STATE OF CALIFORNIA

WATER RESOURCES CONTROL BOARD

DIVISION OF DRINKING WATER

TO: ELM COURT WATER SYSTEM
c/o JD Home Rentals
2975 E. Belmont
Fresno, CA 93701

Water System No. 1000277

Attn: Miguel Torres

CITATION FOR VIOLATION OF CALIFORNIA CODE OF REGULATIONS, TITLE 22

SECTIONS 64463. (a) (2) and 64463.1
PUBLIC NOTIFICATION FOR SIGNIFICANT RISE IN BACTERIAL COUNT
April 2015

SECTION 64423 – TOTAL COLIFORM MONITORING AND REPORTING
May 2015

NONCOMPLIANCE WITH CITATION 03-23-14C-073

CITATION NO. 03-23-15C-077

Issued on August 5, 2015

Section 116650 of the California Health and Safety Code authorizes the issuance of a citation to a public water system for violation 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, 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 Elm Court Water System (hereinafter, Water

System) (mailing address: 2975 E. Belmont, Fresno, CA 93701) for violation of California Code of Regulations (CCR), Title 22, Section 64426.1 subsections (b)(2).

APPLICABLE AUTHORITIES

Section 116650 of California Health and Safety Code provides, in relevant part:

(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 116450(a) provides, in relevant part:

(a) When any primary drinking water standard specified in the Division's regulations is not complied with, when a monitoring requirement specified in the Division's regulations is not performed, or when a water purveyor fails to comply with the conditions of any variance or exemption, the person operating the public water system shall notify the Division and shall give notice to the users of that fact in the manner prescribed by the Division. When a variance or an exemption is granted, the person operating the public water system shall give notice to the users of that fact.

California Code of Regulations, Title 22, provides, in relevant part:

§64426. Significant Rise in Bacterial Count.

(a) Any of the following criteria shall indicate a possible significant rise in bacterial count:

(2) A system has a sample which is positive for fecal or E. coli;

§64424. Repeat Sampling.

(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.

§64463. General Public Notification Requirements.

(e) Each water system shall give new customers public notice of any acute violation as specified in section 64463.1(a) that occurred within the previous thirty days, any continuing violation, the existence of a variance or exemption, and/or any other ongoing occurrence that the State Board has determined poses a potential risk of adverse effects on human health [based on a review of estimated exposures and toxicological data associated with the contaminant(s)] and requires a public notice.

STATEMENT OF FACTS

The Water System is operated under Water Supply Permit No. 03-23-12P-042, issued on September 26, 2012. Elm Court Water System is a community water system serving a population of approximately sixty-four (64) persons through fifteen (15) service connections.

The Water System is required to collect a minimum of one (1) distribution system bacteriological sample per month. The bacteriological water analysis results submitted by the Water System reported the presence of total coliform bacteria **and E. coli** in one (1) of five (5) distribution samples collected by the Water System in April 2015.

The following table summarizes the bacteriological monitoring conducted during the months of February through July of 2015.

Collection Date	Number of Samples	Sample Labeled	Number TC positive	Number E. Coli positive
2/10/2015	1	Routine	1	0
2/13/2015	4	Repeat (including well)	0	0

3/16/2015	5	Routine	1	0
3/20/2015	4	Repeat (including well)	0	0
4/10/2015	**5**	**Routine**	**1**	**1**
5/7/2015	4	Repeat (including well)	0	0
6/10/2015	1	Routine	0	0
7/10/2015	1	Routine	0	0

Due to the above-mentioned total coliform and *E. coli* bacteria positive sample collected on April 10, 2015, the Water System has demonstrated a significant rise in bacterial count during the month of April 2015. The cause of contamination is unknown. **Water System staff have not completed or returned the Positive Total Coliform Investigation form that was sent electronically on April 14, 2015. A Boil Water Order was issued by the Division to the Water System on April 14, 2015. The appropriate Public Notice was provided to the Water System electronically via email. Division staff confirmed with the Water System that the Boil Water Order was received. Water System staff have not completed or returned the Proof of Notification template that was sent electronically on April 14, 2015.**

Results for water samples tested for coliform bacteria during 2015 are summarized in Attachment A. Repeat sampling following the positive Total Coliform and E. Coli bacteria finding on April 10, 2015 was not conducted until May 7, 2015. All four repeat samples were absent for total coliform and *E. coli* bacteria. Due to these findings, the Boil Water Order is rescinded.

The five routine distribution samples required the month following April 2015, which had one total coliform and E. coli positive sample, were not collected during May 2015.

Results for water samples tested for coliform bacteria during 2015 are summarized in Attachment A.

The Groundwater Rule adopted by the Division, effective August 18, 2011, requires the collection of a sample for bacteriological evaluation from wells serving the system in response to a coliform positive distribution sample. This requirement has been met with the repeat sampling collected during February and March of 2015. Repeat sampling collected following the positive total coliform and E. coli sampling.

Citation No. 03-23-14C-073 was issued to the Water System on November 17, 2014 for violation of the Total Coliform Rule's Maximum Contaminant Level during the month of July 2014. **The citation detailed the following directives that were to be complied with by the indicated dates**:

1. *By **November 30, 2014**, the Elm Court water system shall provide public notification of the total coliform Maximum Contaminant Level failure for July 2014 by posting the notice provided as Attachment B in conspicuous locations throughout the area served by the water system and by direct delivery to each consumer.*

   *By **December 15, 2014**, the Water System shall provide proof of public notification of the total coliform MCL violation for July 2014 by completing Attachment C and returning it to:*

   Betsy S. Lichti, Senior Sanitary Engineer
   Division of Drinking Water
   Drinking Water Field Operations Branch
   265 W. Bullard Avenue, Suite 101
   Fresno, CA 93704

2. *By **December 15, 2014**, the Water System shall complete and submit the enclosed "Positive Total Coliform Investigation" form to the Division that describes the incident and all corrective actions taken, and the results of the investigation. The appropriate investigation report is provided as Attachment D.*

3. *Whenever the Water System has one or more total coliform-positive samples in a given month, at least five (5) routine samples shall be collected the following month as required by Section 64424(d) and as discussed in this Citation.*

4. *The Water System will be required to maintain an approved Cross-Connection Control Program which shall include the following elements (as applied from Title 17, California Code of Regulations, Section 7584), and as outlined in Attachment E:*

   a. *The conducting of surveys to identify water user premises or locations where cross connections are likely to occur,*
   b. *The provisions of backflow protection by the Water user at the user's connection or within the user's premises or both,*
   c. *The provision of at least one person trained in cross-connection control to carry out the cross-connection program,*
   d. *The establishment of a procedure or system for annual testing of backflow preventers, and*
   e. *The maintenance of records of locations, tests, and repairs of backflow preventers.*

The survey and documentation of a valid Cross Connection Control Program shall be submitted to the Division by December 15, 2014. *You may contact the SWRCB-DDW Fresno District for guidance in identifying a cross-connection specialist to conduct the survey.*

As of the date of this violation, the Division has not received a response to any of the Directives of Citation No. 03-23-14C-073.

VIOLATIONS

The Drinking Water Field Operations Branch of the State Water Resources Control Board – Division of Drinking Water (hereinafter 'Division') hereby issues a Citation to Elm Court Water System (hereinafter 'Water System'), for failure to comply with Citation 03-23-14C-073 and Section 116555(a)(1) of the CHSC and Sections 64426 (a)(2) and 64424(d) of Title 22, California Code of Regulations (CCR). Specifically, the Water System (mailing address: 2975 E. Belmont, Fresno, CA 93701) failed to comply with all directives of Citation 03-23-14C-073 and failed to collect the required number of distribution samples following a month with a Significant Rise in Bacterial Count.

NOTIFICATION REQUIREMENTS

Section 116450 of the California Health and Safety Code (CHSC), specifies that whenever a monitoring requirement specified in the Division's regulations is not performed, the person operating the public water system shall notify the Division and shall give notice to the users of that fact in the manner prescribed by the Division.

Public notification for violation of any requirement of Section 64423 shall be in accordance with Sections 64463 which outlines the prescribed methods and information to be included in the public notice to the customers.

Public notification for failure to conduct the required bacteriological monitoring for the month of May 2015 is required. The Water System shall utilize the Tier 3 Public Notice to inform their customers of the failure to conduct the required bacteriological monitoring. This notice is provided as Attachment B.

Section 64463.4 allows community water systems to give public notice by mail or direct delivery to each customer and the use of one or more of the following methods in order to reach persons not likely to be reached by mail or direct delivery: publication in a daily or weekly newspaper, posting the public notice in a conspicuous public place within the water system or on the internet, or by delivery to community organizations.

The Water System shall mail or directly deliver the public notice to their customers within the water system. Section 116450(g) requires that upon receipt of notification from a public water system, schools must notify school employees, students, and parents (if the students are minors), residential rental property owners or managers (including nursing homes and care facilities) must notify their tenants and business property owners,

managers or operators must notify employees of businesses located on the property. These secondary notification requirements are included in the public notice.

Proof of notification is required. The Water System shall complete Attachment C and return it to the Division by **August 31, 2015.**

DIRECTIVES

The Water System is hereby directed to take the following actions:

1. By **August 15, 2015,** the Elm Court water system shall provide public notification of the failure to conduct the routine follow-up bacteriological monitoring during May 2015 by posting the notice provided as Attachment B in conspicuous locations throughout the area served by the water system **and by direct delivery to each consumer.**

   By **August 31, 2015,** the Water System shall provide proof of public notification of the bacteriological monitoring and reporting violation by completing Attachment C and returning it to:

   Betsy S. Lichti, Senior Sanitary Engineer
   Division of Drinking Water
   Drinking Water Field Operations Branch
   265 W. Bullard Avenue, Suite 101
   Fresno, CA 93704

2. By **August 31, 2015**, the Water System shall complete and submit the enclosed "Positive Total Coliform Investigation" form to the Division that describes the incident and all corrective actions taken, and the results of the investigation. The appropriate investigation report is provided as Attachment D.

3. Whenever the Water System has one or more total coliform-positive samples in a given month, at least five (5) routine distribution samples shall be collected the following month as required by Section 64424(d) and as discussed in this Citation.

4. The Water System will be required to maintain an approved Cross-Connection Control Program which shall include the following elements (as applied from Title 17, California Code of Regulations, Section 7584), and as outlined in Attachment E:

   a. The conducting of surveys to identify water user premises or locations where cross connections are likely to occur,
   b. The provisions of backflow protection by the Water user at the user's connection or within the user's premises or both,
   c. The provision of at least one person trained in cross-connection control to carry out the cross-connection program,
   d. The establishment of a procedure or system for annual testing of backflow preventers, and
   e. The maintenance of records of locations, tests, and repairs of backflow preventers.

   The survey and documentation of a valid Cross Connection Control Program shall be submitted to the Division by September 30, 2015. You may contact the SWRCB-DDW Fresno District for guidance in identifying a cross-connection specialist to conduct the survey.

PARTIES BOUND

This Citation shall apply to and be binding upon Elm Court Water System, its officers, directors, shareholders, agents, employees, contractors, successors, and assignees.

SEVERABILITY

The Directives of this Citation are severable, and Elm Court Water System shall comply with each and every provision thereof, notwithstanding the effectiveness of any other provision.

FURTHER ENFORCEMENT ACTION

The California SDWA authorizes the Division 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, permit 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 Division 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 Division; and to petition the superior court to take various enforcement measures against a public water system that has failed to comply with violates an order of the Division. The Division does not waive any further enforcement action by issuance of this citation.

8/5/15
Date

Betsy S. Lichti, P.E.,
District Engineer
Division of Drinking Water
State Water Resources Control Board

Attachments:

A. Bacteriological Distribution and Source Monitoring Reports
B. Public Notice Template
C. Proof of Notification
D. Positive Total Coliform Investigation Form
E. Guidelines for Development of Cross Connection Control Program

Certified Mail Tracking 7014 3490 0001 7868 8170

Bacteriological Distribution Monitoring Report

1000277 Elm Court

Distribution System Freq: 1/M

Sample Date	Time	Location	T Coli	E Coli	F Coli	Type	Cl2	Violation	Comment
1/12/2015	14:47	3508 S. Elm #102	A	A		Routine			
2/10/2015	16:00	3520 S. Elm #106	P	A		Routine			
2/13/2015	15:02	3520 S. Elm, #106	A	A		Repeat			
2/13/2015	15:05	3520 S. Elm, #105	A	A		Repeat			
2/13/2015	15:07	3508 S. Elm, #104	A	A		Repeat			
2/13/2015	15:16	Well	A	A		Source Repeat			
3/16/2015	11:35	3508 S. Elm #106	A	A		Routine			
3/16/2015	11:40	3508 S. Elm #107	P	A		Routine			
3/16/2015	11:46	3520 S. Elm #106	A	A		Routine			
3/16/2015	11:52	3508 S. Elm #104	A	A		Routine			
3/16/2015	12:01	3520 S. Elm #101	A	A		Routine			
3/20/2015	14:45	3508 S. Elm #110	A	A		Repeat			
3/20/2015	14:49	Well	A	A		Source Repeat			
3/20/2015	15:02	3508 S. Elm #107	A	A		Repeat			
3/20/2015	15:10	3508 S. Elm #106	A	A		Repeat			
4/10/2015	15:06	3508 S. Elm, #101	A	A		Routine			
4/10/2015	15:12	3508 S. Elm, #103	A	A		Routine			
4/10/2015	15:22	3520 S. Elm #102	P	P		Routine			*BWO issued 4/14/15 for Significant Rise in Bacterial Count*
4/10/2015	15:32	3520 S. Elm, #101	A	A		Routine			
4/10/2015	15:40	3504 S. Elm	A	A		Routine			
5/7/2015	15:48	3508 S. Elm - Well	A	A		Source Repeat			
5/7/2015	15:51	#110	A	A		Repeat			
5/7/2015	16:06	#110	A	A		Repeat			
5/7/2015	16:12	#106	A	A		Repeat			
5/31/2015		No Routine Samples						MR4	*Did not collect the five routine samples following April 2015*
6/10/2015	16:50	3504 S. Elm	A	A		Routine			
7/10/2015	14:40	3520 S. Elm, #105	A	A		Routine			

Violation Key

MCL	Exceeds the maximum contaminant level	MR5	Incorrect number of repeat samples as follow-up to a positive sample
MR1	No monthly sample for the report month	MR6	No source sample
MR2	No quarterly sample for the report month	MR7	No summary report submitted
MR3	Incorrect number of routine samples for the report month	MR8	Other comments and/or info
MR4	Did not collect 5 routine samples for previous month's positive sample	MR9	Cl2 not reported

IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER

Este informe contiene información muy importante sobre su agua potable.
Tradúzcalo o hable con alguien que lo entienda bien.

Bacteriological Monitoring Requirements Not Met for Elm Court Water System

Our water system failed to monitor as required for a drinking water monitoring standard during May 2015 and, therefore, was in violation of the regulations. Even though this failure was not an emergency, as our customers, you have a right to know what you should do, what happened and what we did to correct this situation.

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 month of May 2015, we did not monitor as required for total coliform bacteria and therefore cannot be sure of the quality of our drinking water during that time.

What should I do?

- There is nothing you need to do at this time.
- The table below lists the contaminant(s) we did not properly test for during the last year, how many samples we are required to take and how often, how many samples we took, when samples should have been taken, and the date on which follow-up samples were (or will be) taken.

Contaminant	Required sampling frequency	Number of samples taken	When all samples should have been taken	When samples were or will be taken
Total Coliform Bacteria	5 routines the month following a positive	0	May 2015	

- If you have health issues concerning the consumption of this water, you may wish to consult your doctor.

What happened? What is being done?

For more information, please contact Miguel Torres at _____ or _____

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.

Secondary Notification Requirements

Upon receipt of notification from a person operating a public water system, the following notification must be given within 10 days [Health and Safety Code Section 116450(g)]:

- *SCHOOLS: Must notify school employees, students, and parents (if the students are minors).*
- *RESIDENTIAL RENTAL PROPERTY OWNERS OR MANAGERS (including nursing homes and care facilities): Must notify tenants.*
- *BUSINESS PROPERTY OWNERS, MANAGERS, OR OPERATORS: Must notify employees of businesses located on the property.*

This notice is being sent to you by Elm Court State Water System ID#: 1000277

Date distributed: _____

State Water Resources Control Board
Division of Drinking Water

ATTACHMENT C

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 **Elm Court Water System** of the failure to monitor as required for total coliform bacteria during the month of **May 2015** as directed by the Division.

Notification was made on _____ by
(date)

_____ **hand delivered** and/or **mailed** and/or **posted** written notice.
(*circle all that apply*)

_____
Signature of Water System Representative

_____
Printed Name

_____
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: August 31, 2015
Total Coliform MCL Failure: May 2015
System Number: 1000277
Citation No.: 03-23-15C-077

POSITIVE TOTAL COLIFORM INVESTIGATION

Attachment D

Simple Well with Pressure Tank Systems

This form is intended to assist public water systems in completing the investigation required by the SWRCB Drinking Water Division (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

PWS Name:		**PWS ID NUMBER:**	

	Name	**Address**	**Telephone #**
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. Is there a check valve on the well discharge line? Is the check valve seating properly?					
h. Are there any connections to the raw water piping that could be cross connections? (describe all connections in comments)					
i. Is the wellhead secured to prevent unauthorized access?					
j. To what treatment plant (name) does this well pump?					
k. How often do you take a raw water total coliform (TC) test?					
l. Provide the date and result of the last TC test at this location					

POSITIVE TOTAL COLIFORM INVESTIGATION

Attachment D

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?	

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 **ext**erior location or is it protected by an **enc**losure?				
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 weather conditions at the time of positive sample (rainy, windy, sunny)?				

POSITIVE TOTAL COLIFORM INVESTIGATION

Attachment D

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?	

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 Division.
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:** _____

Cross-Connection Control for Small Community Water Systems
SWRCB DDW-Fresno District

Purpose of Cross-Connection Control Program: Water provided by a public water system may be contaminated via cross-connections within the distribution system. The purpose of the cross-connection control program is to reduce the hazard of contamination of the public water system by identifying actual and potential cross-connections and taking action to protect the system from these hazards. This is accomplished by installing backflow prevention assemblies where hazards are identified; or ensuring that water-using equipment on the premises is installed in accordance with plumbing code requirements and good practice.

What are cross-connections?

Cross-connections are actual and potential unprotected connections between a potable water system and any source or system containing unapproved water or a substance which is not safe. Examples of cross-connections include:

1. Improperly installed irrigation systems that may allow backsiphonage of stagnant, bacteriologically unsafe water into the piping system.
2. Improperly plumbed water-using devices such as hot-tubs, boilers or commercial dishwashers which may allow unsafe water back into the domestic piping system.
3. Irrigation systems served by an auxiliary source, such as a private well or creek. Such systems create a potential for major contamination of the public water system via interties with the domestic piping system.
4. Interconnections between the potable system and a non-potable system.

What the Regulations Require

Section 7584 of the California Code of Regulations requires that each public water system have a cross connection control program that includes these elements:

1. The adoption of operating rules or ordinances to implement the cross-connection program.
2. The conducting of surveys to identify water user premises where cross connections exist or are likely to occur.
3. The provisions of backflow protection by the water user at all connections where a cross connection hazard has been identified.
4. The provision of at least one person trained in cross connection control to carry out the program.
5. The establishment of a procedure or system for testing backflow prevention assemblies.
6. The maintenance of records of locations, tests, and repairs of backflow prevention assemblies within each water supplier's distribution system.

Getting Started

For small community water systems, the initial elements of the program consist of the following:

1. Adopting an ordinance or set of rules to implement the cross-connection control program. A copy of a sample ordinance for small systems is attached. The ordinance is important since it establishes the legal authority to carry out the program.
2. Conducting a system survey to identify actual and potential cross-connection hazards.
3. Ensuring that hazards are abated by the installation of backflow prevention assemblies at the meter, eliminating the hazard in conjunction with the owner of the property or providing internal cross-connection protection.

System Survey

The system survey consists of a preliminary survey and, if necessary, a more detailed second survey. For most small systems, the initial survey may consist of a questionnaire sent to each customer asking whether the customer has specific potential hazards. Documentation of the system survey is to be submitted to the Division. Attached is a summary form for documentation of the system survey.

Residential areas

Customers should be asked if any of the following are located on-site:

1. Auxiliary water supply (i.e. either a well or a creek pump) - backflow prevention device is mandatory.
2. Irrigation systems - backflow prevention device not required if system is installed in accordance with plumbing codes with appropriate vacuum breakers.
3. Swimming pool, hot tub or spa - backflow prevention device not required if system is installed in accordance with plumbing codes.
4. Solar hot water heating panels - backflow prevention device not required if system is installed in accordance with plumbing codes.
5. Graywater systems - backflow prevention assemblies may not be required if the system is installed in accordance with the Uniform Plumbing Code.

If these or other potential hazards are located on site, the water system is to determine whether the equipment has been installed in accordance with plumbing codes and/or good practice in order to minimize the risk of backflow.

Commercial customers: A more detailed questionnaire and survey is necessary. Small community systems, which also serve commercial customers, should review the Division of Health Service's "Manual of Cross-Connection Control - Procedures and Practices". A system survey of commercial users as specified in the Manual is to be performed. As an alternative, the system may decide to require backflow prevention assemblies at all commercial service connections where hazards are likely to exist.

Wastewater and Hazardous Wastes: A service connection which handles wastewater or dangerous chemicals requires special evaluation and protection from cross-connection hazards. For additional information on evaluating this type of facility, please contact the appropriate regulatory agency and a cross-connection control specialist.

ELEMENTS OF A CROSS-CONNECTION CONTROL PROGRAM
SWRCB DDW Fresno District

When implementing a Cross-Connection Control Program, the water supplier or health agency should follow an organized plan. The following items should be included as a minimum. The items **explain the Division of Health Services' policy regarding the regulations.**

7584. Responsibility and Scope of Program
The water supplier shall protect the public water supply from contamination by implementation of a cross-connection control program. The program, or any portion thereof, may be implemented directly by the water supplier or by means of a contract with the local health agency, or with another agency approved by the health agency. The water supplier's cross-connection control program shall for the purpose of addressing the requirements of Sections 7585 through 7605 include, but not limited to, the following elements:

(1) The adoption of operating rules or ordinances to implement the cross-connection program.

A public water supplier shall enact an ordinance or rule of service outlining the cross-connection control program and providing enforcement authority.

(2) The conducting of surveys to identify places where cross-connections are likely to occur.

Water utilities do not have any responsibility for controlling or abating cross-connections on a user's premises. All existing facilities where potential cross-connections are suspected, however, shall be listed and inspected or reinspected on a priority basis, where feasible. All applications for new services or for enlarging existing services or changing of occupant shall be reviewed or screened for cross-connect1ons hazards

(3) The provision of backflow protection at the user's connection or within the user's premises or both.

Adequate provisions for implementation and enforcement of backflow protection where needed including the shutting off service when necessary

4) The provision of at least one person trained in cross-connection control to carry out the cross-connection program.

Specific units of the health agency and/or water supplier should be designated to organize and carry out the cross-connection control program. The personnel in those units should be trained as to the causes and hazards of unprotected cross-connections.

(5) The establishment of a procedure or system for testing backflow preventers.

A list of approved backflow preventers and list of certified testers should be made available to each water user required to provide backflow protection.

The list may include backflow devices approved by University of Southern California, Foundation for Cross-Connection Control and IAPMO.

The List of certified testers may be lists developed by the American Water Works Association and local county health agencies.

Backflow preventers should be tested at least yearly or more often as required by the health agency or water supplier.

(6) The maintenance of records of locations, tests and repairs of backflow preventers

Adequate records should be kept and filed for reference. These records should include, in addition to the name of the owner of the premises, the:

a) Date of inspection
b) Results of inspection
c) Required protection
d) List of all backflow preventer devices in the system
e) Test and maintenance reports
f) All correspondence between the water supplier, the local health authority, and the consumer
g) Records must be maintained for a minimum of three years

Records of inspection and testing should be evaluated to determine if:

a) Devices are frequently or sufficiently reviewed to detect failure.
b) There are unusual feature of a particular model of device or component.
c) Cause of failure can be eliminated.

A program should be established to notify the water user when his backflow preventer must be tested. (A minimum of once each year is required.) After installation or repair, a backflow preventer should be tested and approved before it is accepted.

7605. Testing and Maintenance of Backflow Preventers

Regulations require the following regarding testing and maintenance of backflow prevention devices:

(a) The water supplier shall assure that adequate maintenance and periodic testing are provided by the water user to ensure their proper operation.

(b) Backflow preventers shall be tested by persons who have demonstrated their competency in testing of these devices to the water supplier or health agency.

(c) Backflow preventers shall be tested at least annually or more frequently if determined to be necessary by the health agency or water supplier. When devices are found to be defective, they shall be repaired or replaced in accordance with the provisions of this Chapter.

(d) Backflow preventers shall be tested immediately after they are installed, relocated or repaired and not placed in service unless they are functioning as required.

(e) The water supplier shall notify the water user when testing of backflow preventers is needed. The notice shall contain the date when the test must be completed.

(f) Reports of testing and maintenance shall be maintained by the water supplier for a minimum of three years.

Cross-Connection Survey Summary Form-Small Community Water Systems

Name of System _____ System Number _____

Description of Survey Procedures-How survey was conducted, (include copy of survey form):
Person conducting survey (List name and qualifications):

_____

_____

Procedures for Residential Connections:

_____

_____

_____

_____

Procedures for Commercial Connections:

_____

_____

_____

_____

Total number of service connections _____ Number of service connections surveyed _____
Number of connections with auxiliary sources (i.e. wells or creek pumps) _____
Number of connections with other hazards _____
Total number of backflow prevention devices _____

Type of Hazard Identified(i.e. private well, hot tub, irrigation system, swimming pool, etc)	**Number of connections with hazard**	**Number of devices installed**	**Number where device not necessary**

Describe follow-up for service connections that did not respond to the survey:

_____

_____

_____

_____

_____

_____

Long-term (Describe on-going cross-connection protection & testing of backflow prevention assemblies)

_____

_____

_____

_____

_____

_____

Submitted by (signature) _____ Date _____

MODEL ORDINANCE NO.2 - "SHORT" VERSION
AN ORDINANCE OF THE {Water Supplier's Name}
INSTITUTING A CROSS-CONNECTION CONTROL PROGRAM TO
PROTECT THE PUBLIC WATER SYSTEM

THE {Water Supplier} DOES ORDAIN AS FOLLOWS:

SECTION I – PURPOSE

The purpose of this ordinance is to protect the public water supply system from contamination due to potential and actual cross-connections. This shall be accomplished by the establishment of a cross-connection control program as required by State regulations. This ordinance is adopted pursuant to Title 17, Section 7583 - 7605, inclusive, of the California Code of Regulations, entitled "Regulations Relating to Cross-Connections".

SECTION II – RESPONSIBILITY

The {General Manager/cross-connection control specialist} shall be responsible for implementing and enforcing the cross-connection control program. An appropriate backflow prevention assembly shall be installed by and at the expense of the water user at each user connection where required to prevent backflow from the water user's premises to the domestic water system. It shall be the water user's responsibility to comply with the {Water Supplier}'s requirements.

SECTION III - CROSS-CONNECTION PROTECTION REQUIREMENTS

The type of protection that shall be provided to prevent backflow into the public water supply system shall be commensurate with the degree of hazard, actual or potential, that exists on the water user's premises. Unprotected cross-connections with the public water supply are prohibited. The type of backflow prevention assembly that may be required (listed in decreasing level of protection) includes: Air-gap separation (AG), Reduced Pressure

Principle Backflow Prevention Assembly (RP), and a Double Check Valve Assembly (DC). The water user may choose a higher level of protection than required by the water supplier. The minimum types of backflow protection required to protect the approved water supply at the user's water connection to premises with varying degrees of hazard are listed in Table 1 of Section 7604, Title 17. Situations which are not covered in Table 1 shall be evaluated on a case-by-case basis and the appropriate backflow protection shall be determined by the water supplier or health agency.

SECTION IV - BACKFLOW PREVENTION ASSEMBLIES

Only backflow prevention assemblies, which have been approved by the {Water Supplier} shall be acceptable for installation by a water user. A list of approved backflow prevention assemblies Will be provided upon request to any affected customer. Backflow prevention assemblies shall be Installed in a manner prescribed in Section 7603, Title 17. Location of the assemblies shall be as close as practical to the user's connection. The {Water Supplier} shall have the final authority in determining the required location of a backflow prevention assembly.

Testing of backflow assemblies shall be conducted only by qualified testers and testing will be the responsibility of the water user. Backflow prevention assemblies must be tested at least annually and immediately after installation, relocation or repair. More frequent testing may be required if deemed necessary by the {Water Supplier}. No assembly shall be placed back in

service unless it is functioning as required. These assemblies shall be serviced, overhauled, or replaced whenever they are found to be defective and all costs of testing, repair, and maintenance shall be borne by the water user. Approval must be obtained from the {Water Supplier} prior to removing, relocating or replacing a backflow prevention assembly.

SECTION VI – ADMINISTRATION

The cross-connection control program shall be administered by the {General Manager/ cross-connection control specialist}. The {Water Supplier} will establish and maintain a list of approved backflow prevention assemblies as well as a list of approved backflow prevention assembly testers. The {Water Supplier} shall conduct necessary surveys of water user premises to evaluate the degree of potential health hazards. The {Water Supplier} shall notify users when an assembly needs to be tested. The notice shall contain the date when the test must be completed.

SECTION VII - WATER SERVICE TERMINATION

When the {Water Supplier} encounters water uses that represent a clear and immediate hazard to the potable water supply that cannot be immediately abated, the procedure for terminating water service shall be instituted. Conditions or water uses that create a basis for water service termination shall include, but are not limited *to*, the following:

1. Refusal to install or to test a backflow prevention assembly, or to repair or replace a faulty backflow prevention assembly.

2. Direct or indirect connection between the public water system and a sewer line.

3. Unprotected direct or indirect connection between the public water system and a system or equipment containing contaminants.

4. Unprotected direct or indirect connection between the public water system and an auxiliary water system.

For condition 1, the {Water Supplier} will terminate service to a water user's premises after proper notification has been sent. If no action is taken within the allowed time period water service shall be terminated.

For conditions 2, 3, or 4, the {Water Supplier} shall take the following steps:

1. Make reasonable effort to advise the water user of intent to terminate water service;
2. Terminate water service and lock service valve. The water service shall remain inactive until correction of violations has been approved by the {Water Supplier}.

SECTION VII - EFFECTIVE DATE

This Ordinance shall supersede all previous cross-connection control ordinances and shall take effect thirty (30) days from the date of its adoption. Before the expiration of fifteen (15) days after its adoption this Ordinance shall be published in the _____, a newspaper of general circulation, printed and published in_____.