed and had completed annual reports for the previous years.

The current operator had taken over in February 2022 and was still sorting through the records left behind from the previous operator. Prior to the issuance of this letter, the supplier provided an updated BPCCC program which thoroughly addressed all the required components of a program. This provides resolution for the violation, no further response is needed. Public notice is required.

This violation of Regulation 11 requires Tier 3 public notice in accordance with Regulation 11, Section 11.33 (Public Notification Rule) as directed in the public notice instructions section below.

### **Section III: Observations/Recommendations**

The department recommends the supplier follow up and consider the following observations-recommendations. Please direct questions regarding any of the items below to the department inspector.

#### **1. T995 - Treatment: Treatment Plant (SDWIS ID: 004)**

*Other Treatment Observations:* Department inspector identified treatment observation.

At the time of the sanitary survey, the inspector observed that the required membrane integrity testing was being performed at least weekly through an automated system, however the records for the tests and results could be improved. The supplier is expected to keep detailed records regarding the date and results of the membrane integrity tests, dates of all clean in place operations, and dates of filter change outs and any repairs. These records are expected to be maintained for at least three years in accordance with Regulation 11 Section 11.36(4)(b).

#### **2. T133 - Treatment: Treatment Plant (SDWIS ID: 004)**

*Redundant Units:* Redundant treatment units or spare parts not available for breakdown/outages. Section 4 of the Colorado Design Criteria for Potable Water Systems (Design Criteria).

During the sanitary survey, the department inspector observed that the supplier did not have a redundant filtration train. The listed emergency treatment plant had not been operated in many years and was in disrepair; it would not be capable of functioning in the event of an emergency. The supplier indicated that they were in the early stages of designing a new treatment plant and that a redundant train was anticipated to be included during the construction of the new plant.

### **3. D990 - Distribution: Distribution System (SDWIS ID: DS001)**

*Other Distribution System Observations:* Department inspector identified distribution system observation.

The system had recently experienced several high DBP samples. Since taking over in February 2022, the current ORC made several changes including changing out the membrane filters, increasing the chlorine residual leaving the plant, optimizing the coagulation dose, selecting a more appropriate DBP sampling location and beginning a line flushing program to aid in the control of DBPs. The most recent DBP result was within the required limits. The supplier should continue efforts to minimize DBP formation in the system.

### **4. D400 - Distribution: Distribution System (SDWIS ID: DS001)**

*Line Flushing Program:* System lacked an adequate line flushing program or the flushing program can be improved.

At the time of the sanitary survey, the department inspector found that the supplier was in the process of developing a formal flushing program. In accordance with the Standard G200-04, Distribution System Operation and Maintenance, "the utility shall develop and implement a systematic American Water Works Association (AWWA) flushing program that meets the needs of the utility, taking into consideration the condition of the public water system including but not limited to, hydraulic capacity, treatment, water quality, and other site specific criteria. At a minimum, the flushing program, according to AWWA, shall incorporate the following items:

1. The program addresses a preventive approach to distribution system flushing, including occasional spot flushing to address localized problems or customer concerns and routine flushing to avoid water quality problems.
2. The utility shall perform system flushing at the velocity appropriate to address water quality concerns.
3. The utility has written procedures addressing all activities associated with system flushing, water quality, monitoring, frequency, locations, and duration, as well as adherence to all regulatory requirements."

The department recommends developing a written line flushing program that can be incorporated into the supplier's Operations and Maintenance (O&M) plan. Records of flushing activities should be maintained in the plan.

### **5. R540 - Monitoring & Recordkeeping and Data Verification:**

*Design Approval:* Plans and specifications approval by the department prior to construction of renovations to the water system, including the addition of new sources, modifications of treatment or addition of storage tanks.

At the time of the sanitary survey, the supplier informed the inspector that funding was recently secured to begin planning for a new water treatment plant. The supplier anticipated the design process to begin soon and construction may begin within the next year, however official timelines were still being developed.

Please note, per Regulation 11, Section 11.4(1), no person shall make improvements to or modify the treatment process of an existing water works until plans and specifications for such construction, improvements, or modifications have been submitted to, and approved by the department. In addition, a Professional Engineer registered in the State of Colorado shall design all treatment systems serving a community water system. The department prefers that an electronic copy of the design review submittal to [CDPHE.WQEngReview@state.co.us](mailto:CDPHE.WQEngReview@state.co.us) and one hard copy be mailed to:

Mr. Bret Icenogle, P.E.  
Engineering Section Manager  
CDPHE-WQCD ES B2  
4300 Cherry Creek Drive South  
Denver, CO 80246-1530.

Additional information regarding design approval can be found at: <https://cdphe.colorado.gov/design>.

#### **6. F326 - Finished Water Storage:**

*Comprehensive Storage Tank Inspections Not Performed or Documented:* Supplier failed to perform or document comprehensive tank inspections. This is a storage tank rule treatment technique violation of Regulation 11, Section 11.28(4)(c)(iii).

At the time of the sanitary survey, the inspector reviewed the comprehensive tank inspection documentation for both storage tanks for the inspections that occurred in 2021. The reports provided indicated uncertain conditions of the tanks and the tank lining. Upon review of the videos provided, it appeared the concerns had not yet risen to the level of sanitary defect, rather the tank coating was beginning to show signs of wear and there was some sediment build up observed. The supplier should schedule the tanks for cleaning and should plan on conducting the next comprehensive inspection prior to the 5 year deadline to ensure the tanks are in good condition.

#### **7. T110 - Treatment: Treatment Plant (SDWIS ID: 004)**

*Log Inactivation (Surface Water and GWUDI):* Supplier demonstration of adequate disinfection at the time of the sanitary survey. Adequate disinfection is required prior to the entry point to the distribution system. Regulation 11, Section 11.8(1)(b)(i)(A).

Per Regulation 11, Section 11.8(3)(b)(i)(A), the supplier must maintain disinfection treatment sufficient to ensure that the total treatment processes, including filtration and disinfection, achieve 99.9 percent (3-log) treatment of *Giardia lamblia* cysts and 99.99 percent (4-log) treatment of viruses, as determined by the department. The supplier utilizes a Memcor Axia system that, if properly operated, allows for 3.0-log removal credit for *Giardia lamblia* and 0-log removal credit of viruses. Per the information provided by the supplier, the disinfection contact time is achieved at the surface water treatment plant via chlorine injection prior to a baffled clearwell.

Regulation 11, Section 11.3(33) defines the first customer as the first potable water service connection downstream of the point where complete water treatment, including disinfection contact time, has occurred. Typically, the first customer is the water treatment plant's domestic water system. The supplier must treat the plant house water used for human consumption to at least 0.0 log inactivation of *Giardia lamblia* cysts and 4 log inactivation of viruses, in addition to the 3.0-log removal of *Giardia lamblia* and 0-log removal of viruses provided by filtration.

The current location for the entry point chlorine residual monitor used for compliance reporting was located after the clearwell. The chlorine monitoring location may be located before the required log inactivation of *Giardia lamblia* cysts and/or viruses is achieved by disinfection and contact time.

Though this requirement has been part of Regulation 11 since the U.S. Environmental Protection Agency's Surface Water Treatment Rule went into effect, the department has recently begun a statewide outreach and disinfection verification project to reevaluate surface water treatment. The department has formed a Disinfection Outreach and Verification Effort (DOVE) team to perform this reevaluation and assist suppliers of water in assessing their disinfection.

During the sanitary survey, the department inspector informed the supplier that the DOVE team will be providing additional information regarding the department's evaluation process under separate letter. Please contact the department's engineering section at [CDPHE.WQEngReview@state.co.us](mailto:CDPHE.WQEngReview@state.co.us) to assess the supplier's treatment plant for sufficient disinfection. If the supplier opts to proactively start addressing this issue, please contact [CDPHE.WQEngReview@state.co.us](mailto:CDPHE.WQEngReview@state.co.us) or 303-692-6298.

**Section IV: Field Verification/Sampling**

While performing the sanitary survey, the department inspector performed water quality sampling for free chlorine residual. Table 3 indicates the results of the water quality sampling performed on-site.

**Table 3: Sampling Results**

Parameter	Sample Location	Value	Units	Notes
Entry Point Disinfectant Residual	Treatment Plant Sink	0.81	mg/L	
Distribution System Disinfectant Residual	Town Hall	1.06	mg/L	
Turbidity	Post Filters	0.038	NTU	Online Analyzer

**Section V: Public Notification Instructions for Violations**

The public notice requirements are dependent upon the severity of the violation and any potential public health effects, pursuant to Regulation 11, Sections 11.33(1)(a,b), 11.33(2)(a), 11.33(3)(a) and 11.33(4)(a). All issued notifications must comply with the general content and distribution requirements and notice reporting requirements that are included in Regulation 11, Sections 11.33(5) and (6) and (7). Please be advised of the following:

1. For all violations that require Tier 3 public notice, the supplier must distribute the public notice as soon as possible but no later than **May 3, 2023** to all of the supplier’s consumers. If the supplier posts the public notice, the notice must remain in place for as long as the violation persists or for seven days, whichever is longer. The supplier must repeat the distribution of the public notice annually as long as the violation persists. If the violations remain unresolved and additional years of noncompliance occur, the supplier must continue to comply with the public notice requirements and update the public notice language to accurately reflect the period of noncompliance.
2. The public notice and certification template is provided at <https://cdphe.colorado.gov/dwforms> under Public Notification.
3. No later than ten (10) calendar days after completing the initial and repeat public notice (if applicable), the supplier must submit a certification that states the supplier has fully complied with the public notice requirements. The supplier must include a representative copy of each distributed notice to the department.
4. The supplier’s public notice and the certification form must be submitted to the department electronically through the drinking water portal at <https://wqcdcompliance.com/login> under the category “Certifications - PN or CCR or Seasonal Start-Up”, by mail or by fax at 303-758-1398 (attention to Tim Jones).

Please direct questions regarding the public notice requirements directly to Tim Jones at 303-692-2085 or [timothy.jones@state.co.us](mailto:timothy.jones@state.co.us).

**Reminders**

- Regulation 11, Section 11.4(1)(b) (Prior Approval Required) requires the department’s approval prior to commencement of construction of any improvements, treatment process modifications or the addition of new water sources.
- Most regulations, guidance documents and forms are available on the department’s website at <https://wqcdcompliance.com>

We would appreciate any feedback that you provide so that we can improve. Please take a few moments to complete [this survey](#).

If you have any questions, please contact me at (970) 248-7199 or [kristina.quick@state.co.us](mailto:kristina.quick@state.co.us). Thank you for your time and cooperation.

Sincerely,

**Kristina Quick**

Digitally signed by Kristina Quick  
Date: 2022.05.03 11:51:00 -06'00'

Kristina Quick, EIT  
Staff Field Engineer  
Field Services Section  
Water Quality Control Division  
Colorado Department of Public Health & Environment

cc: Mesa County Health Department  
Drinking Water File, PWSID No. CO0139205

Care Mcinnis, AC  
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Michael Emming, PE, CDPHE-ES, Unit Manager  
Tim Jones, CDPHE-DWCAS, Field Identified Violation Compliance Specialist  
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Margaret Talbott, PE, CDPHE-DWCAS, Unit Manager  
Ben Keilly, CDPHE-DWCAS, Compliance Specialist