EPA Region 8's Technical Guide To

2017 Drinking Water Regulations

For Wyoming Small Business Owners

Dude Ranches

RV Parks

Lodges/Inns

Stores

Restaurants

Campgrounds/
Recreation Areas

Rest Areas

Why Should You Read This Guide?

If your business or facility makes water available to the public by providing food, drinks, restrooms or lodging, then you are likely managing a public water system that must meet certain safety requirements according to the Safe Drinking Water Act.

Reading this guide could save you money!

If you do not monitor according to the drinking water regulations and people get sick from unsafe water you provide, it can result in costly lawsuits. Furthermore, the reputation of your business may be tarnished for years!

The Safe Drinking Water Act provides for stiff penalties for water systems that have continuing violations. One trailer park owner in Wyoming received a $28,000 penalty for 15 violations.

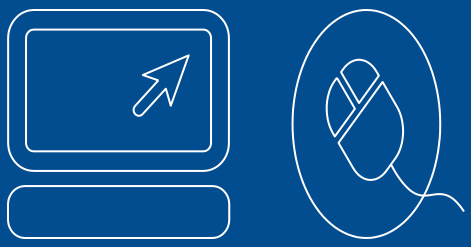
Improper sampling techniques can result in a positive Revised Total Coliform Rule (RTCR) sample that could result in additional follow-up lab costs!

Reading this guide will help you provide safe drinking water!

It is your duty to ensure your water system is operating in a way that protects the health of your employees, your customers and yourself. Using this guide may help you avoid many of the common mistakes that can lead to drinking water contamination. Remember: Any time you have a question, do not hesitate to contact the EPA Region 8 Drinking Water Unit! We can be reached at 1-800-227-8917.

Contact Us!

Environmental Protection Agency
Region 8 Drinking Water Unit
1595 Wynkoop Street (8WP-SD)
Denver, CO 80202-1129
Phone: 1-(800) 227-8917
Email: r8dwu@epa.gov
Fax: 1-877-876-9101



For Important Tools and Information Visit:

https://www.epa.gov/region8-waterops

WHAT IS IN THIS GUIDE?

INTRODUCTION

Why Did I Receive This Guide? Pg. 4

Wyoming or EPA Region 8– Who Does What? Pg. 4

Where Do I Start? Pg. 5

WHAT TESTING IS REQUIRED & WHY Pg. 6

How Do I Arrange To Have My Water Tested? Pg. 7

What Do I Do After I Receive My Test Results? Pg. 8

Steps To Take After a Positive Total Coliform Sample Pg. 9

When Must I call EPA? Pg. 10

What Do I Do With Copies Of The Test Results? Pg. 10

WHAT ARE SANITARY SURVEYS? Pg. 10

HOW TO PREVENT CONTAMINATION Pg. 11

REQUIRED STARTUP PROCEDURES FOR SEASONAL SYSTEMS Pg. 12

REPORTING SYSTEM CHANGES Pg. 12

EMERGENCY RESPONSE PLAN Pg. 13

INTRODUCTION

Why Did I Receive This Guide?

If your business or facility serves an average of at least 25 people per day for at least 60 days in a year or has at least 15 water connections, it is classified as a transient non-community (TNC) public water system (PWS). TNCs provide water by means of serving food, water, drinks or ice; providing restroom facilities or water faucets; and overnight lodging. Typical examples of TNCs are recreational areas, guest ranches, gas stations, lodges, campgrounds and restaurants.

Wyoming Or Environmental Protection Agency Region 8– Who Does What?

Wyoming is the only state that has not requested authority to fully implement the Safe Drinking Water Act. The responsibilities for ensuring that drinking water is safe in Wyoming are shared between the Wyoming Department of Environmental Quality (Water Quality Division) and the EPA Region 8. In addition, public eating and drinking establishments are monitored by either the Wyoming Department of Agriculture's Consumer Health Services Division or by a local health department. If an infectious pathogen or poison is suspected in the water supply, the Wyoming Department of Health also becomes involved.

EPA Region 8 is responsible for the following activities:

- Oversee monitoring/reporting of water testing
- Technical assistance to water system operators
- Laboratory certification
- Compliance determinations
- Sanitary surveys
- Homeland security
- Formal enforcement

The State of Wyoming is responsible for the following activities:

- Plan and specification review
- Water rights
- Capacity development
- Food and beverage inspections
- Source water protection
- Construction/well drilling permits
- Operator certification
- Operation of state laboratories
- Financing drinking water projects
- General public health

Contact Us!

US EPA Region 8
Drinking Water Unit
1595 Wynkoop Street
(8WP-SD)
Denver, CO 80202-1129
Phone: 1-(800) 227-8917
Email: r8dwu@epa.gov
Fax: 1-877-876-9101

Where Do I Start?

As an owner/operator of a public water system, you can access the information that EPA maintains on your water system through EPA Region 8's Drinking Water Watch (DWW) website. Please make note of your PWS ID number assigned by EPA (it looks like WY56XXXXX). This is your unique ID. The DWW website also allows you to receive important reminders about your required sampling. Be sure to sign up. It's a great tool to help keep you in compliance!

Simple steps to register for Drinking Water Watch:

1. Access the "Drinking Water Online" website at https://www.epa.gov/region8-waterops.
2. Click on the Registration and Account Maintenance link under the Water System Info section.
3. This will take you to: https://yosemite.epa.gov/r8/wateropsreg.nsf.
4. Click on "Non-EPA users only - request a new account" and follow the instructions to complete the registration process. Please allow up to 6 hours for the registration process to complete before you log on.
5. Add Drinking Water Watch (DWW) to your favorites and log on at the following secure website: https://sdwisr8.epa.gov/Region8DWW/JSP/loginForm.jsp.

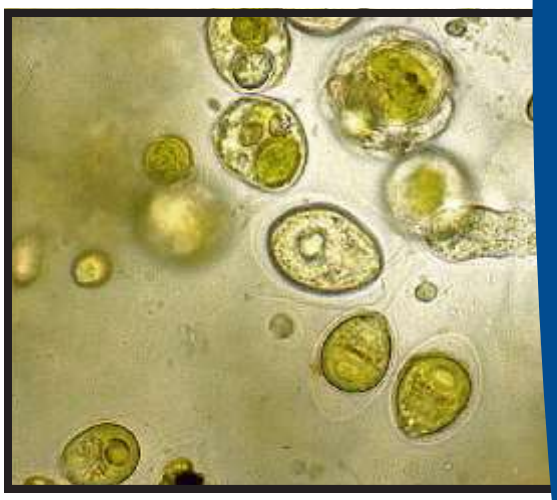
Note: You have to be a designated point of contact (POC) for a PWS and need a valid working email address to sign up for DWW. In order to complete the registration process you will need to know your unique Outreach User ID, which you can obtain from us prior to registering.

Another resource that does not require a password is Drinking Water Online, https://www.epa.gov/region8-waterops, which contains many helpful tips. If you do not have access to the internet, you can always call EPA Region 8 at 1-800-227-8917 to receive information about your water system.

What Testing is Required and Why?

All transient non-community (TNC) systems are required to test for total coliform bacteria and nitrates/nitrites. Additionally, depending upon the source of your water, you will either be subject to the Ground Water Rule, or the Surface Water Treatment Rules (that includes those ground water systems that are under the influence of surface water).

You can find the specific monitoring requirements for your water system after logging into the Drinking Water Watch website (mentioned previously) or by contacting the EPA. On the left side of the site click on "Sample Schedules and Reminders" and then click on "Monitoring and Reporting Requirements."



1. Revised Total Coliform rule

Coliforms are bacteria that are generally not harmful and are naturally present in the environment. They are used as an indicator that other, potentially harmful, bacteria are present. The presence of coliform bacteria in tap water suggests that there could be a problem with existing equipment, treatment systems or a breach in the distribution system which could introduce contamination.

2. Nitrate / Nitrite Rule

Nitrate and nitrite are inorganic chemicals found in fertilizer, sewage and wastes from animals. High levels of nitrate or nitrite in drinking water have caused serious illness and sometimes death in infants less than six months of age. Increasing levels indicate problems at the source area and require further investigation.

3. Ground Water Rule (if you Use a ground water source)

Sampling of ground water sources for coliform and E. coli analysis may be required. Fecal contaminants, such as strains of E. coli bacteria can cause nausea, diarrhea, cramps, and possibly death.

4. Surface Water Treatment Rules (if surface water or ground water is under the direct influence of surface water)

Surface water can contain many different disease causing organisms and requires specific treatment requirements (filtration and disinfection), daily monitoring and monthly reporting. Your system must also be operated by a qualified operator. Call EPA for more information on surface water requirements.

Contact Us!
US EPA Region 8 Drinking Water Unit Phone: 1-(800) 227-8917

How do I Arrange to Have My Water Tested?

1. Contact an EPA Region 8 Certified Laboratory
   Contact a laboratory that is certified by EPA Region 8 for that *specific* contaminant. This information may be found at https://www.epa.gov/region8-waterops by selecting the Certified Laboratories link under the Monitoring and Sampling section. If you do not use an EPA Region 8 certified laboratory for each *specific* contaminant, the results will not be accepted. Ask the lab if they will send all sample results for all contaminants to EPA Region 8, or if you must send the results to EPA.

2. Provide the Lab with Complete Reporting Information
   Tell the laboratory that you are a public water system (PWS). Your monitoring schedule provided by EPA contains most of the information you need to complete the lab forms. You can even send a copy of the monitoring requirements to the laboratory to arrange for the specific testing needed at your system.

3. Collect the Drinking Water Sample
   The laboratory will send you a sampling kit which includes sample bottles and instructions on how to properly collect the drinking water sample. Call the laboratory if you have any questions after reading the instructions. Please be sure to include your PWS number on *all* sample forms.

- Revised Total Coliform Rule (RTCR) bacteria samples should be collected in the distribution system at location(s) identified in your sample siting plan (contact EPA if you need assistance in creating a sample siting plan). Make sure to sample early in your monitoring period, at the beginning of the month and preferably on a Monday in case repeat sampling is required.

  Avoid: Sampling from new faucets or newly repaired faucets, leaky faucets, outdoor faucets (or those faucets connected to softeners, hot water heaters or pressure tanks), and setting down the bottle lid or exposing the inside of the lid or bottle to anything other than the sample water (do not rinse or remove the white powder in the bottle).

  Do: Take your time; sanitize the sample tap and your hands; flush the tap for 5 minutes before taking the sample; and minimize the time the sample bottle is opened- open the bottle immediately prior to gathering your sample and replace the lid as soon as the sample is collected. Keep in mind that improper sampling can result in a positive/unsafe sample that can lead to costly follow-up sampling.

Contact Us!

US EPA Region 8
Drinking Water Unit
1595 Wynkoop Street
(8WP-SD)
Denver, CO 80202-1129
Phone: 1-(800) 227-8917
Email: r8dwu@epa.gov
Fax: 1-877-876-9101

- Nitrate and Nitrite Rule samples should be collected during your open season at each entry point to the distribution system after treatment. Please refer to your Monitoring and Reporting Requirements document to ensure you sample at all required sampling point locations. Write those locations in the *sampling location* on your laboratory form.

- Ground Water Rule samples must be collected within 24 hours of being notified of a total coliform positive *routine* sample under the Revised Total Coliform Rule (RTCR). You must sample and analyze all ground water sources in use at the time of the original TC+ for the presence of E. coli for the same number of *routine R*TCR positive samples. (Note: If you have three *routine* RTCR positive samples you will need to collect three source samples from *each* ground water source.) The Ground Water Rule (GWR) sampling form must be used, which may be found at: https://www.epa.gov/region8-waterops/reporting-forms-and-instructions-reporting-forms. Please refer to your Monitoring and Reporting Requirements document to ensure you sample at all required sampling point codes.

- Surface Water Treatment Rule on-site monitoring is required to ensure your treatment system is working: includes filtered water turbidity, chlorine residual at the point of entry, status of UV unit (if used), and chlorine residual with your Revised Total Coliform Rule bacteria sample(s). Additional onsite monitoring may be necessary depending on the type of filtration utilized.

What Do I Do After I Receive My Test Results?

1. Nitrate/Nitrite Rule Sample Results

If your results exceed 10.4 mg/L for nitrates, and 1 mg/L for nitrites, call EPA immediately at 1-800-227-8917 and take a confirmation sample within 24 hours to verify if dangerous levels exist in your water. Otherwise, send a copy of your results to EPA (see contact information on page 10). Labs do not automatically submit these sample results to EPA. It is your responsibility.

2. Surface Water Treatment Rules Results

If on-site monitoring of filtered water turbidity exceeds your specific system limits, or if the chlorine residual at the point of entry drops below 0.2 mg/L, you must notify EPA within 24 hours by calling 1-800-227-8917. Otherwise, please send your monthly reports to EPA.

3. Revised Total Coliform Rule (RTCR) Sample Results

If your routine sample was safe or absent, continue to sample as required by your monitoring schedule. If you had an unsafe or positive (total coliform present) sample, follow the flowchart on the next page or consult your Monitoring and Reporting Requirements. Do not shock chlorinate the system before collecting repeat, routine or source samples unless you have prior approval from EPA Region 8. If you have an *E. coli* positive you must call EPA and speak with the RTCR Manager immediately.

4. Ground Water Rule (GWR) Sample Results

If you have an *E. coli* positive source sample, you must call EPA immediately and speak with the GWR Manager. Within 24 hours, collect five additional GWR source samples from the same source that had the EC+. If you previously took a combined source sample, you will need to sample all sources separately. Tier 1 public notice must be provided.

If the source is solely total coliform positive, you should inspect your system to identify the cause of the positive result, but there is no further sampling requirement.

Follow Your RTCR Sampling Plan and the Flowchart Below to Take Your Required Total Coliform Samples

STEPS TO TAKE AFTER A *ROUTINE* POSITIVE/UNSAFE TOTAL COLIFORM SAMPLE

Within 24 hours of notification of the *routine* TC+ sample result:
Collect 3 repeat samples in the distribution system for each positive sample; use your regular lab form and mark the samples as RTCR repeats

Collect all GWR source samples if you use a ground water source (e.g., well)

Remember: Anytime you have an E.coli positive (EC+) sample call EPA IMMEDIATELY at 1-800-227-8917 and ask to speak to the RTCR Manager

Are any of the 3 repeat samples positive ***or***
is there more than one *routine* sample that is positive ***or***
did you fail to collect all 3 repeat samples?

NO

1. Conduct routine sampling the following month.

YES

1. You will need to complete a Level 1 Assessment** and submit it to the EPA R8 Office within 30 days.

2. Conduct routine sampling the following month.

**** If any of the following criteria are met, you must contact the RTCR Manager immediately at 1-800-277-8917, and a Level 2 Assessment must be completed by a party approved by EPA within 30 days:**

- **You previously triggered a Level 1 Assessment within a rolling 12 month period;**
- **You have any combination of TC+ and EC+ routine and repeat samples; or**
- **If you failed to collect all required repeat samples after an EC+ routine sample result.**

Additional RTCR information and RTCR Assessment forms can be found at:
https://www.epa.gov/region8-waterops/revised-total-coliform-rule.

When Must I call EPA?

- Any *E.coli* positive water sample result
- When the average result from Nitrate initial and confirmation samples exceeds 10.4 mg/L
- Anytime your on-site monitoring of filtered water turbidity exceeds your specific system limits, or if the chlorine residual at the point of entry drops below 0.2 mg/L
- When animal contamination is present in finished water storage tanks
- Failure or interruption of a key water treatment process
- Natural disasters that disrupt the water supply or distribution system
- Chemical spills or other contamination that may impact the water supply

What Do I Do With Copies of the Test Results?

Send copies of the results to EPA using one of the following methods. Include your PWS name and PWS ID# on all correspondence.

Email: R8DWU@epa.gov

Fax: 1-(877) 876-9101

Mail: US EPA Region 8
Drinking Water Unit (8WP-SD)
1595 Wynkoop St.

You are required to keep a copy of all laboratory sample results and correspondence with EPA.

- RTCR and Ground Water Rule records must be kept for 5 years
- Nitrate/Nitrite records must be kept for 10 years
- Surface Water Treatment Rule records of onsite turbidity and chlorine monitoring must be kept for 10 years

WHAT ARE SANITARY SURVEYS?

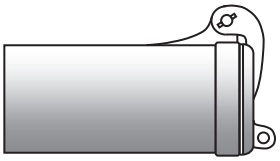
At least once every five years you will be contacted by EPA or an EPA contractor to set up a visit at your facility for a sanitary survey. The purpose of the sanitary survey is to evaluate and document the capabilities of the water system's sources, treatment, storage, distribution network, operation and maintenance, and overall management to ensure the provision of safe water. Sanitary surveys can help identify deficiencies in the water system before any contamination of the public water supply occurs. You can go to the following website to learn more about how to prepare for a sanitary survey: https://www.epa.gov/region8-waterops/system-and-operational-improvements-sanitary-surveys.

After a sanitary survey is completed by an EPA employee or contractor, you will receive a letter and report in the mail a few months later. Within the letter, you may see a list of significant deficiencies and/or recommendations that require your attention. The letter will state if you are required to correct any significant deficiencies. You must keep sanitary survey records and follow up action records for 10 years.

HOW TO PREVENT CONTAMINATION

- The first barrier against contaminants entering a water system is maintaining adequate positive pressure in the water lines. If a water system loses pressure due to a line break or power and/or pump failure, contaminants can be drawn into the water from the surrounding soil. Call EPA immediately for guidance on what to do if your system experiences a loss of pressure.

Tank and well vents should have 24-mesh non-corrodible screen (0.03 inch openings)



- Learn how to prevent contamination from entering wells and water storage tanks at https://www.epa.gov/region8-waterops/system-and-operational-improvements-sanitary-surveys; click on the blue underlined words for Technical Tips.

- Inspect wells routinely for problems such as: lack of bolts in the well cap, lack of 24-mesh screen on the well vent, or broken/missing well cap or sanitary seal.

- Tank and well vents should have 24-mesh non-corrodible screen (0.03 inch openings)

- Eliminate cross-connections and install backflow prevention devices. Connections that can contaminate your water line include:
  * Hand-held pesticide or herbicide applicators attached to garden hoses
  * Stock tanks with hoses lying in the tank without an air gap

- Eliminate rodents and their dropping from facilities utilizing information contained at the following site: https://www.cdc.gov/hantavirus/.

- Avoid storing, mixing or using pesticides, fertilizers, degreasers, fuels, and other pollutants near the well.

- Maintain water treatment units as recommended by manufacturers (replace filter cartridges, regenerate salt, etc.).

- Disinfect drinking water wells after repairs or modifications.

- Keep your spring areas dry and your spring collection boxes watertight.

REQUIRED STARTUP PROCEDURES FOR SEASONAL SYSTEMS

If your public water system is open only part of the year, it is considered a seasonal system. Under the Revised Total Coliform Rule (RTCR), you are *required* to complete a Seasonal Start-up Checklist and submit the form to our office prior to serving water to the public for the season. You will be in violation of the RTCR and subject to enforcement action if you serve water to the public before completing the start-up procedures and submitting this form to our office.

The Seasonal Start-up Checklist form can be found at the following site: https://www.epa.gov/region8-waterops/revised-total-coliform-rule-seasonal-startup-checklist. Please send the filled out form and certification to EPA at R8dwu@epa.gov (Attention: RTCR Manager) *prior* to serving water to the public each season.

REPORTING SYSTEM CHANGES

Please notify EPA before you make any changes to the water system's source of water, treatment equipment, system facilities, ownership, contact person or number of people served. Please fill out the Change to PWS form found on the reporting forms page at https://www.epa.gov/region8-waterops/reporting-forms-and-instructions-reporting-forms and send it to EPA, or call EPA to request the form.

Emergency Response Plan for Transient Ground Water Systems

All public water systems must have an Emergency Response Plan (ERP) that details emergency operations procedures for possible foreseeable emergencies such as power outage, loss of water, equipment failure, and other emergency conditions. When a sanitary surveyor conducts a sanitary survey on your system they will ask if you have an ERP. Please fill this form out now, and keep it handy.

System Name: _____
Public Water System (PWS) Number: **WY56**_____
Operator Name/Cell #: _____
Back-up Operator Name/Cell #: _____
Owner Name/Cell #: _____
Population Served: _____ **Number of Service Connections:** _____
Chemicals Used to Treat the Water: _____
Name/# of Chemical Supplier: _____

Life Threatening Emergency #: _____
County Sheriff #: _____
Critical/Vulnerable Customer Contact #s: _____
_____
EPA Emergency Contact (Monday - Friday 9-4 pm Mountain Time) #: 1-800-227-8917
EPA After Hours Emergency Contact Number: 303-294-1788. Tell the operator you are drinking water operator with an emergency situation.

Wyoming Association of Rural Water Systems #: 307-436-8636
WY DEQ District Engineer Name and #: _____
Alternate Sources of Drinking Water #:_____
Power Company #: _____ **Electrician #:** _____
Plumber #: _____ **Parts Supplier #:** _____
Wyoming Water Agency Response Network #: 307-637-6471 **Website:** www.wyowarn.org

TOTAL COLIFORM/E. COLI POSITIVE SAMPLE, see the following website:
https://www.epa.gov/region8-waterops/emergencies-and-security-follow-unsafe-total-coliform-rule-positive-sample

LOSS OF PRESSURE/WATER OUTAGE ACTION PLAN*
_____
_____

WATER CONTAMINATION ACTION PLAN*
_____
Shut-off valve location and instructions: _____
Location of spare or repair parts: _____

ALWAYS CALL THE EPA TOTAL COLIFORM RULE OR GROUND WATER RULE MANAGER IF YOU HAVE AN E. COLI POSITIVE/UNSAFE SAMPLE AT 1-800-227-8917

***Quick Emergency reference material/Public Notices for Loss of Pressure, Boil Orders, Do Not Drink, etc. can be found at:** https://www.epa.gov/region8-waterops. Click the topic under the top "Emergencies and Preparedness" header.

SPECIAL THANKS TO THE FOLLOWING:

EPA New England
Wyoming Office of Tourism
Wyoming Association of Rural Water Systems
Washington State Department of Health's Office of Drinking Water
Maine Center for Disease Control & Prevention's Office of Public Health & Human Services

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 8

Drinking Water Unit
1595 Wynkoop Street (8WP-SD)
Denver, CO 80202-1129
Phone: 1-(800) 227-8917
Email: r8dwu@epa.gov
Fax: 1-877-876-9101
https://www.epa.gov/region8-waterops

EPA
United States
Environmental Protection
Agency