



**OFFICE OF DRINKING WATER**  
**Group A Public Water Supplies**  
**Chapter 246-290 WAC**

| ACTIVITY   | ANTICIPATED COMPLETION DATE | DATE COMPLETED |
|--|-----------------------------|----------------|
| STATE BOARD OF HEALTH DECISION TO CONSIDER RULE MAKING                           | NOVEMBER 2013               | November 2013  |
| FILE CR-101  | FEBRUARY 2014               | February 2014  |
| DRAFT RULE LANGUAGE CHANGES RELATED TO PLANNING AND DISINFECTION                 | OCTOBER 2014                | November 2014  |
| STAKEHOLDER REVIEW PERIOD FOR DRAFT CHANGES RELATED TO PLANNING AND DISINFECTION | NOVEMBER 2014               | January 2015   |
| DRAFT RULE LANGUAGE CHANGES RELATED TO RTCR                                      | SEPTEMBER 2015              |                |
| STAKEHOLDER REVIEW PERIOD FOR DRAFT CHANGES RELATED TO RTCR                      | OCTOBER 2015                |                |
| SBOH BRIEFING  | JANUARY 2016                |                |
| FINALIZE DRAFT RULE  | FEBRUARY 2016               |                |
| PREPARE SIGNIFICANT ANALYSIS AND SMALL BUSINESS IMPACT STATEMENT                 | MARCH 2016                  |                |
| FILE CR 102  | MAY 2016                    |                |
| PUBLIC HEARING   | JULY 2016                   |                |
| PREPARE CONCISE EXPLANATORY STATEMENT  | AUGUST 2016                 |                |
| FILE CR-103  | OCTOBER 2016                |                |
| RULE EFFECTIVE   | NOVEMBER 2016               |                |

**Purpose**

The intent of the rule making is to adopt the U.S. Environmental Protection Agency's finalized Revised Total Coliform Rule (RTCR) and to amend existing planning and disinfection requirements in chapter 246-290 WAC, Group A public water supplies.

**Recent Issues and Activities**

Completed the Stakeholder Review Period for draft changes related to planning and disinfection.

**Next Steps**

Consideration of comments from stakeholders on draft changes related to planning and disinfection. Continue to draft changes related to RTCR, planning and disinfection.

*For detailed information about the process, please contact Brad Burnham, at 360-236-3158 or [Brad.Burnham@doh.wa.gov](mailto:Brad.Burnham@doh.wa.gov)*

On February 13, 2013, the U.S. Environmental Protection Agency (EPA) published the Revised Total Coliform Rule (RTCR) in the Federal Register. This rule will apply to all public water systems in the U.S., and when compliance begins on April 1, 2016, all water system will see changes to how they monitor coliform and react to positive samples.

There are some 8,000 total coliform MCL violations in the U.S. each year, and the RTCR will require public water system experiencing MCL violations, or newly defined Treatment Technique Violations, to find and correct the probable causes of positive samples.

The RTCR includes:

- Monitoring Changes,
- Public Notification Changes,
- MCL Changes and Treatment Technique Violation,
- New Assessment Requirements, and
- Corrective Action Requirements

## **Monitoring Changes**

While retaining the basic monitoring requirements of the 1989 Total Coliform Rule (TCR), the RTCR links monitoring frequency to water quality and system performance by:

- 1- Providing standard criteria that public small systems with water wells as a water source;
- 2- Requiring increased monitoring for small public water systems with high-risk or unacceptable compliance history; and
- 3- Requiring new monitoring requirements for seasonal systems such as campgrounds and parks.

In general, public water systems continue on their existing TCR monitoring schedule when the RTCR is effective. Ground water (GW) systems serving 1,000 or fewer persons remain on their TCR schedule unless or until:

- Non-community water systems (NCWSs) on quarterly/annual monitoring remain on that schedule unless/until they have an event that triggers increased monitoring.
- Community water systems (CWSs) on reduced monitoring remain on that schedule unless/until they have an event that triggers them to go to routine monitoring.
- Monitoring schedules will be evaluated during the "special monitoring evaluation" conducted by the state as part of the periodic sanitary survey.

## **Public Notification Changes**

The RTCR eliminates public notification requirements based on the presence of total coliforms in two or more sample in one month. Instead, the RTCR requires public notification when an E. coli MCL violation occurs, or when a public water system fails to conduct the required assessment or corrective action identified in an assessment.

## **MCL Changes and Treatment Technique Violation**

The RTCR establishes a Maximum Contaminant Level Goal (MCLG) and an MCL for E. coli; however the Rule eliminates the MCLG and MCL for total coliforms. The total coliform MCL and MCLG are replaced with a treatment technique for coliforms that requires assessment and corrective action.

1- The revised rule sets an MCLG of 0 for E. coli, and the current definition of the "acute" total coliform MCL violation under the 1989 TCR has been maintained as the MCL for E. coli under the RTCR. The MCL for E. coli is based on the monitoring results for total coliforms and E. coli. An MCL violation occurs when:

- A system has an E. coli-positive repeat sample following a total coliform positive routine sample; or
- A routine sample is E. coli-positive and one of its associated repeat samples is total coliform-positive; or
- A routine sample is E. coli-positive and one of its associated repeat samples is E. coli-positive; or
- A system fails to test for E. coli when any repeat sample tests positive for total coliforms; or
- A system fails to take all required repeat samples following a routine sample that is positive for E. coli.

2- Under the new treatment technique for coliforms, total coliforms serve as an indicator of a potential pathway of contamination into the distribution system. A public water system that exceeds a specified frequency of total coliform occurrence must conduct a "Level 1" assessment to determine if there are any sanitary defects and, if any are found, they must correct them within 30 days. A Level 1 assessment is required if:

- For systems taking 40 or more samples per month, the public water system exceeds 5.0 percent total coliform-positive samples for the month; or
- For systems taking fewer than 40 samples per month, the public water system has two or more total coliform-positive samples in the same month; or
- The public water system fails to take every required repeat sample after any single routine total coliform-positive sample.

3- In addition, under the new treatment technique requirements, a public water system that incurs an E. coli MCL violation must conduct a "Level 2" assessment and correct any sanitary defects found. A Level 2 assessment is also needed if the public water system has:

- A second Level 1 treatment technique trigger within a rolling 12-month period, unless the initial Level 1 treatment technique trigger was based on exceeding the allowable number of total coliform positive samples, the state has determined a likely reason for the total coliform-positive samples that caused the initial Level 1 treatment technique trigger, and the state establishes that the system has fully corrected the problem; or
- A system with approved reduced annual monitoring has a Level 1 treatment technique trigger in two consecutive years.

**New Assessment Requirements**

As part of the treatment technique requirements, all public water systems must assess their systems when monitoring results show that the system may be vulnerable to contamination. Systems must conduct either a Level 1 assessment or a more detailed Level 2 assessment depending on the level of concern raised by the results of indicator sampling.

**Level 1 Assessment**

A Level 1 assessment must be conducted when a public water system exceeds one or more of the Level 1 treatment technique triggers specified previously. Under the rule, this self-assessment consists of a basic examination of the source water, treatment, distribution system and relevant operational practices. The public water system should look at conditions that could have occurred prior to and caused the total coliform-positive sample.

In the draft guidance manual, EPA has identified questions that the public water system should answer during a Level 1 assessment, these include:

**1- Review with all Operators and Staff?**

- any interruptions in the treatment process
- any reported loss of pressure events (pressure < 5 psi)
- operation and maintenance activities that could have introduced total coliform
- reported vandalism and/or unauthorized access to facilities
- visible indicators of unsanitary conditions reported
- any firefighting event, flushing operation, sheared hydrant, etc.
- any sites with low or inadequate disinfectant residual or sites where it is difficult to maintain a residual
- any other water quality parameters measured where results were out of the ordinary

**2- Recent Treatment / Operation Adjustments?**

- sources introduced
- treatment or operational changes
- potential sources of contamination

**3- Evaluate sample site**

- condition or location of tap
- regular use of connection

**4- Sample Collection Protocol**

- flush tap
- remove aerator
- no swivel
- fresh sample bottles

- sample storage acceptable
- 5- **Distribution System**
  - system pressure
  - cross connection
  - pump station
  - air relief valves
  - fire hydrants or blow off
  - breaks
  - repairs
- 6- **Storage Tank**
  - screens
  - security
  - access opening
  - condition of tank
  - vent
  - drain overflow
  - pressure tank
  - O&M
- 7- **Treatment Process**
  - interruptions
  - POE/POU
  - softeners
  - O&M
- 8- **Source - Well**
  - sanitary seal
  - vent screened
  - air gap
  - cross connection
  - security
  - pump to waste line

**Level 2 Assessment**

A Level 2 assessment is conducted when a public water system exceeds one or more of the Level 2 treatment technique triggers. It is a more comprehensive examination of the system and its monitoring and operational practices than the Level 1 assessment.

Level 2 assessments must be conducted by a party approved by the state, a third party, or the public water system where the system has staff or management with the required certification or qualifications specified by the state. The public water system must also comply with any expedited actions or additional actions required by the state in the case of an E. coli MCL violation.

In the draft guidance manual, EPA has identified questions that should be answered during a Level 2 assessment, these include:

**1- Review with all Staff:**

a. Were there any operation and maintenance activities that could have introduced total coliforms?

b. Have there been any interruptions in the treatment process?

c. Has the system lost pressure to less than 5 psi?

d. Have there been any vandalism and/or unauthorized access to facilities?

e. Are there any visible indicators of unsanitary conditions observed?

f. Have there been any analytical results or any additional samples collected, including source samples which were positive (not for compliance)?

g. Have there been any sites with low or inadequate disinfectant residual? Are there sites where it is difficult to maintain a residual without flushing?

h. Were any other water quality parameters measured and were any results out of the ordinary?

i. Have there been any community illness suspected of being waterborne (e.g., Does the community public health official indicate that an outbreak has occurred.)

j. Did the water system receive any TCR monitoring violations in the past 12 months? If yes, when.

k. What was the most recent date on which satisfactory total coliform samples were taken?

l. Have there been a fire fighting event, flushing operation, sheared hydrant, etc.

m. Other comments on records and maintenance?

**2- Recent Treatment or Operation Events?**

a. Have any inactive sources recently been introduced into the system (e.g., auxiliary systems)?

b. Have there been any new sources introduced into the system?

c. Is there evidence of any potential sources of contamination (main breaks, low pressure, high turbidity, loss of disinfection, etc.)?

**3- Evaluate sample site**

a. What is the condition of the tap?

b. What is the location of the tap?

c. What is the regular use of the connection?

- d. Have there been any plumbing changes or construction? If yes, when and what was the repair or change?
- e. Have there been any plumbing breaks or failure? If yes, when?
- f. List any identified cross connections after the service connection or in premise plumbing.
- g. Were all of the backflow prevention devices present, operational and maintained?
- h. Were there any low pressure events or changes in water pressure after the service connection or in the premise plumbing? If yes, when?
- i. Are there any treatment devices after the service connection or in premise?
- j. Other comments on sample site?

#### **4- Sample Collection Protocol**

- a. Flush tap, remove aerator, no swivel, fresh sample bottles, sample storage acceptable

#### **5- Distribution System**

- a. System pressure: Is there evidence that the system experienced low or negative pressure? If yes, when?
- b. List any identified cross connections.
- c. Pump station: Are there any sanitary defects in the pump station? Are pump(s) operable?
- d. Last pump maintenance/service date. Maintenance Performed?
- e. Air relief valves: Is the valve vault subject to flooding or does the vent terminate below grade?
- f. Fire hydrant/blow off: Are any located in an area with a high water table or pits?
- g. Is the distribution system secured to prevent unauthorized access?
- h. Are the backflow prevention devices at high risk sites present, operational and maintained?
- i. Have there been any water main repairs or additions? If yes when, and what was the repair or addition?
- j. Have there been any water main breaks? If yes, when?
- k. Was there any scheduled flushing of the distribution system? If yes, when?
- l. Is there any evidence of intentional contamination in the distribution system?
- m. Other comments on the distribution information.

#### **6- Storage Facilities**

- a. Are the overflow and vents properly screened?
- b. Is the facility secured to prevent unauthorized access?
- c. Does the access opening have the proper gasket and seal tightly?

- d. Could the physical condition of tank be a source of contamination?
- e. Is the vent turned down and maintaining an approved air gap at the termination point?
- f. Does the drain/overflow line terminate at a minimum of 12" air gap?
- g. If present, is the pressure tank maintaining an appropriate minimum pressure?
- h. Has proper O&M been performed?
- i. Was there any observed physical deterioration of the tank?
- j. Were there any observed leaks?
- k. Is there any evidence of intentional contamination at the storage tank?
- l. Has there been any facility maintenance (i.e. painting/coating)? If yes, when?
- m. Is facility maintenance occurring per appropriate schedule?
- n. Does the tank "float" on the distribution system or are there separate inlet and outlet lines?
- o. What is the measured chlorine residual (total/free) of the water exiting the storage tank today?
- p. Are there any unsealed openings in the storage facility such as access doors, vents or joints?
- q. Other comments on the storage system

**7- Treatment Process.**

- a. Treatment devices operational and maintained?
- b. Is there any recent installation or repair of treatment equipment?
- c. Were there any recent changes in the treatment process (e.g., addition of a process, change in chemical or dosage)? If yes, when, what was the change?
- d. Were there any interruptions of treatment (lapses in chemical feed, turbidity excursions, disinfection)? If yes which part, when and for how long?
- e. What is the free chlorine residual measured immediately downstream from the point of application?
- f. Did a review of the filter turbidity profiles reveal any anomalies?
- g. Were there any failures to meet the C x T calculations?
- h. Were the flow rates above the rated capacity?
- i. Were there any anomalies on the settled water turbidities?
- j. Other comments on the treatment system.

**8- Source - Well**

- a. Is the sanitary seal intact?
- b. Is the vent screened?



- c. Does the vent and pump to waste terminate in an approved air gap?
- d. Are there any unprotected cross connections at the wellhead?
- e. Is the well: Primary\Backup\Emergency\Not an Approved Source
- f. How far does the casing extend above grade?
- g. Is the well cap vented?
- h. Is there evidence of standing water near the wellhead?
- i. Is the wellhead secured to prevent unauthorized access?
- j. Have there been any sewer spills, source water spills or other disturbances?
- k. Other comments on the well system. (Are there aspects of well construction and operation that would bear on observed positives?)

**9- External Events**

- a. Has there been heavy rainfall?
- b. Has there been any rapid snow melt or flooding?
- c. Have there been changes in source water (e.g., significant drop in water table, well levels, reservoir capacity, etc.)
- d. Have there been any interruptions to electrical power?
- e. Have there been any extremes in heat or cold?

**Corrective Action Requirements**

RTCR will require Public Water Systems to correct all sanitary defects identified during a Level 1 or Level 2 assessment. Public Water Systems will be expected to make corrections expeditiously. RTCR expects sanitary defects found in the assessment to be corrected within 30 days and formal report to the Department of Health be submitted documenting that the corrections have been completed.

If the corrections complicated or require engineering or other reasonable delays and cannot be completed within the 30 day period the Department and Public Water System should collectively develop an appropriate schedule for correcting the sanitary defects. The purpose of any schedule would be to arrange the most appropriate corrective action be completed with the least delay.

There are mandatory elements that must be included in a negotiated schedule to extend the 30 day time period to correct sanitary defects. The schedule must include timelines with milestones for completing corrective actions and temporary public health protection measures. The Public Water System must comply with the schedule and report to the Department as each corrective action identified in the schedule is completed. The Department of Health must approve the schedule before implementation by the Public Water System.

# Revised Total Coliform Rule: A Quick Reference Guide

## Overview of the Rule

|                            |   |
|----------------------------|---|
| <b>Title*</b>              | Revised Total Coliform Rule (RTCR)<br>78 FR 10269, February 13, 2013, Vol. 78, No. 30   |
| <b>Purpose</b>             | Increase public health protection through the reduction of potential pathways of entry for fecal contamination into distribution systems.   |
| <b>General Description</b> | The RTCR establishes a maximum contaminant level (MCL) for <i>E. coli</i> and uses <i>E. coli</i> and total coliforms to initiate a “find and fix” approach to address fecal contamination that could enter into the distribution system. It requires public water systems (PWSs) to perform assessments to identify sanitary defects and subsequently take action to correct them. |
| <b>Utilities Covered</b>   | The RTCR applies to all PWSs.   |

\* This document provides a summary of federal drinking water requirements; to ensure full compliance, please consult the federal regulations at 40 CFR 141 and any approved state requirements.

## Public Health Benefits

Implementation of the RTCR will result in:

- ▶ A decrease in the pathways by which fecal contamination can enter the drinking water distribution system.
- ▶ Reduction in fecal contamination *should* reduce the potential risk from all waterborne pathogens including bacteria, viruses, parasitic protozoa, and their associated illnesses.

## Critical Deadlines and Requirements

### For Public Water Systems

|                                    |  |
|------------------------------------|--|
| <b>Before<br/>April 1, 2016</b>    | <ul style="list-style-type: none"> <li>▶ PWSs must develop a written sample siting plan that identifies the system’s sample collection schedule and all sample sites, including sites for routine and repeat monitoring.</li> <li>▶ PWSs monitoring quarterly or annually must also identify additional routine monitoring sites in their sample siting plans.</li> <li>▶ Sample siting plans are subject to state review and revision.</li> </ul> |
| <b>Beginning<br/>April 1, 2016</b> | PWSs must comply with the RTCR requirements unless the state selects an earlier implementation date.   |

### For State Drinking Water Agencies

|  |   |
|--|---|
| <b>By<br/>February 13, 2015</b>            | <p>State submits final primacy program revision package to the EPA Region, including:</p> <ul style="list-style-type: none"> <li>▶ Adopted State Regulations.</li> <li>▶ Regulation Crosswalk.</li> <li>▶ 40 CFR 142.10 Primacy Update Checklist.</li> <li>▶ 40 CFR 142.14 and 142.15 Reporting and Recordkeeping.</li> <li>▶ 40 CFR 142.16 Special Primacy Requirements.</li> <li>▶ Attorney General’s Enforceability Certification.</li> </ul> <p>NOTE: EPA regulations allow states until February 13, 2015, for this submittal. An extension of up to 2 years may be requested by the state.</p>  |
| <b>Before<br/>February 13, 2015</b>        | <p>State must submit a primacy program revision extension request if it does not plan to submit the final primacy program revision package by February 13, 2015. The state extension request is submitted to the EPA Region including all of the information required in 40 CFR 142.12(b):</p> <ul style="list-style-type: none"> <li>▶ A schedule (not to exceed 2 years) for the submission of the final primacy program revision package.</li> <li>▶ Justification that meets the federal requirements for an extension request.</li> <li>▶ Confirmation that the state is implementing the RTCR within its scope of its current authorities and capabilities.</li> <li>▶ An approved workload agreement with the EPA Region.</li> </ul> |
| <b>No later than<br/>February 13, 2017</b> | For states with an approved extension, submit complete and final program revision package by the agreed upon extension date.  |

## What are the Major Provisions?

### Routine Sampling Requirements

- ▶ Total coliform samples must be collected by PWSs at sites which are representative of water quality throughout the distribution system according to a written sample siting plan subject to state review and revision.
- ▶ For PWSs collecting more than one sample per month, collect total coliform samples at regular intervals throughout the month, except that ground water systems serving 4,900 or fewer people may collect all required samples on a single day if the samples are taken from different sites.



## Routine Sampling Requirements (cont.)

- ▶ Each total coliform-positive (TC+) routine sample must be tested for the presence of *E. coli*.
- ▶ If any TC+ sample is also *E. coli*-positive (EC+), then the EC+ sample result must be reported to the state by the end of the day that the PWS is notified.
- ▶ If any routine sample is TC+, repeat samples are required.
  - PWSs on quarterly or annual monitoring must take a minimum of three additional routine samples (known as additional routine monitoring) the month following a TC+ routine or repeat sample.
- ▶ Reduced monitoring may be available for PWSs using only ground water and serving 1,000 or fewer persons that meet certain additional PWS criteria.

## Repeat Sampling Requirements

|   |   |
|---|---|
| <b>Within 24 hours of learning of a TC+ routine sample result, at least 3 repeat samples must be collected and analyzed for total coliform:</b> | ▶ One repeat sample must be collected from the same tap as the original sample.   |
|   | ▶ One repeat sample must be collected from within five service connections upstream.  |
| <b>If one or more repeat sample is TC+:</b>   | ▶ One repeat sample must be collected from within five service connections downstream.  |
|   | ▶ The PWS may propose alternative repeat monitoring locations that are expected to better represent pathways of contamination into the distribution system. |
| <b>If one or more repeat sample is TC+:</b>   | ▶ The TC+ sample must be analyzed for the presence of <i>E. coli</i> .  |
|   | ▶ If any repeat TC+ sample is also EC+, then the EC+ sample result must be reported to the state by the end of the day that the PWS is notified.            |
|   | ▶ The PWS must collect another set of repeat samples, unless an assessment has been triggered and the PWS has notified the state.                           |

## Assessments and Corrective Action

The RTCR requires PWSs that have an indication of coliform contamination (e.g., as a result of TC+ samples, *E. coli* MCL violations, performance failure) to assess the problem and take corrective action. There are two levels of assessments (i.e., Level 1 and Level 2) based on the severity or frequency of the problem.

|   |   |
|---|---|
| <b>Purpose of Level 1 and Level 2 Assessments</b> | <p>To find sanitary defects at the PWS including:</p> <ul style="list-style-type: none"> <li>▶ Sanitary defects that could provide a pathway of entry for microbial contamination, or</li> <li>▶ Sanitary defects that indicate failure (existing or potential) of protective barriers against microbial contamination.</li> </ul> <p><i>Guidance on how to conduct Level 1 and Level 2 Assessments and how to correct sanitary defects found during the Assessments can be found at:</i><br/> <a href="http://water.epa.gov/lawsregs/rulesregs/sdwa/tcr/regulation_revisions.cfm">http://water.epa.gov/lawsregs/rulesregs/sdwa/tcr/regulation_revisions.cfm</a>.</p> |
| <b>Deadline for Completing Corrective Actions</b> | <p>When sanitary defects are identified during a Level 1 or Level 2 Assessment, they should be corrected as soon as possible to protect public health. The PWS must complete corrective actions by one of the following timeframes:</p> <ul style="list-style-type: none"> <li>▶ No later than the time the assessment form is submitted to the state, which must be within 30 days of triggering the assessment, or</li> <li>▶ Within state-approved timeframe which was proposed in the assessment form.</li> </ul>   |

## Level 1 Assessments

|                                       |   |
|---------------------------------------|---|
| <b>Conducting Level 1 Assessments</b> | ▶ Performed by the PWS owner or operator each time a Level 1 Assessment is triggered.   |
|                                       | ▶ Upon trigger of a Level 1 Assessment, the Level 1 Assessment form must be submitted within 30 days to the state.  |
| <b>Level 1 Assessment Triggers</b>    | <p>Level 1 Assessment is triggered if any one of the following occurs:</p> <ul style="list-style-type: none"> <li>▶ A PWS collecting fewer than 40 samples per month has 2 or more TC+ routine/ repeat samples in the same month.</li> <li>▶ A PWS collecting at least 40 samples per month has greater than 5.0 percent of the routine/ repeat samples in the same month that are TC+.</li> <li>▶ A PWS fails to take every required repeat sample after any single TC+ sample.</li> </ul> |

## Level 2 Assessments

|                                       |   |
|---------------------------------------|---|
| <b>Conducting Level 2 Assessments</b> | ▶ Performed by the state or state-approved entity each time a Level 2 Assessment is triggered.  |
|                                       | ▶ The PWS is responsible for ensuring that the Level 2 Assessment is conducted regardless of the entity conducting the Level 2 Assessment.  |
| <b>Level 2 Assessment Triggers</b>    | ▶ Upon trigger of a Level 2 Assessment, the Level 2 Assessment form must be submitted within 30 days to the state.  |
|                                       | <p>Level 2 Assessment is triggered if any one of the following occurs:</p> <ul style="list-style-type: none"> <li>▶ A PWS incurs an <i>E. coli</i> MCL violation.</li> <li>▶ A PWS has a second Level 1 Assessment within a rolling 12-month period.</li> <li>▶ A PWS on state-approved annual monitoring has a Level 1 Assessment trigger in 2 consecutive years.</li> </ul> |





## Seasonal System Provisions

The RTCR defines seasonal systems and specifies additional requirements for these types of PWSs:

- ▶ A seasonal system is defined as a non-community water system that is not operated as a PWS on a year-round basis and starts up and shuts down at the beginning and end of each operating season.

|   |   |
|---|---|
| <b>Start-up Procedures for Seasonal Systems</b> | At the beginning of each operating period, before serving water to the public, seasonal water systems must: <ul style="list-style-type: none"> <li>▶ Conduct state-approved start-up procedures.</li> <li>▶ Certify completion of state-approved start-up procedures.</li> <li>▶ An exemption from conducting state-approved start-up procedures may be available for seasonal systems that maintain pressure throughout the distribution system during non-operating periods.</li> </ul> |
|   | Examples of state-approved start-up procedures, which need to be completed prior to serving water to the public, may include one or more of the following: <ul style="list-style-type: none"> <li>▶ Disinfection.</li> <li>▶ Distribution system flushing.</li> <li>▶ Sampling for total coliform and <i>E. coli</i>.</li> <li>▶ Site visit by state.</li> <li>▶ Verification that any current or historical sanitary defects have been corrected.</li> </ul>                             |
| <b>Routine Monitoring for Seasonal Systems</b>  | <ul style="list-style-type: none"> <li>▶ The baseline monitoring frequency for seasonal systems is monthly.</li> <li>▶ A reduced monitoring frequency may be available for seasonal systems that use ground water only and serve fewer than 1,000 persons.</li> </ul>   |

## Other Provisions for the State Drinking Water Agency

|                                      |  |
|--------------------------------------|--|
| <b>Special Monitoring Evaluation</b> | The state must perform a special monitoring evaluation at all ground water systems serving 1,000 or fewer persons during each sanitary survey to review the status of the PWS and to determine whether the sample sites and monitoring schedule need to be modified. |
|--------------------------------------|--|

## Major Violations

|                                      |  |                           |
|--------------------------------------|--|---------------------------|
| <b><i>E. coli</i> MCL Violation</b>  | A PWS will receive an <i>E. coli</i> MCL violation when there is any combination of an EC+ sample result with a routine/repeat TC+ or EC+ sample result:   |                           |
|                                      | <b><i>E. coli</i> MCL Violation Occurs with the Following Sample Result Combination</b>  |                           |
|                                      | <b>Routine</b>   | <b>Repeat</b>             |
|                                      | <b>EC+</b>   | <b>TC+</b>                |
|                                      | <b>EC+</b>   | <b>Any missing sample</b> |
|                                      | <b>EC+</b>   | <b>EC+</b>                |
|                                      | <b>TC+</b>   | <b>EC+</b>                |
| <b>Treatment Technique Violation</b> | A PWS will receive a Treatment Technique violation when any of the following occur: <ul style="list-style-type: none"> <li>▶ Failure to conduct a Level 1 or Level 2 Assessment within 30 days of a trigger.</li> <li>▶ Failure to correct all sanitary defects from a Level 1 or Level 2 Assessment within 30 days of a trigger or in accordance with the state-approved timeframe.</li> <li>▶ Failure of a seasonal system to complete state-approved start-up procedures prior to serving water to the public.</li> </ul> |                           |

## Key Points for Public Water Systems to Remember

Find and correct sanitary defects as soon as you become aware of them.

- ▶ This can help reduce *E. coli* MCL violations, which trigger a Level 2 Assessment.
- ▶ This can help reduce TC+ sample results, which may trigger a Level 1 Assessment.

Make sure to collect all routine and repeat samples as required.

- ▶ Timely and correct monitoring can help reduce triggering a Level 1 or Level 2 Assessment because:
  - Failure to conduct repeat monitoring triggers a Level 1 Assessment.
  - A Level 1 Assessment triggered twice within a certain timeframe triggers a Level 2 Assessment.

For additional information on the RTCR:

Call the Safe Drinking Water Hotline at 1-800-426-4791; visit the EPA website at [http://water.epa.gov/lawsregs/rulesregs/sdwa/tcr/regulation\\_revisions.cfm](http://water.epa.gov/lawsregs/rulesregs/sdwa/tcr/regulation_revisions.cfm); or contact your state drinking water representative.