North Carolina Department of Environmental Quality

Division of Water Resources, Public Water Supply Section

Level 2 Assessment Form for the Revised Total Coliform Rule

*(Complete entire form and submit to the Public Water Supply Section's Rule Manager within **30 days** of the Level 2 Assessment Trigger Date)*

Water System Name:	**Water System Number:**	**County:**
Trigger Event [Check the box(es) below that apply]	**Level 2 Assessment Trigger Date**	
☐ System had an *E.coli* Maximum Contaminant Level (MCL) violation	Sample Analysis end date:	
☐ System had a second Level 1 trigger within a rolling 12-month period	Second Level 1 trigger date:	
☐ For systems on approved annual monitoring, a Level 1 trigger occurred in two consecutive years	Second Level 1 trigger date:	

Review and evaluate each of the listed elements below that typically relate to a water system. Check (√) "Yes" if any potential causes of contamination were identified, or check (√) "No" if none were identified, or check (√) "N/A" if the element is not applicable to this water system. For the "Yes" checked (√) items, describe the issue identified and indicate the corrective action(s) taken or proposed, including date(s). Attach additional pages, if necessary. [Note 1: Deficiencies and RTCR Sanitary Defects are denoted below with applicable codes, for example, (D112). Note 2: Drinking water sample(s) with results "absent" of total coliform bacteria are required to demonstrate completion of corrective actions.]

1. ATYPICAL EVENTS	**YES**	**NO**	**NA**	**Issue Description**	**Corrective Actions (include dates)**
a. Weather - Recent heavy precipitation/flooding/snowmelt/drought	☐	☐	☐		
b. Power loss (MA11)	☐	☐	☐		
c. Fire-fighting event (MA12)	☐	☐	☐		
d. Signs of vandalism / tampering / forced entry at water system assets (MA13)	☐	☐	☐		
e. Changes in plant operation (TA2)	☐	☐	☐		
f. Changes in flow rates (TA3)	☐	☐	☐		
g. Plant maintenance / construction activities (TA4)	☐	☐	☐		
h. Other (MA1):	☐	☐	☐		
2. DISTRIBUTION SYSTEM MAINTENANCE & OPERATION	**YES**	**NO**	**NA**	**Issue Description**	**Corrective Actions (include dates)**
a. Temporary pressure loss / low or negative pressure (DA2)	☐	☐	☐		
b. Inadequate pressure – pressure in mains is less than 20 psi during peak demand (fire flow design) or pressure is less than 30 psi during peak demand (non-fire flow design) (D105 or D107)	☐	☐	☐		
c. Main or service lines – new installation (DA3)	☐	☐	☐		
d. Main or service lines – leaks /breaks / repairs (DD2)	☐	☐	☐		
e. Mains improperly sized to provide minimum pressure of 20 psi (fire flow design) or 30 psi (non-fire flow design) during peak demand (D102 or D103)	☐	☐	☐		
f. Water main / line placed in service without satisfactory bacteriological tests (D120)	☐	☐	☐		
g. Dead end mains do not have hydrant or flushing valve with aboveground discharge, protected from contamination (D112)	☐	☐	☐		

h. Flushing activity / fire hydrants and/or blow-offs (DA4)	☐	☐	☐		
i. Improper disinfection of distribution system after flushing and/or leak testing / not disinfected as required by Rule .1003(a) (D119)	☐	☐	☐		
j. Unprotected / unapproved cross-connection (D004)	☐	☐	☐		
k. Backflow protection devices – Improper operation / not maintained or properly tested (DD3)	☐	☐	☐		
l. Hydrants - Sheared, damaged or improperly used hydrants (DA5)	☐	☐	☐		
m. Pumps - Improper operation or failure of pumps / repairs (PA2)	☐	☐	☐		
n. Valves - Improper operation of valves / valve breakage (DA6)	☐	☐	☐		
o. Air-relief or air-vacuum valves – Improper operation / leakage (DA7)	☐	☐	☐		
p. Improper surge control (DA8)	☐	☐	☐		
q. Low residual disinfectant concentration (<0.2 mg/L free chlorine residual or <1.0 mg/L total chlorine residual) at total coliform sampling sites (DD4)	☐	☐	☐		
r. Known bio-film accumulation (DA9)	☐	☐	☐		
s. Other (DA1):	☐	☐	☐		
3. STORAGE	**YES**	**NO**	**NA**	**Issue Description**	**Corrective Actions (include dates)**
a. Tank – Not disinfected properly in accordance with AWWA Standard C-652 or Rule .1003 or an approved method by the Department (F004)	☐	☐	☐		
b. Tank - Elevation not adequate to produce a designed minimum distribution system pressure of 20 psi (fire flow) or 30 psi during peak flow (F115)	☐	☐	☐		
c. Tank – Hydropneumatic tank does not have the capacity to maintain a minimum pressure of 30 psi during periods of peak flow (F116)	☐	☐	☐		
d. Recent maintenance / observed leaks / repair on tank (FA2)	☐	☐	☐		
e. Unsecured facility / unauthorized access allowed (FA3)	☐	☐	☐		
f. Vandalism / tampering observed (FA4)	☐	☐	☐		
g. Evidence of contamination or potential sources of contamination at or near the facility (FA5)	☐	☐	☐		
h. High water age / low disinfectant residual (FA6)	☐	☐	☐		
i. Inadequate cleaning and maintenance practices (FA7)	☐	☐	☐		
j. Visibly unsanitary conditions - presence of debris / animals / insects / birds / bats etc. in tank or near openings (FD2)	☐	☐	☐		
k. Deterioration, rust, holes, etc. in vent, overflow pipe, access hatch, screens, ladders, etc. (FD3)	☐	☐	☐		
l. Vent installed improperly (FA8)	☐	☐	☐		
m. Hatch not sealed properly (FD4)	☐	☐	☐		
n. Improper operation of level control valves, altitude valves, and related appurtenances (FA9)	☐	☐	☐		
o. Other (FA1):	☐	☐	☐		

4. SOURCES - *GROUNDWATER*	YES	NO	NA	Issue Description	Corrective Actions (include dates)
a. Source – Unapproved / changed / new source added (SA2)	☐	☐	☐		
b. Heavy rainfall or flooding (SA3)	☐	☐	☐		
c. Well pit with standing water or evidence of flooding / run-off inundation (SD2)	☐	☐	☐		
d. Operational changes/ changes in static / pumping levels (SA4)	☐	☐	☐		
e. Inadequate or damaged well components – well cap / well seal / well casing / grout seal / pitless adaptor (SD3)	☐	☐	☐		
f. Upper terminal of well casing not sealed watertight, with exception of vent pipe (S106)	☐	☐	☐		
g. Vent – damaged / unscreened vent (SD4)	☐	☐	☐		
h. Vent pipe or vent tube not downward-directed and screened (S107)	☐	☐	☐		
i. Threaded hose bibs are not equipped with anti-siphon devices (S110)	☐	☐	☐		
j. Potential cross-connections exist at well site (S501)	☐	☐	☐		
k. Inadequate concrete slab or well house concrete floor (S108)	☐	☐	☐		
l. Unprotected opening in pump / pump assembly (SA5)	☐	☐	☐		
m. Nearby potential sources of contamination (SA6)	☐	☐	☐		
n. Recent maintenance activity (SA7)	☐	☐	☐		
o. New, repaired or reconditioned well was not properly cleaned and disinfected and/or representative bacteriological samples were not found to be free of contamination (S120)	☐	☐	☐		
p. Other (SA1):	☐	☐	☐		
5. SOURCES - *SURFACE WATER SOURCES*	**YES**	**NO**	**NA**	**Issue Description**	**Corrective Actions (include dates)**
a. Source – Change in source / intake / new source added (SA8)	☐	☐	☐		
b. Heavy rainfall or flooding / high raw water turbidity measurements (SA9)	☐	☐	☐		
c. Changes in source water quality (lake turnover, algal blooms, etc.) (SA10)	☐	☐	☐		
d. Recent maintenance activity (SA11)	☐	☐	☐		
e. Other (SA1):	☐	☐	☐		
6. TREATMENT	**YES**	**NO**	**NA**	**Issue Description**	**Corrective Actions (include dates)**
a. Treatment malfunction or interruption (TD2)	☐	☐	☐		
b. Disinfection equipment not provided as specified in approved plans and specifications. Stand-by disinfection equipment is not provided (T110)	☐	☐	☐		
c. Minimum residual disinfection concentration at Entry Point not maintained as required (T138)	☐	☐	☐		
d. Detectable residual disinfection concentration at water system MRT site not maintained as required (T139)	☐	☐	☐		
e. Clogging of filters / media (TA5)	☐	☐	☐		
f. Recent maintenance activity on treatment equipment (TA6)	☐	☐	☐		
g. Other (TA1):	☐	☐	☐		

7. SAMPLING	YES	NO	NA	Issue Description	Corrective Actions (include dates)
a. Visibly unsanitary sampling site/tap (MA2)	☐	☐	☐		
b. Infrequently used sample tap (MA3)	☐	☐	☐		
c. Threads on inside of tap (MA4)	☐	☐	☐		
d. Treatment device in use after service connection [Point of Entry (POE) or Point of Use (POU)] (MA5)	☐	☐	☐		
e. Recent maintenance activity (MA6)	☐	☐	☐		
f. Sample tap not disinfected (MA7)	☐	☐	☐		
g. Aerator was not removed (MA8)	☐	☐	☐		
h. Inadequate tap flushing (MA9)	☐	☐	☐		
i. Other (MA1):	☐	☐	☐		

☐ **Check box if ALL corrective actions have been completed**

☐ **Check box if drinking water samples were collected upon completion of corrective actions and the results were "absent" of total coliform bacteria** (required to demonstrate completion of corrective actions)

Comments:

Level 2 Assessment

Water System Name: **Water System Number:**

Depending on the Person Responsible for Conducting and Documenting the Assessment, Select Option A or B below

☐ **Option A:** Assessment Conducted and Documented by State-Approved Party **[Complete Section 1 Only]**	☐ **Option B:** Assessment Conducted and Documented by Public Water Supply Section Representative **[Complete Section 2 Only]**

Section 1: Water System Representative Information

Name:			
Title:			
Name of Firm:			
Address of Firm:			
Date of On-site Assessment:	Assessment Completion Date:		
Qualification of State-Approved Party: (Complete all that apply)	☐ NC Certified Operator Number:	☐ NC Professional Engineer Number:	
If NC Certified Operator, provide Certification Level: (Check all that apply)	Surface ☐ A ☐ B ☐ C	Well ☐ A ☐ B ☐ C ☐ D	Distribution ☐ A ☐ B ☐ C ☐ D
Public Water System Classification: (Check all that apply)	Surface ☐ A ☐ B ☐ C	Well ☐ A ☐ B ☐ C ☐ D	Distribution ☐ A ☐ B ☐ C ☐ D
Signature:			
Phone Number:			
Email:			

Section 2: Public Water Supply Section Representative Information

Name:	
Regional Office:	
Date of On-site Assessment:	Assessment Completion Date:
Signature:	
Phone Number:	
Email:	
Date copy of assessment was sent to Owner via ☐ Email or ☐ Mail:	

Please return this form to the **Public Water Supply Section** at the address below within **30 days** of the Level 2 Assessment Trigger Date

1634 Mail Service Center, Raleigh, North Carolina 27699-1634

Attention: Total Coliform Rule Manager

OR

Email form to pwss.rtcr@deq.nc.gov