Hawaii Department of Health - Safe Drinking Water Branch RTCR-Level 2

Revised Total Coliform Rule - Level 2 Assessment

PWS ID #:	PWS Name:	City:
Lead Assessor, other participants in the assessment:		
Person(s) representing the PWS:		
Trigger Date:		
Date of Site Visit:	Date Assessment completed:	

Level 2 Trigger:
- ☐ *E. coli* MCL violation
- ☐ 2nd Level 1 trigger in 12 months Date of last Level 1 trigger: _____

List all positive samples and all repeat samples (in chronological order)		Sample Pt ID/Location	Date Collected	Total coliform *E. coli*
	1	Chlorine: _____ mg/L		☐ Total coli. ☐ *E. coli*
	2	Chlorine: _____ mg/L		☐ Total coli. ☐ *E. coli*
	3	Chlorine: _____ mg/L		☐ Total coli. ☐ *E. coli*
	4	Chlorine: _____ mg/L		☐ Total coli. ☐ *E. coli*
	5	Chlorine: _____ mg/L		☐ Total coli. ☐ *E. coli*
	6	Chlorine: _____ mg/L		☐ Total coli. ☐ *E. coli*
	7	Chlorine: _____ mg/L		☐ Total coli. ☐ *E. coli*
	8	TC_____ Chlorine: _____ mg/L		☐ Total coli. ☐ *E. coli*

Check all sections completed and provide the number of individual assessments within each category.
Sections in BOLD must be completed for each assessment.

- ☐ **1.0 Sample site evaluation** ___
- ☐ **2.0 Sampling protocol followed** ___
- ☐ **3.0 Operational, Environmental or Security Events**
- ☐ **4.0 Distribution System** ___
- ☐ 5.0 Storage Facilities ___
- ☐ **6.0 Treatment Processes** ___
- ☐ 7.0 Source - Well ___
- ☐ 8.0 Source - Surface Water Supply ___
- ☐ 9.0 Source - Spring ___
- ☐ 10.0 Source - Purchased ___
- ☐ 11.0 Water Quality ___
- ☐ 12.0 Other Issues Identified ___
- ☐ **13.0 Summary of Incident** ___

1.0	**Sample Site Evaluation** *Complete this form for each positive coliform sample location (routine or repeat).* Sample Pt. no.: Location:				
	This is a routine or repeat sample point.				
	Item	Yes	No	N/A	Issue and/or Description
1.1	What is the regular use of the sample site (handwashing, dedicated sample tap, etc.)?				
1.2	Describe the location and condition. Is the tap exposed to the rain?				
1.3	Have there been any plumbing breaks or failure? If yes, when?				
1.4	Have there been any plumbing changes or construction?				
1.5	List any identified cross-connections after the service connection or in premise plumbing.				
1.6	Were there any low pressure events in the premise plumbing?				
1.7	Were all backflow prevention devices present, operational, tested annually by a certified tester & maintained?				
1.8	Other comments on sample site?				

Photo of sample site	

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	Item	Yes	No	N/A	Issue and/or Description
1.1	What is the regular use of the sample site				
1.2	Describe the location and condition. Is the tap				
1.3	Have there been any plumbing breaks or				
1.4	Have there been any plumbing changes or				
1.5	List any identified cross-connections after the				
1.6	Were there any low pressure events in the				
1.7	Were all backflow prevention devices present,				
1.8	Other comments on sample site?				

Photo of sample site

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Photo of sample site	

2.0	**Sampling protocol followed**	Person who collected samples: Paul Wentworth			
	Item	Yes	No	N/A	Issue and/or Description
2.1	Were samples collected according to an				
2.2	Please describe the sampling procedures.				Sampler:
2.3	Aerator, screen, hose or other attachment				
2.4	Were proper storage and transport procedures used?				
2.5	Was the chain-of-custody form properly completed?				
2.6	Other comments on sample collection				

	procedures.				

Notes

3.0	**Operational, Environmental, or Security Events.** Have any of the following occurred at relevant facilities prior to the collection of positive total coliform samples?				
	Item	Yes	No	N/A	Issue and/or Description
3.1	Was there a failure of chlorination equipment?				
3.2	Have there been events indicating potential for introducing contamination (e.g. main breaks, low pressure, loss of disinfection, high turbidity)?				
3.3	Were there any operational or maintenance activities that could have introduced total coliforms or *E. coli*, such as pipeline replacement?				
3.4	Has there been any vandalism and/or unauthorized access to facilities?				
3.5	Have there been a fire fighting event, flushing operation, sheared hydrant, etc?				
3.6	Have there been any other events that could have caused coliform positives?				
3.7	Has there recently been heavy rainfall/flooding?				

3.8	Any inactive sources or new sources recently introduced into the system?				

Notes

4.0	**Distribution System**				
	Item	Yes	No	N/A	Issue and/or Description
4.1	Are there any unprotected cross-connections to nonpotable water (for example: fire flow system)?				
4.2	Any issues found in any booster pump stations?				
4.3	Air relief valves: Is the valve vault subject to flooding? Is the vent not pointing downwards or not screened?				
4.4	Are backflow prevention devices at high risk sites present, operational, and maintained & inspected within the last 12 months by a certified tester?				
4.5	Have there been any water main repairs or additions? If yes, when and what was the repair or addtion?				
4.6	Have there been any water main breaks? If yes, when?				
4.7	Was there any scheduled flushing of the				

	distribution system? If yes, when?				
4.8	Is there any evidence of intentional contamination in the distribution system?				
4.9	Other comments on the distribution system.				
Notes					

5.0	**Storage Facilities** *Complete one form for each storage facility.* **Storage Tank Name:** 1.0 MG tank				
	Item	Yes	No	N/A	Issue and/or Description
5.1	Is unauthorized access possible?				
5.2	Is the overflow outlet outfitted with a flapper valve, duckbill check valve or insect screen?				
	Is there improper sealing of the access hatch or other openings, or improper screening of the level indicator opening (for example, it does not prevent entrance of rainwater & insects).				
5.4	Could the physical condition of the tank be a source of contamination (including but not limited to: biofilm, oil sheen or particulates on the water surface, or insects or geckoes visible in the tank)?				
5.5	Is the vent turned down and properly screened, and does the termination point have an approved air gap?				
5.6	Is the overflow line outlet submerged?				

5.7	Has recent maintenance work been done on the tank?				
5.8	Were there any observed leaks?				
5.9	Are there separate inlet & outlet lines?				
5.10	What is the measured chlorine residual (total/free) of the water exiting the tank today?				
5.11	Was there observed physical deterioration of				
5.12	Is there any evidence of intentional				
5.13	PRESSURE TANK (if applicable) - Is the pressure tank maintaining an appropriate minimum pressure?				
5.14	List other comments on the storage tank.				
Notes					

5.0	**Storage Facilities** *Complete one form for each storage facility.* **Storage Tank Name:** Surge tank				
	Item	Yes	No	N/A	Issue and/or Description
5.1	Is unauthorized access possible?				
5.2	Is the overflow outlet outfitted with a flapper valve, duckbill check valve or insect screen?				
5.3	Is there improper sealing of the access hatch or other openings, or improper screening of the level indicator opening (for example, it does not prevent entrance of rainwater & insects).				
5.4	Could the physical condition of the tank be a source of contamination (including but not limited to: biofilm, oil sheen or particulates on the water surface, or insects or geckoes visible in the tank)?				
5.5	Is the vent turned down and properly screened,				

	and does the termination point have an approved air gap?				
5.6	Is the overflow line outlet submerged?				
5.7	Has recent maintenance work been done on the tank?				
5.8	Were there any observed leaks?				
5.9	Are there separate inlet & outlet lines?				
5.10	What is the measured chlorine residual (total/free) of the water exiting the tank today?				
5.11	Was there observed physical deterioration of				
5.12	Is there any evidence of intentional				
5.13	PRESSURE TANK (if applicable) - Is the pressure tank maintaining an appropriate minimum pressure?			X	
5.14	List other comments on the storage tank.				

Notes

6.0 Treatment Process *Complete one form for each treatment process.*

Treatment process description: Sodium hypochlorite

	Item	Yes	No	N/A	Issue and/or Description
6.1	Have there been any interruptions of treatment (lapses in disinfection, chemical feed/power loss)? If yes, which process and for how long?				
6.2	How frequently is chorine residual measured?				
6.3	Is the treatment device operational and maintained?				
6.4	Has there been any recent installation or repair of treatment equipment?				
6.5	Were there any recent changes in the treatment process? If yes, when, and what was the change?				
6.6	What is the free chlorine residual measured				

	immediately downstream from the point of application today?				
6.7	SURFACE WATER-Was there a failure to meet the minimum CT requirements?				
6.8	SURFACE WATER-Did a review of filter turbidity profiles reveal any anomalies?				
6.9	SURFACE WATER-Were the flow rates above the rated capacity?				
6.10	List other comments on the treatment/disinfection system.				
Notes					

7.0 Source - Well *Complete one form for each well*

Well name: Waiahole Well P-A (Well 1)

	Item	Yes	No	N/A	Issue and/or Description
7.1	Is unathorized access possible?				
7.2	Is the sanitary seal intact (e.g. are there openings through the pump baseplate)?				
7.3	Are the vents not facing downward or not screened?				
7.4	Do the vent and pump-to-waste terminate in an approved air gap? Is there a flapper valve or duckbill check on the pump-to-waste outlet?				
7.5	Are there any unprotected cross-connections at the wellhead (including hose bibbs without vacuum breakers)?				
7.6	Is there any evidence of standing water at the wellhead?				
7.7	Have there been any sewer spills, source water spills, or other disturbances?				
Notes					

7.0 Source - Well *Complete one form for each well*

Well name: Waiahole Well P-B (Well 2)

	Item	Yes	No	N/A	Issue and/or Description
7.1	Is unathorized access possible?				
7.2	Is the sanitary seal intact (e.g. are there openings through the pump baseplate)?				
7.3	Are the vents not facing downward or not screened?				
7.4	Do the vent and pump-to-waste terminate in an approved air gap? Is there a flapper valve or duckbill check on the pump-to-waste outlet?				
7.5	Are there any unprotected cross-connections at the wellhead (including hose bibbs without vacuum breakers)?				
7.6	Is there any evidence of standing water at the wellhead?				
7.7	Have there been any sewer spills, source water spills, or other disturbances?				

Notes

11.0 Water Quality Review:

Additional water quality data was reviewed or collected as part of this assessment and an assessment for the Ground Water Rule.

☐	Coliform bacteria	☐	Heterotrophic Plate count
☐	Chlorine residual	☐	Other
☐	Turbidity	☐	Other
☐	pH		

Discuss any issues identified

12.0 Additional Comments or Issues Identified: Complete if necessary

13.0 Summary of Incident related to this Level 2 trigger:

Include the date that a clean round of samples was ultimately collected (if collected prior to assessment submittal).	1/9/2020

Cause of Coliform Positive Samples: Based on the results of your investigation & any other available system. 3. Extremely rainy and windy conditions during sample collection.

☐ No sanitary defects were identified during the course of this assessment.

Sanitary Defects and Corrective Actions

-List all sanitary defects and corrective actions performed prior to submitting this assessment.
-List all sanitary defects and Planned corrective actions with proposed completion dates.

	Sanitary Defect	Corrective Action	Date Completed	Planned Completion Date

Note that once this schedule has been approved by the Hawaii Department of Health, failure to meet this schedule subjects the PWS to a Treatment Technique violation, which would require public notification.

Certification			
Print Name:		Signature:	
Title:		Date:	
Email:		Phone No.:	

PWS Owner or PWS Responsible party must also complete the following certification if this assessment includes a			
Print Name:		Signature:	
Title:		Date:	
Email:		Phone No.:	

Hawaii Department of Health, Safe Drinking Water Branch Review							Yes		No
Has assessment been successfully completed?									
Likely reason for bacterial occurrence has been found.									
PWS has corrected the problems.									
Assessment is deemed		Acceptable		Deficient					
Corrective Action Plan		Approved		Denied		Approved with changes (attached)			
Name of DOH SDWB Reviewer:					Date:				
Comments:									