

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	
Owner:		Phone:	
Compliance Monitoring Period:			
Number of Samples	Required	Collected	Total coliform present
Routine per monitoring period			
Repeat			
Triggered source water			
Date ODW Notified Waterworks Level 1 Assessment Required:			
Assessment Due Date:			
Assessment Conducted Date:			
Reason Level 1 Assessment is required:			
1.	<input checked="" 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 4 of the form, if needed. Provide the date and description of Corrective Actions taken in the table on page 5. Provide a list of Additional Actions Needed for uncorrected sanitary defects in the table on page 5. 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.

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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 type="checkbox"/>	<input type="checkbox"/>		
1.2	Are the sample tap and the surrounding area clean?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
1.3	Describe sample tap fixtures (e.g., outdoor hose bib, indoor cold water faucet, etc?)					Description:
1.4	Is the sample tap a swivel faucet?	<input 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 type="checkbox"/>	<input type="checkbox"/>		
2.2	Were taps flushed adequately (approx. 5 minutes)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
2.3	Were aerators removed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
2.4	Were sample containers sealed/unopened/untampered prior to use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
2.5	Were the sample containers/rim or cap contaminated during sampling?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
2.6	Were the taps disinfected?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
2.7	Were samples shipped/delivered per laboratory instruction?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
3. Recent Operational Changes to the System						
3.1	New/different/emergency well used?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
3.2	Changes in operation or treatment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
3.3	Any possible contamination events not directly related to operations?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
3.4	If seasonal system, was start-up initiated without flushing and disinfection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
3.5	Sites with low chlorine residual (<0.2 mg/L)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
3.6	Did power outages occur prior to "present" bacteria results?	<input 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 type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
4.2	Cross-connection problem	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
4.3	Pump station problem	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
4.4	Fire hydrants/blow off used	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
4.5	Line break/repair or nearby construction	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
4.6	Yard hydrants near sample location	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
4.7	Customer complaints about pressure, water quality prior to sampling?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		

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		Y	N	N/A	
5. Storage Tanks/Tank Sites					
5.1	Are lot/tank ladder secured from unauthorized access?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5.2	Are roof access hatches on atmospheric tanks locked and properly sealed?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
5.3	Are roof vents on atmospheric tanks properly sealed/screened?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5.4	Are structures water tight/without leak?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5.5	Any hole/damage in the tank structure that is not sleeved or protected?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5.6	Are drain and overflow line outlets screened?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5.7	Have tank(s) been serviced, repaired, or maintained recently?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5.8	Any recent unusual changes in tank water levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6. Treatment Process Upsets Or Change Noted:				<input checked="" type="checkbox"/>	
6.1	Has there been an interruption of treatment operations?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6.2	Are chemical solution containers uncovered?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6.3	Does building housing treatment equipment reflect poor house keeping	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
6.4	Any chlorine residual <0.2 mg/L at entry point to distribution system?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6.5	Any turbidity values ≥ 0.3 NTU in water entering the distribution system?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6.6	Did treatment fail to continuously meet 4 log inactivation of viruses requirements?	<input 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 type="checkbox"/>	<input type="checkbox"/>	
7.2	Is well cap and seal securely in place?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
7.3	Is well casing vent properly screened?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
7.4	Is electrical connection to pump secure and sealed?	<input type="checkbox"/>	<input 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 type="checkbox"/>	<input type="checkbox"/>	
7.6	Is the wellhead free of any cross-connections?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
7.7	Any hoses left connected to a hose bib w/o a vacuum breaker in well house?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

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		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 type="checkbox"/>	<input type="checkbox"/>	
7.9	Any recent ponding or flooding around wellhead?	<input 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 type="checkbox"/>	<input type="checkbox"/>	
7.11	Was a triggered source water sample result total coliform present?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
7.12	Has the well pump been replaced during the current monitoring period?	<input 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 type="checkbox"/>	<input checked="" 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 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 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 type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
9.3	Has there been any damage, change or repairs to the spring(s) infrastructure?	<input 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 type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Additional Comments					

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Summary

Assessment Elements/Sanitary Defects	Corrective Action Taken and Date

Additional Actions Needed But Not Completed	
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Action Needed	Completion Deadline:

Conclusions:

A cause for the contamination was not determined.

Assistance with assessment provided by:

Print name of person completing the form: _____

Signature: _____ Date: _____

Print name of Waterworks Representative: _____

Signature: _____ Date: _____

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Reserved for VDH-ODW Review			
	Response		
	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:
