**North Carolina Department of Environmental Quality**

Division of Water Resources, Public Water Supply Section

Level 1 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 1 Assessment Trigger Date)*

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| --- | --- | --- |
| **Water System Name:** Click here to enter text. | **Water System Number:** Click here to enter text. | **County:** Click here to enter text. |
| **Trigger Event** [Check the box(es) below that apply] | **Level 1 Assessment Trigger Date** |
| [ ]  For systems taking fewer than 40 samples per month: System has two or more total coliform-positive samples in the same month  | Sample Analysis end date: Click here to enter a date. |
| [ ] For systems taking 40 or more samples per month: Greater than5% of samples are total coliform-positive  | Sample Analysis end date: Click here to enter a date. |
| [ ] Failure to take every required repeat sample after any single total coliform-positive sample  | Routine sample analysis end date + 24 hours (unless extension approved by the Rule Manager): Click here to enter a date. |

**Section A -** 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. [Note: Deficiencies and RTCR Sanitary Defects are denoted below with applicable codes, for example, (D112).]

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  **1. ATYPICAL EVENTS**  | **YES** | **NO** | **NA** |  | **YES** | **NO** | **NA** |
| a. Weather - Recent heavy precipitation/flooding/snowmelt/drought (MA10) |[ ] [ ] [ ]  1. Signs of vandalism/tampering/forced entry at water system assets (MA13)
 |[ ] [ ] [ ]
| b. Power loss (MA11) |[ ] [ ] [ ]  1. Changes in plant operation (TA2) / flow rates (TA3) / maintenance / construction (TA4)
 |[ ] [ ] [ ]
| c. Fire-fighting event (MA12) |[ ] [ ] [ ]  1. Other (MA1): Click here to enter text.
 |[ ] [ ] [ ]
| **2. DISTRIBUTION SYSTEM MAINTENANCE & OPERATION** | **YES** | **NO** | **NA** |  | **YES** | **NO** | **NA** |
| 1. Temporary pressure loss / low or negative pressure (DA2)
 |[ ] [ ] [ ]  i. Unprotected / unapproved cross-connection (D004) |[ ] [ ] [ ]
| 1. Pressure loss / inadequate pressure (D105 or D107)
 |[ ] [ ] [ ]  1. Hydrants - Sheared, damaged or improperly used hydrants (DA5)
 |[ ] [ ] [ ]
| 1. Main or service lines – new installation (DA3) / leaks /breaks / repairs (DD2)
 |[ ] [ ] [ ]  1. Pumps - Improper operation or failure of pumps / repairs (PA2)
 |[ ] [ ] [ ]
| 1. Mains improperly sized to provide adequate pressure (D102 or D103)
 |[ ] [ ] [ ]  1. Valves - Improper operation of valves / valve breakage (DA6) / leaking air-relief / air-vacuum valves (DA7)
 |[ ] [ ] [ ]
| 1. Water main / line placed in service without satisfactory bacteriological tests (D120)
 |[ ] [ ] [ ]  1. Improper surge control (DA8)
 |[ ] [ ] [ ]
| 1. Dead end mains do not have hydrant or flushing valve with aboveground discharge, protected from contamination (D112)
 |[ ] [ ] [ ]  1. 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)
 |[ ] [ ] [ ]
| 1. Flushing activity / fire hydrants and/or blow-offs (DA4)
 |[ ] [ ] [ ]  1. Known bio-film accumulation (DA9)
 |[ ] [ ] [ ]
| 1. Improper disinfection of distribution system after flushing and/or leak testing (D119)
 |[ ] [ ] [ ]  1. Other (DA1): Click here to enter text.
 |[ ] [ ] [ ]
| **Water System Name:** Click here to enter text. | **Water System Number:** Click here to enter text. |
|  |  |
| **3. STORAGE**  | **YES** | **NO** | **NA** |  | **YES** | **NO** | **NA** |
| 1. Tank – Not disinfected properly (F004) / elevation not adequate to provide required pressure in distribution system (F115) / hydropneumatic tank capacity not adequate to provide required pressure in distribution system (F116)
 |[ ] [ ] [ ]  1. Inadequate cleaning and maintenance practices (FA7) - Visibly unsanitary conditions - presence of debris / animals / insects / birds / bats etc. in tank or near openings (FD2) / Deterioration, rust, holes, etc. in vent, overflow pipe, access hatch, screens, ladders, etc. (FD3)
 |[ ] [ ] [ ]
| 1. High water age / low disinfectant residual (FA6)
 |[ ] [ ] [ ]  1. Hatch not sealed properly (FD4)
 |[ ] [ ] [ ]
| 1. Recent maintenance / observed leaks / repair on tank (FA2)
 |[ ] [ ] [ ]  1. Improper operation of level control valves, altitude valves, and related appurtenances (FA9)
 |[ ] [ ] [ ]
| 1. Vandalism / tampering observed (FA4)
 |[ ] [ ] [ ]  1. Other (FA1): Click here to enter text.
 |[ ] [ ] [ ]
| **4. SOURCES - *GROUNDWATER***  | **YES** | **NO** | **NA** |  | **YES** | **NO** | **NA** |
| 1. Source – Unapproved/ changed / new source added (SA2)
 |[ ] [ ] [ ]  1. Threaded hose bibs are not equipped with anti-siphon devices (S110)
 |[ ] [ ] [ ]
| 1. Heavy rainfall or flooding (SA3)
 |[ ] [ ] [ ]  1. Potential cross-connections exist at well site (S501)
 |[ ] [ ] [ ]
| 1. Well pit with standing water or evidence of flooding/run-off inundation (SD2)
 |[ ] [ ] [ ]  1. Inadequate concrete slab or well house concrete floor (S108)
 |[ ] [ ] [ ]
| 1. Operational changes/ changes in static/pumping levels (SA4)
 |[ ] [ ] [ ]  1. Unprotected opening in pump / pump assembly (SA5)
 |[ ] [ ] [ ]
| 1. Inadequate or damaged well components – well cap / well seal / well casing / grout seal / pitless adaptor (SD3)
 |[ ] [ ] [ ]  1. 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)
 |[ ] [ ] [ ]
| 1. Upper terminal of well casing not sealed watertight, with exception of vent pipe (S106)
 |[ ] [ ] [ ]   |  |  |  |
| 1. Vent – damaged / unscreened vent (SD4)
 |[ ] [ ] [ ]  1. Other (SA1): Click here to enter text.
 |[ ] [ ] [ ]
| 1. Vent pipe or vent tube not downward-directed and screened (S107)
 |[ ] [ ] [ ]   |  |  |  |
| **5. SOURCES *- SURFACE WATER SOURCES*** | **YES** | **NO** | **NA** |  | **YES** | **NO** | **NA** |
| 1. Source – Change in source / intake / new source added (SA8)
 |[ ] [ ] [ ]  1. Recent maintenance activity (SA11)
 |[ ] [ ] [ ]
| 1. Heavy rainfall or flooding/high raw turbidity measurements (SA9)
 |[ ] [ ] [ ]  1. Other (SA1): Click here to enter text.
 |[ ] [ ] [ ]
| 1. Changes in source water quality (lake turnover, algal blooms, etc.) (SA10)
 |[ ] [ ] [ ]   |  |  |  |
| **6. TREATMENT** | **YES** | **NO** | **NA** |  | **YES** | **NO** | **NA** |
| 1. Treatment malfunction or interruption (TD2)
 |[ ] [ ] [ ]  1. Detectable residual disinfection concentration at water system MRT site not maintained as required (T139)
 |[ ] [ ] [ ]
| 1. Disinfection equipment not provided as specified in approved plans and specifications. Stand-by disinfection equipment is not provided (T110)
 |[ ] [ ] [ ]  1. Clogging of filters / media (TA5)
 |[ ] [ ] [ ]
| 1. Minimum residual disinfection concentration at Entry Point not maintained as required (T138)
 |[ ] [ ] [ ]  1. Other (TA1): Click here to enter text.
 |[ ] [ ] [ ]
| **7. SAMPLING** | **YES** | **NO** | **NA** |  | **YES** | **NO** | **NA** |
| 1. Visibly unsanitary sampling site/tap (MA2)
 |[ ] [ ] [ ]  1. Sample tap not disinfected (MA7)
 |[ ] [ ] [ ]
| 1. Infrequently used sample tap (MA3)
 |[ ] [ ] [ ]  1. Aerator was not removed (MA8)
 |[ ] [ ] [ ]
| 1. Threads on inside of tap (MA4)
 |[ ] [ ] [ ]  1. Inadequate tap flushing (MA9)
 |[ ] [ ] [ ]
| 1. Treatment device in use after service connection [Point of Entry (POE) or Point of Use (POU)] (MA5)
 |[ ] [ ] [ ]  1. Other (MA1): Click here to enter text.
 |[ ] [ ] [ ]
| 1. Recent maintenance activity (MA6)
 |[ ] [ ] [ ]   |  |  |  |
| **Water System Name:** Click here to enter text. | **Water System Number:** Click here to enter text. |
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| **Section B - Description of Occurrence -** Provide an explanation of any issues that were identified and provideadditional information that supports your findings (i.e. water quality and pressure monitoring data). Include corresponding dates with your findings. If no issues were identified above, provide an explanation of any other factors that may have caused total coliform-positive sample results.  |
| Click here to enter text.  |
| **Section C - Corrective Action -** Describe corrective actions taken or proposed corrective actions for each issue identified in Section B and provide corresponding completion dates for each action item. Note: Drinking water sample(s) with results “absent” of total coliform bacteria are required to demonstrate completion of corrective actions.  |
| [ ]  **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)***EXAMPLES:*** *(TD2) -Treatment malfunction - Corrective Action taken: Replaced chlorinator; Date Completed: 04/30/2016* *(S110) –Threaded hose bibs are not equipped with anti-siphon devices - Corrective Action proposed: Install anti-siphon devices; Date to be Completed: 05/15/2016*Click here to enter text. |

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| **Level 1 Assessment** |
| **Water System Name: Click here to enter text.** | **Water System Number: NC-00-00-000** |
| **Depending on the Person Responsible for Conducting and Documenting the Assessment,Select Option A, B or C below** |
| [ ]  **Option A:** Assessment Conducted and Documented by Water System Representative (must be Owner, Operator or PE)**[Complete Section 1 Only]** | [ ]  **Option B:** Assessment Conducted by Water System Representative (must be Owner, Operator or PE) and Documented by Public Water Supply Section Representative**[Complete Both Sections 1 and 2]** | [ ]  **Option C:** Assessment Conducted and Documented by Public Water Supply Section Representative **[Complete Section 2 Only]** |
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| **Section 1: Water System Representative Information** (must be Owner, Operator or PE) |
| Name: Click here to enter text. |
| Title: Click here to enter text.  |
| Date of On-site Assessment: Select Date | Assessment Completion Date: Select Date |
| Signature (Not Required for Option B): |
| Phone Number: Click here to enter text.  |
| Email: Click here to enter text. |
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| **Section 2: Public Water Supply Section Representative Information** |
| Name: Click here to enter text. |
| Regional Office: Choose an item. |
| Date of On-site Assessment: Select Date | Assessment Completion Date: Select Date |
| Signature: |
| Phone Number: Click here to enter text. |
| Email: Click here to enter text. |  |
| Date copy of assessment was sent to owner via [ ]  Email or [ ]  Mail: Select Date |
|  |
| Comments: Click here to enter text. |
|  |
| Please returnthis form to the **Public Water Supply Section** at the address below within **30 days** of the Level 1 Assessment Trigger Date |
| 1634 Mail Service Center, Raleigh, North Carolina 27699-1634 |
| Attention: Total Coliform Rule Manager |
| OR |
| Email form to pwss.rtcr@ncdenr.gov |