



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:
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Assessor Name:

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

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

Comments:

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

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

Comments:

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

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

Comments:

4. DISTRIBUTION SYSTEM/PUMPS

No issues Issue(s) identified NA**

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

Comments:

5. STORAGE TANKS

No issues Issue(s) identified NA**

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

Comments:

6. SOURCES - Well

No issues Issue(s) identified NA**

- | | |
|---|--|
| <input type="checkbox"/> Defective/damaged well cap/well seal | <input type="checkbox"/> Damaged well casing |
| <input type="checkbox"/> Well flooded | <input type="checkbox"/> Damaged/unscreened vent |
| <input type="checkbox"/> Damaged pitless adaptor | <input type="checkbox"/> Other: |

Comments:

Surface Water Supply

No issues Issue(s) identified NA**

- | | | |
|---|---|---|
| <input type="checkbox"/> Potential source of contamination identified | <input type="checkbox"/> Rapid snowmelt | <input type="checkbox"/> Heavy rainfall |
| <input type="checkbox"/> Increase in turbidity | <input type="checkbox"/> Flooding | |

Comments:

Spring

No issues Issue(s) identified NA**

- | | | |
|--|---|---|
| <input type="checkbox"/> Potential source of contamination | <input type="checkbox"/> Rapid snowmelt | <input type="checkbox"/> 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 w/o this month:		# of MCL violations in past 12 months w/o this month:	