South Dakota
Drinking Water Program
Revised Total Coliform Rule (RTCR)
Level 1 Assessment Form

What is the purpose of this form?

The attached Revised Total Coliform Rule (RTCR) Level 1 Assessment form was designed for use by public water system (PWSs) and any Level 1 assessors to fulfill the requirements to perform an assessment.

Where do the PWSs submit the assessment form?

The completed form should be submitted to-SD Drinking Water Program (DWP)-DENR, 523 E Capital, Pierre SD 57501. Faxed to 605-773-5286. It can also be scanned/ emailed.

How do PWSs document the completion of the assessment?

The PWS must use this form to document completion of the Level 1 Assessment. The PWS must submit the completed form to the DWP within 30 days after they have learned that they have exceeded an RTCR treatment technique trigger. DWP makes the final determination on the adequacy and completeness of the assessment. DWP will review the assessment form and if it determines that the assessment is insufficient, it will consult with the system on follow-up efforts that may be required. PWSs should be familiar with the form and required submittals so that they are prepared for an assessment in advance, should one be required. For example, PWSs may wish to create a standard operating procedure (SOP) for what to do when coliform results trigger an assessment.

Why do systems need to conduct a Level 1 Assessment?

- The purpose of performing an assessment is to enhance public health protection by identifying the presence of **sanitary defects** and correcting all such defects identified. Performing assessments will also help identify if there are deficiencies or problems in the sampling practices.

- **Sanitary defects** are defined as "defects that could provide a pathway of entry for microbial contamination into the distribution system or that are indicative of a failure or imminent failure in a barrier that is already in place". Identifying and correcting sanitary defects early will provide some assurance that issues have been addressed that may compromise public health. The Level 1 Assessment should be conducted thoroughly enough to capture the possibility that there may be multiple sanitary defects. In some cases, a sanitary defect may not be found despite conducting a thorough assessment. Ideally, a well-performed Level 1 Assessment will prevent most systems from developing conditions that lead to fecal contamination.

When is a Level 1 Assessment required?

A Level 1 Assessment is triggered if RTCR sampling results in any one of the following scenarios:

1. For systems taking 40 or more RTCR samples per month, the system exceeds 5.0% total coliform positive samples for the month; or

2. For systems taking fewer than 40 RTCR samples per month, the system has more than one total coliform positive sample for the month; or

3. The system fails to take all required repeat samples after any single total coliform positive sample.

Who is responsible for conducting the Level 1 Assessment?

A Level 1 Assessment can be conducted by water system personnel. The PWS is ultimately responsible to make sure that the assessment is completed and submitted to the DWP.

South Dakota Drinking Water Program (SD DWP)
Revised Total Coliform Rule (RTCR) Level 1 Assessment Form

EPA ID#:	**Water System Name**:	**City/Town**:

Assessor Name:

Compliance Period (mm/yy): **Date Assessment Completed:**

INSTRUCTIONS:

A Level 1 Assessment must be done any time a water system has more than one positive RTCR sample in a month or if all repeat samples were not collected. The Level 1 Assessment is meant to be done by the water system's own personnel in order to evaluate the possible cause(s) of the positive sample(s).

In **Section A, "Assessment Details"-**Review and evaluate the listed elements typically found at a water system. Check (√) "Issue(s) identified" if any potential causes of contamination were identified. Check (√) "No issues" if no potential causes of contamination were identified. Check (√) "NA" if the section is not applicable to your water system.

In **Section B, "Description of Occurrence"-**Provide an explanation if any issues were identified as possible causes of positive samples.

In **Section C, "Corrective Action"-**Provide proposed corrective action(s) along with proposed date of correction if any issues were identified in Section B.

Return this form within 30 days after determination that a Level 1 Assessment must be done.

Section A-Assessment Details

1. GENERAL OBSERVATIONS/OPERATION/MANAGEMENT ☐ No issues ☐ Issue(s) identified ☐ NA**

Have any of the following occurred at sample sites prior to collecting bacteria samples?

- ☐ Low disinfectant residual (< 0.2 mg/l free/<0.5 mg/l total)
- ☐ Operation/maintenance activities
- ☐ Firefighting event
- ☐ Source of contamination identified
- ☐ Loss of pressure (<20 psi)
- ☐ Visible indicators of unsanitary conditions
- ☐ Signs of vandalism/forced entry
- ☐ Other:

Comments:

2. SAMPLING PROTOCOL/MONITORING/REPORTING ☐ No issues ☐ Issue(s) identified ☐ NA**

- ☐ Dirty or unsuitable sample tap
- ☐ Improper sample container used
- ☐ Aerator was not removed
- ☐ Unsanitary sample collection procedures or conditions
- ☐ Sampling locations not on RTCR sampling plan
- ☐ Other:
- ☐ Change in conditions at sample site
- ☐ Inadequate tap flushing
- ☐ Swivel-type faucet
- ☐ Frost-free hydrant used
- ☐ Improper number of samples taken

Comments:

3. TREATMENT PROCESS ☐ No issues ☐ Issue(s) identified ☐ NA**

- ☐ Change in flow rates at treatment plant
- ☐ Low disinfection residual (< 0.2 mg/l free/<0.5 mg/l total)
- ☐ Treatment chemicals ran out
- ☐ Treatment process added or changed
- ☐ New source added or change in sources used
- ☐ Turbidity measurements out of range
- ☐ Recent installation/repair
- ☐ O & M procedures not followed
- ☐ Interruption in treatment process
- ☐ Loss of power at treatment plant
- ☐ Water quality treatment parameters out of range
- ☐ Other:

Comments:

4. DISTRIBUTION SYSTEM/PUMPS ☐ No issues ☐ Issue(s) identified ☐ NA**

- ☐ Power loss in distribution system
- ☐ Standing water/debris in valve vault
- ☐ Low disinfection residuals (< 0.2 mg/l free/<0.5 total)
- ☐ Pump or valve failure
- ☐ Pressure loss/inadequate pressure (<20 psi)
- ☐ Improper surge control
- ☐ Main breaks
- ☐ Unprotected cross connection
- ☐ Operation of isolation valves resulting in breakage
- ☐ Flushing of fire hydrants or blow-offs
- ☐ Improper operation of valves
- ☐ Installation of new mains or construction activity
- ☐ Improper operation of pumps
- ☐ Illegal use of hydrants by public
- ☐ Leaks
- ☐ Increased water usage/higher velocities
- ☐ Other:

Comments:

5. STORAGE TANKS ☐ No issues ☐ Issue(s) identified ☐ NA**

- ☐ Improper maintenance practices
- ☐ Presence of dead animals/insects/birds/etc.
- ☐ Vents/overflows not screened properly
- ☐ Low disinfectant residual (< 0.2 mg/l free/<0.5 mg/l total)
- ☐ Hatch not sealed and tightly fitting
- ☐ Signs of vandalism/forced entry
- ☐ Incorrect operation of level control valves, altitude valves, and related appurtenances
- ☐ Deterioration, rust, holes, or other breaches in vent, overflow pipe, access hatch, screens, ladders, etc.
- ☐ Other:

Comments:

6. SOURCES - Well ☐ No issues ☐ Issue(s) identified ☐ NA**

- ☐ Defective/damaged well cap/well seal
- ☐ Well flooded
- ☐ Damaged pitless adaptor
- ☐ Damaged well casing
- ☐ Damaged/unscreened vent
- ☐ Other:

Comments:

Surface Water Supply ☐ No issues ☐ Issue(s) identified ☐ NA**

- ☐ Potential source of contamination identified
- ☐ Increase in turbidity
- ☐ Rapid snowmelt
- ☐ Flooding
- ☐ Heavy rainfall

Comments:

Spring ☐ No issues ☐ Issue(s) identified ☐ NA**

- ☐ Potential source of contamination
- ☐ Rapid snowmelt
- ☐ Heavy rainfall

☐ Infiltration of surface run-off ☐ Improper development/poorly maintained spring box ☐ Other:
Comments:

Purchased Water Supply (such as a rural water system) ☐ No issues ☐ Issue(s) identified ☐ NA**

☐ Water quality issues w/ supplier ☐ Low disinfectant residual from supplier (< 0.2 mg/l free/<0.5 mg/l total)
☐ Pressure loss/low pressure ☐ Other:
Comments:

7. OPERATOR CERTIFICATION ☐ No issues ☐ Issue(s) identified ☐ NA**

☐ Improperly certified operator for distribution system? ☐ Improperly certified operator for treatment system?
Comments:

** NA (not applicable) should be checked if PWS does not have that component (i.e. no spring, no storage tank, etc.)

Section B - Description of Occurrence Use this space to provide additional information that supports your findings (i.e. water quality and pressure monitoring data). Include corresponding dates with your findings.

☐ Check if PWS did not find any possible causes for the positive samples

Section C - Corrective Action Use this space to describe corrective action taken or proposed corrective action with corresponding dates.

Certification: I certify that the information contained herein is true, accurate and complete to the best of my knowledge and belief.

Print Name: _____ Title: _____

Signature: _____ Date: _____

Phone #: _____ Email: _____

Please return this form to the **South Dakota Drinking Water Program, 523 E Capitol, Pierre SD 57501 or fax 605-773-5286** within 30 days.

SD DWP USE ONLY: Date received:	Reviewer:	
Routine Positive Date:	Routine Positive Notification Date:	Initial Consultation Date:
# routine/repeat samples in this month:	# coliform positive samples:	# E-coli positive samples:
# of coliform positive samples in past 12 months:	# of MCL violations in past 12 months:	