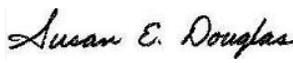


**COMMONWEALTH OF VIRGINIA
DEPARTMENT OF HEALTH
OFFICE OF DRINKING WATER**

Date: March 30, 2016

To: Office of Drinking Water Staff

Through: Drew Hammond, PE, Deputy Director 
Office of Drinking Water

From: Susan E. Douglas, PE, Director 
Division of Technical Services

Subject: **Working Memo 917**
SURVEILLANCE & REGULATIONS - Revised Total Coliform Rule
Implementation Procedures

Reference: WM 823 – SDWIS and *SDWIS Manual*
WM 851 – Sanitary Surveys
WM 898 – *Compliance Sampling and Reporting Guidance Manual for ODW Staff*

Summary:

The primary purpose of the Revised Total Coliform Rule (RTCR) is to reduce potential pathways of microbial contamination into the waterworks distribution system and subsequently enhance public health protection. The RTCR eliminates the primary maximum contaminant level (PMCL) for total coliform and establishes the PMCL for *E. coli*. It also uses the detection of total coliform and *E. coli* to initiate a “find and fix” approach to address fecal contamination in the distribution system and requires waterworks owners to perform assessments to identify potential sanitary defects and subsequently take corrective action to fix them.

Electronic Copy:

An electronic copy of this working memo in PDF format is available for staff internally at the following location: <odwsrv1\odwshare\03-Memos\301-Active Working Memos\301.01-pdf Active Memos>.

An electronic copy of the working memo attachments is available for staff internally at the following location: <odwsrv1\odwshare\03-Memos\301-Active Working Memos\301.02-Forms Letters Manuals\WM917-RTCR>

Contact Information:

Please contact Ray Whitner, PE, Office of Drinking Water, at (276) 676-5650, Ray.Whitner@vdh.virginia.gov, with any questions regarding the application of this working memo.

Disclaimer:

This document is provided as guidance and, as such, sets forth standard operating procedures for the Office of Drinking Water. However, it does not mandate or prohibit a particular action not otherwise required or prohibited by law. If alternative proposals are made, such proposals will be reviewed and accepted or denied based upon their technical adequacy and compliance with appropriate laws and regulations.

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ATTACHMENTS:

- A.1. Notice - Level 1 Assessment Required
- A.2. Notice - Level 2 Assessment Required
- A.3. Level 2 Assessment Transmittal Letter
- B.1. Waterworks Level 1 Assessment Form¹
- B.2. Waterworks Level 2 Assessment Form¹
- C.1. Seasonal Waterworks Notification Letter
- C.2. Seasonal Waterworks Start-Up Procedures
- C.3. Waterworks with Seasonal Components Start-Up Procedures
- C.4. Seasonal Waterworks Start-Up Disinfection Procedures
- C.5. Seasonal Waterworks Start-Up Procedures Approval Letter
- C.6. Seasonal Waterworks Start-Up Procedures Certification Form
- C.7. Waterworks with Seasonal Components Start-Up Procedures Certification Form
- C.8. Seasonal Waterworks Start-Up Procedures Review Sheet
- D.1. RTCR Tier 1 *E. coli* PMCL Informational NOV & PN - Notice of Level 2 Assessment
- D.2. RTCR Tier 2 Coliform TT Informational NOV & PN
- D.3. RTCR Tier 2 Seasonal TT Informational NOV & PN
- D.4. RTCR Tier 3 Monitoring Informational NOV & PN
- D.5. RTCR Tier 3 Reporting Informational NOV & PN
- D.6. RTCR Tier 3 Recordkeeping Informational NOV & PN

¹ The Level 1 and Level 2 assessment forms will be attached to the *Waterworks Regulations* posted on Town Hall and also on ODW’s webpage: [Laws & Regulations](#).

- E.1. RTCR Tier 1 *E. coli* PMCL NOV & PN - Notice of Level 2 Assessment
- E.2. RTCR Tier 2 Coliform TT NOV & PN
- E.3. RTCR Tier 2 Seasonal TT NOV & PN
- E.4. RTCR Tier 3 Monitoring NOV & PN
- E.5. RTCR Tier 3 Reporting NOV & PN
- E.6. RTCR Tier 3 Recordkeeping NOV & PN

1. INTRODUCTION

The RTCR upholds the purpose of the 1989 Total Coliform Rule (TCR) to protect public health by ensuring the integrity of the waterworks distribution system and monitoring for the presence of microbial contamination. The RTCR, as with the TCR, is the only microbial drinking water regulation that applies to all waterworks. The RTCR specifies the frequency and timing of required microbial testing based on population served, waterworks type, and source water type. Additionally, the RTCR requires waterworks found to be vulnerable to microbial contamination to identify and fix problems. Many of these problems may be defined as “sanitary defects.”

The RTCR establishes a Primary Maximum Contaminant Level (PMCL) and a Maximum Contaminant Level Goal (MCLG) for *E. coli*. *E. coli* is a more specific indicator of fecal contamination, and is a potentially more harmful pathogen than other bacteria typically found in the total coliform group.

2. APPLICABILITY AND COMPLIANCE DATES

The RTCR applies to all waterworks. Beginning April 1, 2016, all waterworks must comply with the requirements of the RTCR. The TCR is applicable through March 31, 2016, with the exception of existing, unresolved TCR requirements that will transition over April 1, 2016, and must be completed as specified by the TCR (e.g., repeat monitoring and completion of public notification requirements).

3. SAMPLE SITING PLANS & MICROBIAL MONITORING

All bacteriological sample siting plans (BSSPs) shall be developed and approved in accordance with guidance in the most recent version of the *Compliance Sampling and Reporting Guidance Manual* and the requirements of the *Waterworks Regulations*. The Office of Drinking Water (ODW) shall review every BSSP for adequacy during every routine sanitary survey, according to the minimum frequency of sanitary surveys required for each type of waterworks.

ODW has elected not to adopt the reduced monitoring provisions of the federal regulations (40 CFR Part 141, Subpart Y - Revised Total Coliform Rule). With the exception of seasonal waterworks, routine monitoring remains the same as presently required under the TCR. Waterworks will NOT be permitted to reduce their monitoring frequency to annual. The minimum frequency of total coliform monitoring is quarterly for transient non-community (TNC) waterworks operated year round serving 1,000 or fewer people, and monthly for all community, non-transient non-community (NTNC), and TNC waterworks serving more than 1,000 people. All routine monitoring for seasonal TNC waterworks is conducted on a monthly frequency.

Waterworks performing routine monitoring on a monthly frequency that collect less than five samples per monitoring period (month) and have a routine sample result that is total coliform positive do not increase the number of samples to be collected in the subsequent month. TNC waterworks on a quarterly monitoring frequency must collect a minimum of three routine samples in the month subsequent to a month having a total coliform-positive sample (referred to as “additional routine monitoring”).

A TNC waterworks using a groundwater source, on a quarterly monitoring frequency, operating year-round and serving 1,000 or fewer people, must increase monitoring frequency to monthly for at least 12 months when any of the following occurs:

- A Level 2 assessment or two Level 1 assessments in a rolling 12-month period are triggered;
- An *E. coli* PMCL is exceeded;
- A total coliform treatment technique requirement is not met;
- Non-compliance with two RTCR monitoring requirements; or
- Non-compliance with one RTCR monitoring requirement and one Level 1 assessment in a rolling 12-month period for a waterworks on quarterly monitoring.

The monthly sampling begins in the month subsequent to the occurrence.

A TNC waterworks operated year-round may return to routine monitoring (quarterly frequency) after the 12 months of monthly monitoring and after all of the following conditions are met:

- A sanitary survey, site visit or a voluntary Level 2 assessment has been performed;
- Waterworks is free of sanitary defects;
- Waterworks has a protected water source; and
- Waterworks has a “clean compliance history”.²

Each routine total coliform-positive sample result requires the collection of three “repeat” samples no matter the waterworks type or population served. Each set of repeat total coliform samples with positive results also requires the collection of three repeat samples unless a treatment technique has been triggered. The *Waterworks Regulations* require that the repeat samples be collected within 24 hours of being notified of a coliform-positive result. ODW may allow an extension of this requirement for the following situations:

- Problems with lab availability or accessibility;
- Problems with delivery service; or
- Weather or other circumstances beyond the control of the waterworks owner, which will create logistical problems in the sample collection.

Owners may select alternative repeat sample sites if those sites better characterize possible contamination routes into the distribution system. The repeat sites can be either alternative fixed locations or identified on a situational basis per a Standard Operating Procedure (SOP). The SOP must be included in the approved BSSP. Refer to the most recent version of the *Compliance Sampling and Reporting Manual* for additional information and BSSP templates.

If a single well groundwater source is used at a waterworks serving 1,000 or fewer people, and a disinfectant is not added, a repeat sample taken at the triggered source water monitoring site may be used to satisfy the sampling requirements of both the RTCR and GWR (“dual purpose sampling”). In other words, the triggered sample is also the repeat sample. The BSSP must clearly describe this situation.

² A “clean compliance history” is defined as 12 consecutive months of: no *E. coli* PMCL exceedances; continuous compliance with RTCR monitoring requirements and treatment technique requirements; and no occurrence of coliform treatment technique triggers.

4. SEASONAL WATERWORKS

Definition

The RTCR defines a “seasonal waterworks” as a noncommunity waterworks that is not operated as a waterworks on a year-round basis, and starts up and shuts down at the beginning and end of each operating season, respectively. ODW will identify seasonal waterworks during site visits and from records including SDWIS, correspondence, sanitary surveys, etc. Use Attachment C.1 to introduce the operational requirements to the seasonal waterworks owner.

Monitoring Requirements

ODW has not adopted reduced monitoring provisions for seasonal waterworks. All seasonal waterworks will conduct bacteriological monitoring on a monthly frequency in accordance with an approved BSSP. In cases where the population may vary during the monitoring period, the number of samples must be adjusted accordingly. The number of samples to be collected is based on the population served in accordance with the *Waterworks Regulations*.

Seasonal Start-Up Provisions

All seasonal waterworks are required to establish a Start-up Procedure (Attachment C.2) approved by ODW (Attachment C.5). Guidance on disinfection procedures is provided in Attachment C.4. After completing the start-up procedure, the owner/operator must:

- Collect two bacteriological water samples, identified as “special,” a minimum of 16 hours apart, from an approved bacteriological sample site and submit the samples to DCLS or a laboratory certified by DCLS to perform the total coliform presence/absence (positive/negative) analysis. These samples shall not be used for routine monitoring compliance determination with the RTCR; and
- Submit a copy of the “special” bacteriological sample results along with the signed certification form (Attachment C.6) to ODW.

Only after the signed Certification Form has been submitted and the two consecutive bacteriological samples have tested total coliform absent shall the waterworks be allowed to start serving water.

Waterworks with Seasonal Components

Some waterworks operate a portion of their components (areas of distribution piping, in particular) on a seasonal basis due to cyclic business conditions or lack of freeze protection safeguards. ODW is requiring any owner that seasonally operates a portion of the waterworks to establish a start-up procedure (Attachment C.3.) including special bacteriological sampling and submittal of a start-up procedures certification form (Attachment C.7.). Once ODW has identified such waterworks, the Waterworks Description Sheet shall be amended to document the waterworks operational practices.

5. SANITARY SURVEYS

Sanitary Surveys are required for all waterworks as described in WM 851. WM 851 requires review of all sampling plans, including the BSSP, during each sanitary survey evaluation in accordance with Essential Element #6 - “Monitoring and Reporting (M&R) and Data Verification”. The review verifies accuracy of all monitoring requirements in the BSSP,

especially site locations, frequency and number of samples collected per monitoring period for every waterworks. This BSSP review will also serve as the RTCR “special monitoring evaluation” required for groundwater waterworks serving 1,000 or fewer people. The Sanitary Survey template (Part I - Compliance History) has been updated to reflect the RTCR requirements, including the Level 1 and Level 2 assessments.

6. COLIFORM TREATMENT TECHNIQUE TRIGGERS

The RTCR specifies two levels of coliform treatment technique (TT) triggers and corresponding levels of assessment (Level 1 and Level 2) in response to those triggers. The degree and depth to which a waterworks must be examined, including monitoring and operational practices, depends on the TT triggers’ potential impact to public health. A Level 2 assessment requires a more in-depth and comprehensive review of the waterworks compared to a Level 1 assessment.

The waterworks has exceeded the TT trigger after any of the following trigger conditions have been met:

Level 1 TT triggers:

1. For waterworks taking 40 or more samples (including routine and repeat samples) per month, the waterworks exceeds 5.0 % total coliform-positive samples for the month.
2. For waterworks taking fewer than 40 samples (including routine and repeat samples) per month, the waterworks has two or more total coliform-positive samples in the same monitoring period.
3. The waterworks fails to take every required repeat sample after any single routine total coliform-positive sample.

The first two Level 1 TT triggers are the same conditions that formerly defined a non-acute total coliform PMCL exceedance under the 1989 TCR. These are no longer violations under the RTCR.

Level 2 TT triggers:

1. The waterworks incurs an *E. coli* PMCL exceedance.
2. The waterworks has a second Level 1 TT trigger within a rolling 12-month period, unless the likely cause for the total coliform-positive samples triggering the initial Level 1 TT trigger was identified during the prior assessment process, and ODW concurred that the waterworks corrected the problem during the assessment.

7. VIOLATIONS AND PUBLIC NOTIFICATION

The RTCR establishes an *E. coli* PMCL violation and additional TT, monitoring, and reporting violations. Public notification is required for each violation.

The RTCR eliminates the PMCL for total coliform bacteria. Consequently, there will no longer be total coliform PMCL violations issued for monitoring periods with start dates of and after April 1, 2016. In addition, beginning April 1, 2016 failure to collect repeat samples after a total

coliform-positive sample is no longer a failure to monitor violation, but instead requires a Level 1 assessment.

The following table provides a listing of RTCR violations, its associated public notification Tier level, and NOV/PN template reference.

Note: Two versions of each template have been developed. One is to be used *before* the RTCR is promulgated in the *Waterworks Regulations* (Attachments D.1 through D.6) and the other is to be used *after* the RTCR is promulgated in the *Waterworks Regulations* (Attachments E.1 through E.6). The correct templates will be made available on the ODW server and staff will be notified when the appropriate version is changed.

Type of Violation	Description	Notification Required	NOV/PN Template (Attachment)
<i>E. coli</i> PMCL (Boil Water Advisory Required)	<i>E. coli</i> -positive repeat sample following a total coliform-positive routine sample	Tier 1 PN	D.1 E.1
	Total coliform-positive repeat sample following an <i>E. coli</i> -positive routine sample		
	Failure to collect all required repeat samples following an <i>E. coli</i> -positive sample		
	Failure to analyze for <i>E. coli</i> when any repeat sample tests total coliform-positive		
Coliform Treatment Technique	Failure to conduct (and submit) a required assessment within 30 calendar days	Tier 2 PN	D.2 E.2
	Failure to complete (and report) corrective actions within 30 calendar days or in accordance with a set schedule		
	Failure of seasonal waterworks owner to complete ODW-approved start-up procedure before serving water	Tier 2 PN	D.3 E.3
Monitoring	Failure to take every required routine or additional routine sample in the compliance period	Tier 3 PN	D.4 E.4
	Failure to analyze for <i>E. coli</i> following a total coliform-positive routine sample		
Reporting	Failure to submit a monitoring report or a completed assessment form by deadline	Tier 3 PN	D.5 E.5
	Failure to notify ODW by the end of the next business day after the owner learns of an <i>E. coli</i> -positive sample		
	Failure to submit certification of completion of start-up procedure by a seasonal waterworks owner		
	Failure to notify ODW by the end of the next business day after the owner learns of an <i>E. coli</i> PMCL exceedance		
	Failure to notify ODW by the end of the next business day after the owner learns of an <i>E. coli</i> -		

Type of Violation	Description	Notification Required	NOV/PN Template (Attachment)
	positive routine sample		
	Failure to notify ODW by the end of the next business day after the owner learns of a coliform TT violation		
	Failure to submit an assessment report within 30 calendar days of being notified of the assessment rigger and/or failure to notify ODW of completed corrective actions in compliance with a schedule approved by ODW		
	Failure to report a monitoring violation to ODW within ten (10) calendar days after the waterworks discovers the violation		
Record-keeping	Failure to maintain assessment forms and documentation of corrective actions completed or other documentation of the sanitary defects	Tier 3 PN	D.6 E.6

Community waterworks may report Tier 3 notices in their annual Consumer Confidence Report as described in the *Waterworks Regulations*.

Note: Failure of a waterworks with seasonal components to complete all requirements of the start-up procedure (see Section 4 of this memo) is either an ODW reliability violation (SDWIS State Violation Code C3, didn't complete disinfection procedure) or an ODW monitoring violation (SDWIS State Violation Code C2, didn't complete disinfection sampling).

8. LEVEL 1 AND LEVEL 2 ASSESSMENTS

An assessment is an evaluation to identify the possible presence of sanitary defects (as defined in Section 9 of this memo), improper coliform monitoring practices in the distribution system, and the likely reason that triggered the assessment.

Level 1 Assessments

A Level 1 assessment must be conducted when a waterworks exceeds any of the Level 1 TT triggers described in Section 6 of this memo.

Under the RTCR, a Level 1 assessment is a self-assessment by the owner (or owner's representative) and consists of a basic examination of sample collection, sample collection sites, source water, treatment, storage, distribution system and relevant operational practices, often using existing data and information. The owner should evaluate conditions that could have caused the total coliform-positive sample. A Level 1 assessment form (Attachment B.1) must be used to meet this requirement.

Example conditions include treatment process interruptions (where applicable), loss of system pressure, maintenance activities, recent operational changes, etc. In addition, the owner should

evaluate the method of sample collection, condition of sample sites, the distribution system, storage tanks, source water facilities, etc.

A Level 1 assessment is to be conducted or managed by a responsible party of the waterworks (e.g., a licensed operator for a community or NTNC waterworks or a manager for a TNC waterworks). The assessor must be someone familiar enough with the waterworks to be able to answer the questions in the Level 1 assessment form or gather pertinent or correct information from others who work for the waterworks. A Level 1 assessment can be performed by an individual who does not have a waterworks operator license (e.g., TNC waterworks owner or staff); however, an individual without a license may need to consult with someone who has more expertise to conduct the assessment. The owner may elect to use the services of technical assistance providers, consult with operators at other waterworks, or consult with ODW. For very small waterworks, such as those with a limited distribution system, ODW should assist the owner in completing the assessment via telephone.

ODW will send a “Level 1 Assessment Required” letter (Attachment A.1) to the owner or administrative contact as soon as ODW is aware of a Level 1 trigger condition. ODW will use all email notifications, R&R sample result information, and the features of the SDWIS Compliance Determination Module to become aware of treatment technique trigger occurrences. The assessment is to be completed and submitted to ODW within 30 days of the date of the letter notifying the owner of the assessment requirement. ODW shall review corrective actions listed by the owner for effectiveness and shall consult with the owner in the event the schedule does not indicate corrective action within 30 calendar days.

Level 2 Assessments

Level 2 assessments will be conducted by ODW field office staff, must include a site visit, and must be documented with the Level 2 assessment form (Attachment B.2).

A Level 2 assessment must be conducted when a waterworks exceeds any of the Level 2 TT triggers described in Section 6 of this memo. ODW will use all email notifications and R&R sample result information plus use the features of the SDWIS Compliance Determination Module to become aware of treatment technique trigger occurrences.

If an *E. coli* PMCL exceedance occurs, ODW will send a “PMCL Notice of Violation and Level 2 Assessment Requirement” letter (Attachment D.1 or E.1) to the owner or administrative contact. If a second Level 1 TT trigger occurs within a rolling 12-month period, ODW will send a “Level 2 Assessment Required” letter (Attachment A.2) to the owner or administrative contact.

ODW field office staff assigned to conduct the Level 2 assessments will have at least one year of experience in performing sanitary surveys of waterworks of similar size and complexity, and shall have:

- The ability to identify pathways of microbial contamination;
- An understanding of the nature of the coliform group and *E. coli*, including its sources, control and public health significance;
- A familiarity with bacteriological sampling practices;

- The ability to interpret distribution system water quality data, distribution system operational data and water source data; and
- An understanding of disinfection practices and the potential implications of changes in disinfection practices.

Level 2 assessments must be completed within 30 calendar days of the condition that triggered the assessment. In the case of an *E. coli* PMCL exceedance, which indicates an acute risk to public health, the site visit to complete the assessment shall be assigned the highest priority for completion. The owner shall be given seven (7) calendar days from the date of the letter (Attachment A.3) to return either the form with a signature acknowledging concurrence that no corrective action is required or the signed corrective action schedule. The owner should be consulted during the drafting of the corrective action schedule.

Consultation between the owner and ODW is essential during the assessment process that includes the site visit and formulation of a corrective action schedule.

9. SANITARY DEFECTS

A "sanitary defect" is a condition that could provide a pathway of entry for microbial contamination into the distribution system or that is indicative of failure or imminent failure in a barrier that is already in place. It represents a breach in the distribution system, other facilities (source, storage, etc.) or operational practices whereby the microbial contamination can enter the treated/finished water and be transported to customers, potentially resulting in adverse health effects. Therefore, sanitary defects must be identified and corrected. The following table is not an exhaustive or binding list, and ODW may determine that there may be other "unusual" circumstances which can be regarded as a "sanitary defect." Sanitary defects may be the same as significant deficiencies; the difference is the procedure used to identify them. Sanitary defects are identified during the Level 1 or Level 2 assessments. Significant deficiencies are identified during a sanitary survey.

Sanitary Defect	Explanation
Cross connection & backflow issues	<ul style="list-style-type: none"> ✓ Required cross connection control devices not in place or not operating properly ✓ Unprotected cross connection ✓ Unauthorized connections to water mains/hydrants
Operational issues	<ul style="list-style-type: none"> ✓ Failure to follow Standard Operating Procedures (SOPs) that protect distribution system integrity and sanitary condition ✓ Inadequate disinfection during and after pipe repair/replacement activities ✓ Failure to monitor and replace chlorine supply ✓ Improper/Inadequate chlorine residual measurements ✓ Sample collection and transportation problems ✓ Failure to follow sample siting plan ✓ Use of unapproved or untested source of water ✓ Untrained sample collector
Distribution system issues	<ul style="list-style-type: none"> ✓ Inadequate inspection and maintenance of distribution system ✓ Loss of distribution system integrity (e.g., main breaks)

Sanitary Defect	Explanation
	<ul style="list-style-type: none"> ✓ Failure to maintain adequate pressure or low pressure event ✓ Pump failure ✓ Supervisory control and data acquisition (SCADA) and control issues ✓ Improper or lack of flushing operations ✓ Improper construction of new, replaced or renovated lines or service connections
Storage issues	<ul style="list-style-type: none"> ✓ Overflow, vents, hatches and other penetrations not configured, screened or sealed properly ✓ Holes in tanks that could allow entry of insects or small animals ✓ Leaks in tanks that could be harboring growth ✓ Bladder pressure tanks that can become waterlogged ✓ Inadequate inspection and maintenance of storage facilities ✓ Inadequate disinfection during and after pipe repair/replacement activities
Source water issues	<ul style="list-style-type: none"> ✓ Cracks or holes in well seals or casings ✓ Leaking sewer lines or septic tanks ✓ Sewage overflow upstream of the source ✓ Lack of wellhead protection ✓ Unsanitary conditions at the wellhead ✓ Contamination during pump or motor repair or replacement ✓ Watertight seal at wellhead not present
Disinfection issues	<ul style="list-style-type: none"> ✓ Inability to maintain required residual throughout the distribution system ✓ Failure of chlorination equipment ✓ Improper settings on chemical feed ✓ Failure in redundant disinfection ✓ Loss of power

10. CORRECTIVE ACTIONS

Corrective action is required when a waterworks has identified one or more sanitary defects. All owners are required to correct any sanitary defect identified during an assessment. A schedule of corrective action(s) is required for any sanitary defect not corrected either before the submittal of a Level 1 assessment form or completion of a Level 2 assessment site visit by ODW.

A corrective action listed in the Level 1 assessment form should be completed within 30 calendar days of submittal of the form. If not, ODW shall consult with the owner to formulate a mutually agreeable schedule to complete timely correction and the Level 1 assessment form shall be resubmitted with the updated projected completion date.

The Level 2 assessment schedule of corrective actions should also aim for completion dates within 30 calendar days of mailing the schedule to the owner. Consultation between the owner and ODW shall be used to formulate a mutually agreeable schedule action completion date if the action cannot feasibly be completed within 30 calendar days.

The owner is to notify ODW, in writing, no later than seven days after completion of a corrective action. "In writing" notification may be in the form of a letter, email or fax.

11. WATERWORKS REPORTING, COMPLIANCE DETERMINATIONS, TRACKING & INVALIDATION OF TOTAL COLIFORM-POSITIVE RESULT

Waterworks Reporting

The RTCR does not change waterworks reporting requirements for routine, repeat, triggered, and additional source water samples to ODW. Owners must report to ODW as soon as practical, but no later than 24 hours, after learning of an *E. coli*-positive sample, or after learning of the *E. coli* PMCL exceedance. This requirement is most often satisfied when ODW contacts the owner to inform them of the possible violation.

Owners must report to ODW as soon as practical, but no later than the end of the next business day, after learning of a noncompliance with a treatment technique for coliform (failure to perform Level 1 or 2 assessments, or meet corrective action deadlines).

Completed Level 1 assessments must be submitted to ODW within 30 calendar days of being notified of the assessment requirement. Owners must notify ODW after completion of each corrective action contained in a Level 1 assessment or the Level 2 assessment "Schedule of Correction Actions".

Seasonal waterworks owners must submit a certification form to ODW that confirms completion of the approved start-up plan procedures before serving water to consumers.

Compliance Determinations

ODW will evaluate compliance using SDWIS compliance determination tools. Compliance with the RTCR requirements will be completed in accordance with the deadlines for field office tasks listed in the "Mandatory SDWIS Database Activities" table in WM 823. The following items will be evaluated:

- *E. coli* PMCL exceedance;
- Routine monitoring;
- Repeat monitoring;
- Level 1 assessment trigger;
- Level 2 assessment trigger; and
- Schedule activity.³

³ Level 1 assessment and Level 2 schedule of corrective action(s) – the individual corrective action completion by dates (SDWIS Due Date) are entered in SDWIS as individual "Compliance Schedule Activities" in a RTCR type Compliance Schedule.

Tracking

The following will be tracked:

- Level 1 and Level 2 assessment completion;
- Individual corrective action completion dates (SDWIS Achieved Date); and
- Receipt of certification form for completion of seasonal start-up procedures.

Invalidation of Total Coliform-Positive Result

Invalidation of a total coliform-positive sample may be allowed for any of the following conditions:

1. The laboratory establishes that improper sample analysis caused the result;
2. ODW determines that the result was due to a domestic or other non-distribution system plumbing problem; or
3. ODW has substantial grounds to believe that the result is due to circumstances or conditions NOT representative of the distribution system water quality.

The decision and rationale must be documented and the Field Office Director must approve and sign the decision in writing.

12. CONSUMER CONFIDENCE REPORTS

All community waterworks owners must provide an annual report containing data and other information on its previous calendar year of operations to each of its consumers by July 1st and certify that this has been done by October 1st. The contents of these reports must include the following RTCR requirements:

- The total number of *E. coli*-positive samples in the table of detected contaminants;
- Health effects language for conducting a Level 1 or 2 assessment not due to an *E. coli* PMCL exceedance;
- Health effects language for conducting a Level 2 assessment due to an *E. coli* PMCL exceedance;
- The definition of specific assessment(s) if required;
- Specific language to describe any non-compliance when the waterworks incurs an *E. coli* PMCL exceedance;
- If *E. coli* was detected, but no *E. coli* PMCL exceedance was incurred, the owner may include a statement that explains that they are not in violation;
- Numerical accounting of Level 1 and Level 2 assessments and corrective actions completed and not completed;
- The reasons for conducting the assessment(s) and corrective action(s);
- Failure to conduct assessment(s); and
- Failure to correct all sanitary defects.

13. WATERWORKS RECORDS RETENTION

Verification that owners are maintaining adequate documentation and records will be made during routine inspections. RTCR recordkeeping requirements are to maintain any assessment form, documentation of corrective actions completed as a result of assessments and any other documentation of the sanitary defects and corrective actions taken for five (5) years.

14. ODW RECORDS RETENTION

Records of the RTCR decisions must be made in writing and retained in the appropriate field office files for not less than five (5) years or in accordance with the VDH-ODW Records Retention and Disposition Schedule, Specific Schedule No. 601-190 described in WM 630, whichever is longer. The following information must be retained:

- Records of decisions to allow a waterworks on quarterly frequency to waive the requirement for three (3) additional routine samples the month following a total coliform-positive sample;
- Records of decisions to invalidate a total coliform-positive sample; and
- Records of completed and approved RTCR assessments, including reports from the owner that corrective action has been completed.

Records of routine, repeat or special microbiological analysis shall be logged in SDWIS.

All records of decisions, determinations, copies of correspondence with waterworks, and supporting information shall be maintained in the appropriate field office files for each waterworks.

END OF MEMO

WM 917 Attachment A.1. Notice of Level 1 Assessment Requirement

INSTRUCTIONS: Complete / select items shown with *italics*, and convert to regular font. Print on VDH letterhead. Pages are 1" top, bottom, and side margins.

NOTICE of LEVEL 1 ASSESSMENT REQUIREMENT

SUBJECT: County/City
Waterworks: Waterworks Name
PWSID No: PWSID

Date

Waterworks Owner
Address 1
Address 2
City, State, Zip

Dear Waterworks Owner:

This notice is to advise you of requirements of the Revised Total Coliform Rule (RTCR) that went into effect on April 1, 2016. According to ¹[§141.859(a)(1) of the federal regulations] OR [12VAC5-590-392 A 1 of the Waterworks Regulations], your waterworks generated a requirement to perform a Level 1 assessment and submit a completed Level 1 assessment form to this Office. A Level 1 assessment is required whenever a waterworks has *(two or more) (greater than 5.0 percent)* total coliform positive samples during a monitoring period; or, there is a failure to collect every required repeat sample after any total coliform positive sample result.

Comment [sed1]: Think about this

Option for more than 1 total coliform-positive sample or >5.0% total coliform-positive samples:

Based on our records for the *(Month)(# Calendar Quarter) year* monitoring period, the subject waterworks had *(number)(%)* total coliform-positive samples. The total coliform-positive samples were collected at sample locations *physical location/address* on *dates*, respectively.

Option for failure to collect every required repeat sample:

Based on our records for the *(Month)(# Calendar Quarter) year* monitoring period, the subject waterworks failed to collect the proper number of repeat samples. The sample(s) collected from *physical location/address* on *date(s)* showed the presence of total coliform bacteria which required the collection of *number* repeat samples and *number* repeat samples were collected.

Required Actions

The following actions are required:

- Perform a Level 1 assessment using the enclosed form.
- Submit the completed Level 1 assessment form to this Office within 30 days from the date of this letter, on or before *date*.

¹ Use federal citation if RTCR has not been adopted into Waterworks Regulations; otherwise use the Waterworks Regulations citation.

WM 917 Attachment A.1. Notice of Level 1 Assessment Requirement

INSTRUCTIONS: Complete / select items shown with *italics*, and convert to regular font. Print on VDH letterhead. Pages are 1" top, bottom, and side margins.

Additional Information

A Level 1 assessment evaluates conditions throughout the waterworks to determine possible causes for the total coliform positive sample results. Sanitary defects (conditions that could provide a pathway of entry for microbial contamination into the distribution system) identified by the assessment are to be corrected and noted in the assessment. A schedule of corrective action(s) must be included in the assessment for defects not corrected by the above submittal due date.

This Office will review the assessment for accuracy and completeness plus verify completion of any scheduled actions to correct sanitary defects. Notify this Office, in writing, within one business day upon completion of each corrective action, if a corrective action is listed in a submitted schedule.

Should you need any assistance in completing the Level 1 assessment form, please contact me at phone number.

Sincerely,

District Engineer/Assistant District Engineer/
Environmental Health Specialist
Name of field office

ABC:xyz

Enclosure(s): Level 1 assessment form

ec/enc: *(electronic copy if applicable)*

cc: Consulting engineer *(if applicable)*
Name, County Administrator *(if applicable)*
VDH, ODW-Central Office

WM 917 - Attachment A.2. Notice of Level 2 Assessment Required

INSTRUCTIONS: Complete / select items shown with *italics*, and convert to regular font. Print on VDH letterhead. Pages are 1" top, bottom, and side margins.

NOTICE of LEVEL 2 ASSESSMENT REQUIREMENT

SUBJECT: County/City
Waterworks: Waterworks Name
PWSID No: PWSID

Date

Waterworks Owner
Address 1
Address 2
City, State, Zip

Dear Waterworks Owner:

This notice is to advise you of the Revised Total Coliform Rule (RTCR) requirements that went into effect on April 1, 2016. In accordance with ¹[§ 141.859(a)(2) of the *Code of Federal Regulations*] OR [12VAC5-590-392 A 2 of the *Waterworks Regulations*], the subject waterworks must complete a Level 2 assessment.

Option 1 for more than 1 total coliform-positive sample or >5.0% total coliform-positive samples:

Based on our records for the (Month)(# Calendar Quarter) year monitoring period, the subject waterworks had (number or %) total coliform-positive samples. The total coliform-positive samples were collected at sample locations physical location/address on dates, respectively.

Option 2 for failure to collect every required repeat sample:

Based on our records for the (Month)(# Calendar Quarter) year monitoring period, the subject waterworks failed to collect the proper number of repeat samples. The sample(s) collected from physical location/address on date(s) showed the presence of total coliform bacteria which required the collection of number repeat samples and only number repeat samples were collected.

This situation typically requires a Level 1 assessment to be completed. However, a Level 1 assessment was required after the (Month)(# Calendar Quarter) year compliance period and (a likely cause for this event could not be found.) OR (we could not verify that the sanitary defects associated with this event were corrected.) Consequently, a Level 2 assessment must now be completed.

Required Actions

A Level 2 assessment must be completed within 30 days from the date of this letter; on or before date. Unlike a Level 1 assessment, staff from this Office will visit the subject waterworks to complete the Level 2 assessment with assistance from you and your staff. (Schedule a site visit with staff from this Office to take place within 2 weeks of the date of this letter.) OR (A site visit

¹ Use federal citation if RTCR has not been adopted into Waterworks Regulations; otherwise use the Waterworks Regulations citation.

WM 917 - Attachment A.2. Notice of Level 2 Assessment Required

INSTRUCTIONS: Complete / select items shown with *italics*, and convert to regular font. Print on VDH letterhead. Pages are 1" top, bottom, and side margins.

has been scheduled for (date).) Please ensure that necessary staff is available and all facilities are accessible.

Additional Information

A Level 2 assessment is an in-depth evaluation of conditions throughout the waterworks to determine possible causes for the total coliform-positive sample results. Sanitary defects (conditions that could provide a pathway of entry for microbial contamination into the distribution system) identified by the assessment are to be corrected and noted in the assessment. A schedule of corrective action(s) must be included in the assessment for defects not corrected by the above submittal due date.

Should you have any questions please contact me at *phone number*.

Sincerely,

District Engineer
Name of field office

ABC:xyz

Enclosure(s): Level 2 assessment form

ec/enc: *(electronic copy if applicable)*

cc: *Consulting engineer (if applicable)*
Name, County Administrator (if applicable)
VDH, ODW-Central Office

WM 917 Attachment A.3. Level 2 Assessment Transmittal Letter

INSTRUCTIONS: Complete / select items shown with *italics*, and convert to regular font. Print on VDH letterhead. Pages are 1" top, bottom, and side margins

SUBJECT: County/City
Waterworks: Waterworks Name
PWSID No: PWSID

Date

Waterworks Owner
Address 1
Address 2
City, State, Zip

Dear Waterworks Owner:

The subject waterworks was required to complete a Level 2 assessment per the Notice of Level 2 Assessment Required, dated date. Enclosed is a copy of the assessment completed by name and title of this office.

The Level 2 assessment was required (due to an exceedance of the E. coli Primary Maximum Contaminant Level (PMCL)) (because this was the second event within a rolling 12-month period requiring a Level 1 assessment). Refer to the (Notice of Level 2 Assessment Required), dated date for details regarding these events which triggered the assessment requirement.

Option when NO corrective action is needed:

REQUIRED ACTION

Review the assessment, paying particular attention to the “assessment elements” and “corrective action taken and date” summarized on page number. If you are in agreement, sign and date the assessment on page number and return the form to this Office no later than date. If you are not in agreement, contact this Office within one business day upon receipt of this letter. Failure to submit the completed Level 2 assessment may be a violation of (before primacy is awarded: Part 141 of the National Primary Drinking Water Regulations, Revised Total Coliform Rule; after primacy is awarded: the Waterworks Regulations).

Option when corrective action is needed:

REQUIRED ACTION

Review the assessment, paying particular attention to the “elements of concern” and the enclosed schedule of corrective action(s). If you are in agreement with the schedule of corrective action(s), sign, date and return the form to this Office no later than date. If you are not in agreement, contact this Office within one business day upon receipt of this letter. Failure to submit a signed Level 2 assessment form, submit a signed schedule of corrective actions or complete the corrective actions by the scheduled date may be a violation of (before primacy is awarded: Part 141 of the National Primary Drinking Water Regulations Revised Total Coliform Rule; after primacy is awarded: the Waterworks Regulations).

We appreciate the assistance in completing the Level 2 assessment and look forward to your continued cooperation. If you have any questions, please contact me at phone number.

Sincerely,

WM 917 Attachment A.3. Level 2 Assessment Transmittal Letter

INSTRUCTIONS: Complete / select items shown with *italics*, and convert to regular font. Print on VDH letterhead. Pages are 1" top, bottom, and side margins

District Engineer
Name of field office

Enclosure(s): Level 2 assessment
Schedule of Corrective Action

Cc: *Consulting engineer*
County Administrator (if applicable)
ODW-Central

DRAFT

WM 917 Attachment A.3. Level 2 Assessment Transmittal Letter

INSTRUCTIONS: Complete / select items shown with *italics*, and convert to regular font. Print on VDH letterhead. Pages are 1" top, bottom, and side margins

**SCHEDULE OF CORRECTIVE ACTIONS REQUIRED
LEVEL 2 ASSESSMENT**

This Office completed a Level 2 assessment on *date*, which was required due to *(an E. coli MCL violation) or (a second Level 1 assessment generated within a rolling 12-month period)*.

INTERIM ACTION REQUIREMENTS

Based on the Level 2 assessment findings, we recommend *List interim actions such as a Boil Water Advisory, increase chlorine residual, additional sampling*

CORRECTIVE ACTION REQUIREMENTS

Based on the Level 2 assessment findings, the following items must be corrected as stated below:

Sanitary Defect	Required Corrective Action	Completion Deadline Date

I agree to fully implement the above *(interim actions and)* corrective actions to rectify the elements of concern that may have led to the *(E. coli MCL violation) or (second Level 1 assessment generated within a rolling 12-month period)*. I will notify the Virginia Department of Health, Office of Drinking Water, in writing, within 1 business day upon completion of each corrective action.

Waterworks Owner (Signature)

(Date)

WM 917 Attachment B.1. Waterworks Level 1 Assessment Form

Virginia Department of Health
Office of Drinking Water (ODW)

Waterworks Level 1 Assessment				
Waterworks Name:		PWSID No.:		
Source Water Type:		City/County:		
Waterworks Type:	<input type="checkbox"/> Community	Population Served:		
	<input type="checkbox"/> Nontransient Noncommunity	<input type="checkbox"/> Seasonal		
	<input type="checkbox"/> Transient Noncommunity	<input type="checkbox"/> Seasonal		
Operator in Responsible Charge:		Phone:		
Compliance Monitoring Period:				
Number of Samples	Required	Collected	Total coliform present	<i>E.coli</i> present
Routine per monitoring period				
Repeat				
Triggered source water				
Date ODW Notified Waterworks Level 1 Assessment Required:				
Assessment Due Date:				
Reason Level 1 Assessment is required:				
1.	<input type="checkbox"/>	Two or more coliform present samples		
2.	<input type="checkbox"/>	Failure to collect all repeat samples (subsequent to coliform present sample)		
3.	<input type="checkbox"/>	Greater than 5% of samples are coliform present		

Waterworks Assessment Instructions

Consider each assessment element listed in the following evaluation form to determine if the element listed may have contributed to the “present” bacteriological sample results.

A response in a highlighted box suggests the assessment element may have contributed to the “present” bacteriological sample results and is a potential Sanitary Defect. Provide an explanation of why the highlighted element could have contributed to the “present” bacteriological sample results in the column titled “Describe any element of concern.” Use the “Additional Comments” space on page 5 of the form, if needed. Provide the date and description of Corrective Actions taken in the table on page 6. Provide a list of Additional Actions Needed for uncorrected sanitary defects in the table on page 6. List each item, in any box, by the assessment element number as identified in the first column. Notify the appropriate ODW field office, in writing, no later than seven days after completion of each corrective action, if a corrective action is listed in a submitted schedule.

Notes:

1. For wholesale and consecutive waterworks:
 - a. Review records related to flows, pressures, and water quality parameters at the connection(s) with the wholesale water supplier.
 - b. Consecutive waterworks owners shall notify the wholesale water supplier whenever the consecutive system has been triggered to perform a Level 1 Assessment.
 - c. Wholesale waterworks owners shall notify consecutive waterworks owners as total coliform bacteria could have spread to the consecutive waterworks distribution system.
2. The Level 1 Assessment must be completed based on data and documentation available to the waterworks operator and maintained on file by the waterworks. The completed Level 1 Assessment must be returned to the appropriate ODW-Field Office within 30 days of being notified that the assessment was triggered.

WM 917 Attachment B.1. Waterworks Level 1 Assessment Form

Virginia Department of Health
Office of Drinking Water (ODW)

Waterworks Level 1 Assessment					
Waterworks Name:			PWSID No.:		
Assessment Elements		Response			Describe any element of concern
		Y	N	N/A	
1. Sample Site					
1.1	Were all sites used listed on approved BSSP?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Description:
1.2	Are the sample tap and the surrounding area clean?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
1.3	Describe sample tap fixtures (e.g., outdoor hose bib, indoor cold water faucet, etc?)				
1.4	Is the sample tap a swivel faucet?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2. Sample Collection Protocol					
2.1	Was the sample collector properly instructed in collection procedures?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2.2	Were taps flushed adequately (approx. 5 minutes)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2.3	Were aerators removed?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2.4	Were sample containers sealed/unopened/untampered prior to use?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2.5	Were the sample containers/rim or cap contaminated during sampling?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.6	Were the taps disinfected?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2.7	Were samples shipped/delivered per laboratory instruction?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3. Recent Operational Changes to the System					
3.1	New/different/emergency well used?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.2	Changes in operation or treatment?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.3	Any possible contamination events not directly related to operations?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.4	If seasonal system, was start-up initiated without flushing and disinfection?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.5	Sites with low chlorine residual (<0.2 mg/L)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.6	Did power outages occur prior to "present" bacteria results?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4. Recent Distribution System Event That Might Introduce Contaminants					
4.1	Low water pressure (<20 psi)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.2	Cross-connection problem	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.3	Pump station problem	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.4	Fire hydrants/blow off used	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.5	Line break/repair or nearby construction	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.6	Yard hydrants near sample location	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.7	Customer complaints about pressure, water quality prior to sampling?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

WM 917 Attachment B.1. Waterworks Level 1 Assessment Form

Virginia Department of Health
Office of Drinking Water (ODW)

Waterworks Level 1 Assessment					
Waterworks Name:				PWSID No.:	
Assessment Elements		Response			Describe any element of concern
		Y	N	N/A	
5. Storage Tanks/Tank Sites					
5.1	Are lot/tank ladder secured from unauthorized access?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
5.2	Are roof access hatches on atmospheric tanks locked and properly sealed?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
5.3	Are roof vents on atmospheric tanks properly sealed/screened?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
5.4	Are structures water tight/without leak?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
5.5	Any hole/damage in the tank structure that is not sleeved or protected?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5.6	Are drain and overflow line outlets screened?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
5.7	Have tank(s) been serviced, repaired, or maintained recently?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5.8	Any recent unusual changes in tank water levels?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6. Treatment Process Upsets Or Change Noted:					
6.1	Has there been an interruption of treatment operations?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6.2	Are chemical solution containers uncovered?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6.3	Does building housing treatment equipment reflect poor house keeping	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6.4	Any chlorine residual <0.2 mg/L at entry point to distribution system?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6.5	Any turbidity values ≥ 0.3 NTU in water entering the distribution system?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6.6	Did treatment fail to continuously meet 4 log inactivation of viruses requirements?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
7. Water Supply Well(s)					
7.1	Is well house free of pests/vermin?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
7.2	Is well cap and seal securely in place?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
7.3	Is well casing vent properly screened?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
7.4	Is electrical connection to pump secure and sealed?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
7.5	If there is an air release or screened pressure relief valve, is the release feature piped to grade?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
7.6	Is the wellhead free of any cross-connections?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
7.7	Any hoses left connected to a hose bib w/o a vacuum breaker in well house?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

WM 917 Attachment B.1. Waterworks Level 1 Assessment Form

Virginia Department of Health
Office of Drinking Water (ODW)

Waterworks Level 1 Assessment					
Waterworks Name:				PWSID No.:	
Assessment Elements		Response			Describe any element of concern
		Y	N	N/A	
7. Water Supply Well(s) cont.				<input type="checkbox"/>	
7.8	Is the well pump blow-off line air gapped w/screened discharge?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
7.9	Any recent ponding or flooding around wellhead?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
7.10	Is well site secure? (i.e. fenced, gate or building locked)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
7.11	Was a triggered source water sample result total coliform present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
7.12	Has the well pump been replaced during the current monitoring period?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
8. Source – Surface/GUDI Water Supply				<input type="checkbox"/>	
8.1	Has there been an incident of raw water turbidity (≥ 100 NTU) within 14 days prior to sampling?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Typical turbidity ranges from ____ to ____.
8.2	Any sewage overflow, storm water discharge or construction excavation in the vicinity of the source within 14 days prior to sampling?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
9. Source – Spring(s)				<input type="checkbox"/>	
9.1	Recent heavy rainfall, flooding event prior to sampling?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Typical turbidity ranges from ____ to ____.
9.2	Recent incident of water turbidity (≥ 100 NTU) prior to sampling?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
9.3	Has there been any damage, change or repairs to the spring(s) infrastructure?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
9.4	Have there been any unusual changes or incidents recently within the spring recharge area prior to the sampling event?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Additional Comments					

WM 917 Attachment B.1. Waterworks Level 1 Assessment Form

Virginia Department of Health
Office of Drinking Water (ODW)

Waterworks Level 1 Assessment	
Waterworks Name:	PWSID No.:
Summary	
Assessment Elements/Sanitary Defects	Corrective Action Taken and Date
Additional Actions Needed But Not Completed	
Action Needed	Completion Deadline:
<p>Conclusions:</p> <p><input type="checkbox"/> A cause for the contamination was not determined.</p>	
<p>Assistance with assessment provided by:</p> 	
<p>Print name of person completing the form: _____</p>	
<p>Signature: _____</p>	<p>Date: _____</p>
<p>Print name of Waterworks Representative: _____</p>	
<p>Signature: _____</p>	<p>Date: _____</p>

WM 917 Attachment B.1. Waterworks Level 1 Assessment Form

Virginia Department of Health
Office of Drinking Water (ODW)

Waterworks Level 1 Assessment			
Reserved for VDH-ODW Review			
Waterworks Name:		PWSID No.:	
	Response		Comments
	Yes	No	
1. Has assessment been completed?	<input type="checkbox"/>	<input type="checkbox"/>	
2. Was likely reason for TC+ occurrence found?	<input type="checkbox"/>	<input type="checkbox"/>	
3. Was assessment completed on time?	<input type="checkbox"/>	<input type="checkbox"/>	
4. Have all identified problems or sanitary defects been corrected by the waterworks?	<input type="checkbox"/>	<input type="checkbox"/>	
a. If 'No', has an acceptable schedule of corrective actions been provided?	<input type="checkbox"/>	<input type="checkbox"/>	
b. If a correction schedule is necessary, has schedule been entered into SDWIS?	<input type="checkbox"/>	<input type="checkbox"/>	

ODW Reviewer:

_____ (Print)
 _____ Date: _____

WM 917 Attachment B.2. Waterworks Level 2 Assessment Form

Virginia Department of Health
Office of Drinking Water

Waterworks Level 2 Assessment				
Waterworks Name:		PWSID No.:		
Source Water Type:		City/County:		
Waterworks Type:	<input type="checkbox"/> Community	Population Served:		
	<input type="checkbox"/> Nontransient Noncommunity	<input type="checkbox"/> Seasonal		
	<input type="checkbox"/> Transient Noncommunity	<input type="checkbox"/> Seasonal		
Operator in Responsible Charge:			Phone:	
Compliance Monitoring Period:				
Number of Samples	Required	Collected	Total coliform present	E. coli present
Routine per monitoring period				
Repeat				
Triggered source water				
Date ODW Notified Waterworks Level 2 Assessment Required:				
Assessment Due Date:				
Waterworks Personnel Consulted For Assessment:				
1.		Phone:		
2.		Phone:		
ODW- FO Staff Conducting Assessment:				
Reason Level 2 Assessment is required				
1.	<input type="checkbox"/>	An <i>E.coli</i> maximum contaminant level (MCL) violation		
2.	<input type="checkbox"/>	A second Level 1 Assessment required within a rolling 12-month period		

Waterworks Assessment Instructions

Consider each assessment element listed in the following evaluation form to determine if the element listed may have contributed to the “present” bacteriological sample results.

A response in a highlighted box suggests the assessment element may have contributed to the “present” bacteriological sample results and is a potential Sanitary Defect. Provide an explanation of why the highlighted element could have contributed to the “present” bacteriological sample results in the column titled “Describe any element of concern.” Use the “Additional Comment” space on page 9, if needed, and always refer to the assessment element number. Also, provide the date and description of Corrective Actions taken/required as required on Page 10.

Notes:

1. For wholesale and consecutive waterworks:
 - a. Review records related to flows, pressures, and water quality parameters at the connection(s) with wholesale water supplier.
 - b. Consecutive waterworks owners shall notify wholesale water supplier whenever the consecutive system has been triggered to perform a Level 2 Assessment.
 - c. Wholesale waterworks owners shall notify consecutive waterworks owners as total coliform could have spread to consecutive waterworks distribution system.
2. The Level 2 Assessment must be completed based on a site visit plus the data and documentation available and maintained on file by the waterworks and ODW-Field Office.

WM 917 Attachment B.2. Waterworks Level 2 Assessment Form

Virginia Department of Health
Office of Drinking Water

Waterworks Level 2 Assessment					
Waterworks Name:				PWSID No.:	
Assessment Elements		Response			Describe any element of concern
		Y	N	N/A	
1. Sample Site					
1.1	Were all sites used listed on approved BSSP?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Description:
1.2	If the sample site is listed on the approved BSSP, does it remain an appropriate sample site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
1.3	Are the sample tap and the surrounding area clean?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
1.4	Describe sample tap fixture (e.g., outdoor hose bib, indoor cold water faucet, etc.)				
1.5	Is the sample tap fixture a swivel faucet?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.6	Is the sample tap location used regularly?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
1.7	Any plumbing breaks or changes in vicinity of sample site or premise plumbing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.8	Are there any identified cross connections after the service connection or in premise plumbing? Describe if present.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.9	Were all of the backflow prevention devices at the sample location operational and maintained?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
1.10	Were there any low pressure events or changes in water pressure after the service connection or in the premise plumbing: immediately prior to sample? If yes, when?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.11	Are there any treatment devices after the service connection or in the premises of the sample site?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2. Sample Collection Protocol					
2.1	Was the sample collector properly instructed in collection procedures?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2.2	Were taps flushed adequately (approx. 5 minutes)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2.3	Were aerators removed?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2.4	Were sample containers sealed/unopened prior to use?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2.5	Were the sample containers/rim or cap contaminated during sampling?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.6	Were the taps disinfected?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2.7	Were samples delivered per laboratory instructions?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

WM 917 Attachment B.2. Waterworks Level 2 Assessment Form

Virginia Department of Health
Office of Drinking Water

Waterworks Level 2 Assessment					
Waterworks Name:				PWSID No.:	
Assessment Elements		Response			Describe any element of concern
		Y	N	N/A	
3. Events That May Have Caused a System Upset Prior to Collection of TC Samples					
3.1	Have there been any operation and maintenance activities that could have introduced total coliforms / <i>E.coli</i> ?				
	a.	Well #	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	b.	Well Lot	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	c.	Reservoir	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	d.	Stream/River Intake	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	e.	Treatment Plant / System	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	f.	Distribution piping network	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	g.	Pump Station	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	h.	Storage tanks (atmospheric or pressure)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.2	Has there been a fire fighting event, flushing operation, sheared hydrant, etc.?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.3	Has there been any vandalism and/or unauthorized access to facilities?				
	a.	Well #	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	b.	Well Lot	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	c.	Reservoir	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	d.	Stream/River Intake	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	e.	Treatment Plant / System	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	f.	Distribution piping network	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	g.	Pump Station	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	h.	Storage Tanks (atmospheric or pressure)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.4	Are there any visible indicators of unsanitary conditions?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.5	Have there been any TC+ samples that were not compliance samples, including well or raw water samples?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.6	Have there been any low or inadequate disinfectant residual readings at the entry point or in the distribution system?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.7	Are there sites where it is historically difficult to maintain a residual without flushing?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.8	Have any other measured water quality parameters been out of normal ranges?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.9	Have there been any TC+ or E. coli results in the distribution system (esp. in the last 12 months)? Where?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.10	Did the water system receive any chlorine monitoring violations in the past 12 months? If yes, when.		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.11	Have there been any reports of community illness suspected of being waterborne? (ODW/LHD)		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

WM 917 Attachment B.2. Waterworks Level 2 Assessment Form

Virginia Department of Health
Office of Drinking Water

Waterworks Level 2 Assessment					
Waterworks Name:				PWSID No.:	
Assessment Elements		Response			Describe any Element of Concern
		Y	N	N/A	
4. Recent Operational Changes To The System					
4.1	Have any new approved, previously inactive or unapproved well sources been placed into service recently?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.2	Have any emergency or contingent/reserve well sources been placed into service recently?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.3	Is there evidence of any potential contamination from main breaks, low pressure, high turbidity, loss of disinfection, or other similar event?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.4	If seasonal, were there any problems during the most recent start-up procedure?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5. Distribution System					
5.1	System pressure: Is there evidence that the system experienced low or negative pressure prior to sampling? If yes, describe event and when it occurred.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5.2	Have there been any water main breaks or utility line construction in the vicinity of the sample site? If yes, when?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5.3	Pump stations				
	a. Have there been any mechanical, electrical, or operational problems?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	b. Are pump(s) currently operable?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
5.4	Pump maintenance service or repair in the last six (6) months?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5.5	Air valves upstream of the sample tap connection:				
	a. Is the air valve vault subject to flooding?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	b. Does the vent terminate below grade?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5.6	Have any fire hydrants in the vicinity of the sample tap connection been used recently?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5.7	Have any blow-offs in the vicinity of the sample tap been used recently?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5.8	Unauthorized access or use of the distribution system suspected or reported?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5.9	Backflow Prevention Devices				
	a. Are any backflow devices in service in the distribution system near tap?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	b. Are required inspections and certifications current?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
	c. Is the certification or serviceability of any backflow prevention device suspect?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

WM 917 Attachment B.2. Waterworks Level 2 Assessment Form

Virginia Department of Health
Office of Drinking Water

Waterworks Level 2 Assessment					
Waterworks Name:			PWSID No.:		
Assessment Elements		Response			Describe any Element of Concern
		Y	N	N/A	
5. Distribution System - continued					
5.10	Was there any scheduled flushing of the distribution system? If yes, when?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5.11	Is there any evidence of intentional contamination in the distribution system?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5.12	Has there been a large variation in chlorine residual values in the system?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5.13	Have any unusual circumstances/incidents involving the water distribution system been observed or reported?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5.14	Authorized/unauthorized water haul trucks filled at any fire hydrant?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5.15	Yard hydrants near sample location?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5.16	Have there been any customer complaints about pressure and/or water quality prior to sampling?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6. Treatment Process					
6.1	Have there been any interruptions in treatment processes from power outages or other causes? If yes, provide details for which part, when and for how long?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6.2	Is treatment equipment operational and maintained?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
6.3	Has there been any new equipment installation or repair of treatment equipment recently?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6.4	Has useful life of filter media/cartridges expired?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6.5	Have there been any recent changes in the treatment process (e.g., addition of a process, change in chemical or dosage)? If yes, provide details for the change and when it occurred?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6.6	Was the free chlorine residual measured immediately downstream from the point of application adequate for chlorine contact time?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
6.7	Has the desired free chlorine residual goal and range been consistently achieved?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
6.8	Did a review of the filter turbidity profiles reveal any anomalies?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6.9	Were there any failures in meeting the required chlorine contact time?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6.10	Was any process flow loading rate above the rated capacity?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6.11	Was there anything unusual about the settled water turbidity?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6.12	Other observations on the treatment system?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

WM 917 Attachment B.2. Waterworks Level 2 Assessment Form

Virginia Department of Health
Office of Drinking Water

Waterworks Level 2 Assessment					
Waterworks Name:			PWSID No.:		
Assessment Elements		Response			Describe any Element of Concern
		Y	N	N/A	
7. Water Storage Tanks - Atmospheric					
7.1	Are the vents properly protected and screened?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
7.2	Are the storage facilities and sites secured to prevent unauthorized access?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
7.3	Are the roof access hatches properly designed as shoebox lids, properly gasketed, sealed and locked against unauthorized access?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
7.4	Does the tank have a screened drain line, separate from the overflow line, discharging to the atmosphere?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
7.5	Is the tank overflow outlet screened?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
7.6	Does the tank overflow line terminate above ground surface (air-gap) with a downward discharge screened end?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
7.7	Are there any unsealed openings in the storage facility, such as access doors, vents or joints, target float wire penetrations; cathodic protection/ ice free electrode holder penetrations in the tank roof or wall; have any leaks been observed?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
7.8	Was any physical deterioration of the tank appurtenances (ladders, communications equipment, etc.) observed?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
7.9	Could the physical condition of the tank be a possible source of contamination?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
7.10	Does the tank "float" on the distribution system?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
7.11	Are there separate inlet/outlet lines into the tank?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
7.12	Does the tank have an altitude valve assembly, air release assembly or other device associated with the tank inlet/outlet or fill/release line?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
8. Water Storage – Hydropneumatic/Bladder Storage Tanks				<input type="checkbox"/>	
8.1	Are the pressure storage tanks maintaining an appropriate minimum pressure?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
8.2	Has proper O&M been performed per appropriate schedule?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
8.3	Any recent tank maintenance (i.e. interior inspection; painting/coating)? If yes, when?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
8.4	Is the measured free chlorine residual in the water exiting the storage tank detectable?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
8.5	Is there any evidence of intentional contamination to the pressure storage tank?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
8.6	Are there any other observations of the water storage facilities worthy of note?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

WM 917 Attachment B.2. Waterworks Level 2 Assessment Form

Virginia Department of Health
Office of Drinking Water

Waterworks Level 2 Assessment					
Waterworks Name:				PWSID No.:	
Assessment Elements		Response			Describe any Element of Concern
		Y	N	N/A	
9. Water Supply Well(s)				<input type="checkbox"/>	
9.1	Is well house free of pests/vermin?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
9.2	Is exposed well casing free of rust/pitting or damage?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
9.3	Is well casing floor penetration sealed?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
9.4	Wellhead with Sanitary Seal				
	a. Is the sanitary seal intact and tightened down?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
	b. Is the seal properly vented and screened?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
	c. Are all other penetrations through the seal protected?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
9.5	Wellhead with Caps (pitless adapter installations)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	a. Is the cap a PAS-97 watertight cap?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
	b. Is the watertight cap and gasket properly installed and evenly tightened?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
	c. Is the vent screen intact?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
	d. If the cap has been modified for any purpose, is the cap properly sealed and is any vent securely installed and screened?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
9.6	Is the well casing cover fitted to permit measurement of depth to water level?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	a. If yes, is the installation satisfactory?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
9.7	Does the well blowoff terminate with approved air gap and screened end?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
9.8	Are there any unprotected cross connections at the wellhead?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
9.9	Does the well casing extend 12-in. above grade?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
9.10	Is there evidence of standing water near the wellhead?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	a. In the wellhead enclosure	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	b. Around the concrete pad	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
9.11	Does the Well have a suitable 6 ft. x 6 ft. concrete pad in good condition?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
9.12	Is the wellhead secured in a locked enclosure?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
9.13	Have there been any sewer spills or other contamination activities in or around wellhead (within 50 ft.)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
9.14	Are there any aspects of well or wellhead construction whether compliant or non-compliant with the VA. <i>Waterworks Regulations</i> , that might affect bacteriological quality?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

WM 917 Attachment B.2. Waterworks Level 2 Assessment Form

Virginia Department of Health
Office of Drinking Water

Waterworks Level 2 Assessment					
Waterworks Name:				PWSID No.:	
Assessment Elements		Response			Describe any Element of Concern
		Y	N	N/A	
10. Source – Surface Water Supply (Lake/Reservoir)					<input type="checkbox"/>
10.1	Have there been any sewer overflows, chemical spills or other disturbances into the source?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
10.2	Have there been any algal blooms?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
10.3	Has water turnover occurred?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
10.4	Has there been heavy rainfall, flooding, or rapid snowmelt in the past 60 days that have resulted in raw water turbidities exceeding 100 NTU?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
10.5	Any other surface water comments relevant to bacteriological quality?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
11. Source – Spring(s)					<input type="checkbox"/>
11.1	Recent heavy rainfall, flooding event within 7 days prior to sampling?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
11.2	Recent incident of raw water turbidity (≥100 NTU) within 14 days prior to sampling?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
11.3	Has there been any damage, change or repairs to the spring(s) infrastructure?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
11.4	Has there been any damage, change or repairs to the treatment processes used at the spring(s)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
11.5	Have there been any unusual changes or incidents within the spring drainage area?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
12. Environmental Events					
12.1	Have there been changes in the availability of water supply, such as a significant drop in water table, ground well levels in the wells, reservoir capacity, etc.?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
12.2	Have there been any extremes in heat or cold?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Additional Comments					

WM 917 Attachment B.2. Waterworks Level 2 Assessment Form

Virginia Department of Health
Office of Drinking Water

Waterworks Level 2 Assessment					
Waterworks Name:			PWSID No.:		
Summary					
Assessment Elements/Sanitary Defects			Corrective Action Taken and Date		
Conclusions: <input type="checkbox"/> Attach additional sheets as necessary <input type="checkbox"/> A cause for the contamination was not found.					
Assistance with assessment provided by:					
			Yes	No	Comments
1.	Was likely reason for TC+ occurrence or <i>E.coli</i> violation found?		<input type="checkbox"/>	<input type="checkbox"/>	
2.	Have all identified problems or sanitary defects been corrected by waterworks?		<input type="checkbox"/>	<input type="checkbox"/>	
	a.	If 'No', has an approved schedule to complete remaining corrections been developed and accepted by the waterworks? <u>See attachment</u>	<input type="checkbox"/>	<input type="checkbox"/>	
	b.	If a correction schedule is necessary, has schedule been entered into SDWIS?	<input type="checkbox"/>	<input type="checkbox"/>	

Print name of ODW staff completing the form: _____

Signature: _____ Date: _____

Print name of Waterworks Representative: _____

Signature: _____ Date: _____

Name of Reviewer (Print) _____ Date: _____

Comments:

WM 917 Attachment C.1. Seasonal Waterworks Notification Letter

INSTRUCTIONS: Complete / select items shown with *italics*, and convert to regular font. Print on VDH letterhead. Pages are 1" top, bottom, and side margins.

SUBJECT: County/City
Waterworks: Waterworks Name
PWSID No: PWSID

Date

Waterworks Owner
Address 1
Address 2
City, State, Zip

Dear Waterworks Owner:

Beginning April 1, 2016, the EPA's Revised Total Coliform Rule (RTCR) will take effect. For the first time, the RTCR establishes monitoring requirements specific to seasonal waterworks. A seasonal waterworks is a non-community waterworks that is not operated on a year-round basis and starts up and shuts down at the beginning and end of each operating season.

According to ¹[§141.854(i) of the federal regulations] OR [12VAC5-590-370 A 10 of the *Waterworks Regulations*], a seasonal waterworks must demonstrate completion of start-up procedure approved by the Office of Drinking Water (ODW). The start-up procedure will depend on whether the distribution system is kept pressurized, or is drained at the end of the operating season. ODW may not require all of these requirements if the entire distribution system remains pressurized during the entire period that the waterworks is not in service. In addition, start-up bacteriological sampling is required prior to serving water.

The start-up procedure must include completion of any needed repairs, cleaning, flushing, disinfection, and bacteriological sampling prior to serving water. Two bacteriological samples taken at a minimum of 16 hours apart must test absent for total coliforms before the operating season begins. You must allow sufficient time for completing the start-up procedure (including receiving sample results) and for providing written certification (Certification Form enclosed) of its completion to ODW prior to the start of each operating season.

A Start-up Procedure template is enclosed for your use. You may complete, sign, and submit this procedure or develop your own. An electronic file is available upon request. If you have any questions or need assistance, please contact me at phone number.

Sincerely,

District Engineer
Name of field office

¹ Use federal citation if RTCR has not been adopted into Waterworks Regulations; otherwise use the Waterworks Regulations citation.

WM 917 Attachment C.1. Seasonal Waterworks Notification Letter

INSTRUCTIONS: Complete / select items shown with *italics*, and convert to regular font. Print on VDH letterhead. Pages are 1" top, bottom, and side margins.

ABC:xyz

ec/enc: (*electronic copy if applicable*)

Enclosures: Start-Up Procedure Template
Seasonal Start-Up Disinfection Procedures Guidance
Certification Form

cc: *Consulting engineer (if applicable)*
Name, County Administrator (*if applicable*)
VDH, ODW-Central Office

Start-Up Procedure for Seasonal Waterworks

Name of Waterworks: _____

PWSID No.: _____

Purpose: All seasonal waterworks are required to establish a start-up procedure approved by the Virginia Department of Health, Office of Drinking Water (ODW). A seasonal waterworks is a noncommunity waterworks that is not operated on a year-round basis and starts up and shuts down at the beginning and end of each operating season. Shutting down the waterworks may allow opportunities for bacteriological contamination to enter or spread throughout the distribution system upon re-opening.

Waterworks Details:

- Anticipated start-up date: _____
- Anticipated shut-down date: _____
- Does the waterworks routinely provide chlorination treatment? Yes No
- Conditions at shut down:
 - Will the waterworks remain pressurized (at least 20 psi)? Yes No
 - Will the waterworks be fully drained? Yes No
 - Will the well(s) continue to be used in the off season? Yes No

Provide details on conditions at shut down and off-season activity: _____

Procedure: The following steps in the start-up procedure are mandatory before serving water. The waterworks will be inspected, maintained and repaired as needed, disinfected (where applicable), and sampled for bacteriological water quality prior to opening day. Start-up procedures shall begin well in advance of the anticipated first day of public use to ensure enough time is available to repeat disinfection and sampling procedures, if necessary. (The appropriate ODW field office may be contacted to arrange a site visit to provide technical assistance with the start-up procedures.)

1. At least _____ weeks prior to opening and throughout the start-up procedure, an inspection will be performed of the waterworks. Identified sanitary defects/deficiencies will be corrected as well as any other issues that may affect start-up of the closed section.
 - a. **Source** (i.e., wellhead, spring box, or other structure):
 - 1) The surrounding area will be checked for any potential contamination sources such as fuel storage, chemicals, pesticides, paints, surface water ponding, animal feces and any other materials that could contaminate the area.
 - 2) The well cap/spring box/cover, etc., will be checked to verify it is secured, electrical conduits are protected and sealed, vent screens are intact, and any other signs of damage will be noted and repaired.
 - b. **Well/Pump House:** The structure will be checked for leaking pipes, operational lighting and heating, exposed wires in all electrical conduits, operational sump pumps and booster pumps, signs of flooding or pests/vermin intrusion, vent screens, security measures, and removal of all hazardous or unsanitary materials, etc.

WM 917 Attachment C.2. Seasonal Waterworks Start-Up Procedures

- c. **Treatment Facilities:** Inspections will be conducted of all chemical feed pumps, fittings, tubing, injection points, solution crocks, test kits and that all chemicals and necessary reagents are current (shelf life not expired).
 - d. **Storage Facilities:** Inspections of tank(s) will be conducted for physical damage, pitting or other corrosion, and overall integrity (no cracks or openings). In addition, any defects/deficiencies will be corrected at each type of tank for the following:
 - 1) **Atmospheric tanks:** the vent/overflow/drain screens, water level controls, water tight hatches, locked hatches, sediment build-up, etc.
 - 2) **Hydropneumatic/bladder tanks:** operability of pressure gauges and control switches, correct air/water ratio (tanks are not waterlogged), etc.
 - e. **Distribution system:** Valves, blow-offs, and hydrants will be exercised and an inspection will be conducted for leaks upon filling/flushing the distribution piping. The Cross Connection Control Program will be complied with by ensuring that all devices are installed and tested as required.
2. Flushing will be conducted as follows:
- a. The well will be flushed to waste using the well blow-off or a comparable tap until all water runs clear.
 - b. Storage facilities will be completely drained and flushed to waste to remove stagnant water and sediment.
3. Check which section applies – A, B or C:
- A. The waterworks will remain pressurized (further disinfection is not required); therefore, the following actions will be taken:
- a. Flushing of the distribution system by opening up the taps/hydrants closest to the source first and working outward to the end of the distribution system.
 - b. Once all the water runs clear, the taps/hydrants will be closed in the same order as opened (starting with those closest to the source).
 - c. If chlorine is used to treat the water, the chlorinator will be operated simultaneously while flushing the distribution system, using caution to prevent any chlorinated water from discharging into any surface water (creeks, streams, lakes, etc.). The chlorinated water will be discharged to vegetated areas. Taps/hydrants will be closed upon obtaining a normal chlorine residual (approximately__ ppm). A field test kit will be used to ensure that the proper level is maintained.
- Note: Chlorine solutions are hazardous. Follow safety precautions: use personal protection equipment such as gloves and goggles to avoid contact with skin and eyes.**
- B. The waterworks is fully/partially drained; therefore the facilities will be disinfected using the method checked, and steps “a” through “d” listed below shall be completed. Water treatment devices will be bypassed to prevent damage by the chlorine. (**Note:** Chlorine is not used to treat the water supply.)
- Adding approximately _____ (ounces)(cups) of _____% (sodium hypochlorite) (calcium hypochlorite) chlorine to the well(s).
- Adding approximately ____ (ounces)(cups) of _____ % (sodium hypochlorite) (calcium hypochlorite) chlorine to the atmospheric storage tank(s).
- a. Taps will be opened to get the chlorinated water into the pipes by opening the ones closest to the source first and working outward to the end of the distribution system. Upon detecting the chlorine smell, all taps will be closed in the same order as opened (starting with those closest to the source).
 - b. The chlorinated water will be left in the distribution system for a minimum of 24 hours.
 - a. After 24 hours, the distribution system will be flushed to remove the chlorinated water.
 - b. Chlorinated water will be neutralized with a suitable chemical (such as sulfur dioxide, sodium bisulfite, sodium sulfite, or sodium thiosulfate) prior to discharge to any surface water (i.e.,

WM 917 Attachment C.2. Seasonal Waterworks Start-Up Procedures

creek, stream, river, lake, etc.) OR the local sewer department will be contacted and their procedures followed for disposing of any chlorinated water into the sanitary sewer OR the chlorinated water will be discharged to vegetated areas.

Note: Chlorine solutions are hazardous. Follow safety precautions: use personal protection equipment such as gloves and goggles to avoid contact with skin and eyes.

- C. The waterworks is fully/partially drained and will be disinfected by operating the chlorinator at a dose of 25 ppm. Water treatment devices will be bypassed to prevent damage by the chlorine. The following steps will be completed:
- a. Taps will be opened to get the chlorinated water into the pipes by opening the ones closest to the source first and working outward to the end of the distribution system. Upon detecting the chlorine smell, all taps will be closed in the same order as opened (starting with those closest to the source).
 - b. The chlorinated water will be left in the distribution system for a minimum of 24 hours.
 - c. After 24 hours, the distribution system will be flushed to remove the highly chlorinated water. The water will run until the level of chlorine has reduced to the normal operating level (approximately ___ ppm). A field test kit will be used to ensure that the proper level is maintained.
 - d. Chlorinated water will be neutralized with a suitable chemical (such as sulfur dioxide, sodium bisulfite, sodium sulfite, or sodium thiosulfate) prior to discharge to any surface water (i.e., creek, stream, river, lake, etc.) OR the local sewer department will be contacted and their procedures followed for disposing of any chlorinated water into the sanitary sewer OR the chlorinated water will be discharged to vegetated areas.

Note: Chlorine solutions are hazardous. Follow safety precautions: use personal protection equipment such as gloves and goggles to avoid contact with skin and eyes.

4. After the disinfection/flushing procedure is completed:
 - a. Two bacteriological water samples will be collected, a minimum of 16 hours apart, from an approved bacteriological sample site and submitted to a laboratory certified to perform the presence/absence analysis.
 - b. The samples will be marked "special" on the lab form and will not be used for compliance purposes.
 - c. If either sample result is total coliform present, the procedures listed in item Nos. 2, 3 and 4 will be repeated until two total coliform absent results are obtained.
 - d. Water will not be provided to the public until two consecutive bacteriological samples (collected 16 hours apart) have tested total coliform absent and the start-up certification form has been submitted.
5. A copy of the two "special" bacteriological sample analysis results and the certification form stating completion of the above start-up procedures will be submitted to the _____ Field Office.

Owner/Representative Name: _____

Title: _____

Signature: _____

Date: _____

Start-Up Procedure for Waterworks with Seasonal Components

Name of Waterworks: _____

PWSID No.: _____

Purpose: Year-round waterworks that shut down some of their components during the operating year shall establish a Start-up Procedure for that section of the waterworks. The Start-up Procedure must be approved by the Virginia Department of Health, Office of Drinking Water (ODW). Shutting down part of the waterworks may allow opportunities for bacteriological contamination to enter or spread throughout the distribution system upon re-opening the closed section.

Details of Partial Waterworks Closure:

- Anticipated start-up date: _____
- Anticipated shut-down date: _____
- Does the waterworks routinely provide chlorination treatment? Yes No
- Conditions at shut down:
 - Will the closed section remain pressurized (at least 20 psi)? Yes No
 - Will the closed section be fully drained? Yes No
 - Will all well(s) continue to be used? Yes No
 - Will all storage facilities remain in use? Yes No

Provide details on conditions at shut down and off season activity: _____

Procedure: The following steps in the start-up procedure are mandatory before serving water. The closed section of the waterworks will be inspected, maintained and repaired as needed, disinfected (where applicable), and sampled for bacteriological water quality before opening day. Start-up procedures will begin well in advance of the anticipated first day of public use, to ensure enough time is available to repeat disinfection and sampling procedures, if necessary. (The appropriate ODW field office may be contacted to arrange a site visit to provide technical assistance with the start-up procedures.)

1. At least _____ weeks prior to opening and throughout the start-up procedure, an inspection will be performed of all waterworks components that have not been in operation year-round. Identified sanitary defects/deficiencies will be corrected as well as any other issues that may affect start-up of the closed section.
 - a. **Source** (i.e., wellhead, spring box, or other structure):
 - 1) The surrounding area will be checked for any potential contamination sources such as fuel storage, chemicals, pesticides, paints, surface water ponding, animal feces and any other materials that could contaminate the area.
 - 2) The well cap/spring box/cover, etc., will be checked to verify it is secured, electrical conduits are protected and sealed, vent screens are intact, and any other signs of damage will be noted and repaired.
 - b. **Well/Pump House:** The structure will be checked for leaking pipes, operational lighting and heating, exposed wires in all electrical conduits, operational sump pumps and booster pumps, signs

WM 917 Attachment C.3. Waterworks with Seasonal Components Start-Up Procedures

of flooding or pests/vermin intrusion, vent screens, security measures, and removal of all hazardous or unsanitary materials, etc.

- c. **Treatment Facilities:** Inspections will be conducted of all chemical feed pumps, fittings, tubing, injection points, solution crocks, test kits and that all chemicals and necessary reagents are current (shelf life not expired).
 - d. **Storage Facilities:** Inspections of tank(s) will be conducted for physical damage, pitting or other corrosion, and overall integrity (no cracks or openings). In addition, any defects/deficiencies will be corrected at each type of tank for the following:
 - 1) **Atmospheric tanks:** the vent/overflow/drain screens, water level controls, water tight hatches, locked hatches, sediment build-up, etc.
 - 2) **Hydropneumatic/bladder tanks:** operability of pressure gauges and control switches, correct air/water ratio (tanks are not waterlogged), etc.
 - e. **Distribution system:** Valves, blow-offs, and hydrants will be exercised and an inspection will be conducted for leaks upon filling/flushing the distribution piping. The Cross Connection Control Program will be complied with by ensuring that all devices are installed and tested as required.
2. If the source and/or storage facilities have not been in use, flushing will be conducted as follows:
- a. The well will be flushed to waste using the well blow-off or a comparable tap until all water runs clear.
 - b. Storage facilities will be completely drained and flushed to waste to remove stagnant water and sediment.

3. Check which section applies – A, B or C:

- A. The waterworks closed section will remain pressurized (further disinfection is not required); therefore, the following actions will be taken:
- a. Flushing of the distribution system by opening up the taps/hydrants closest to the source first and working outward to the end of the distribution system.
 - b. Once all the water runs clear, the taps/hydrants will be closed in the same order as opened (starting with those closest to the source).
 - c. If chlorine is used to treat the water, the chlorinator will be operated simultaneously while flushing the distribution system using caution to not allow any chlorinated water to discharge into any surface water (creeks, streams, lakes, etc.). The chlorinated water will be discharged to vegetated areas. Taps/hydrants will be closed upon obtaining a normal chlorine residual (approximately _____ ppm). A field test kit will be used to ensure that the proper level is maintained.
- Note: Chlorine solutions are hazardous. Follow safety precautions: use personal protection equipment such as gloves and goggles to avoid contact with skin and eyes.**

- B. The waterworks closed section is fully/partially drained; therefore, the seasonal components will be disinfected using the method checked and steps “a” through “c” listed below shall be completed. Water treatment devices will be bypassed to prevent damage by the chlorine. (**Note:** Chlorine is not used to treat the water supply.)
- Adding approximately _____ (ounces)(cups) of _____% (sodium hypochlorite) (calcium hypochlorite) chlorine to the well(s).
- Adding approximately ____ (ounces)(cups) of _____% (sodium hypochlorite) (calcium hypochlorite) chlorine to our atmospheric storage tank(s).
- a. Taps will be opened to get the chlorinated water into the pipes by opening the ones closest to the source first and working outward to the end of the distribution system. Upon detecting the chlorine smell, all taps will be closed in the same order as opened (starting with those closest to the source).
 - b. The chlorinated water will be left in the distribution system for a minimum of 24 hours.
 - c. After 24 hours, the distribution system will be flushed to remove the chlorinated water.

WM 917 Attachment C.3. Waterworks with Seasonal Components Start-Up Procedures

- d. Chlorinated water will be neutralized with a suitable chemical (such as sulfur dioxide, sodium bisulfite, sodium sulfite, or sodium thiosulfate) prior to discharge to any surface water (i.e., creek, stream, river, lake, etc.) OR the local sewer department will be contacted and procedures followed before disposing of any chlorinated water into the sanitary sewer OR the chlorinated water will be discharged to vegetated areas.

Note: Chlorine solutions are hazardous. Follow safety precautions: use personal protection equipment such as gloves and goggles to avoid contact with skin and eyes.

C. The waterworks closed section is fully/partially drained and will be disinfected by operating the chlorinator at a dose of 25 ppm. Water treatment devices will be bypassed to prevent damage by the chlorine. The following steps will be completed:

- a. Taps will be opened to get the chlorinated water into the pipes by opening the ones closest to the source first and working outward to the end of the distribution system. Upon detecting the chlorine smell, all taps will be closed in the same order as opened (starting with those closest to the source).
- b. The chlorinated water will be left in the distribution system for a minimum of 24 hours.
- c. After 24 hours, the distribution system will be flushed to remove the highly chlorinated water. Chlorinated water will not be allowed to enter a surface water source (i.e., creek, stream, river, lake, etc.). The water will run until the level of chlorine has reduced to the normal operating level (approximately ___ ppm). A field test kit will be used to ensure that the proper level is maintained.
- d. Chlorinated water will be neutralized with a suitable chemical (such as sulfur dioxide, sodium bisulfite, sodium sulfite, or sodium thiosulfate) prior to discharge to any surface water (i.e., creek, stream, river, lake, etc.) OR The local sewer department will be contacted and procedures followed before disposing of any chlorinated water into the sanitary sewer OR the chlorinated water will be discharged to vegetated areas.

Note: Chlorine solutions are hazardous. Follow safety precautions: use personal protection equipment such as gloves and goggles to avoid contact with skin and eyes.

- 4. After the disinfection/flushing procedure is completed:
 - a. Two bacteriological water samples will be collected, a minimum of 16 hours apart, from an approved bacteriological sample site and submitted to a laboratory certified to perform the presence/absence analysis.
 - b. The samples will be marked "special" on the lab form and will not be used for compliance purposes.
 - c. If either sample result is total coliform present, the procedures listed in item Nos. 2, 3 and 4 will be repeated until two total coliform absent results are obtained.
 - d. Water will not be provided to the public until two consecutive bacteriological samples (collected 16 hours apart) have tested total coliform absent and the start-up certification form has been submitted.
- 5. A copy of the two "special" bacteriological sample analysis results and the certification form stating completion of the above start-up procedures will be submitted to the _____ Field Office.

Owner/Representative Name: _____

Title: _____

Signature: _____

Date: _____

Seasonal Start-Up: Disinfection Procedures

- Waterworks does not have an atmospheric storage tank. We will disinfect using Method 1.
- Waterworks has an atmospheric storage tank. We will disinfect using Method 2.

Note: Concentrated chlorine solutions are hazardous. Follow safety precautions: use personal protection equipment such as gloves and goggles to avoid contact with skin and eyes.

Disinfection Method 1: Well pump will be used to provide chlorinated water to disinfect the waterworks.

Step 1. Flush the well to waste until all water runs clear using the well’s blow-off or comparable tap. Drain and flush all storage tank(s) to waste to remove stagnant water and sediment.

Step 2. Refer to the Well Completion Report for your well or use the Waterworks Description Sheet (WDS) prepared by Virginia Department of Health, Office of Drinking Water (ODW). If the well depth is unknown, call your ODW Field Office for guidance.

Determine the well depth, static water level and the diameter of the well casing and note it below.

Well depth:_____ **Static water level:**_____ **Well casing diameter:**_____

Using Table 1, calculate the amount of water in the well (see example below).

Table 1: Calculating Well Volume	
Well Casing Diameter	Volume of Water Per Foot
4 inches	0.7 gallons
6 inches	1.5 gallons
8 inches	2.6 gallons

Example – By looking at your Well Completion Report or WDS, you know that the depth of the well is 550 feet, the static water level is 36 feet and the casing diameter is 6-inch. To determine total depth of water in the well, subtract the static water level from the depth of the well. 550 feet – 36 feet = 514 feet (depth of water in the well). Multiply this depth by the factor in table 1 to determine the gallons of water in the well. 514 feet x 1.5 gallons (6-inch diameter casing) = 771 gallons of water in the well.

Step 3. Use Table 2 to determine the chlorine dose needed to achieve 25 ppm of chlorine residual using the volume of water in the well as calculated in step 2 above. Round up the number of gallons determined in Step 2.

Step 4. Dilute liquid chlorine bleach (sodium hypochlorite) with enough water to fill a clean 5 gallon bucket. Calcium hypochlorite will be added dry.

- If the well has a pitless adapter and well cap (figure 1), remove bolts and cap. Pour chlorine solution into the well or if using calcium hypochlorite granules, add directly to the well. Pour several buckets of fresh water into the well to rinse the concentrated chlorine solution off of the wiring and sides of the casing. This will help prevent possible damage or corrosion of components. Ensure that the rubber gasket is in place, replace cap and tighten the bolts evenly.

CAUTION: Be careful when pouring chlorine solution to avoid dousing electrical connections/wire nuts! Pull connectors up out of the casing if possible prior to pouring in chlorine solution.



Figure 1 – Pitless Adapter

- If the well has a sanitary seal split well cap (non-pitless cap) (figure 2), remove the vent pipe and use a funnel to pour the chlorine solution or calcium hypochlorite granules into the well. Pour several buckets of fresh water into the well to rinse the concentrated chlorine solution off of the wiring and sides of the casing. This will help prevent possible damage or corrosion of components. Replace the vent pipe, ensuring that the screen is securely in place.



Figure 2 - Split Well Cap

CAUTION: Do not loosen the bolts of the split well cap or the pump/drop pipe may release into the well.

Step 5. Follow the approved Start-up Procedures to complete the disinfection process. Until the chlorine is flushed out, bypass any water treatment devices, such as water softeners.

Disinfection Method 2: Chlorine will be added to the atmospheric storage tank to disinfect the waterworks.

Step 1. Flush the well to waste until all water runs clear using the well’s blow-off or comparable tap. Drain and flush all storage tank(s) to waste to remove stagnant water and sediment.

Step 2. Based on the atmospheric tank volume, determine how much chlorine to add to the tank by referring to Table 2.

Step 3. Dilute liquid chlorine bleach (sodium hypochlorite) with enough water to fill a clean 5 gallon bucket. Add chlorine solution to the empty tank(s) and fill tank(s) with water until full. If using calcium hypochlorite granules, add directly to the tank.

Step 4. Follow the approved Start-up Procedures to complete the disinfection process. Until the chlorine is flushed out, bypass all water treatment devices, such as water softeners, that are downstream from the tank to prevent damage by the chlorine.

Table 2: Chlorine dose of 25 ppm with a disinfection time of 24 hours				
Volume of Water (gallons)	Sodium Hypochlorite Dose of 25 ppm (5.25% strength)	Sodium Hypochlorite Dose of 25 ppm (8.25% strength)	Sodium Hypochlorite Dose of 25 ppm (12.5% Strength)	Calcium Hypochlorite Granule Dose of 25 ppm (65% Strength)
200	1 ½ cups (12 oz)	1 cup (8 oz)	¾ cup (6 oz)	⅙ cup
300	2 ¼ cups (18 oz)	1 ⅓ cups (11 oz)	1 cup (8 oz)	¼ cup
500	3 ½ cups (28 oz)	2 ¼ cups (18 oz)	1 ½ cups (12 oz)	⅓ cup
750	5 ⅓ cups (43 oz)	3 ½ cups (28 oz)	2 ⅓ cups (19 oz)	½ cup
1,500	10 ¾ cups (86 oz)	6 ¾ cups (54 oz)	4 ⅔ cups (37 oz)	1 cup
2,500	1 ¼ gallons	¾ gallon	½ gallon	1 ½ cups

NOTE: If not using National Sanitation Foundation (NSF) certified sodium hypochlorite, use regular household bleach that has been recently purchased and is free of additives and scents.

WM 917 Attachment C.5. Seasonal Waterworks Start-Up Procedures Approval Letter
INSTRUCTIONS: Complete / select items shown with *italics*, and convert to regular font. Print on VDH letterhead. Pages are 1" top, bottom, and side margins.

SUBJECT: County/City
Waterworks: Waterworks Name
PWSID No: PWSID

Date

Waterworks Owner
Address 1
Address 2
City, State, Zip

Dear Waterworks Owner:

The Start-up Procedure dated date for your (seasonal waterworks)(waterworks with seasonal components) has been reviewed by this Office. This letter is to advise that the Start-up Procedure satisfies the requirements of the Revised Total Coliform Rule (RTCR), and is approved. A copy of this approved Start-up Procedure document is enclosed.

Please note that under the RTCR, as a (seasonal waterworks)(waterworks with seasonal components), you must complete this approved procedure prior to the start of every operating season, and submit a written certification form to this Office. Start-up sampling is mandatory and samples must be collected prior to the start of every operating season. Two "special" bacteriological samples must be taken from the distribution system at a minimum of 16 hours apart, using an approved site from your currently approved bacteriological sample siting plan. The results of these samples must be absent for total coliforms.

You will need to make appropriate arrangements with your laboratory to procure these sample kits. Use the correct forms and labels (sent with the sampling kits) for these samples. Notify this Office immediately if there are any errors on these forms so that the appropriate corrections can be made.

Finally, allow sufficient time for completing the Start-up Procedure, including receiving sample results, prior to serving water to the public. We recommend sample collection and analyses at least 2 weeks prior to the first day of service.

If we may be of any assistance to you in implementing this Start-up Procedure, please contact me at phone number.

Sincerely,

Field Office Director
Name of field office

WM 917 Attachment C.5. Seasonal Waterworks Start-Up Procedures Approval Letter
INSTRUCTIONS: Complete / select items shown with *italics*, and convert to regular font. Print on VDH letterhead. Pages are 1" top, bottom, and side margins.

ABC:xyz

Enclosure: Approved Start-up Procedure

ec/enc: *(electronic copy if applicable)*

cc: Consulting engineer *(if applicable)*
Name, County Administrator *(if applicable)*
VDH, ODW-Central Office

CERTIFICATION FORM

Seasonal Waterworks Start-Up Procedure Completed

Name of Waterworks: _____

PWSID No.: _____

Anticipated Date of Opening: _____

During the closed season, this waterworks was:

- Partially/fully drained
 - Fully pressurized (at least 20 psi)
-

To help reduce the risk of bacteriological contamination in the water being served to the public at this waterworks, the following start-up procedures were completed.

- Inspected the waterworks for sanitary defects
 - Repaired all noted sanitary defects
 - N/A – no defects noted
 - Cleaned/flushed all storage facilities
 - Flushed all pipes until the water ran clear
 - Disinfected the waterworks
 - N/A – disinfection not required per approved Start-up Procedure
 - Placed treatment facilities into service
 - N/A – no treatment facilities
 - Collected two bacteriological samples a minimum of 16 hours apart for presence/absence analysis
 - Submitted bacteriological results to the Office of Drinking Water
-

I hereby certify that each start-up procedure indicated above was completed before water was served to the public in accordance with the approved "Start-up Procedure" document for this waterworks.

Signature _____ Date: _____

Print Name: _____

Job Title: _____

Phone: _____

Submit this form to: VDH - Office of Drinking Water
Name Field Office, Address

CERTIFICATION FORM

Waterworks with Seasonal Components Start-Up Procedure Completed

Name of Waterworks: _____

PWSID No.: _____

Anticipated Date of Opening (partial system closure): _____

During the time frame in which we shut down some of our waterworks components, the section was:

- Partially/fully drained
 - Fully pressurized (at least 20 psi)
-

To help reduce the risk of bacteriological contamination in the water being served to the public at this waterworks, the following start-up procedures were completed.

- Inspected shut down components for sanitary defects
 - Repaired all noted sanitary defects
 - N/A – no defects noted
 - Cleaned/flushed all storage facilities
 - Flushed all pipes until the water ran clear
 - Disinfected the waterworks
 - N/A – disinfection not required per approved Start-up Procedure
 - Placed treatment facilities into service
 - N/A – no treatment facilities
 - Collected two bacteriological samples a minimum of 16 hours apart for presence/absence analysis
 - Submitted bacteriological results to the Office of Drinking Water
-

I hereby certify that each start-up procedure indicated above was completed before water was served to the public in accordance with the approved "Start-up Procedure" document for this waterworks.

Signature _____ Date: _____

Print Name: _____

Job Title: _____

Phone: _____

Submit this form to: VDH - Office of Drinking Water
Name Field Office, Address

REVIEW SHEET FOR SEASONAL START-UP PROCEDURES

Subject: _____ Water: _____ Prepared By: _____ Date Submitted: _____ Reviewed By: _____	Review Time		
	Date	Hours	Initials

- | | | | | |
|----|---|-----|----|-----|
| 1. | Is an ODW standard Start-Up Procedure form used? | Yes | No | |
| | Are all portions of the form completed? | Yes | No | N/A |
| | Comments: | | | |
| | Acceptable? | Yes | No | |
| 2. | Has an exemption been requested? | Yes | No | |
| | Does Distribution System remain pressurized year round? | Yes | No | N/A |
| | Does Waterworks have atmospheric storage? | Yes | No | N/A |
| | Recommend granting exemption? | Yes | No | N/A |
| 3. | Does the procedure include the following? | | | |
| | Inspection of the waterworks | Yes | No | N/A |
| | Maintenance or repair of deficient items | Yes | No | N/A |
| | Flushing of storage and distribution systems | Yes | No | N/A |
| | Disinfection of storage and distribution systems | Yes | No | N/A |
| | Special bacteriological sampling | Yes | No | N/A |
| | Comments: | | | |
| | Acceptable? | Yes | No | N/A |
| 4. | Comments: | | | |

**NOTICE OF VIOLATION
and
NOTICE OF LEVEL 2 ASSESSMENT REQUIREMENT**

SUBJECT: County/City
Waterworks: Waterworks Name
PWSID No: PWSID

Date

Waterworks Owner
Address 1
Address 2
City, State, Zip

Re: Exceeding the Primary Maximum Contaminant Level for *E. coli* Bacteria and Level 2 Assessment Required

Dear Waterworks Owner:

This Notice is to advise that you appear to be in violation of § 141.860(a) of the federal Revised Total Coliform Rule (RTCR) that went into effect on April 1, 2016. Waterworks owners are required to comply with these regulations. While the Virginia Department of Health (VDH) is in the process of adopting State RTCR regulations, VDH and the Environmental Protection Agency (EPA) are jointly implementing the federal RTCR in Virginia in accordance with the RTCR extension agreement.

(Choose one or more paragraphs as appropriate from below)

According to our records, a routine bacteriological sample collected from the distribution system on date was *E. coli*-positive. Number (spell out) of the three (3) repeat samples collected on date were total coliform-positive.

According to our records, a routine bacteriological sample collected from the distribution system on date was total coliform-positive. Number (spell out) of the three (3) repeat samples collected on date were *E. coli*-positive.

In addition, our records do not indicate receipt of the analyses for all of the required repeat samples following an *E. coli*-positive routine sample collected on date.

According to our records, an *E. coli* test was not performed on the repeat sample collected on date which tested total coliform-positive.

This is a serious health concern. The presence of *E. coli* bacteria in drinking water is serious because these bacteria are usually associated with sewage or animal wastes (fecal contamination) and indicate that the water may be contaminated with organisms that can cause disease. *E. coli* bacteria in drinking water are generally a result of contaminated source water, inadequate water

treatment, (*and/or*) contaminated distribution piping.

Consequently, a coliform treatment technique has been triggered due to an *E. coli* bacteria PMCL violation. You are hereby notified that a Level 2 assessment must be completed in accordance with the RTCR. A Level 2 assessment will be conducted by staff from this Office. You were contacted on *date*, and a site visit to conduct the assessment is scheduled for *date*.

Required Actions

Consultation: The RTCR requires waterworks owners to initiate consultation with this Office within 24 hours of learning of an *E. coli* bacteria PMCL violation. According to our records, the consultation took place at *time* on *date*. At that time, *name of staff* described public notification requirements and (*faxed/emailed*) you a copy of this letter and a draft Notice to Consumers ("Notice").

Public Notice: The RTCR characterizes this as a Tier 1 situation. You are required to notify consumers that the *E. coli* bacteria PMCL has been exceeded. 12VAC5-590-540 of the *Waterworks Regulations* requires that public notice be handled as follows:

- You must distribute the Notice no later than *time* on *date*. (*Note to ODW staff: This date and time must be 24 hours from the time the waterworks became aware of the violation. It will usually be 24 hours from the consultation date and time.*)
- The Notice must be distributed in a manner to reach all persons served by hand delivering the Notice to each connection, posting at conspicuous locations throughout the area served by the waterworks, and/or appropriate broadcast media such as television, radio, social media, or website.
- Additional public notification may be required depending on the outcome of the Level 2 assessment findings.

Draft Notice: Attached is a draft Notice for you to distribute as directed above. You may use this Notice as is, or modify it to better meet your situation, as long as the information is accurate and it contains all of the required elements and mandated language. If you decide to change the Notice, we suggest that you contact this Office to verify that your proposed changes meet the requirements of the RTCR.

Public Notice Confirmation: Within ten (10) days of completing public notification, but no later than *date*, you must provide this Office with a copy of the Notice that you distributed, along with a signed certification that the distribution was completed in the required time and manner. Failure to distribute the public notice and submit a signed certification form to this Office may be a violation of the RTCR. A certification form is enclosed for your use.

Additional Actions: (*Note or list any needed follow-up actions*)

If applicable, include paragraph below:

The RTCR requires owners who collect routine samples on a quarterly frequency to collect three (3) additional routine samples during the next month following one or more total coliform-

WM917-Attachment D.1. RTCR Tier 1 E. Coli PMCL NOV & PN & Level 2 Assessment Required
INSTRUCTIONS: Complete / select items shown with *italics*, and convert to regular font. Print 1st page on VDH letterhead. Pages are 1" top, bottom, and side margins

positive samples in accordance with your approved Bacteriological Sample Siting Plan.

Level 2 Assessment - Additional Information

A Level 2 assessment is an in-depth evaluation of conditions throughout the waterworks to determine possible causes for the presence of *E. coli* bacteria. Sanitary defects, which are conditions that could provide a pathway of entry for microbial contamination into the distribution system, identified by the assessment are to be noted and corrected. A schedule of corrective action(s) must be included in the assessment for defects not corrected by the assessment due date.

As a reminder, staff from this Office will meet with note the name of the approved waterworks representative with whom staff will be meeting on date to conduct the Level 2 assessment.

Any violation of the federal regulations may result in an enforcement action being taken by the EPA, including federal civil penalties of up to \$37,500 per day per violation.

If you have any questions regarding this matter, please contact me at *phone number*.

Sincerely,

District Engineer
Name of field office

ABC:xyz

Enclosure(s): *list*

ec/enc: *(electronic copy, if applicable)*

cc: *Name of Consulting Engineer (if applicable)*

Name, (Health Director/Environmental Health Manager), Name of LHD

Robert A.K. Payne, JD, Director of Legal Affairs, VDH, ODW-Central Office

Karen Johnson, Groundwater and Enforcement Branch Chief, EPA Region 3

**NOTICE TO CONSUMERS
of the Name WATERWORKS**

IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER

State Health Officials have advised us of a failure to meet the Primary Maximum Contaminant Level (PMCL) for *Escherichia coli* (*E. coli*) in accordance with the federal Revised Total Coliform Rule. Water served to our customers during *monitoring period - month or calendar quarter, and year* did not comply with the PMCL because *E. coli* was detected in (*a sample /samples*) collected from our distribution system on *date (and in follow-up samples on date)*.

E. coli are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Human pathogens in these wastes can cause short-term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a greater health risk for infants, young children, the elderly, and people with severely compromised immune systems. We violated the standard for *E. coli* bacteria, indicating the need to look for potential problems in water treatment or distribution. When this occurs, we are required to conduct a detailed assessment to identify problems and to correct any problems that are found.

General guidelines on ways to lessen the risk of infection by microbes are available from EPA's Safe Drinking Water Hotline at 1 (800) 426-4791.

State Health Officials feel there is a need for concern about the safety of your water. Therefore, until further notice:

DO NOT DRINK TAP WATER WITHOUT BOILING IT FIRST

Bring all tap water to a rolling boil, let it boil for one minute, and let it cool before using, or use bottled water. Boiled or bottled water should be used for drinking, beverage and food preparation, brushing teeth, and making ice. Boiling kills bacteria and other disease-causing microorganisms in the water. Boiling is the preferred method to assure that the tap water is safe to drink. Water does not need to be boiled for washing clothes, bathing, washing dishes, or other uses where water is not ingested. However, care should be taken not to allow children or infants to drink bath water or allow it to get into their mouths.

If you cannot boil your tap water:

- An alternative method of purification for residents that do not have gas or electricity available is to use liquid household bleach to disinfect water. The bleach product should be recently purchased, free of additives and scents, and should contain a hypochlorite solution of at least 5.25%. Public health officials recommend adding eight (8) drops of bleach (about ¼ teaspoon) to each gallon of water. The water should be stirred and allowed to stand for at least 30 minutes before use.
- Water purification tablets may also be used by following the manufacturer's instructions.
- Potable water is available at the following locations: (*List locations where water is available and any special instructions*)

WM917-Attachment D.1. RTCR Tier 1 E. Coli PMCL NOV & PN & Level 2 Assessment Required
INSTRUCTIONS: Complete / select items shown with *italics*, and convert to regular font. Print 1st page on VDH letterhead. Pages are 1" top, bottom, and side margins

CONSUMING WATER FROM WATER SOURCES OF UNTESTED AND UNKNOWN QUALITY MAY POSE A THREAT TO YOUR HEALTH.

State Health Officials will be conducting an assessment of our waterworks to determine the possible cause for the detection of *E. coli* in our distribution system. We will be following up with all corrective actions noted in their assessment. You will be notified of future developments.

We anticipate resolving the problem within the next *provide time frame*.

For more information, please contact: *name of owner/operator* at *contact address* or *contact phone*

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

WM917-Attachment D.1. RTCR Tier 1 E. Coli PMCL NOV & PN & Level 2 Assessment Required
INSTRUCTIONS: Complete / select items shown with *italics*, and convert to regular font. Print 1st page on VDH letterhead. Pages are 1" top, bottom, and side margins

SUBJECT: County/City
Waterworks: Waterworks Name
PWSID No: PWSID

VIOLATION: *E. Coli* PMCL – date

PUBLIC NOTIFICATION CERTIFICATION REPORT FORM

By direct (hand) delivery on _____ (*date*) at _____ a.m./p.m.

Posted on _____ (*date*) at _____ a.m./p.m.

at the following locations _____

Provided to the following broadcast media (*list: television/radio/website/social media*) on

_____ (*date*) at _____ a.m./p.m.

_____ (*date*) at _____ a.m./p.m.

_____ (*date*) at _____ a.m./p.m.

Other approved method _____ (*method and date*)

New billing customers will be notified of any ongoing violation for which notice has previously been issued.

I hereby certify that the attached public notice was distributed as indicated above and that the notice meets all content requirements.

(Signature)

RETURN TO: Name Field Office, Office of Drinking Water
Address

WM917-Attachment D.2. RTCR Tier 2 Coliform TT NOV & PN

INSTRUCTIONS: Complete / select items shown with *italics*, and convert to regular font. Print 1st page on VDH letterhead. Pages are 1" top, bottom, and side margins

NOTICE OF VIOLATION

SUBJECT: County/City
Waterworks: Waterworks Name
PWSID No: PWSID

Date

Waterworks Owner
Address 1
Address 2
City, State, Zip

Re: Coliform Treatment Technique

Dear Waterworks Owner:

This Notice is to advise that you appear to be in violation of § 141.860(b) of the federal Revised Total Coliform Rule (RTCR) that went into effect on April 1, 2016. Virginia waterworks owners are required to comply with these regulations. While the Virginia Department of Health (VDH) is in the process of adopting State RTCR regulations, VDH and the Environmental Protection Agency (EPA) are jointly implementing the federal RTCR in Virginia in accordance with the RTCR extension agreement.

Choose the appropriate paragraph from below:

According to our records, the Level 1 assessment required to be conducted and submitted to this Office by date has not been received. This assessment was required due to [more than one total coliform-positive sample][greater than 5% of collected samples were total coliform-positive samples] during the monitoring period-month or calendar quarter, and year.

According to our records, a Level 2 assessment with a schedule of corrective actions was required to be signed and returned to this Office by date per our Level 2 assessment transmittal letter to you dated date. The signed Level 2 assessment with the schedule of corrective actions has not been received. This assessment was required (due to the E. coli Primary Maximum Contaminant Level exceedance during the monitoring period (specify dates)) (due to a second Level 1 assessment being required during a 12-month rolling period).

According to our records, the sanitary defect(s) as identified in the [Level 1 or Level 2] assessment (was/were) not corrected (within 30 days of the Notice of (Level 1 or Level 2) Assessment Requirement issued to you dated (date)) (by the completion date(s) in accordance with the approved schedule of corrective actions signed by you on (date)). (Staff to specify uncorrected sanitary defects and missed completion dates if multiple defects were required to be corrected, and not all were corrected.)

WM917-Attachment D.2. RTCR Tier 2 Coliform TT NOV & PN

INSTRUCTIONS: Complete / select items shown with *italics*, and convert to regular font. Print 1st page on VDH letterhead. Pages are 1" top, bottom, and side margins

Required Actions

Public Notice: The RTCR characterizes this as a Tier 2 situation. You are required to notify consumers that the required treatment technique was not conducted. 12VAC5-590-540 of the *Waterworks Regulations* requires that public notice be handled as follows:

Choose the appropriate option from below:

(Community waterworks PN requirements option)

- You must distribute a Notice to Consumers ("Notice") no later than *date*.
- The Notice must be mailed or directly delivered to each customer receiving a bill, and to other service connections served by your waterworks.
- If your waterworks serves consumers who do not pay water bills, or who do not have service connection addresses (apartment dwellers, university students, or nursing home patients, for example), you must also use other delivery methods to provide the Notice to these consumers as well. Examples of other methods include (but are not limited to) publication in local newspapers, delivery of multiple copies to apartment buildings, or posting the Notice in public places served by your waterworks.
- Until the violation is resolved, you must give a copy of the Notice to all new billing units or new customers, before or at the time service begins. (This bullet may be deleted if the violation has already been resolved.)
- You must repeat distribution of the Notice each calendar quarter for as long as the violation persists. (This bullet may be deleted if the violation has already been resolved.)

(Non-community waterworks PN requirements option)

- You must provide a Notice to Consumers ("Notice") no later than *date*.
- The Notice must be posted in conspicuous locations throughout the area served by your waterworks, or mailed or directly delivered to the persons served by your waterworks.
- If your waterworks serves consumers who would not be reached by your posted, mailed, or hand-delivered notice, you must also use other distribution methods to provide the Notice to these consumers as well. Such persons may include those who may not see the posted Notice because it is not in a location they routinely pass. Examples of other methods include, but are not limited to, publication of the Notice through a company newsletter, or by E-mail to staff or students.
- The Notice must be posted for a minimum of seven (7) days even if the violation has been resolved, and it must remain in place as long as the violation persists.
- You must repeat distribution of the Notice each calendar quarter for as long as the violation persists. (This bullet may be deleted if the violation has already been resolved.)

Draft Notice: Attached is a draft Notice for you to distribute as directed above. You may use this Notice as is, or modify it to better meet your situation, as long as the information is accurate and the Notice contains all of the required elements and mandated language. If you decide to change the Notice, we suggest that you contact this Office to verify that your proposed changes meet the requirements of the RTCR.

WM917-Attachment D.2. RTCR Tier 2 Coliform TT NOV & PN

INSTRUCTIONS: Complete / select items shown with *italics*, and convert to regular font. Print 1st page on VDH letterhead. Pages are 1" top, bottom, and side margins

Public Notice Confirmation: Within ten (10) days of completing public notification, but no later than *date*, you must provide this Office with a copy of the Notice you distributed, along with a signed certification that the distribution was completed in the required time and manner. Failure to distribute the Notice and submit a signed certification form to this Office may be a violation of the RTCR. A certification form is enclosed for your use.

Follow-up Actions: *(List actions necessary to bring the waterworks back into compliance with the RTCR)*

Any violation of the federal regulations may result in an enforcement action being taken by the EPA, including federal civil penalties of up to \$37,500 per day per violation.

If you have any questions regarding this matter, please contact me at *phone number*.

Sincerely,

District Engineer
Name of Field Office

ABC:xyz

Enclosure(s): *(if applicable)*

ec/enc: *(electronic copy, if applicable)*

cc: *Name of Consulting Engineer (if applicable)*

Name, (Health Director/Environmental Health Manager), Name of LHD

Robert A.K. Payne, JD, Director of Legal Affairs, VDH, ODW-Central Office

Karen Johnson, Groundwater and Enforcement Branch Chief, EPA Region 3

WM917-Attachment D.2. RTCR Tier 2 Coliform TT NOV & PN

INSTRUCTIONS: Complete / select items shown with *italics*, and convert to regular font. Print 1st page on VDH letterhead. Pages are 1" top, bottom, and side margins

**NOTICE TO CONSUMERS
of the Name WATERWORKS**

IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER

State Health Officials have advised us of a failure to meet the Coliform Treatment Technique in accordance with the NATIONAL PRIMARY DRINKING WATER REGULATIONS Revised Total Coliform Rule. We failed to (*conduct the required assessment of our waterworks by (date)*) (*submit a signed schedule of corrective actions upon the finding of a sanitary defect*) (*correct all identified sanitary defects that were found during the assessment that (we conducted) (the Virginia Department of Health conducted)*).

(Choose the appropriate paragraph from below)

Level 1 not performed:

An assessment was required as a result of [more than one sample] [greater than 5% of samples collected] indicating the presence of total coliform bacteria during monitoring period-month or calendar quarter, and year.]

Level 2 signed schedule of corrective actions not returned to ODW:

An assessment and a schedule of corrective actions to fix sanitary defect(s) were required to be signed and returned to the Virginia Department of Health by date. A sanitary defect is a defect that may provide a pathway for contamination to enter the waterworks. The assessment was required (*due to the E. coli Primary Maximum Contaminant Level exceedance during monitoring period-month or calendar quarter, and year.*) (*due to a second Level 1 assessment being required during a 12- month rolling period.*)

Sanitary Defect not corrected:

(Sanitary defects that we identified in the assessment were not corrected by the timeframe specified by the Virginia Department of Health.) (Sanitary defects identified by the Virginia Department of Health assessment were not corrected by the deadlines specified in the schedule of corrective actions.) A sanitary defect is a defect that may provide a pathway for contamination to enter the waterworks.

Although this situation does not require that you take immediate action, as our customers, you have a right to know what happened, what you should do, and what we did to correct the situation.

Choose the appropriate option from below:

(Where Level 1 triggers were tripped, including a 2nd Level 1 assessment in a rolling 12-month period)

You do not need to boil your water or take other corrective actions. However, if you have specific health concerns, consult your doctor.

WM917-Attachment D.2. RTCR Tier 2 Coliform TT NOV & PN

INSTRUCTIONS: Complete / select items shown with *italics*, and convert to regular font. Print 1st page on VDH letterhead. Pages are 1" top, bottom, and side margins

Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially-harmful, waterborne pathogens may be present or that a potential pathway exists through which contamination may enter the drinking water distribution system. We found coliforms indicating the need to look for potential problems in water treatment or distribution. When this occurs, we are required to conduct assessments to identify problems and to correct any problems that are found.

People with severely compromised immune systems, infants, and some elderly may be at increased risk. These people should seek advice about drinking water from their health care providers. General guidelines on ways to lessen the risk of infection by microbes are available from EPA's Safe Drinking Water Hotline at 1 (800) 426-4791.

(Where Level 2 triggers were tripped, including E. coli PMCL)

DO NOT DRINK TAP WATER WITHOUT BOILING IT FIRST

State Health Officials believe there is a need for concern about the safety of your water. Please refer to the Boil Water Advisory delivered to you on date.

E. coli are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Human pathogens in these wastes can cause short-term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a greater health risk for infants, young children, the elderly, and people with severely compromised immune systems. We violated the standard for *E. coli* bacteria, indicating the need to look for potential problems in water treatment or distribution. When this occurs, we are required to conduct a detailed assessment to identify problems and to correct any problems that are found.

These people should seek advice about drinking water from their health care providers. General guidelines on ways to lessen the risk of infection by microbes are available from EPA's Safe Drinking Water Hotline at 1 (800) 426-4791.

What is being done?

(Describe the actions that the waterworks is taking to address the Coliform Treatment Technique requirements)

We anticipate resolving the problem within the next provide time frame.

For more information, please contact: name of owner/operator at contact address or contact phone

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

WM917-Attachment D.2. RTCR Tier 2 Coliform TT NOV & PN

INSTRUCTIONS: Complete / select items shown with *italics*, and convert to regular font. Print 1st page on VDH letterhead. Pages are 1" top, bottom, and side margins

SUBJECT: County/City
Waterworks: Waterworks Name
PWSID No: PWSID

VIOLATION: Coliform Treatment Technique – date

PUBLIC NOTIFICATION CERTIFICATION REPORT FORM
(For Community Waterworks)

By mail delivery on _____ *(date)*

By direct (hand) delivery on _____ *(date)*

Alternate delivery method(s) for consumers who do not pay bills or have a service connection:

1. Posted on _____ *(date)*

At the following locations: _____

2. Published in the _____ *(newspaper)*

on _____ *(date)*

Other approved method _____ *(Method and date)*

New billing customers will be notified of any ongoing violation for which notice has previously been issued.

I hereby certify that the attached public notice was distributed as indicated above and that the notice meets all content requirements.

(Signature)

RETURN TO: Name Field Office, Office of Drinking Water
Address

WM917-Attachment D.2. RTCR Tier 2 Coliform TT NOV & PN

INSTRUCTIONS: Complete / select items shown with *italics*, and convert to regular font. Print 1st page on VDH letterhead. Pages are 1" top, bottom, and side margins

SUBJECT: County/City
Waterworks: Waterworks Name
PWSID No: PWSID

VIOLATION: Coliform Treatment Technique – date

PUBLIC NOTIFICATION CERTIFICATION REPORT FORM
(For Non-community Waterworks)

Posted on _____ *(date)*

At the following locations: _____

By direct (hand) delivery on _____ *(date)*

By mail delivery on _____ *(date)*

Other approved method _____ *(Method and date)*

I hereby certify that the attached public notice was distributed as indicated above and that the notice meets all content requirements.

(Signature)

RETURN TO: Name Field Office, Office of Drinking Water
Address

WM917-Attachment D.3. RTCR Tier 2 Seasonal TT NOV & PN

INSTRUCTIONS: Complete / select items shown with *italics*, and convert to regular font. Print 1st page on VDH letterhead. Pages are 1" top, bottom, and side margins.

NOTICE OF VIOLATION

SUBJECT: County/City
Waterworks: Waterworks Name
PWSID No: PWSID

Date

Waterworks Owner
Address 1
Address 2
City, State, Zip

Re: Coliform Treatment Technique

Dear Waterworks Owner:

This Notice is to advise that you appear to be in violation of § 141.860(b)(2) of the federal Revised Total Coliform Rule (RTCR) that went into effect on April 1, 2016. Virginia waterworks owners are required to comply with these regulations. While the Virginia Department of Health (VDH) is in the process of adopting State RTCR regulations, VDH and the Environmental Protection Agency (EPA) are jointly implementing the federal RTCR in Virginia in accordance with the RTCR extension agreement.

Section 141.860(b)(2) of the federal RTCR requires all seasonal waterworks to complete the State-approved start-up procedure before serving water to the public. According to our records, the subject waterworks is a seasonal waterworks and the approved seasonal start-up procedures were not completed before serving water to the public for the year operating season. A seasonal start-up procedure certification form (has not been submitted to this Office.) (received on (date) does not indicate that all required procedures were completed. Specifically, (list the missing actions)).

Required Actions

Public Notice: The RTCR characterizes this as a Tier 2 situation. You are required to notify consumers that the required treatment technique was not conducted. 12VAC5-590-540 of the *Waterworks Regulations* requires that public notice be handled as follows:

- You must provide a Notice to Consumers (“Notice”) no later than date.
- The Notice must be posted in conspicuous locations throughout the area served by your waterworks, or mailed or directly delivered to the persons served by your waterworks.
- If your waterworks serves consumers who would not be reached by your posted, mailed, or hand-delivered Notice, you must also use other distribution methods to provide the Notice to these consumers as well. Such persons may include those who may not see the posted Notice

WM917-Attachment D.3. RTCR Tier 2 Seasonal TT NOV & PN

INSTRUCTIONS: Complete / select items shown with *italics*, and convert to regular font. Print 1st page on VDH letterhead. Pages are 1" top, bottom, and side margins.

because it is not in a location they routinely pass. Examples of other methods include (but are not limited to) publication of the Notice through a company newsletter, or by E-mail to staff or students.

- The Notice must be posted for a minimum of seven (7) days even if the violation has been resolved, and must remain in place as long as the violation persists.
- You must repeat distribution of the Notice each calendar quarter for as long as the violation persists. (*This bullet may be deleted if the violation has already been resolved.*)

Draft Notice: Attached is a draft Notice for you to distribute as directed above. You may use this Notice as is, or modify it to better meet your situation, as long as the information is accurate and the Notice contains all of the required elements and mandated language. If you decide to change the Notice, we suggest that you contact this Office to verify that your proposed changes meet the requirements of the RTCR.

Public Notice Confirmation: Within ten (10) days of completing public notification, but no later than *date*, you must provide this Office with a copy of the Notice you distributed, along with signed certification that the distribution was completed in the required time and manner. Failure to distribute the Notice and submit a signed certification form to this Office may be a violation of the RTCR. A certification form is enclosed for your use.

Follow-up Actions: (*List actions necessary to bring the waterworks back into compliance with the RTCR.*)

Any violation of the federal regulations may result in an enforcement action being taken by the EPA, including federal civil penalties of up to \$37,500 per day per violation.

If you have any questions regarding this matter, please contact me at *phone number*.

Sincerely,

District Engineer
Name of Field Office

ABC:xyz

Enclosure(s): *list*

ec/enc: (*electronic copy, if applicable*)

cc: *Name of Consulting Engineer (if applicable)*
Name, (Health Director/Environmental Health Manager), Name of LHD
Robert A.K. Payne, JD, Director of Legal Affairs, VDH, ODW-Central Office
Karen Johnson, Groundwater and Enforcement Branch Chief, EPA Region 3

WM917-Attachment D.3. RTCR Tier 2 Seasonal TT NOV & PN

INSTRUCTIONS: Complete / select items shown with *italics*, and convert to regular font. Print 1st page on VDH letterhead. Pages are 1" top, bottom, and side margins.

**NOTICE TO CONSUMERS
of the Name WATERWORKS**

IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER

The waterworks we operate is classified as a seasonal waterworks, meaning that our waterworks does not operate year round and is required to perform opening season start-up procedures prior to serving water. These procedures include inspection of waterworks components, pipe flushing, (*disinfection*) and water analysis for bacteriological quality.

We failed to follow our State-approved start-up procedures prior to serving water (*including a failure to analyze water samples for total coliform bacteria in accordance with the RTCR.*) Even though this was not an emergency, as our customers, you have a right to know what happened and what we did to correct (*this/these*) situation(s).

(Include the following language when the violation includes the failure to monitor for total coliforms prior to serving water; note regular monitoring in this case is referring to the annual disinfection verification samples.)

We are required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not your drinking water meets health standards. Prior to serving water in year, we did not complete all monitoring or testing for total coliform bacteria, and therefore, cannot be sure of the quality of your drinking water during that time.

Choose the appropriate option from below:

State Health Officials believe there is little need for concern about the safety of your water because (*we have now collected samples verifying the safety of the water*) (*List other reason(s).*)

State Health Officials believe there is a need for concern because *describe reason(s).*

We are (*describe actions*) to alleviate this concern.

There is nothing you need to do at this time.

We will carefully follow the state-approved start-up procedures for our waterworks in the future. For more information, please contact: name of owner/operator at contact address or contact phone.

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

WM917-Attachment D.3. RTCR Tier 2 Seasonal TT NOV & PN

INSTRUCTIONS: Complete / select items shown with *italics*, and convert to regular font. Print 1st page on VDH letterhead. Pages are 1" top, bottom, and side margins.

SUBJECT: County/City
Waterworks: Waterworks Name
PWSID No: PWSID

VIOLATION: Seasonal Start-up Procedure failure - date

PUBLIC NOTIFICATION CERTIFICATION REPORT FORM

By direct (hand) delivery on _____ Posted on _____
(date) (date)

at the following locations _____

Other approved method _____
(Method and date)

I hereby certify that the attached public notice was distributed as indicated above and that the notice meets all content requirements.

(Signature)

RETURN TO: Name Field Office, Office of Drinking Water
Address

NOTICE OF VIOLATION

SUBJECT: County/City
Waterworks: Waterworks Name
PWSID No: PWSID

Date

Waterworks Owner

Address 1

Address 2

City, State, Zip

Re: (Select the appropriate violation title & paragraph below)

Failure to Monitor for Total Coliform Bacteria

Failure to Analyze for *E. coli* Following a Total Coliform-Positive Routine Sample

Failure to Monitor for Disinfectant Residual

Dear Waterworks Owner:

This Notice is to advise that you appear to be in violation of § 141.860(c) of the federal Revised Total Coliform Rule (RTCR) that went into effect on April 1, 2016. Virginia waterworks owners are required to comply with these regulations. While the Virginia Department of Health (VDH) is in the process of adopting State RTCR regulations, VDH and the Environmental Protection Agency (EPA) are jointly implementing the RTCR in Virginia in accordance with the RTCR extension agreement.

Choose the appropriate paragraph below:

Section 141.860(c)(1) of the federal RTCR requires that number (routine)(additional routine) samples (was/were) required during monitoring period-month or calendar quarter, and year.) According to our records, number (was/were) analyzed.

Section 141.860(c)(2) of the federal RTCR requires that total coliform-positive samples shall be analyzed for *E. coli*. According to our records, the (routine) (additional routine) sample(s) collected on date (was/were) total coliform-positive and (was/were) not analyzed for *E. coli* bacteria.

Section 141.74(c)(3)(i) of the federal Subpart H-Filtration and Disinfection regulations requires that the residual disinfectant level shall be measured in the distribution system at the same point and at the same time as the required water sample for bacteriological examination. According to our records, the required disinfection level was not measured.

Required Actions

Public Notice: The RTCR characterizes this as a Tier 3 situation. You are required to notify

WM 917 Attachment D.4. RTCR Tier 3 Monitoring NOV & PN

INSTRUCTIONS: Complete / select items shown with *italics*, and convert to regular font. Print 1st page on VDH letterhead. Pages are 1" top, bottom, and side margins.

consumers that the required monitoring was not conducted. 12VAC5-590-540 of the *Waterworks Regulations* requires that public notice be handled as follows:

Choose the appropriate option from below:

(Community waterworks PN requirements option)

- You must distribute a Notice to Consumers ("Notice") no later than *date*.
- The Notice to consumers must be mailed or directly delivered to each customer receiving a bill, and to other service connections served by your waterworks.
- If your waterworks serves consumers who do not pay water bills, or who do not have service connection addresses (apartment dwellers, university students, or nursing home patients, for example) you must also use other delivery methods to provide the Notice to these consumers as well. Examples of other methods include, but are not limited to, publication in local newspapers, delivery of multiple copies to apartment buildings, or posting the Notice in public places served by the waterworks.
- You may choose to include the Notice as an enclosure with or as an integral part of your Consumer Confidence Report (CCR) for *year*. To do so, the combined CCR and public notice must be distributed to consumers by the *date* AND you must take steps to ensure that the CCR and public notice reach all persons served by the waterworks. This requirement is more stringent than the "good faith effort" requirements for distributing the CCR alone.
- Until the violation is resolved, you must give a copy of the Notice to all new billing units or new customers, before or at the time service begins. (This bullet may be deleted if the violation has already been resolved.)
- You must repeat distribution of the Notice annually for as long as the violation persists. (This bullet may be deleted if the violation has already been resolved.)

(Non-community waterworks PN requirements option)

- You must provide a Notice to Consumers ("Notice") no later than *date*.
- The Notice must be posted in conspicuous locations throughout the area served by your waterworks, or mailed or directly delivered to the persons served by your waterworks.
- If your waterworks serves consumers who would not be reached by your posted, mailed, or hand-delivered Notice, you must also use other distribution methods to provide the Notice to these consumers as well. Such persons may include those who may not see the posted Notice because it is not in a location they routinely pass. Examples of other methods include, but are not limited to, publication of the Notice through a company newsletter, or by E-mail to staff or students.
- The Notice must be posted for a minimum of seven (7) days even if the violation has been resolved, and must remain in place as long as the violation persists.
- You must repeat distribution of the notice annually for as long as the violation persists. (This bullet may be deleted if the violation has already been resolved.)

Draft Notice: Attached is a draft Notice mers for you to distribute as directed above. You may use this Notice as is, or modify it to better meet your situation, as long as the information is accurate and the Notice contains all of the required elements and mandated language. If you decide to change the Notice, we suggest that you contact this Office to verify that your proposed

changes meet the requirements of the RTCR.

Public Notice Confirmation: Within ten (10) days of completing public notification, but no later than *date*, you must provide this Office with a copy of the Notice you distributed, along with a signed certification that the distribution was completed in the required time and manner. Failure to distribute the Notice and submit a signed certification form to this Office may be a violation of the RTCR. A certification form is enclosed for your use.

Follow-up Actions: (*List actions necessary to bring the waterworks back into compliance with the RTCR*)

Any violation of the federal regulations may result in an enforcement action being taken by the EPA, including federal civil penalties of up to \$37,500 per day per violation.

If you have questions regarding this matter, please contact me at *phone number*.

Sincerely,

District Engineer
Name of Field Office

ABC:xyz

Enclosure(s): *list*

ec/enc: (*electronic copy, if applicable*)

cc: *Name of Consulting Engineer (if applicable)*

Name, (Health Director/Environmental Health Manager), Name of LHD

Robert A.K. Payne, JD, Director of Legal Affairs, VDH, ODW-Central Office

Karen Johnson, Groundwater and Enforcement Branch Chief, EPA Region 3

**NOTICE TO CONSUMERS
of the Name WATERWORKS**

IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER

State Health Officials have advised us of a failure to perform required monitoring in accordance with the RTCR.

We are required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not our drinking water meets health standards. During the *monitoring period-month or calendar quarter, and year*, we *(did not monitor for coliform bacteria) (did not complete all monitoring for coliform bacteria) (and chlorine residual concentrations) (did not analyze all total coliform-positive samples for E. coli)*. Therefore, we cannot be sure of the quality of our drinking water during that time.

Choose the appropriate paragraph(s) from below:

Number (spell out) sample(s) (was/were) required for analysis and number (spell out) (was/were) analyzed.

A sample was collected on date; however, it was rejected by the laboratory as not acceptable for analysis.

A sample collected on date indicated the presence of coliform bacteria. Whenever coliform bacteria are detected in a sample, follow-up testing is conducted to determine if other bacteria of greater concern, such as *E. coli*, are present. However, the water sample was not analyzed for *E. coli* bacteria as required by the RTCR.

If applicable, include paragraph below:

State Health Officials believe that there is little need for concern about the safety of your water because past records show that our waterworks has had no documented problems with bacteriological contamination; however, routine sampling and examination are required to determine the quality of water delivered to our customers.

There is nothing you need to do at this time. This situation has been resolved.

Choose the appropriate sentence from below:

We have since been collecting and having analyzed the required number of bacteriological samples.

We have advised our laboratory that all future total coliform-positive samples must be analyzed for *E. coli*.

WM 917 Attachment D.4. RTCR Tier 3 Monitoring NOV & PN

INSTRUCTIONS: Complete / select items shown with *italics*, and convert to regular font. Print 1st page on VDH letterhead. Pages are 1" top, bottom, and side margins.

For more information, please contact: *name of owner/operator* at *contact address* or *contact phone*

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

DRAFT

SUBJECT: County/City
Waterworks: Waterworks Name
PWSID No: PWSID

VIOLATION: Monitoring – date

PUBLIC NOTIFICATION CERTIFICATION REPORT FORM
(For Community Waterworks)

By mail delivery on _____ *(date)*

By direct (hand) delivery on _____ *(date)*

Alternate delivery method(s) for consumers who do not pay bills or have a service connection:

1. Posted on _____ *(date)*

At the following locations: _____

2. Published in the _____ *(newspaper)*

On _____ *(date)*

Other approved method _____ *(Method and date)*

New billing customers will be notified of any ongoing violation for which notice has previously been issued.

I hereby certify that the attached public notice was distributed as indicated above and that the notice meets all content requirements.

(Signature)

RETURN TO: Name Field Office, Office of Drinking Water
Address

INSTRUCTIONS: Complete / select items shown with *italics*, and convert to regular font. Print 1st page on VDH letterhead. Pages are 1" top, bottom, and side margins.

SUBJECT: County/City
Waterworks: Waterworks Name
PWSID No: PWSID

VIOLATION: Monitoring – date

PUBLIC NOTIFICATION CERTIFICATION REPORT FORM
(For Non-community Waterworks)

Posted on _____ *(date)*

At the following locations: _____

By direct (hand) delivery on _____ *(date)*

By mail delivery on _____ *(date)*

Other approved method _____ *(Method and date)*

I hereby certify that the attached public notice was distributed as indicated above and that the notice meets all content requirements.

(Signature)

RETURN TO: Name Field Office, Office of Drinking Water
Address

WM917-Attachment D.5. RTCR Tier 3 Reporting NOV & PN

INSTRUCTIONS: Complete / select items shown with *italics*, and convert to regular font. Print 1st page on VDH letterhead. Pages are 1" top, bottom, and side margins.

NOTICE OF VIOLATION

SUBJECT: County/City
Waterworks: Waterworks Name
PWSID No: PWSID

Date

Waterworks Owner

Address 1

Address 2

City, State, Zip

Re: (Select the appropriate violation title & paragraph below; do not use numbers)

1. Failure to Submit Monitoring Report or Completed Assessment Form
2. Failure to Report an *E. coli*-Positive Sample Result
3. Failure to Submit Certification of Completion of Start-up Procedure
4. Failure to Report an *E. coli* PMCL Exceedance
5. Failure to Report an *E. coli*-Positive Routine Sample Result
6. Failure to Report a Coliform Treatment Technique Violation
7. Failure to Submit Assessment Report on Corrective Actions within 30 Calendar Days
8. Failure to Report a Monitoring Violation

Dear Waterworks Owner:

This Notice is to advise that you appear to be in violation of § 141.860 of the federal Revised Total Coliform Rule (RTCR) that went into effect on April 1, 2016. Virginia waterworks owners are required to comply with these regulations. While the Virginia Department of Health (VDH) is in the process of adopting State RTCR regulations, VDH and the Environmental Protection Agency (EPA) are jointly implementing the RTCR in Virginia in accordance with the RTCR extension agreement.

(Choose the appropriate paragraph from below; do not use numbers)

1. Section 141.860(d)(1) of the federal RTCR requires the submission of a monitoring report or a completed assessment form in a timely manner. Our records indicate that you failed to submit this (report) (form) to this Office.
2. Section 141.860(d)(2) of the federal RTCR requires the waterworks to notify the VDH, Office of Drinking Water (ODW) by the end of the next business day when the waterworks learns of an *E. coli*-positive sample. Our records indicate that you failed to report this information to this Office
3. Section 141.860(d)(3) of the federal RTCR requires a seasonal waterworks to submit certification of completion of start-up procedure. Our records indicate that you failed to submit this certificate of completion to this Office.
4. Section 141.861(a)(1)(i) of the federal RTCR requires the waterworks to notify ODW by

WM917-Attachment D.5. RTCR Tier 3 Reporting NOV & PN

INSTRUCTIONS: Complete / select items shown with *italics*, and convert to regular font. Print 1st page on VDH letterhead. Pages are 1" top, bottom, and side margins.

the end of the next business day when the waterworks is notified of an *E. coli* PMCL exceedance. Our records indicate that you failed to report this information to this Office.

5. Section 141.861(a)(1)(ii) of the federal RTCR requires the waterworks to notify ODW by the end of the next business day when the waterworks learns of an *E. coli*-positive routine sample. Our records indicate that you failed to report this information to this Office.
6. Section 141.861(a)(2) of the federal RTCR requires the waterworks to notify ODW by the end of the next business day when the waterworks learns of a coliform treatment technique violation. Our records indicate that you failed to report this information to this Office.
7. Section 141.861(a)(3) of the federal RTCR requires the waterworks to submit an assessment report within thirty (30) calendar days of being notified of the assessment trigger and/or to notify ODW of completed corrective actions in compliance with a schedule approved by ODW. Our records indicate that you failed to report this information to this Office.
8. Section 141.861(a)(4) of the federal RTCR requires the waterworks to report a monitoring violation to ODW within ten (10) days after the waterworks discovers the violation. Our records indicate that you failed to report this information to this Office.

Required Actions

Public Notice: The RTCR characterizes this as a Tier 3 violation. You are required to notify consumers that the required reporting was not conducted. 12VAC5-590-540 of the *Waterworks Regulations* requires that public notice be handled as follows:

Choose the appropriate option from below:

(Community waterworks PN requirements option)

- You must distribute a Notice to Consumers (“Notice”) no later than date.
- The Notice must be mailed or directly delivered to each customer receiving a bill, and to other service connections served by your waterworks.
- If your waterworks serves consumers who do not pay water bills, or who do not have service connection addresses (apartment dwellers, university students, or nursing home patients, for example) you must also use other delivery methods to provide the Notice to these consumers as well. Examples of other methods include, but are not limited to, publication in local newspapers, delivery of multiple copies to apartment buildings, or posting the Notice in public places served by the system.
- You may choose to include the Notice as an enclosure with or as an integral part of your Consumer Confidence Report (CCR) for year. To do so, the combined CCR and public notice must be distributed to consumers by the date AND you must take steps to ensure that the CCR and public notice reach all persons served by the waterworks. This requirement is more stringent than the “good faith effort” requirements for distributing the CCR alone.
- Until the violation is resolved, you must give a copy of the Notice to all new billing units or new customers, before or at the time service begins. (This bullet may be deleted if the violation has already been resolved.)

WM917-Attachment D.5. RTCR Tier 3 Reporting NOV & PN

INSTRUCTIONS: Complete / select items shown with *italics*, and convert to regular font. Print 1st page on VDH letterhead. Pages are 1" top, bottom, and side margins.

- You must repeat distribution of the Notice annually for as long as the violation persists. (*This bullet may be deleted if the violation has already been resolved.*)

(Non-community waterworks PN requirements option)

- You must provide a Notice to Consumers ("Notice") no later than *date*.
- The Notice must be posted in conspicuous locations throughout the area served by your waterworks, or mailed or directly delivered to the persons served by your waterworks.
- If your waterworks serves consumers who would not be reached by your posted, mailed, or hand-delivered Notice, you must also use other distribution methods to provide the Notice to these consumers as well. Such persons may include those who may not see the posted Notice because it is not in a location they routinely pass. Examples of other methods include, but are not limited to, publication of the Notice through a company newsletter, or by E-mail to staff or students.
- The Notice must be posted for a minimum of seven (7) days even if the violation has been resolved, and must remain in place as long as the violation persists.
- You must repeat distribution of the Notice annually for as long as the violation persists. (*This bullet may be deleted if the violation has already been resolved.*)

Draft Notice: Attached is a draft Notice for you to distribute as directed above. You may use this Notice to Consumers as is, or modify it to better meet your situation, as long as the information is accurate and the notice contains all of the required elements and mandated language. If you decide to change the notice, we suggest that you contact this Office to verify that your proposed changes meet the requirements of the RTCR.

Public Notice Confirmation: Within ten (10) days of completing public notification, but no later than *date*, you must provide this Office with a copy of the Notice you distributed, along with a signed certification that the distribution was completed in the required time and manner. Failure to distribute the Notice and submit a signed certification form to this Office may be a violation of the RTCR. A certification form is enclosed for your use.

Follow-up Actions: (*List actions necessary to bring the waterworks back into compliance with the RTCR.*)

Any violation of the federal regulations may result in an enforcement action being taken by the EPA, including federal civil penalties of up to \$37,500 per day per violation.

If you have any questions regarding this matter, please contact me at *phone number*.

Sincerely,

Name
District Engineer
Name of Field Office

ABC:xyz

WM917-Attachment D.5. RTCR Tier 3 Reporting NOV & PN

INSTRUCTIONS: Complete / select items shown with *italics*, and convert to regular font. Print 1st page on VDH letterhead. Pages are 1" top, bottom, and side margins.

Enclosure(s): *list*

ec/enc: *(electronic copy, if applicable)*

cc: *Name of Consulting Engineer (if applicable)*

Name, (Health Director/Environmental Health Manager), Name of LHD

Robert A.K. Payne, JD, Director of Legal Affairs, VDH, ODW-Central Office

Karen Johnson, Groundwater and Enforcement Branch Chief, EPA Region 3

DRAFT

WM917-Attachment D.5. RTCR Tier 3 Reporting NOV & PN

INSTRUCTIONS: Complete / select items shown with *italics*, and convert to regular font. Print 1st page on VDH letterhead. Pages are 1" top, bottom, and side margins.

**NOTICE TO CONSUMERS
of the Name WATERWORKS**

IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER

State Health Officials have advised us of a failure to perform required reporting to the Virginia Department of Health in accordance with the NATIONAL PRIMARY DRINKING WATER REGULATIONS Revised Total Coliform Rule (RTCRC).

Choose the appropriate paragraph from below:

According to our records, the (*monitoring report/analytical results*) (*completed assessment form*) (*was/were*) not submitted to the Virginia Department of Health by the required due date of *date*.

According to our records, the certification of completion of the seasonal start-up procedure was not submitted to the Virginia Department of Health prior to serving water. This procedure is required because our waterworks does not operate year round and measures must be taken to verify the safety of water prior to serving our customers.

According to our records, the Virginia Department of Health was not notified of (*an E. coli-positive sample*) (*an E. coli PMCL exceedance*) (*a Coliform Treatment Technique Violation*) (*a monitoring violation*) (*completed corrective actions per a schedule approved by ODW*) within the time frame specified in the RTCRC.

There is nothing you need to do at this time.

We are immediately attempting to prevent further violations by ensuring that all required reporting is performed appropriately in accordance with the RTCRC. Future violations will be reported as required by the RTCRC in order to increase consumers' awareness of conditions that exist in their waterworks.

(Add additional information as needed)

For more information, please contact: *name of owner/operator* at *contact address* or *contact phone*

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

WM917-Attachment D.5. RTCR Tier 3 Reporting NOV & PN

INSTRUCTIONS: Complete / select items shown with *italics*, and convert to regular font. Print 1st page on VDH letterhead. Pages are 1" top, bottom, and side margins.

SUBJECT: County/City
Waterworks: Waterworks Name
PWSID No: PWSID

VIOLATION: Reporting – date

PUBLIC NOTIFICATION CERTIFICATION REPORT FORM
(For Community Waterworks)

By mail delivery on _____ *(date)*

By direct (hand) delivery on _____ *(date)*

Alternate delivery method(s) for consumers who do not pay bills or have a service connection:

1. Posted on _____ *(date)*

At the following locations: _____

2. Published in the _____ *(date)*

on _____ *(date)*

Other approved method _____ *(Method and date)*

New billing customers will be notified of any ongoing violation for which notice has previously been issued.

I hereby certify that the attached public notice was distributed as indicated above and that the notice meets all content requirements.

(Signature)

RETURN TO: Name Field Office, Office of Drinking Water
Address

WM917-Attachment D.5. RTCR Tier 3 Reporting NOV & PN

INSTRUCTIONS: Complete / select items shown with *italics*, and convert to regular font. Print 1st page on VDH letterhead. Pages are 1" top, bottom, and side margins.

SUBJECT: County/City
Waterworks: Waterworks Name
PWSID No: PWSID

VIOLATION: Reporting – date

PUBLIC NOTIFICATION CERTIFICATION REPORT FORM
(For Non-community Waterworks)

Posted on _____ *(date)*

At the following locations: _____

By direct (hand) delivery on _____ *(date)*

By mail delivery on _____ *(date)*

Other approved method _____ *(Method and date)*

I hereby certify that the attached public notice was distributed as indicated above and that the notice meets all content requirements.

(Signature)

RETURN TO: Name Field Office, Office of Drinking Water
Address

WM917-Attachment D.6. RTCR Tier 3 Recordkeeping NOV & PN

INSTRUCTIONS: Complete / select items shown with *italics*, and convert to regular font. Print 1st page on VDH letterhead. Pages are 1" top, bottom, and side margins.

NOTICE OF VIOLATION

SUBJECT: County/City
Waterworks: Waterworks Name
PWSID No: PWSID

Date

Waterworks Owner

Address 1

Address 2

City, State, Zip

Re: Failure to Maintain Required Documentation

Dear Waterworks Owner:

This Notice is to advise that you appear to be in violation of § 141.861(b) of the federal Revised Total Coliform Rule (RTCR) that went into effect on April 1, 2016. Virginia waterworks owners are required to comply with these regulations. While the Virginia Department of Health (VDH) is in the process of adopting State RTCR regulations, VDH and the Environmental Protection Agency (EPA) are jointly implementing the RTCR in Virginia in accordance with the RTCR extension agreement.

Section 141.861(b)(1) of the federal RTCR requires the waterworks to maintain assessment forms and documentation of corrective actions completed or other documentation of the sanitary defects. Our records indicate that you failed to follow these recordkeeping requirements. (Specify the records that are missing.)

Required Actions

Public Notice: The RTCR characterizes this as a Tier 3 violation. You are required to notify consumers that the required reporting was not conducted. 12VAC5-590-540 of the *Waterworks Regulations* requires that public notice be handled as follows:

Choose the appropriate option from below:

(Community waterworks PN requirements option)

- You must distribute a Notice to Consumers ("Notice") no later than date.
- The Notice must be mailed or directly delivered to each customer receiving a bill, and to other service connections served by your waterworks.
- If your waterworks serves consumers who do not pay water bills, or who do not have service connection addresses (apartment dwellers, university students, or nursing home patients, for example) you must also use other delivery methods to provide the Notice to these consumers as well. Examples of other methods include, but are not limited to, publication in local newspapers, delivery of multiple copies to apartment buildings, or posting the Notice in public places served by the system.
- You may choose to include the notice to consumers as an enclosure with or as an integral part of your Consumer Confidence Report (CCR) for year. To do so, the combined CCR and

WM917-Attachment D.6. RTCR Tier 3 Recordkeeping NOV & PN

INSTRUCTIONS: Complete / select items shown with *italics*, and convert to regular font. Print 1st page on VDH letterhead. Pages are 1" top, bottom, and side margins.

public notice must be distributed to consumers by the *date* AND you must take steps to ensure that the CCR and public notice reach all persons served by the waterworks. This requirement is more stringent than the “good faith effort” requirements for distributing the CCR alone.

- Until the violation is resolved, you must give a copy of the Notice to all new billing units or new customers, before or at the time service begins. (*This bullet may be deleted if the violation has already been resolved.*)
- You must repeat distribution of the Notice annually for as long as the violation persists. (*This bullet may be deleted if the violation has already been resolved.*)

(Non-community waterworks PN requirements option)

- You must provide a Notice to Consumers (“Notice”) no later than *date*.
- The Notice must be posted in conspicuous locations throughout the area served by your waterworks, or mailed or directly delivered to the persons served by your waterworks.
- If your waterworks serves consumers who would not be reached by your posted, mailed, or hand-delivered Notice, you must also use other distribution methods to provide the Notice to these consumers as well. Such persons may include those who may not see the posted Notice because it is not in a location they routinely pass. Examples of other methods include, but are not limited to, publication of the Notice through a company newsletter, or by E-mail to staff or students.
- The Notice must be posted for a minimum of seven (7) days even if the violation has been resolved, and must remain in place as long as the violation persists.
- You must repeat distribution of the Notice annually for as long as the violation persists. (*This bullet may be deleted if the violation has already been resolved.*)

Draft Notice: Attached is a draft Notice for you to distribute as directed above. You may use this Notice as is, or modify it to better meet your situation, as long as the information is accurate and the Notice contains all of the required elements and mandated language. If you decide to change the Notice, we suggest that you contact this Office to verify that your proposed changes meet the requirements of the RTCR.

Public Notice Confirmation: Within ten (10) days of completing public notification, but no later than *date*, you must provide this Office with a copy of the Notice you distributed, along with a signed certification that the distribution was completed in the required time and manner. Failure to distribute public notice and submit a signed certification form to this Office may be a violation of the RTCR. A certification form is enclosed for your use.

Follow-up Actions: (*List actions necessary to bring the waterworks back into compliance with the RTCR.*)

Any violation of the federal regulations may result in an enforcement action being taken by the EPA, including federal civil penalties of up to \$37,500 per day per violation.

If you have any questions regarding this matter, please contact me at *phone number*.

Sincerely,

WM917-Attachment D.6. RTCR Tier 3 Recordkeeping NOV & PN

INSTRUCTIONS: Complete / select items shown with *italics*, and convert to regular font. Print 1st page on VDH letterhead. Pages are 1" top, bottom, and side margins.

Name
District Engineer
Name of Field Office

ABC:xyz

Enclosure(s): list

ec/enc: (electronic copy, if applicable)

cc: Name of Consulting Engineer (if applicable)
Name, (Health Director/Environmental Health Manager), Name of LHD
Robert A.K. Payne, JD, Director of Legal Affairs, VDH, ODW-Central Office
Karen Johnson, Groundwater and Enforcement Branch Chief, EPA Region 3

DRAFT

WM917-Attachment D.6. RTCR Tier 3 Recordkeeping NOV & PN

INSTRUCTIONS: Complete / select items shown with *italics*, and convert to regular font. Print 1st page on VDH letterhead. Pages are 1" top, bottom, and side margins.

**NOTICE TO CONSUMERS
of the Name of WATERWORKS**

IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER

State Health Officials have advised us of a failure to meet recordkeeping requirements in accordance with the NATIONAL PRIMARY DRINKING WATER REGULATIONS Revised Total Coliform Rule (RTCR).

We are required to maintain records of all (*assessment forms*) (*completed corrective actions*) (*sanitary defect documentation*). We failed to maintain these records.

There is nothing you need to do at this time.

We are immediately attempting to prevent further violations by ensuring that all records are maintained in accordance with the RTCR. Future violations will be reported as required by the RTCR in order to increase consumers' awareness of conditions that exist in their waterworks.

(Add additional information as needed)

For more information, please contact: name of owner/operator at contact address or contact phone

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

WM917-Attachment D.6. RTCR Tier 3 Recordkeeping NOV & PN

INSTRUCTIONS: Complete / select items shown with *italics*, and convert to regular font. Print 1st page on VDH letterhead. Pages are 1" top, bottom, and side margins.

SUBJECT: County/City
Waterworks: Waterworks Name
PWSID No: PWSID

VIOLATION: Recordkeeping – date

PUBLIC NOTIFICATION CERTIFICATION REPORT FORM
(For Community Waterworks)

By mail delivery on _____ *(date)*

By direct (hand) delivery on _____ *(date)*

Alternate delivery method(s) for consumers who do not pay bills or have a service connection:

1. Posted on _____ *(date)*

At the following locations: _____

2. Published in the _____ *(date)*

on _____ *(date)*

Other approved method _____ *(Method and date)*

New billing customers will be notified of any ongoing violation for which notice has previously been issued.

I hereby certify that the attached public notice was distributed as indicated above and that the notice meets all content requirements.

(Signature)

RETURN TO: Name Field Office, Office of Drinking Water
Address

WM917-Attachment D.6. RTCR Tier 3 Recordkeeping NOV & PN

INSTRUCTIONS: Complete / select items shown with *italics*, and convert to regular font. Print 1st page on VDH letterhead. Pages are 1" top, bottom, and side margins.

SUBJECT: County/City
Waterworks: Waterworks Name
PWSID No: PWSID

VIOLATION: Recordkeeping – date

PUBLIC NOTIFICATION CERTIFICATION REPORT FORM
(For Non-community Waterworks)

Posted on _____ *(date)*

At the following locations: _____

By direct (hand) delivery on _____ *(date)*

By mail delivery on _____ *(date)*

Other approved method _____ *(Method and date)*

I hereby certify that the attached public notice was distributed as indicated above and that the notice meets all content requirements.

(Signature)

RETURN TO: Name Field Office, Office of Drinking Water
Address

**WM917-Attachment E.1. RTCR Tier 1 E. Coli PMCL NOV & PN & Level 2 Assessment
Required**

INSTRUCTIONS: Complete / select items shown with *italics*, and convert to regular font. Print 1st page on VDH letterhead. Pages are 1" top, bottom, and side margins

**NOTICE OF VIOLATION
and
NOTICE OF LEVEL 2 ASSESSMENT REQUIREMENT**

SUBJECT: County/City
Waterworks: Waterworks Name
PWSID No: PWSID

Date

Waterworks Owner
Address 1
Address 2
City, State, Zip

Re: Exceeding the Primary Maximum Contaminant Level for *E. coli* Bacteria, and Requirement of Level 2 Assessment

Dear Waterworks Owner:

This Notice is to advise that you appear to be in violation of 12VAC5-590-380 of the Virginia *Waterworks Regulations* ("Regulations") for exceeding the Primary Maximum Contaminant Level (PMCL) for *E. coli* bacteria during the monitoring period - month or calendar quarter, and year.

Choose one or more paragraphs as appropriate from below:

According to our records, a routine bacteriological sample collected from the distribution system on date was *E. coli*-positive. Number (spell out) of the three (3) repeat samples collected on date were total coliform-positive.

According to our records, a routine bacteriological sample collected from the distribution system on date was total coliform-positive. Number (spell out) of the three (3) repeat samples collected on date were *E. coli*-positive.

In addition, our records do not indicate receipt of the analyses for all of the required repeat samples following an *E. coli*-positive routine sample collected on date.

According to our records, an *E. coli* analysis was not performed on the repeat sample collected on date which tested total coliform-positive.

WM917-Attachment E.1. RTCR Tier 1 E. Coli PMCL NOV & PN & Level 2 Assessment Required

INSTRUCTIONS: Complete / select items shown with *italics*, and convert to regular font. Print 1st page on VDH letterhead. Pages are 1" top, bottom, and side margins

This is a serious health concern. The presence of *E. coli* bacteria in drinking water is serious because these bacteria are usually associated with sewage or animal wastes (fecal contamination) and indicate that the water may be contaminated with organisms that can cause disease. *E. coli* bacteria in drinking water are generally a result of contaminated source water, inadequate water treatment, (*and/or*) contaminated distribution piping.

Consequently, a coliform treatment technique has been triggered due to an *E. coli* bacteria PMCL exceedance. You are hereby notified that a Level 2 assessment must be completed in accordance with 12VAC5-590-392 of the *Regulations*. A Level 2 assessment will be conducted by staff from this Office. You were contacted on *date*, and a site visit to conduct the assessment is scheduled for *date*.

Required Actions

Consultation: The *Regulations* require waterworks owners to initiate consultation with this Office within 24 hours of learning of an *E. coli* bacteria PMCL violation. According to our records, the consultation took place at *time* on *date*. At that time, *name of staff* described public notification requirements and (*faxed/emailed*) you a copy of this letter and a draft Notice to Consumers ("Notice").

Public Notice: This is a Tier 1 situation. 12VAC 5-590-540 of the *Regulations* requires you to notify consumers within 24 hours of learning whenever the PMCL for *E. coli* bacteria is exceeded. The public notice must be handled as follows:

- You must distribute the Notice no later than *time* on *date*. (*Note to ODW staff: This date and time must be 24 hours from the time the waterworks became aware of the exceedance. It will usually be 24 hours from the consultation date and time.*)
- The Notice must be distributed in a manner to reach all persons served by hand delivering the notice to each connection, posting at conspicuous locations throughout the area served by the waterworks, and/or appropriate broadcast media such as television, radio, social media, or website.
- Additional public notification may be required depending on the outcome of the Level 2 assessment findings.

Draft Notice: Attached is a draft Notice for you to distribute as directed above. You may use this Notice as is, or modify it to better meet your situation, as long as the information is accurate and it contains all of the required elements and mandated language. If you decide to change the Notice, we suggest that you contact this Office to verify that your proposed changes meet the requirements of the *Regulations*

Public Notice Confirmation: Within ten (10) days of completing public notification, but no

WM917-Attachment E.1. RTCR Tier 1 E. Coli PMCL NOV & PN & Level 2 Assessment Required

INSTRUCTIONS: Complete / select items shown with *italics*, and convert to regular font. Print 1st page on VDH letterhead. Pages are 1" top, bottom, and side margins

later than *date*, you must provide this Office with a copy of the Notice that you distributed, along with a signed certification that the distribution was completed in the required time and manner. Failure to distribute the Notice and submit a signed certification form to this Office may be a violation of the *Regulations*. A certification form is enclosed for your use.

Additional Actions: (*Note or list any needed follow-up actions*)

If applicable, include paragraph below:

12VAC5-590-380 of the *Regulations* requires owners who collect routine samples on a quarterly frequency to collect three (3) additional routine samples during the next month following one or more total coliform-positive samples in accordance with your approved Bacteriological Sample Siting Plan.

Level 2 Assessment - Additional Information

A Level 2 assessment is an in-depth evaluation of conditions throughout the waterworks to determine possible causes for the presence of *E. coli* bacteria. Sanitary defects, which are conditions that could provide a pathway of entry for microbial contamination into the distribution system, identified by the assessment are to be noted and corrected. A schedule of corrective action(s) must be included in the assessment for defects not corrected by the assessment due date.

As a reminder, staff from this Office will meet with note the name of the approved waterworks representative with whom staff will be meeting on date to conduct the Level 2 assessment.

If you have any questions regarding this matter, please contact me at *phone number*.

Sincerely,

District Engineer
Name of Field Office

ABC:xyz

Enclosure(s): *list*

ec/enc: (*electronic copy, if applicable*)

cc: *Name of Consulting Engineer (if applicable)*
Name, (Health Director/Environmental Health Manager), Name of LHD
Robert A.K. Payne, JD, Director of Legal Affairs, VDH, ODW-Central Office

**WM917-Attachment E.1. RTCR Tier 1 E. Coli PMCL NOV & PN & Level 2 Assessment
Required**

INSTRUCTIONS: Complete / select items shown with *italics*, and convert to regular font. Print 1st page on VDH letterhead. Pages are 1" top, bottom, and side margins

**NOTICE TO CONSUMERS
of the Name WATERWORKS**

IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER

State Health Officials have advised us of a failure to meet the Primary Maximum Contaminant Level (PMCL) for *Escherichia coli* (*E. coli*) in accordance with the Virginia *Waterworks Regulations*. Water served to our customers during *monitoring period - month or calendar quarter, and year* did not comply with the PMCL because *E. coli* was detected in (*a sample/samples*) collected from our distribution system on *date (and in follow-up samples on date)*.

E. coli are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Human pathogens in these wastes can cause short-term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a greater health risk for infants, young children, the elderly, and people with severely compromised immune systems. We violated the standard for *E. coli*, indicating the need to look for potential problems in water treatment or distribution. When this occurs, we are required to conduct a detailed assessment to identify problems and to correct any problems that are found.

General guidelines on ways to lessen the risk of infection by microbes are available from EPA's Safe Drinking Water Hotline at 1 (800) 426-4791.

State Health Officials feel there is a need for concern about the safety of your water. Therefore, until further notice:

DO NOT DRINK TAP WATER WITHOUT BOILING IT FIRST

Bring all tap water to a rolling boil, let it boil for one minute, and let it cool before using, or use bottled water. Boiled or bottled water should be used for drinking, beverage and food preparation, brushing teeth, and making ice. Boiling kills bacteria and other disease-causing microorganisms in the water. Boiling is the preferred method to assure that the tap water is safe to drink. Water does not need to be boiled for washing clothes, bathing, washing dishes, or other uses where water is not ingested. However, care should be taken not to allow children or infants to drink bath water or allow it to get into their mouths.

If you cannot boil your tap water:

- An alternative method of purification for residents that do not have gas or electricity available is to use liquid household bleach to disinfect water. The bleach product should be recently purchased, free of additives and scents, and should contain a hypochlorite solution of at least 5.25%. Public health officials recommend adding eight (8) drops of bleach (about ¼ teaspoon) to each gallon of water. The water should be stirred and allowed to stand for at least 30 minutes before use.

**WM917-Attachment E.1. RTCR Tier 1 E. Coli PMCL NOV & PN & Level 2 Assessment
Required**

INSTRUCTIONS: Complete / select items shown with *italics*, and convert to regular font. Print 1st page on VDH letterhead. Pages are 1" top, bottom, and side margins

- Water purification tablets may also be used by following the manufacturer's instructions.
- Potable water is available at the following locations: (*List locations where water is available and any special instructions*)

CONSUMING WATER FROM WATER SOURCES OF UNTESTED AND UNKNOWN QUALITY MAY POSE A THREAT TO YOUR HEALTH.

State Health Officials will be conducting an assessment of our waterworks to determine the possible cause for the detection of *E. coli* in our distribution system. We will be following up with all corrective actions noted in their assessment. You will be notified of future developments.

We anticipate resolving the problem within the next *provide time frame*.

For more information, please contact: *name of owner/operator* at *contact address* or *contact phone*

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

**WM917-Attachment E.1. RTCR Tier 1 E. Coli PMCL NOV & PN & Level 2 Assessment
Required**

INSTRUCTIONS: Complete / select items shown with *italics*, and convert to regular font. Print 1st page on VDH letterhead. Pages are 1" top, bottom, and side margins

SUBJECT: County/City
Waterworks: Waterworks Name
PWSID No: PWSID

VIOLATION: *E. Coli* PMCL – date

PUBLIC NOTIFICATION CERTIFICATION REPORT FORM

By direct (hand) delivery on _____ (*date*) at _____ a.m./p.m.

Posted on _____ (*date*) at _____ a.m./p.m.

at the following locations _____

Provided to the following broadcast media (*list: television/radio/website/social media*) on

_____ (*date*) at _____ a.m./p.m.

_____ (*date*) at _____ a.m./p.m.

_____ (*date*) at _____ a.m./p.m.

Other approved method _____ (*method and date*)

New billing customers will be notified of any ongoing violation for which notice has previously been issued.

I hereby certify that the attached public notice was distributed as indicated above and that the notice meets all content requirements.

(Signature)

RETURN TO: Name Field Office, Office of Drinking Water
Address

WM917-Attachment E.2. RTCR Tier 2 Coliform TT NOV & PN

INSTRUCTIONS: Complete / select items shown with *italics*, and convert to regular font. Print 1st page on VDH letterhead. Pages are 1" top, bottom, and side margins

NOTICE OF VIOLATION

SUBJECT: County/City
Waterworks: Waterworks Name
PWSID No: PWSID

Date

Waterworks Owner

Address 1

Address 2

City, State, Zip

Re: Coliform Treatment Technique Violation

Dear Waterworks Owner:

This Notice is to advise that you appear to be in violation of 12VAC5-590-392 of the Virginia *Waterworks Regulations* ("Regulations").

Choose the appropriate paragraph from below:

According to our records, the Level 1 assessment required to be conducted and submitted to this Office by date has not been received. This assessment was required due to (more than one total coliform-positive sample) (due to greater than 5% of collected samples were total coliform-positive samples) during the monitoring period-month or calendar quarter, and year.

According to our records, a Level 2 assessment with a schedule of corrective actions was required to be signed and returned to this Office by date per our letter to you dated date. The signed Level 2 assessment with the schedule of corrective actions has not been received. This assessment was required (due to the E. coli Primary Maximum Contaminant Level exceedance during the monitoring period (specify dates)) (due to a second Level 1 assessment being required during a 12-month rolling period).

According to our records, the sanitary defect(s) as identified in the (Level 1 or Level 2) assessment (was/were) not corrected (within 30 days of the Notice of (Level 1 or Level 2) Assessment Requirement issued to you dated (date)) (by the completion date(s) in accordance with the approved schedule of corrective actions signed by you on (date)). (Staff to specify uncorrected sanitary defects and missed completion dates if multiple defects were required to be corrected, and not all were corrected.)

WM917-Attachment E.2. RTCR Tier 2 Coliform TT NOV & PN

INSTRUCTIONS: Complete / select items shown with *italics*, and convert to regular font. Print 1st page on VDH letterhead. Pages are 1" top, bottom, and side margins

Required Actions

Public Notice: This is a Tier 2 situation. 12VAC5-590-540 of the *Regulations* requires you to notify consumers that the required action(s) stated above (*was/were*) not conducted. The public notice must be handled as follows:

Choose the appropriate option from below:

(Community waterworks PN requirements option)

- You must distribute a Notice to Consumers ("Notice") no later than *date*.
- The Notice must be mailed or directly delivered to each customer receiving a bill, and to other service connections served by your waterworks.
- If your waterworks serves consumers who do not pay water bills, or who do not have service connection addresses (apartment dwellers, university students, or nursing home patients, for example), you must also use other delivery methods to provide the Notice to these consumers as well. Examples of other methods include (but are not limited to) publication in local newspapers, delivery of multiple copies to apartment buildings, or posting the notice in public places served by your waterworks.
- Until the violation is resolved, you must give a copy of the Notice to all new billing units or new customers, before or at the time service begins. *(This bullet may be deleted if the violation has already been resolved.)*
- You must repeat distribution of the Notice each calendar quarter for as long as the violation persists. *(This bullet may be deleted if the violation has already been resolved.)*

(Non-community waterworks PN requirements option)

- You must provide a Notice to Consumers ("Notice") no later than *date*.
- The Notice must be posted in conspicuous locations throughout the area served by your waterworks, or mailed or directly delivered to the persons served by your waterworks.
- If your waterworks serves consumers who would not be reached by your posted, mailed, or hand-delivered Notice, you must also use other distribution methods to provide the Notice to these consumers as well. Such persons may include those who may not see the posted Notice because it is not in a location they routinely pass. Examples of other methods include, but are not limited to, publication of the Notice through a company newsletter, or by E-mail to staff or students.
- The Notice must be posted for a minimum of seven (7) days even if the violation has been resolved, and it must remain in place as long as the violation persists.
- You must repeat distribution of the Notice each calendar quarter for as long as the violation persists. *(This bullet may be deleted if the violation has already been resolved.)*

Draft Notice: Attached is a draft Notice for you to distribute as directed above. You may use this Notice as is, or modify it to better meet your situation, as long as the information is accurate and the Notice contains all of the required elements and mandated language. If you decide to change the Notice, we suggest that you contact this Office to verify that your proposed changes meet the requirements of the *Regulations*.

WM917-Attachment E.2. RTCR Tier 2 Coliform TT NOV & PN

INSTRUCTIONS: Complete / select items shown with *italics*, and convert to regular font. Print 1st page on VDH letterhead. Pages are 1" top, bottom, and side margins

Public Notice Confirmation: Within ten (10) days of completing public notification, but no later than *date*, you must provide this Office with a copy of the Notice that you distributed, along with a signed certification that the distribution was completed in the required time and manner. Failure to distribute the Notice and submit a signed certification form to this Office may be a violation of the *Regulations*. A certification form is enclosed for your use.

Follow-up Actions: (List actions necessary to bring the waterworks back into compliance with the Virginia Waterworks Regulations)

If you have any questions regarding this matter, please contact me at phone number.

Sincerely,

District Engineer
Name of Field Office

ABC:xyz

Enclosure(s): list

ec/enc: (electronic copy, if applicable)

cc: Name of Consulting Engineer (if applicable)
Name, (Health Director/Environmental Health Manager), Name of LHD
Robert A.K. Payne, JD, Director of Legal Affairs, VDH, ODW-Central Office

WM917-Attachment E.2. RTCR Tier 2 Coliform TT NOV & PN

INSTRUCTIONS: Complete / select items shown with *italics*, and convert to regular font. Print 1st page on VDH letterhead. Pages are 1" top, bottom, and side margins

NOTICE TO CONSUMERS of the Name WATERWORKS

IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER

State Health Officials have advised us of a failure to meet the Coliform Treatment Technique in accordance with the Virginia Waterworks Regulations. We failed to *(conduct the required assessment of our waterworks by (date)) (submit a signed schedule of corrective actions upon the finding of a sanitary defect) (correct all identified sanitary defects that were found during the assessment that (we conducted) (the Virginia Department of Health conducted))*.

Choose the appropriate paragraph from below:

Level 1 assessment not performed:

An assessment was required as a result of *(more than one sample) (greater than 5% of samples collected)* indicating the presence of total coliform bacteria during *monitoring period-month or calendar quarter, and year.*

Level 2 assessment signed schedule of corrective actions not returned to ODW:

An assessment and a schedule of corrective actions to fix sanitary defect(s) were required to be signed and returned to the Virginia Department of Health by *date*. A sanitary defect is a defect that may provide a pathway for contamination to enter the waterworks. The assessment was required *(due to the E. coli Primary Maximum Contaminant Level exceedance during monitoring period-month or calendar quarter, and year.) (due to a second Level 1 assessment being required during a 12- month rolling period.)*

Sanitary Defect not corrected:

(Sanitary defects that we identified in the assessment were not corrected by the timeframe specified by the Virginia Department of Health.) (Sanitary defects identified by the Virginia Department of Health assessment were not corrected by the deadlines specified in the schedule of corrective actions.) A sanitary defect is a defect that may provide a pathway for contamination to enter the waterworks.

Although this situation does not require that you take immediate action, as our customers, you have a right to know what happened, what you should do, and what we did to correct the situation.

Choose the appropriate option from below:

(Where Level 1 triggers were tripped, including a 2nd Level 1 assessment in a rolling 12-month period)

You do not need to boil your water or take other corrective actions. However, if you have specific health concerns, consult your doctor.

Coliforms are bacteria that are naturally present in the environment and are used as an indicator that

WM917-Attachment E.2. RTCR Tier 2 Coliform TT NOV & PN

INSTRUCTIONS: Complete / select items shown with *italics*, and convert to regular font. Print 1st page on VDH letterhead. Pages are 1" top, bottom, and side margins

other, potentially harmful, waterborne pathogens may be present or that a potential pathway exists through which contamination may enter the drinking water distribution system. We found coliforms indicating the need to look for potential problems in water treatment or distribution. When this occurs, we are required to conduct assessments to identify problems and to correct any problems that are found.

People with severely compromised immune systems, infants, and some elderly may be at increased risk. These people should seek advice about drinking water from their health care providers. General guidelines on ways to lessen the risk of infection by microbes are available from EPA's Safe Drinking Water Hotline at 1 (800) 426-4791.

(Where Level 2 triggers were tripped, including E. coli PMCL)

DO NOT DRINK TAP WATER WITHOUT BOILING IT FIRST

State Health Officials believe there is a need for concern about the safety of your water. Please refer to the Boil Water Advisory delivered to you on date.

E. coli are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Human pathogens in these wastes can cause short-term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a greater health risk for infants, young children, the elderly, and people with severely compromised immune systems. We violated the standard for *E. coli*, indicating the need to look for potential problems in water treatment or distribution. When this occurs, we are required to conduct a detailed assessment to identify problems and to correct any problems that are found.

These people should seek advice about drinking water from their health care providers. General guidelines on ways to lessen the risk of infection by microbes are available from EPA's Safe Drinking Water Hotline at 1 (800) 426-4791.

What is being done?

(Describe the actions that the waterworks is taking to address the Coliform Treatment Technique requirements.)

We anticipate resolving the problem within the next provide time frame.

For more information, please contact: name of owner/operator at contact address or contact phone

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

WM917-Attachment E.2. RTRC Tier 2 Coliform TT NOV & PN

INSTRUCTIONS: Complete / select items shown with *italics*, and convert to regular font. Print 1st page on VDH letterhead. Pages are 1" top, bottom, and side margins

SUBJECT: County/City
Waterworks: Waterworks Name
PWSID No: PWSID

VIOLATION: Coliform Treatment Technique – date

PUBLIC NOTIFICATION CERTIFICATION REPORT FORM

(For Community Waterworks)

By mail delivery on _____ *(date)*

By direct (hand) delivery on _____ *(date)*

Alternate delivery method(s) for consumers who do not pay bills or have a service connection:

1. Posted on _____ *(date)*

At the following locations: _____

2. Published in the _____ *(newspaper)*

on _____ *(date)*

Other approved method _____ *(Method and date)*

New billing customers will be notified of any ongoing violation for which notice has previously been issued.

I hereby certify that the attached public notice was distributed as indicated above and that the notice meets all content requirements.

(Signature)

RETURN TO: Name Field Office, Office of Drinking Water
Address

WM917-Attachment E.2. RTCR Tier 2 Coliform TT NOV & PN

INSTRUCTIONS: Complete / select items shown with *italics*, and convert to regular font. Print 1st page on VDH letterhead. Pages are 1" top, bottom, and side margins

SUBJECT: County/City
Waterworks: Waterworks Name
PWSID No: PWSID

VIOLATION: Coliform Treatment Technique – date

PUBLIC NOTIFICATION CERTIFICATION REPORT FORM

(For Non-community Waterworks)

Posted on _____ *(date)*

At the following locations: _____

By direct (hand) delivery on _____ *(date)*

By mail delivery on _____ *(date)*

Other approved method _____ *(Method and date)*

I hereby certify that the attached public notice was distributed as indicated above and that the notice meets all content requirements.

(Signature)

RETURN TO: Name Field Office, Office of Drinking Water
Address

WM917-Attachment E.3. RTRC Tier 2 Seasonal TT NOV & PN

INSTRUCTIONS: Complete / select items shown with *italics*, and convert to regular font. Print 1st page on VDH letterhead. Pages are 1" top, bottom, and side margins.

NOTICE OF VIOLATION

SUBJECT: County/City
Waterworks: Waterworks Name
PWSID No: PWSID

Date

Waterworks Owner

Address 1

Address 2

City, State, Zip

Re: Coliform Treatment Technique Violation

Dear Waterworks Owner:

This Notice is to advise that you appear to be in violation of 12VAC5-590-370 of the Virginia *Waterworks Regulations* ("Regulations").

According to our records, your waterworks is a seasonal waterworks and the approved seasonal start-up procedures were not completed prior to serving water to the public for the year operating season. A seasonal start-up procedure certification form (has not been submitted to this Office.) (received on (date) does not indicate that all required procedures were completed. Specifically, (list the missing actions).).

Required Actions

Public Notice: This is a Tier 2 situation. 12VAC5-590-540 of the *Regulations* requires you to notify consumers that the required action(s) stated above (was/were) not conducted. The public notice must be handled as follows:

- You must provide a Notice to Consumers ("Notice") no later than date.
- The Notice must be posted in conspicuous locations throughout the area served by your waterworks, or mailed or directly delivered to the persons served by your waterworks.
- If your waterworks serves consumers who would not be reached by your posted, mailed, or hand-delivered Notice, you must also use other distribution methods to provide the Notice to these consumers as well. Such persons may include those who may not see the posted Notice because it is not in a location they routinely pass. Examples of other methods include, but are not limited to, publication of the Notice through a company newsletter, or by E-mail to staff or students.
- Notices must be posted for a minimum of seven (7) days even if the violation has been resolved, and must remain in place as long as the violation persists.

WM917-Attachment E.3. RTCR Tier 2 Seasonal TT NOV & PN

INSTRUCTIONS: Complete / select items shown with *italics*, and convert to regular font. Print 1st page on VDH letterhead. Pages are 1" top, bottom, and side margins.

- You must repeat distribution of the Notice each calendar quarter for as long as the violation persists. (*This bullet may be deleted if the violation has already been resolved.*)

Draft Notice: Attached is a draft Notice for you to distribute as directed above. You may use this Notice as is, or modify it to better meet your situation, as long as the information is accurate and the Notice contains all of the required elements and mandated language. If you decide to change the Notice, we suggest that you contact this Office to verify that your proposed changes meet the requirements of the *Regulations*.

Public Notice Confirmation: Within ten (10) days of completing public notification, but no later than *date*, you must provide this Office with a copy of the Notice that you distributed, along with signed certification that the distribution was completed in the required time and manner. Failure to distribute the Notice and submit a signed certification form to this Office may be a violation of the *Regulations*. A certification form is enclosed for your use.

Follow-up Actions: (*List actions necessary to bring the waterworks back into compliance with the Regulations*)

If you have any questions regarding this matter, please contact me at *phone number*.

Sincerely,

District Engineer
Name of Field Office

ABC:xyz

Enclosure(s): *list*

ec/enc: (*electronic copy, if applicable*)

cc: *Name of Consulting Engineer (if applicable)*
Name, (Health Director/Environmental Health Manager), Name of LHD
Robert A.K. Payne, JD, Director of Legal Affairs, VDH, ODW-Central Office

WM917-Attachment E.3. RTCR Tier 2 Seasonal TT NOV & PN

INSTRUCTIONS: Complete / select items shown with *italics*, and convert to regular font. Print 1st page on VDH letterhead. Pages are 1" top, bottom, and side margins.

**NOTICE TO CONSUMERS
of the Name WATERWORKS**

IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER

The waterworks we operate is classified as a seasonal waterworks, meaning that our waterworks does not operate year round, and is required to perform opening season start-up procedures prior to serving water to the public. These procedures include inspection of waterworks components, pipe flushing, (*disinfection*) and water analysis for bacteriological quality.

We failed to follow our State-approved start-up procedures prior to serving water (*including a failure to analyze water samples for total coliform bacteria in accordance with the Virginia Waterworks Regulations.*) Even though this was not an emergency, as our customers, you have a right to know what happened and what we did to correct (*this/these*) situation(s).

(Include the following language when the violation includes the failure to monitor for total coliforms prior to serving water; note regular monitoring in this case is referring to the annual disinfection verification samples.)

We are required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not your drinking water meets health standards. Prior to serving water to the public in *year*, we did not complete all monitoring or testing for total coliform bacteria, and therefore, cannot be sure of the quality of your drinking water during that time.

Choose the appropriate option from below:

State Health Officials believe there is little need for concern about the safety of your water because (*we have now collected samples verifying the safety of the water*) (*List other reason(s)*).

State Health Officials believe there is a need for concern because *describe reason(s)*.
We are (*describe actions*) to alleviate this concern.

There is nothing you need to do at this time.

We will carefully follow the State-approved start-up procedures for our waterworks in the future. For more information, please contact: *name of owner/operator* at *contact address* or *contact phone*.

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

WM917-Attachment E.3. RTCR Tier 2 Seasonal TT NOV & PN

INSTRUCTIONS: Complete / select items shown with *italics*, and convert to regular font. Print 1st page on VDH letterhead. Pages are 1" top, bottom, and side margins.

SUBJECT: County/City
Waterworks: Waterworks Name
PWSID No: PWSID

VIOLATION: Seasonal Start-up Procedure failure - date

PUBLIC NOTIFICATION CERTIFICATION REPORT FORM

By direct (hand) delivery on _____ Posted on _____
(date) (date)

at the following locations _____

Other approved method _____
(Method and date)

I hereby certify that the attached public notice was distributed as indicated above and that the notice meets all content requirements.

(Signature)

RETURN TO: Name Field Office, Office of Drinking Water
Address

NOTICE OF VIOLATION

SUBJECT: County/City
Waterworks: Waterworks Name
PWSID No: PWSID

Date

Waterworks Owner
Address 1
Address 2
City, State, Zip

Re: (Select the appropriate violation title(s) & paragraph(s) below)

Failure to Monitor for Coliform Bacteria

Failure to Analyze for *E. coli* Following a Total Coliform-Positive Routine Sample

Failure to Monitor for Disinfectant Residual

Dear Waterworks Owner:

This notice is to advise that you appear to be in violation of 12VAC5-590-370 of the Virginia *Waterworks Regulations* ("Regulations").

Choose the appropriate paragraph(s) from below:

According to our records, the required routine water sample(s) for bacteriological examination (was/were) not collected and analyzed during monitoring period-month or calendar quarter, and year. Number (spell out) (routine/additional routine) samples (was/were) required and number (spell out) (was/were) analyzed.

According to our records, the (routine/additional routine) sample(s) collected on date (was/were) total coliform-positive and (was/were) not analyzed for *E. coli* bacteria.

The (routine/additional routine) sample collected on date was not acceptable for analysis due to its rejection by the laboratory.

In addition, according to our records, the required residual disinfectant level, as specified in 12VAC5-590-370 of the *Regulations*, was not measured. The residual disinfectant level must be measured in the distribution system at the same point and at the same time as the required water sample for bacteriological examination.

Required Actions

Public Notice: This is a Tier 3 situation. 12VAC5-590-540 of the *Regulations* requires you to notify consumers that the required monitoring was not conducted. The public notice must be handled as follows:

WM917-Attachment E.4. RTCR Tier 3 Monitoring NOV & PN

INSTRUCTIONS: Complete / select items shown with *italics*, and convert to regular font. Print 1st page on VDH letterhead. Pages are 1" top, bottom, and side margins.

Choose the appropriate option from below:

(Community waterworks PN requirements option)

- You must distribute a Notice to Consumers (“Notice”) no later than *date*.
- The Notice must be mailed or directly delivered to each customer receiving a bill, and to other service connections served by your waterworks.
- If your waterworks serves consumers who do not pay water bills, or who do not have service connection addresses (apartment dwellers, university students, or nursing home patients, for example) you must also use other delivery methods to provide the Notice to these consumers as well. Examples of other methods include, but are not limited to, publication in local newspapers, delivery of multiple copies to apartment buildings, or posting the Notice in public places served by the waterworks.
- You may choose to include the Notice as an enclosure with or as an integral part of your Consumer Confidence Report (CCR) for *year*. To do so, the combined CCR and public notice must be distributed to consumers by the *date* AND you must take steps to ensure that the CCR and public notice reach all persons served by the waterworks. This requirement is more stringent than the “good faith effort” requirements for distributing the CCR alone.
- Until the violation is resolved, you must give a copy of the Notice to all new billing units or new customers, before or at the time service begins. (*This bullet may be deleted if the violation has already been resolved.*)
- You must repeat distribution of the Notice annually for as long as the violation persists. (*This bullet may be deleted if the violation has already been resolved.*)

(Non-community waterworks PN requirements option)

- You must provide a Notice to Consumers (“Notice”) no later than *date*.
- The Notice must be posted in conspicuous locations throughout the area served by your waterworks, or mailed or directly delivered to the persons served by your waterworks.
- If your waterworks serves consumers who would not be reached by your posted, mailed, or hand-delivered Notice, you must also use other distribution methods to provide the Notice to these consumers as well. Such persons may include those who may not see the posted Notice because it is not in a location they routinely pass. Examples of other methods include, but are not limited to, publication of a Notice through a company newsletter, or by E-mail to staff or students.
- The Notice must be posted for a minimum of seven (7) days even if the violation has been resolved, and must remain in place as long as the violation persists.
- You must repeat distribution of the Notice annually for as long as the violation persists. (*This bullet may be deleted if the violation has already been resolved.*)

Draft Notice: Attached is a draft Notice for you to distribute as directed above. You may use this Notice as is, or modify it to better meet your situation, as long as the information is accurate and the Notice contains all of the required elements and mandated language. If you decide to change the Notice, we suggest that you contact this Office to verify that your proposed changes meet the requirements of the *Regulations*.

Public Notice Confirmation: Within ten (10) days of completing public notification, but no

WM917-Attachment E.4. RTCR Tier 3 Monitoring NOV & PN

INSTRUCTIONS: Complete / select items shown with *italics*, and convert to regular font. Print 1st page on VDH letterhead. Pages are 1" top, bottom, and side margins.

later than *date*, you must provide this Office with a copy of the Notice that you distributed, along with a signed certification that the distribution was completed in the required time and manner. Failure to distribute the Notice and submit a signed certification form to this Office may be a violation of the *Regulations*. A certification form is enclosed for your use.

Follow-up Actions: (*List actions necessary to bring the waterworks back into compliance with the Regulations*)

If you have any questions regarding this matter, please contact me at *phone number*.

Sincerely,

District Engineer
Name of Field Office

ABC:xyz

Enclosure(s): *list*

ec/enc: (*electronic copy, if applicable*)

cc: *Name of Consulting Engineer (if applicable)*
Name, (Health Director/Environmental Health Manager), Name of LHD
Robert A.K. Payne, JD, Director of Legal Affairs, VDH, ODW-Central Office

**NOTICE TO CONSUMERS
of the Name WATERWORKS**

IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER

State Health Officials have advised us of a failure to perform required monitoring in accordance with the Virginia *Waterworks Regulations*.

We are required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not our drinking water meets health standards. During the *monitoring period-month or calendar quarter, and year*, we (*did not monitor for coliform bacteria*) (*did not complete all monitoring for coliform bacteria*) (*and chlorine residual concentrations*) (*did not analyze all total coliform-positive samples for E. coli*). Therefore, we cannot be sure of the quality of our drinking water during that time.

Choose the appropriate paragraph(s) from below:

Number (spell out) sample(s) (*was/were*) required for analysis and number (spell out) (*was/were*) analyzed.

A sample was collected on date; however, it was rejected by the laboratory as not acceptable for analysis.

A sample collected on date indicated the presence of coliform bacteria. Whenever coliform bacteria are detected in a sample, follow-up testing is conducted to determine if other bacteria of greater concern, such as *E. coli*, are present. However, the water sample was not analyzed for *E. coli* bacteria as required by the Virginia *Waterworks Regulations*.

If applicable, include paragraph below:

State Health Officials believe that there is little need for concern about the safety of your water because past records show that our waterworks has had no documented problems with bacteriological contamination; however, routine sampling and examination are required to determine the quality of water delivered to our customers.

There is nothing you need to do at this time. This situation has been resolved.

Choose the appropriate sentence from below:

We have since been collecting and having analyzed the required number of bacteriological (and chlorine concentration) samples.

We have advised our laboratory that all future total coliform-positive samples must be analyzed for *E. coli*.

For more information, please contact: name of owner/operator at contact address or contact phone

WM917-Attachment E.4. RTCR Tier 3 Monitoring NOV & PN

INSTRUCTIONS: Complete / select items shown with *italics*, and convert to regular font. Print 1st page on VDH letterhead. Pages are 1" top, bottom, and side margins.

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

DRAFT

INSTRUCTIONS: Complete / select items shown with *italics*, and convert to regular font. Print 1st page on VDH letterhead. Pages are 1" top, bottom, and side margins.

SUBJECT: County/City
Waterworks: Waterworks Name
PWSID No: PWSID

VIOLATION: Monitoring – date

PUBLIC NOTIFICATION CERTIFICATION REPORT FORM
(For Community Waterworks)

By mail delivery on _____ *(date)*

By direct (hand) delivery on _____ *(date)*

Alternate delivery method(s) for consumers who do not pay bills or have a service connection:

1. Posted on _____ *(date)*

At the following locations: _____

2. Published in the _____ *(newspaper)*

On _____ *(date)*

Other approved method _____ *(Method and date)*

New billing customers will be notified of any ongoing violation for which notice has previously been issued.

I hereby certify that the attached public notice was distributed as indicated above and that the notice meets all content requirements.

(Signature)

RETURN TO: Name Field Office, Office of Drinking Water
Address

WM917-Attachment E.4. RTCR Tier 3 Monitoring NOV & PN

INSTRUCTIONS: Complete / select items shown with *italics*, and convert to regular font. Print 1st page on VDH letterhead. Pages are 1" top, bottom, and side margins.

SUBJECT: County/City
Waterworks: Waterworks Name
PWSID No: PWSID

VIOLATION: Monitoring – date

PUBLIC NOTIFICATION CERTIFICATION REPORT FORM
(For Non-community Waterworks)

Posted on _____ *(date)*

At the following locations: _____

By direct (hand) delivery on _____ *(date)*

By mail delivery on _____ *(date)*

Other approved method _____ *(Method and date)*

I hereby certify that the attached public notice was distributed as indicated above and that the notice meets all content requirements.

(Signature)

RETURN TO: Name Field Office, Office of Drinking Water
Address

WM917-Attachment E.5. RTRC Tier 3 Reporting NOV & PN

INSTRUCTIONS: Complete / select items shown with *italics*, and convert to regular font. Print 1st page on VDH letterhead. Pages are 1" top, bottom, and side margins.

NOTICE OF VIOLATION

SUBJECT: County/City
Waterworks: Waterworks Name
PWSID No: PWSID

Date

Waterworks Owner

Address 1

Address 2

City, State, Zip

Re: (Select the appropriate violation title & paragraph below; do not use numbers)

1. Failure to Submit Monitoring Report or Completed Assessment Form
2. Failure to Report an *E. coli*-positive Sample Result
3. Failure to Submit Certification of Completion of Start-up Procedure
4. Failure to Report an *E. coli* PMCL Exceedance
5. Failure to Report an *E.coli*-Positive Routine Sample Result
6. Failure to Report a Coliform Treatment Technique Violation
7. Failure to Submit Assessment Report on Corrective Actions within 30 Calendar Days
8. Failure to Report a Monitoring Violation

Dear Waterworks Owner:

This Notice is to advise that you appear to be in violation of the reporting requirements in 12VAC5-590-530 of the Virginia *Waterworks Regulations* ("Regulations").

Choose the appropriate paragraph from below; do not use numbers:

1. According to our records, you failed to submit a monitoring report or a completed assessment form to this Office by the required due date of date.
2. According to our records, you failed to notify this Office by the end of the next business day when the waterworks learns of an *E. coli*-positive sample result.
3. According to our records, the certification of completion of the seasonal start-up procedure was not submitted to this Office on date.
4. According to our records, you failed to notify this Office by the end of the next business day when the waterworks learns of an *E. coli* PMCL exceedance.
5. According to our records, you failed to notify this Office by the end of the next business day when the waterworks learns of an *E. coli*-positive routine sample result.
6. According to our records, you failed to notify this Office by the end of the next business day when the waterworks learns of a coliform treatment technique violation.

WM917-Attachment E.5. RTCR Tier 3 Reporting NOV & PN

INSTRUCTIONS: Complete / select items shown with *italics*, and convert to regular font. Print 1st page on VDH letterhead. Pages are 1" top, bottom, and side margins.

7. According to our records, you failed to submit an assessment report within 30 calendar days of being notified of the assessment trigger and/or to notify this Office of completed corrective actions in compliance with a schedule approved by ODW.
8. According to our records, you failed to report a monitoring violation to this Office within ten (10) days after the waterworks discovers the violation.

Required Actions

Public Notice: This is a Tier 3 situation. 12VAC5-590-540 of the *Regulations* requires you to notify consumers that the required reporting was not conducted. The public notice must be handled as follows:

Choose the appropriate option from below:

(Community waterworks PN requirements option)

- You must distribute a Notice to Consumers (“Notice”) no later than date.
- The Notice must be mailed or directly delivered to each customer receiving a bill, and to other service connections served by your waterworks.
- If your waterworks serves consumers who do not pay water bills, or who do not have service connection addresses (apartment dwellers, university students, or nursing home patients, for example) you must also use other delivery methods to provide the Notice to these consumers as well. Examples of other methods include, but are not limited to, publication in local newspapers, delivery of multiple copies to apartment buildings, or posting the notice in public places served by the waterworks.
- You may choose to include the Notice as an enclosure with or as an integral part of your Consumer Confidence Report (CCR) for year. To do so, the combined CCR and public notice must be distributed to consumers by the date AND you must take steps to ensure that the CCR and public notice reach all persons served by the waterworks. This requirement is more stringent than the “good faith effort” requirements for distributing the CCR alone.
- Until the violation is resolved, you must give a copy of the Notice to all new billing units or new customers, before or at the time service begins. (This bullet may be deleted if the violation has already been resolved.)
- You must repeat distribution of the Notice annually for as long as the violation persists. (This bullet may be deleted if the violation has already been resolved.)

(Non-community waterworks PN requirements option)

- You must provide a Notice to Consumers (“Notice”) no later than date.
- The Notice must be posted in conspicuous locations throughout the area served by your waterworks, or mailed or directly delivered to the persons served by your waterworks.
- If your waterworks serves consumers who would not be reached by your posted, mailed, or hand-delivered notice, you must also use other distribution methods to provide the Notice to these consumers as well. Such persons may include those who may not see the posted Notice because it is not in a location they routinely pass. Examples of other methods include, but are

WM917-Attachment E.5. RTCR Tier 3 Reporting NOV & PN

INSTRUCTIONS: Complete / select items shown with *italics*, and convert to regular font. Print 1st page on VDH letterhead. Pages are 1" top, bottom, and side margins.

not limited to, publication of the Notice through a company newsletter, or by E-mail to staff or students.

- The Notice must be posted for a minimum of seven (7) days even if the violation has been resolved, and must remain in place as long as the violation persists.
- You must repeat distribution of the Notice annually for as long as the violation persists. (*This bullet may be deleted if the violation has already been resolved.*)

Draft Notice: Attached is a draft Notice for you to distribute as directed above. You may use this Notice as is, or modify it to better meet your situation, as long as the information is accurate and the Notice contains all of the required elements and mandated language. If you decide to change the Notice, we suggest that you contact this Office to verify that your proposed changes meet the requirements of the *Regulations*.

Public Notice Confirmation: Within ten (10) days of completing public notification, but no later than *date*, you must provide this Office with a copy of the Notice you distributed, along with a signed certification that the distribution was completed in the required time and manner. Failure to distribute public notice and submit a signed certification form to this Office may be a violation of the *Regulations*. A certification form is enclosed for your use.

Follow-up Actions: (*List actions necessary to bring the waterworks back into compliance with the Regulations*)

If you have any questions regarding this matter, please contact me at *phone number*.

Sincerely,

District Engineer
Name of Field Office

ABC:xyz

Enclosure(s): *list*

ec/enc: (*electronic copy, if applicable*)

cc: *Name of Consulting Engineer (if applicable)*
Name, (Health Director/Environmental Health Manager), Name of LHD
Robert A.K. Payne, JD, Director of Legal Affairs, VDH, ODW-Central Office

WM917-Attachment E.5. RTCR Tier 3 Reporting NOV & PN

INSTRUCTIONS: Complete / select items shown with *italics*, and convert to regular font. Print 1st page on VDH letterhead. Pages are 1" top, bottom, and side margins.

**NOTICE TO CONSUMERS
of the Name of WATERWORKS**

IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER

State Health Officials have advised us of a failure to perform required reporting to the Virginia Department of Health in accordance with the Virginia *Waterworks Regulations*.

Choose the appropriate paragraph from below:

(Total coliform bacteria analytical results for the month or quarter monitoring period) (A completed Level 1 assessment form) (was/were) not submitted to the Virginia Department of Health by the required deadline of date.)

A certification of completion of the seasonal start-up procedure was not submitted to the Virginia Department of Health prior to serving water to the public on date. This procedure is required because our waterworks does not operate year round and measures must be taken to verify the safety of water prior to serving our customers.

The Virginia Department of Health was not notified of (an E. coli-positive sample) (an E. coli PMCL exceedance) (a Coliform Treatment Technique Violation) (a monitoring violation) (completed corrective actions to address sanitary defect(s) per a Virginia Department of Health approved schedule) within the time frame specified in the Virginia *Waterworks Regulations*.

There is nothing you need to do at this time.

We are immediately attempting to prevent further violations by ensuring that all required reporting is performed appropriately in accordance with the Virginia *Waterworks Regulations*. Future violations will be reported as required by these regulations in order to increase consumers' awareness of conditions that exist in their waterworks.

(Add additional information as needed)

For more information, please contact: name of owner/operator at contact address or contact phone

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

WM917-Attachment E.5. RTCR Tier 3 Reporting NOV & PN

INSTRUCTIONS: Complete / select items shown with *italics*, and convert to regular font. Print 1st page on VDH letterhead. Pages are 1" top, bottom, and side margins.

SUBJECT: County/City
Waterworks: Waterworks Name
PWSID No: PWSID

VIOLATION: Reporting – date

PUBLIC NOTIFICATION CERTIFICATION REPORT FORM
(For Community Waterworks)

By mail delivery on _____ *(date)*

By direct (hand) delivery on _____ *(date)*

Alternate delivery method(s) for consumers who do not pay bills or have a service connection:

1. Posted on _____ *(date)*

At the following locations: _____

2. Published in the _____ *(date)*

on _____ *(date)*

Other approved method _____ *(Method and date)*

New billing customers will be notified of any ongoing violation for which notice has previously been issued.

I hereby certify that the attached public notice was distributed as indicated above and that the notice meets all content requirements.

(Signature)

RETURN TO: Name Field Office, Office of Drinking Water
Address

WM917-Attachment E.5. RTRC Tier 3 Reporting NOV & PN

INSTRUCTIONS: Complete / select items shown with *italics*, and convert to regular font. Print 1st page on VDH letterhead. Pages are 1" top, bottom, and side margins.

SUBJECT: County/City
Waterworks: Waterworks Name
PWSID No: PWSID

VIOLATION: Reporting – date

PUBLIC NOTIFICATION CERTIFICATION REPORT FORM
(For Non-community Waterworks)

Posted on _____ *(date)*

At the following locations: _____

By direct (hand) delivery on _____ *(date)*

By mail delivery on _____ *(date)*

Other approved method _____ *(Method and date)*

I hereby certify that the attached public notice was distributed as indicated above and that the notice meets all content requirements.

(Signature)

RETURN TO: Name Field Office, Office of Drinking Water
Address

WM917-Attachment E.6. RTCR Tier 3 Recordkeeping NOV & PN

INSTRUCTIONS: Complete / select items shown with *italics*, and convert to regular font. Print 1st page on VDH letterhead. Pages are 1" top, bottom, and side margins.

NOTICE OF VIOLATION

SUBJECT: County/City
Waterworks: Waterworks Name
PWSID No: PWSID

Date

Waterworks Owner

Address 1

Address 2

City, State, Zip

Re: Failure to Maintain Required Documentation

Dear Waterworks Owner:

This Notice is to advise that you appear to be in violation of 12VAC5-590-550 of the Virginia *Waterworks Regulations* ("Regulations") for failure to maintain records of (assessment forms) (completed corrective actions addressing sanitary defects) (sanitary defect documentation). The records were not available for review upon our request on date. The following records were missing: (Specify the records that are missing)

Required Actions

Public Notice: This is a Tier 3 situation. 12VAC5-590-540 of the *Regulations* require you to notify consumers that the required recordkeeping was not conducted. The public notice must be handled as follows:

Choose the appropriate option from below:

(Community waterworks PN requirements option)

- You must distribute a Notice to Consumers ("Notice") no later than date.
- The Notice must be mailed or directly delivered to each customer receiving a bill, and to other service connections served by your waterworks.
- If your waterworks serves consumers who do not pay water bills, or who do not have service connection addresses (apartment dwellers, university students, or nursing home patients, for example) you must also use other delivery methods to provide the Notice to these consumers as well. Examples of other methods include, but are not limited to, publication in local newspapers, delivery of multiple copies to apartment buildings, or posting the Notice in public places served by the waterworks.
- You may choose to include the Notice to Consumers as an enclosure with or as an integral part of your Consumer Confidence Report (CCR) for year. To do so, the combined CCR and public notice must be distributed to consumers by the date AND you must take steps to ensure that the CCR and public notice reach all persons served by the waterworks. This requirement is more stringent than the "good faith effort" requirements for distributing the CCR alone.

WM917-Attachment E.6. RTCR Tier 3 Recordkeeping NOV & PN

INSTRUCTIONS: Complete / select items shown with *italics*, and convert to regular font. Print 1st page on VDH letterhead. Pages are 1" top, bottom, and side margins.

- Until the violation is resolved, you must give a copy of the Notice to all new billing units or new customers, before or at the time service begins. (*This bullet may be deleted if the violation has already been resolved.*)
- You must repeat distribution of the Notice annually for as long as the violation persists. (*This bullet may be deleted if the violation has already been resolved.*)

(Non-community waterworks PN requirements option)

- You must provide a Notice to Consumers ("Notice") no later than *date*.
- The Notice must be posted in conspicuous locations throughout the area served by your waterworks, or mailed or directly delivered to the persons served by your waterworks.
- If your waterworks serves consumers who would not be reached by your posted, mailed, or hand-delivered Notice, you must also use other distribution methods to provide the Notice to these consumers as well. Such persons may include those who may not see the posted Notice because it is not in a location they routinely pass. Examples of other methods include (but are not limited to) publication of the Notice through a company newsletter, or by E-mail to staff or students.
- The Notice must be posted for a minimum of seven (7) days even if the violation has been resolved, and must remain in place as long as the violation persists.
- You must repeat distribution of the Notice annually for as long as the violation persists. (*This bullet may be deleted if the violation has already been resolved.*)

Draft Notice: Attached is a draft Notice for you to distribute as directed above. You may use this Notice as is, or modify it to better meet your situation, as long as the information is accurate and the Notice contains all of the required elements and mandated language. If you decide to change the Notice, we suggest that you contact this Office to verify that your proposed changes meet the requirements of the *Regulations*.

Public Notice Confirmation: Within ten (10) days of completing public notification, but no later than *date*, you must provide this Office with a copy of the Notice you distributed, along with a signed certification that the distribution was completed in the required time and manner. Failure to distribute public notice and submit a signed certification form to this Office may be a violation of the *Regulations*. A certification form is enclosed for your use.

Follow-up Actions: (*List actions necessary to bring the waterworks back into compliance with the Regulations*)

If you have any questions regarding this matter, please contact me at *phone number*.

Sincerely,

District Engineer
Name of Field Office

ABC:xyz

Enclosure(s): *list*

WM917-Attachment E.6. RTCR Tier 3 Recordkeeping NOV & PN

INSTRUCTIONS: Complete / select items shown with *italics*, and convert to regular font. Print 1st page on VDH letterhead. Pages are 1" top, bottom, and side margins.

ec/enc: *(electronic copy, if applicable)*

cc: *Name of Consulting Engineer (if applicable)*

Name, (Health Director/Environmental Health Manager), Name of LHD

Robert A.K. Payne, JD, Director of Legal Affairs, VDH, ODW-Central Office

DRAFT

WM917-Attachment E.6. RTCR Tier 3 Recordkeeping NOV & PN

INSTRUCTIONS: Complete / select items shown with *italics*, and convert to regular font. Print 1st page on VDH letterhead. Pages are 1" top, bottom, and side margins.

**NOTICE TO CONSUMERS
of the Name of WATERWORKS**

IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER

State Health Officials have advised us of a failure to meet recordkeeping requirements in accordance with the Commonwealth of Virginia *Waterworks Regulations*.

We are required to maintain records of all (*assessment forms*) (*completed corrective actions*) (*sanitary defect documentation*). The following records were missing: (*Staff to specify the records that are missing*)

There is nothing you need to do at this time.

We are immediately attempting to prevent further violations by ensuring that all records are maintained and retained in accordance with the Virginia *Waterworks Regulations*. Future violations will be reported as required by these regulations in order to increase consumers' awareness of conditions that exist in their waterworks.

(*Add additional information as needed*)

For more information, please contact: *name of owner/operator* at *contact address* or *contact phone*

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

WM917-Attachment E.6. RTCR Tier 3 Recordkeeping NOV & PN

INSTRUCTIONS: Complete / select items shown with *italics*, and convert to regular font. Print 1st page on VDH letterhead. Pages are 1" top, bottom, and side margins.

SUBJECT: County/City
Waterworks: Waterworks Name
PWSID No: PWSID

VIOLATION: Recordkeeping – *date*

PUBLIC NOTIFICATION CERTIFICATION REPORT FORM
(For Community Waterworks)

By mail delivery on _____ *(date)*

By direct (hand) delivery on _____ *(date)*

Alternate delivery method(s) for consumers who do not pay bills or have a service connection:

1. Posted on _____ *(date)*

At the following locations: _____

2. Published in the _____ *(date)*

on _____ *(date)*

Other approved method _____ *(Method and date)*

New billing customers will be notified of any ongoing violation for which notice has previously been issued.

I hereby certify that the attached public notice was distributed as indicated above and that the notice meets all content requirements.

(Signature)

RETURN TO: *Name* Field Office, Office of Drinking Water
Address

WM917-Attachment E.6. RTCR Tier 3 Recordkeeping NOV & PN

INSTRUCTIONS: Complete / select items shown with *italics*, and convert to regular font. Print 1st page on VDH letterhead. Pages are 1" top, bottom, and side margins.

SUBJECT: County/City
Waterworks: Waterworks Name
PWSID No: PWSID

VIOLATION: Recordkeeping – date

PUBLIC NOTIFICATION CERTIFICATION REPORT FORM
(For Non-community Waterworks)

Posted on _____ *(date)*

At the following locations: _____

By direct (hand) delivery on _____ *(date)*

By mail delivery on _____ *(date)*

Other approved method _____ *(Method and date)*

I hereby certify that the attached public notice was distributed as indicated above and that the notice meets all content requirements.

(Signature)

RETURN TO: Name Field Office, Office of Drinking Water
Address