

STATE OF CALIFORNIA  
WATER RESOURCES CONTROL BOARD  
DIVISION OF DRINKING WATER

IN RE: **FISHCAMP MUTUAL WATER COMPANY**  
Water System No. 2210903

TO: Mr. Jeff Cerioni, Board President  
Fishcamp Mutual Water Company  
420 Camden Way  
Madera, CA 93637

CC: Mariposa County Environmental Health Services Department  
Thorne Hertwig, Watermaster (P.O. Box 85 Ahwahnee, CA 93601)

**CITATION FOR VIOLATION OF  
CALIFORNIA CODE OF REGULATIONS, TITLE 22, SECTION 64426 (a)(2)  
SIGNIFICANT RISE IN BACTERIAL COUNT VIOLATION**

**August 2014**

**Issued on October 24, 2014**

Section 116650 of the California Health and Safety Code authorizes the issuance of a citation to a public water system for violation of the California Safe Drinking Water Act (Health and Safety Code, Division 104, Part 12, Chapter 4, commencing with Section 116270) (hereinafter "California SDWA"), or any regulation, standard, permit or order issued or adopted thereunder.

The State Water Resources Control Board (hereinafter "Board"), acting by and through its Division of Drinking Water (hereinafter "Division") and the Deputy Director for the Division (hereinafter "Deputy Director"), hereby issues a citation to the Fishcamp Mutual Water Company (hereinafter "Company") (420 Camden Way, Madera, CA 93637) for violation of California Code of Regulations (CCR), Title 22, Section 64426.

1 APPLICABLE AUTHORITIES

2 The applicable statutes and regulations are provided in Attachment A, attached hereto and  
3 incorporated by reference.

4  
5 STATEMENT OF FACTS

6 The Company is a community water system serving a residential population of approximately  
7 250 persons through 76 service connections. The Company currently operates under a revised  
8 water supply permit issued by the Division on December 9, 2009.

9  
10 The Company is required to collect a minimum of one (1) distribution system bacteriological  
11 samples per month. The bacteriological water analysis results submitted by the Company  
12 reported the presence of total coliform bacteria and *E.coli* bacteria in a routine sample collected  
13 by the Company in August 12, 2014.

14  
15 Upon being informed of the presence of *E. coli* bacteria, Company staff collected one repeat  
16 sample on August 15, 2014. In consultation with the Company, the Division approved the delay  
17 in collecting the additional five repeat samples scheduled for August 18, 2014. When the  
18 notification was made to the Division, the Company was already in the process of emergency  
19 chlorination of the affected storage tank and distribution system. The Company opted to use the  
20 two remaining water bottles to collect raw samples. The proper number of repeat samples was  
21 collected. None of the repeat samples showed the presence of total coliform bacteria.

22  
23 The five routine samples required the month following a month with one or more total coliform-  
24 positive samples were collected on September 9, 2014, and were absent for total coliform  
25 bacteria. All water samples for coliform bacteria collected during August and September 2014  
26 are summarized in Attachment B.

27

1 The California Groundwater Rule (GWR) requires the collection of a sample for bacteriological  
2 evaluation from the well(s) serving the system in response to a coliform-positive distribution  
3 system sample within 24 hours of being notified of the coliform-positive result. Based on data  
4 submitted to the Division, the Company collected their raw water well samples in a timely  
5 manner in follow-up to the total coliform-positive routine samples collected on August 12, 2014.  
6 On August 15, 2014, the Company collected samples at Wells Nos. 1 and 2 with results that  
7 were positive for total coliform bacteria. Re-sampling of Wells Nos. 1 and 2 were conducted on  
8 August 18, 2014, with results that were negative for total coliform bacteria. None of the raw  
9 water samples were positive for *E.coli* bacteria.

10  
11 The Company had indicated that the cause of the contamination is due to a dead squirrel found  
12 in one of the storage tanks. The shoe box type lid over the hatch of the storage tank was  
13 oversized and loose allowing the entrance of the small squirrel into the storage tank. The  
14 Company provided emergency chlorination of the affected storage tank, wells and the  
15 distribution system.

16  
17 Public notification to the Division and consumers of a water system is required whenever there  
18 is a significant rise in bacterial count. Notification to the Division is required by the end of the  
19 business day on which the violation has been determined. If the Division is closed, notification  
20 shall be within 24 hours of the determination. The Division was notified on August 14, 2014, in  
21 accordance with the above-referenced section. The Company provided public notification by  
22 direct delivery of the Boil Water Notice to the consumers on August 15, 2014.

23  
24 Public notification to the customers of the Company was conducted on August 15, 2014,  
25 advising each customer to boil their water. A copy of the notice that was directly delivered to  
26 each customer is provided as Attachment C. Proof of Notification is required (Attachment D).  
27 The Boil Water Notice was rescinded on August 20, 2014.

1  
2 DETERMINATION

3 Title 22, CCR, Section 64426 (a)(2), specifies that when a public water system has a sample  
4 which is positive for *fecal* coliform or *E. coli* bacteria, it considered a possible significant rise in  
5 bacterial count. Because of the *E.coli* bacteria positive distribution system sample collected on  
6 August 12, 2014, the Division has determined that the Company failed to comply with Title 22,  
7 CCR, Section 64426 (a)(2), Significant Rise in Bacterial Count for the month of August 2014.  
8

9 DIRECTIVES

10  
11 The Company is hereby directed to take the following actions:  
12

- 13 1. Comply with Title 22, CCR, Section 64426 (a)(2), in all future monitoring periods.  
14  
15 2. By November 15, 2014, the Company shall provide to the Division certification of public  
16 notification using the enclosed Proof of Notification form (Attachment D). A copy of the final  
17 notice that was distributed is included as Attachment C.  
18  
19 3. By **November 15, 2014**, the Company shall prepare and submit an incident report  
20 (Attachment E). The information contained in the report should detail the events leading to  
21 the *E.coli* bacteria positive sample as well as correction actions made since the *E.coli*  
22 bacteria positive sample was collected.  
23  
24 4. By December 30, 2014, the Company shall prepare and submit a tank inspection and  
25 cleaning program to the Division.  
26  
27

1 The Division reserves the right to make such modifications to the Citation as it may deem  
2 necessary to protect public health and safety. Such modifications may be issued as  
3 amendments to this Citation and shall be effective upon issuance.

4  
5 Nothing in this Citation relieves the Company of its obligation to meet the requirements of the  
6 California Safe Drinking Water Act or any regulation, standard, permit or order issued  
7 thereunder.

8  
9 All submittal required by this Citation shall be submitted to the Division at the following address:

10  
11 Kassy D. Chauhan, P.E.  
12 Senior Sanitary Engineer, Merced District  
13 State Water Resources Control Board  
14 Division of Drinking Water  
15 265 W. Bullard Avenue, Suite 101  
16 Fresno, CA 93704

17  
18  
19 **PARTIES BOUND**

20 This Citation shall apply to and be binding upon the Fishcamp Mutual Water Company, its  
21 officers, directors, agents, employees, contractors, successors, and assignees.

22  
23  
24 **SEVERABILITY**

25 The Directives of this Citation are severable, and the Fiscamp Mutual Water Company shall  
26 comply with each and every provision thereof notwithstanding the effectiveness of any  
27 provision.

**FURTHER ENFORCEMENT ACTION**

The California SDWA authorizes the Board to: issue citation with assessment of administrative penalties to a public water system for violation or continued violation of the requirements of the California SDWA or any permit, regulation or order issued or adopted thereunder including, but not limited to, failure to correct a violation identified in a citation or compliance order. The California SDWA also authorizes the Board to take action to suspend or revoke a permit that has been issued to a public water system if the system has violated applicable law or regulations or has failed to comply with an order of the Board; and to petition the superior court to take various enforcement measures against a public water system that has failed to comply with an order of the Board. The Board does not waive any further enforcement action by issuance of this citation.

10/24/14  
Date

Kassy D. Chauhan  
Kassy D. Chauhan, P.E.  
Senior Sanitary Engineer, Merced District  
DRINKING WATER FIELD OPERATIONS BRANCH

KDC/mlm

Attachments:

- Attachment A: Applicable Authorities
- Attachment B: Summary of Bacteriological Samples from August to September 2014
- Attachment C: Public Notice for August 2014
- Attachment D: Proof of Notification Form
- Attachment E: Positive Total Coliform Investigation report

**Applicable Statutes and Regulations for Citation No. 03-11-14C-014**

**Section 116650 of the CHSC states in relevant part:**

§116650. Citations

- (a) If the Division determines that a public water system is in violation of this chapter or any regulation, permit, standard, citation, or order issued or adopted thereunder, the Division may issue a citation to the public water system. The citation shall be served upon the public water system personally or by certified mail. Service shall be deemed effective as of the date of personal service or the date of receipt of the certified mail. If a person to whom a citation is directed refuses to accept delivery of the certified mail, the date of service shall be deemed to be the date of mailing.
- (b) Each citation shall be in writing and shall describe the nature of the violation or violations, including a reference to the statutory provision, standard, order, citation, permit, or regulation alleged to have been violated.
- (c) A citation may specify a date for elimination or correction of the condition constituting the violation.
- (d) A citation may include the assessment of a penalty as specified in subdivision (e).
- (e) The Division may assess a penalty in an amount not to exceed one thousand dollars (\$1,000) per day for each day that a violation occurred, and for each day that a violation continues to occur. A separate penalty may be assessed for each violation.

**Section 64424 of Title 22, California Code of Regulations (CCR) states in relevant part:**

**§64426. Significant Rise in Bacterial Count.**

- (a) Any of the following criteria shall indicate a possible significant rise in bacterial count:
  - (1) A system collecting at least 40 samples per month has a total coliform-positive routine sample followed by two total coliform-positive repeat samples in the repeat sample set;
  - (2) A system has a sample which is positive for fecal coliform or E. coli; or
  - (3) A system fails the total coliform Maximum Contaminant Level (MCL) as defined in §64426.1.
- (b) When the coliform levels specified in subsection (a) are reached or exceeded, the water supplier shall:
  - (1) Contact the Department by the end of the day on which the system is notified of the test result or the system determines that it has exceeded the MCL, unless the notification or determination occurs after the Department office is closed, in which case the supplier shall notify the Department within 24 hours; and
  - (2) Submit to the Department information on the current status of physical works and operating procedures which may have caused the elevated bacteriological findings, or any information on community illness suspected of being waterborne. This shall include, but not be limited to:
    - (A) Current operating procedures that are or could potentially be related to the increase in bacterial count;
    - (B) Any interruptions in the treatment process;
    - (C) System pressure loss to less than 5 psi;

- (D) Vandalism and/or unauthorized access to facilities;
- (E) Physical evidence indicating bacteriological contamination of facilities;
- (F) Analytical results of any additional samples collected, including source samples;
- (G) Community illness suspected of being waterborne; and
- (H) Records of the investigation and any action taken.

- (c) Upon receiving notification from the Department of a significant rise in bacterial count, the water supplier shall implement the emergency notification plan required by Section 116460, Health and Safety Code.

**Section 64424 of Title 22, California Code of Regulations (CCR) states in relevant part:**  
§64424. Repeat Sampling.

- (a) If a routine sample is total coliform-positive, the water supplier shall collect a repeat sample set as described in paragraph (a)(1) within 24 hours of being notified of the positive result. The repeat samples shall all be collected within the same 24 hour time period. A single service connection system may request that the Division allow the collection of the repeat sample set over a four-day period.
  - (1) For a water supplier that normally collects more than one routine sample a month, a repeat sample set shall be at least three samples for each total coliform-positive sample. For a water supplier that normally collects one or fewer samples per month, a repeat sample set shall be at least four samples for each total coliform-positive sample.
  - (2) If the water supplier is unable to collect the samples within the 24-hour time period specified in subsection (a) or deliver the samples to the laboratory within 24 hours after collection because of circumstances beyond its control, the water supplier shall notify the Department within 24 hours. The Department will then determine how much time the supplier will have to collect the repeat samples.
- (b) When collecting the repeat sample set, the water supplier shall collect at least one repeat sample from the sampling tap where the original total coliform-positive sample was taken. Other repeat samples shall be collected within five service connections upstream or downstream of the original site. At least one sample shall be from upstream and one from downstream unless there is no upstream and/or downstream service connection.
- (c) If one or more samples in the repeat sample set is total coliform-positive, the water supplier shall collect and have analyzed an additional set of repeat samples as specified in subsections (a) and (b). The supplier shall repeat this process until either no coliforms are detected in one complete repeat sample set or the supplier determines that the MCL for total coliforms specified in §64426.1 has been exceeded and notifies the Department.
- (d) If a public water system for which fewer than five routine samples/month are collected has one or more total coliform-positive samples, the water supplier shall collect at least five routine samples the following month. If the supplier stops supplying water during the month after the total coliform-positive(s), at least five samples shall be collected during the first month the system resumes operation. A water supplier may request the Department waive the requirement to collect at least five routine samples the following month, but a waiver will not be granted solely on the basis that all repeat samples are total coliform-negative. To request a waiver, one of the following conditions shall be met:
  - (1) The Department conducts a site visit before the end of the next month the system provides water to the public to determine whether additional monitoring and/or corrective action is necessary to protect public health.

- (2) The Department determines why the sample was total coliform-positive and establishes that the system has corrected the problem or will correct the problem before the end of the next month the system serves water to the public. If a waiver is granted, a system shall collect at least one routine sample before the end of the next month it serves water to the public and use it to determine compliance with §64426.1.

**Section 64463.1 of Title 22, California Code of Regulations (CCR) states in relevant part: §64463.1. Tier 1 Public Notice.**

- (a) A water system shall give public notice pursuant to this section and section 64465 if any of the following occurs:
  - (1) Violation of the total coliform MCL when:
    - (A) Fecal coliform or *E. coli* are present in the distribution system; or
    - (B) When any repeat sample tests positive for coliform and the water system fails to test for fecal coliforms or *E. coli* in the repeat sample;
  - .....
- (b) As soon as possible within 24 hours after learning of any of the violations in subsection (a) or being notified by the Department that it has determined there is a potential for adverse effects on human health [pursuant to paragraph (a)(4), (5), or (6)], the water system shall:
  - (1) Give public notice pursuant to this section;
  - (2) Initiate consultation with the Department within the same timeframe; and
  - (3) Comply with any additional public notice requirements that are determined by the consultation to be necessary to protect public health
- (c) A water system shall deliver the public notice in a manner designed to reach residential, transient, and nontransient users of the water system and shall use, as a minimum, one of the following forms:
  - (1) Radio or television;
  - (2) Posting in conspicuous locations throughout the area served by the water system;
  - (3) Hand delivery to persons served by the water system; or
  - (4) Other method approved by the Department, based on the method's ability to inform water system users.

**Section 64465. of Title 22, California Code of Regulations (CCR) states in relevant part: §64465. Public Notice Content and Format.**

- (a) Each public notice given pursuant to this article, except Tier 3 public notices for variances and exemptions pursuant to subsection (b), shall contain the following:
  - (1) A description of the violation or occurrence, including the contaminant(s) of concern, and (as applicable) the contaminant level(s);
  - (2) The date(s) of the violation or occurrence;
  - (3) Any potential adverse health effects from the violation or occurrence, including the appropriate standard health effects language from appendices 64465-A through G;
  - (4) The population at risk, including subpopulations particularly vulnerable if exposed to the contaminant in drinking water;
  - (5) Whether alternative water supplies should be used;
  - (6) What actions consumers should take, including when they should seek medical help, if known;
  - (7) What the water system is doing to correct the violation or occurrence;

- (8) When the water system expects to return to compliance or resolve the occurrence;
- (9) The name, business address, and phone number of the water system owner, operator, or designee of the water system as a source of additional information concerning the public notice;
- (10) A statement to encourage the public notice recipient to distribute the public notice to other persons served, using the following standard language: "Please share this information with all the other people who drink this water, especially those who may not have received this public notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this public notice in a public place or distributing copies by hand or mail"; and
- (11) For a water system with a monitoring and testing procedure violation, this language shall be included: "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. During [compliance period dates], we [did not monitor or test] or [did not complete all monitoring or testing] for [contaminant(s)], and therefore, cannot be sure of the quality of your drinking water during that time."

.....

#### *Ground Water Rule*

#### **Section 64430. of Title 22, California Code of Regulations (CCR) states in relevant part: §64430. Requirements.**

A public water system that uses ground water shall comply with the following provisions of 40 Code of Federal Regulations as they appear in the Ground Water Rule published in 71 Federal Register 65574 (November 8, 2006) and amended in 71 Federal Register 67427 (November 21, 2006) and 74 Federal Register 30953 (June 29, 2009), which are hereby incorporated by reference: Sections 141.21(d)(3), 141.28(a), 141.153(h)(6), Appendix A to Subpart O (Consumer Confidence Reports), 141.202(a)(8), 141.203(a)(4), Appendices A and B to Subpart Q (Public Notification), and 141.400 through 141.405, except that in:

- (a) sections 141.402(a)(1)(ii), (a)(2), (a)(2)(ii), (a)(4), (a)(4)(ii)(A), (a)(5)(i), and (a)(5)(ii), the phrase —§141.21(a) is replaced by —22 California Code of Regulations sections 64422 and 64423, and
- (b) sections 141.402(a)(1)(ii) and 141.405(b)(4), the phrase —§141.21(c) is replaced by —22 California Code of Regulations section 64425, and
- (c) section 141.402(a)(2)(iii), the phrase —§141.21(b) is replaced by —22 California Code of Regulations section 64424.

*[Note: The text reflecting this section is provided in Addendum A of this book.]*

#### *Addendum A*

#### **§141.402. Ground water source microbial monitoring and analytical methods.**

##### *(a) Triggered source water monitoring —*

- (1) *General requirements.* A ground water system must conduct triggered source water monitoring if the conditions identified in paragraphs (a)(1)(i) and (a)(1)(ii) of this section exist.
  - (i) The system does not provide at least 4-log treatment of viruses (using inactivation, removal, or a State-approved combination of 4-log virus inactivation and removal) before or at the first customer for each ground water source; and

(ii) The system is notified that a sample collected under 22 California Code of Regulations sections 64422 and 64423 is total coliform-positive and the sample is not invalidated under 22 California Code of Regulations section 64425.

- (2) *Sampling requirements.* A ground water system must collect, within 24 hours of notification of the total coliform-positive sample, at least one ground water source sample from each ground water source in use at the time the total coliform-positive sample was collected under 22 California Code of Regulations sections 64422 and 64423, except as provided in paragraph (a)(2)(ii) of this section.

(i) The State may extend the 24-hour time limit on a case-by-case basis if the system cannot collect the ground water source water sample within 24 hours due to circumstances beyond its control. In the case of an extension, the State must specify how much time the system has to collect the sample.

(ii) If approved by the State, systems with more than one ground water source may meet the requirements of this paragraph (a)(2) by sampling a representative ground water source or sources. If directed by the State, systems must submit for State approval a triggered source water monitoring plan that identifies one or more ground water sources that are representative of each monitoring site in the system's sample siting plan under 22 California Code of Regulations sections 64422 and 64423 and that the system intends to use for representative sampling under this paragraph.

(iii) A ground water system serving 1,000 people or fewer may use a repeat sample collected from a ground water source to meet both the requirements of 22 California Code of Regulations section 64424 and to satisfy the monitoring requirements of paragraph (a)(2) of this section for that ground water source only if the State approves the use of *E. coli* as a fecal indicator for source water monitoring under this paragraph (a). If the repeat sample collected from the ground water source is *E. coli* positive, the system must comply with paragraph (a)(3) of this section.

- (3) *Additional requirements.* If the State does not require corrective action under §141.403(a)(2) for a fecal indicator-positive source water sample collected under paragraph (a)(2) of this section that is not invalidated under paragraph (d) of this section, the system must collect five additional source water samples from the same source within 24 hours of being notified of the fecal indicator-positive sample.

## Bacteriological Distribution Monitoring Report

**2210903 Fishcamp Mutual**
*Distribution System Freq: 1/M*

<i>Sample Date</i>	<i>Location</i>	<i>T Coli</i>	<i>E Coli</i>	<i>F Coli</i>	<i>HPC</i>	<i>Type</i>	<i>Cl2</i>	<i>Violation</i>	<i>Comment</i>
8/12/2014	OT @ Front	8.0	8.0	8.0		Routine		MCL	<i>Sig Rise - found dead squirrel in the tank</i>
8/15/2014	Spencer	<1.1	<1.1			Repeat			
8/18/2014	5 samples: Odry, Woodworth, Brown, Cerioni, Keller	<1.1	<1.1			Repeat			
8/18/2014	Wells: 1, 2	<1.1	<1.1			Source R			
9/9/2014	5 samples	<1.1				Routine			<i>5 follow up samples</i>

**Violation Key**

MCL	Exceeds the maximum contaminant level	MR4	Did not collect 5 routine samples for previous month's positive sample
MR1	No monthly sample for the report month	MR5	Incorrect number of repeat samples as follow-up to a positive sample
MR2	No quarterly sample for the report month	MR6	No source sample
MR3	Incorrect number of routine samples for the report month	MR7	No summary report submitted
		MR8	Other comments and/or info.

# *Fishcamp Mutual*

**2210903**

*Source Monitoring Freq:*

<i>Sample Date</i>	<i>Time</i>	<i>Source</i>	<i>T Coli</i>	<i>E Coli</i>	<i>F Coli</i>	<i>HPC</i>	<i>Turbidity</i>	<i>Violation</i>	<i>Comment</i>
8/15/2014		Well 2	3.6	<1.1					
8/15/2014		Well 1	1.1	<1.1					0.9 ppm cl2

August 15<sup>th</sup> 2014

# Boil water advisory

## Failure to Follow This Advisory Could Result in Stomach or Intestinal Illness

Due to bacteriological contamination of the drinking water supply we are advising all users to boil tap water or use bottled water for drinking and cooking purposes as a safety precaution.

**All tap water used for drinking or cooking should be boiled rapidly for at least 1 minute. This is the preferred method to assure that the water is safe to drink.**

An alternative method of purification for users that do not have gas or electricity available is to use fresh liquid household bleach (Chlorox, Purex, etc.). Add 8 drops (1/4 teaspoon) of bleach to each gallon of clear water or 18 drops (1/2 teaspoon) to each gallon of cloudy water. Mix the water thoroughly and allow to stand for 30 minutes before using.

A chlorine-like taste and odor will result from this purification and is an indication that adequate disinfection has taken place.

Water purification tablet may be used by following the manufacturer's instructions.

This advisory is only for houses in the Fish Camp Mutual Water System (FCM) WEST of Highway 41. Houses EAST of Highway 41 and all other water systems in Fish Camp are normal. Free drinking water is available at the "spigot" on the front of Jeff Cerionis' house in Fish Camp. It is the red house, second one on the left as you go up White Chief Road off of Highway 41. Bring your own containers. Please check the FCM telephone number for daily updates on conditions. 559-683-6698

For more information call:

California Department of Public Health (559) 447-3300 (916) 558-1784

Also CDPH.ca.gov is their website

Thorn Hertwig, FCM "Watermaster" (Water System Operator) – 559-683 6698

**PROOF OF NOTIFICATION**

(Return with copy of notice)

As required by Section 116450 of the California Health and Safety Code, I notified all users of water supplied by the **Fishcamp MWC** of the failure to meet the **Total Coliform Rule Maximum Contaminant Level (MCL)- Significant Rise in Bacterial Count** requirement for August **2014** as directed by the Division.

Notification was made on \_\_\_\_\_ by  
(date)  
**hand delivering / mailing / posting / publishing** the written  
notice.  
*(circle all that apply)*

\_\_\_\_\_  
Signature of Water System Representative

\_\_\_\_\_  
Date

DISCLOSURE: Be advised that Section 116725 and 116730 of the California Health and Safety Code state that any person who knowingly makes any false statement on any report or document submitted for the purpose of compliance with the attached order may be liable for a civil penalty not to exceed five thousand dollars (\$5,000) for separate violation for each day that violation continues. In addition, the violators may be prosecuted in criminal court and upon conviction, be punished by a fine of not more than \$25,000 for each day of violation, or be imprisoned in the county jail not to exceed one year, or by both the fine and imprisonment.

Due: November 15, 2014  
TCR MCL-Sig Rise Violation  
System Number: 2210903  
Citation No.: 03-11-14C-014

**POSITIVE TOTAL COLIFORM INVESTIGATION**

This form is intended to assist public water systems in completing the investigation required by the State Water Resource Control Board (Section 64426(b) of Title 22, California Code of Regulations) and may be modified to take into account conditions unique to the system.

**ADMINISTRATIVE INFORMATION**

<b>PWS Name:</b>	<b>PWSID NUMBER:</b>
<b>Name</b>	<b>Address</b>
<b>Telephone #</b>	
Operator in Responsible Charge (ORC)	
Person that collected TC samples if different than ORC	
Owner	
Certified Laboratory for Microbiological Analyses	
Date Investigation Completed:	
Month(s) of Total Coliform MCL Failure:	

**INVESTIGATION DETAILS**

SOURCE	WELL (name)	WELL (name)	WELL (name)	WELL (name)	COMMENTS
1. Inspect each well head for physical defects and report					
a. Is raw water sample tap upstream from point of disinfection?					
b. Is wellhead vent pipe screened?					
c. Is wellhead seal watertight?					
d. Is well head located in pit or is any piping from the wellhead submerged?					
e. Does the ground surface slope towards well head?					
f. Is there evidence of standing water near the wellhead?					
g. Are there any connections to the raw water piping that could be cross-connections? (describe all connections in comments)					
h. Is the wellhead secured to prevent unauthorized access?					
i. To what treatment plant (name) does this well pump?					
j. How often do you take a raw water total coliform (TC) test?					
k. Provide the date and result of the last TC test at this location					

**TREATMENT**

TREATMENT	PLANT (NAME)	PLANT (NAME)	PLANT (NAME)	PLANT (NAME)	COMMENTS
1. If you provide continuous chlorination treatment, was there any equipment failure? Did the distribution system maintain a chlorine residual?					
a. Was emergency chlorination initiated?					
b. If yes, for how long?					

# POSITIVE TOTAL COLIFORM INVESTIGATION

TREATMENT	PLANT (NAME)	COMMENTS				
2. Did the distribution system lose chlorine residual?						
3. If you do not provide routine chlorination, was emergency chlorination initiated? If Yes, when?						
4. Inspect each point where disinfectant is added and report a. For hypochlorinator systems						
1. Is the disinfectant feed pump feeding disinfectant?						
2. What is the feed rate of disinfectant in ml/minute						
3. What is the concentration of the disinfectant solution being fed? (percent, or mg/l of chlorine as HOCl)						
4. By what method was the concentration of solution determined? (ex: measured, manufacturer's literature)						
5. What is the age (days) of the disinfectant solution currently being used at this treatment location?						
6. What is the raw water flow rate at the point where disinfectant is added in gallons per minute?						
7. What is the <b>total</b> chlorine residual measured immediately downstream from the point of application?						
8. What is the <b>free</b> chlorine residual measured immediately downstream from the point of application?						
9. What is the contact time in minutes from the point of disinfectant application to the first customer?						

STORAGE	TANK (name)	COMMENTS				
1. Is each tank locked to prevent unauthorized access?						
2. Are all vents of each tank screened down-turned to prevent dust and dirt from entering the tank?						
3. Is the overflow on each tank screened?						
4. Are there any unsealed openings in the tank such as access doors, water level indicators hatches, etc.?						
5. Is the roof/cover of the tank sealed and free of any leaks?						
6. Is the tank above ground or buried? a. If buried or partially buried, are there provisions to direct surface water away from the site. b. Has the interior of the tank been inspected to identify any sanitary defects, such as root intrusion?						
8. Does the tank "float" on the distribution system or are there separate inlet and outlet						

# POSITIVE TOTAL COLIFORM INVESTIGATION

STORAGE	TANK (name)	TANK (name)	TANK (name)	TANK (name)	TANK (name)	TANK (name)	COMMENTS
lines?							
9. What is the measured chlorine residual (total/free) of the water exiting the storage tank <b>today</b> ?							
10. What is the volume of the storage tank in gallons?							
11. Is the tank baffled?							
12. Prior to the TC+ or EC+, what was the previous date item #1-7 were checked and documented?							

DISTRIBUTION SYSTEM	SYSTEM RESPONSES
1. What is the minimum pressure you are maintaining in the distribution system?	
2. Did pressure in the distribution system drop to less than 5 psi prior to experiencing the TCR positive finding.	
3. Has the distribution system been worked on within the last week? (service taps, hydrant flushing, main breaks, main extensions, etc.) If yes, provide details.	
4. Are there any signs of excavations near your distribution system not under the direct control of your maintenance staff?	
5. Did you inspect your distribution system to check for mainline leaks? Do you or did you have a mainline leak?	
6. If there was a mainline leak, when was it repaired?	
7. On what date was the distribution system last flushed?	
8. Is there a written flushing procedure you can provide for our review?	
9. Do you have an active cross connection control program?	
10. What is name and phone number of your Cross-Connection Control Program Coordinator?	
11. Is the review and testing of backflow prevention devices current?	
12. On what date was the last physical survey of the system done to identify cross-connections?	

## BOOSTER STATION

## SYSTEM RESPONSES

1. Do you have a booster pump? How many?
2. Do you have a standby booster pump if the main pump fails?
3. Prior to bacteriological quality problems, did your booster pump fail?
4. Do you notice standing water, leakage at the booster station?

# POSITIVE TOTAL COLIFORM INVESTIGATION

SAMPLE SITE EVALUATION (Complete for all TC+ or EC+ findings)	Routine Site TC+ or EC+	Upstream Site	Downstream Site	Sample 4 (specify)
1. What is the height of the sample tap above grade? (inches)				
2. Is the sample tap located in an <b>exterior</b> location or is it protected by an <b>enclosure</b> ?				
3. Is the sample tap threaded, have a swing arm (kitchen sink) or aerator (sinks)?				
4. Is the sample tap in good condition, free of leaks around the stem or packing?				
5. Can the sample tap be adjusted to the point where a good laminar flow can be achieved without excessive splash?				
6. Is the sample tap and area around the sample tap clean and dry (free of animal droppings, other contaminants or spray irrigation systems)				
7. Is the area around the sample tap free of excessive vegetation or other impediments to sample collection				
8. Describe how the tap was treated in preparation for sample collection (ran water, swabbed with disinfectant, flamed, etc.)				
9. Is this sample tap designated on the sampling plan submitted with this information request?				
10. What were the weather conditions at the time of the positive sample (rainy, windy, sunny).				

GENERAL OPERATIONS:	Response
1. Where there any power outages that affected water system facilities during the 30 days prior to the TC+ or EC + findings?	
2. Where there any main breaks, water outages, or low pressure reported in the service area where TC+ or EC+ samples were located.	
3. Does the system have backup power or elevated storage?	
4. During or soon after bacteriological quality problems, did you receive any complaints of any customers' illness suspected of being waterborne? How many?	
5. What were the symptoms of illness if you received complaints about customers being sick?	

# POSITIVE TOTAL COLIFORM INVESTIGATION

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## ADDITIONAL INFORMATION TO BE SUBMITTED WITH RESPONSES TO THE ABOVE QUESTIONS

1. **Sketch** of System showing all sources, treatment locations, storage tanks, microbiological sampling sites and general layout of the distribution system including the location of all hazardous connections such as the wastewater treatment facility.
2. A set of photographs of the well, pressure tanks, and storage tanks in the system may be submitted if they would show that the contamination is directly related and changes have been made since the last inspection by our Department
3. Name, certification level and certificate number of the Operator in Responsible Charge.
4. Copy of the last cross connection survey performed that identifies the location of all unprotected cross connections.

**SUMMARY: BASED ON THE RESULTS OF YOUR INVESTIGATION AND ANY OTHER INFORMATION AT YOUR DISPOSAL, WHAT DO YOU BELIEVE TO BE THE CAUSE OF THE POSITIVE TOTAL COLIFORM SAMPLES FROM YOUR PUBLIC WATER SYSTEM?**

**CERTIFICATION: I CERTIFY THAT THE INFORMATION SUBMITTED IN RESPONSE TO THE QUESTIONS ABOVE IS ACCURATE TO THE BEST OF MY PROFESSIONAL KNOWLEDGE**

NAME: \_\_\_\_\_ TITLE: \_\_\_\_\_ DATE: \_\_\_\_\_