

EDWARD I. BARWICK  
JAMIESON CANYON WATER TREATMENT PLANT  
PUBLIC WORKS DEPARTMENT  
270 Kirkland Ranch Road  
P.O. Box 660  
Mailing Address:  
P.O. Box 660  
Napa, California 94559-0660  
Phone: 707-253-0822  
Fax: 707-253-1225  
TTY: (707) 257-9506

April 10, 2015

Sheri Miller, P.E.  
Mendocino District Engineer  
State Water Resources Control Board  
Division of Drinking Water  
50 D Street, Suite 200  
Santa Rosa, CA 95404

RE: City of Napa, Citation #: 02-03-15C002; Certification of Compliance for Public Notification(s) and OEL Completion

Dear Ms. Miller,

This letter confirms the City of Napa has completed the Public Notifications and Completed OEL Forms for the Citation #: 02-03-15C002 as specified in the Certification of Compliance Appendix 3. A copy of the updated Certification of Compliance is included for your reference. As discussed with Amy, Directive 6 has been revised to reflect July 1, 2016.

The City of Napa has completed the OE Reporting forms for 1072 Darms Lane, 770 Jackson Street and 4152 Browns Valley Road, Treatment, Distribution and Source Water and included those for your information.

We appreciate your review of the attached materials and if you have any questions or concerns, please call (707) 253-0822.

Respectfully submitted,

Erin Kebbas  
Water Quality Manager

**Attachments:**

1. **Certification of Compliance, Appendix 3**
2. **Copy of Public Notification as Mailed on March 3, 2015**
3. **Screen Shot of City of Napa Webpage Link for Public Notification for Residents**
4. **City of Napa OE Reporting Forms**

***Cc (via email):*** Joy Eldredge, Water General Manager  
Bob Janowski, Water Treatment Manager  
Amy Little, SWRCB Associate Sanitary Engineer

**CERTIFICATION OF COMPLIANCE**

**Citation Number 02-03-15C002**

**Name of Water System: City of Napa**

**System Number: 2810003**

**Certification**

As required by Section 64463.4 of the California Code of Regulations, I certify that the identified users of the water supplied by the City of Napa were notified of the violations of Title 22, California Code of Regulations (CCR) for the compliance period ending in the 1st Quarter 2015. In addition, I certify that the City of Napa has complied with the directives of this citation as indicated below:

Required Action	Date Completed
Public Notification – Mail or Hand Delivery by 3/31/2015*	March 3, 2015
Public Notification – Newspaper or Internet by 3/31/2015*	March 3, 2015

*Erin Kellas*

Signature of Water System Representative

*04.10.15*

Date

*\*Attach a copy of the notice delivered to customers and a copy of the notice published in the newspaper or internet.*

**THIS FORM MUST BE COMPLETED AND RETURNED TO THE DEPARTMENT BY  
April 15, 2015**

**Disclosure:** Be advised that Section 116725 and 116730 of the California Health and Safety Code states 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 each 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 county jail not to exceed one year, or by both the fine and imprisonment.

**02-03-15C002**



CITY of NAPA

## IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER

Este informe contiene información muy importante sobre su agua potable.  
Para una copia de este artículo en español, por favor llame al 707-257-9520 extensión 7743.

### City of Napa Has Detected Levels of Disinfection Byproducts Above Drinking Water Standards

Our water system recently exceeded a new drinking water standard for trihalomethanes in the vicinity of your service meter. As our customers, you have a right to know what happened, what you should do, and what we are doing to correct this situation.

#### What happened?

To protect drinking water from disease-causing organisms, or pathogens, chlorine is added to drinking water as a disinfectant. However, disinfection byproducts can form when organic-rich water, is disinfected. A major challenge for the City of Napa and all municipal water systems is how to control and limit risks from pathogens and simultaneously minimize disinfection byproduct formation. Disinfection byproducts tend to be highest when naturally-occurring organic matter is elevated in our surface water supplies due to winter rains and during periods of long detention times in the water system.

We routinely monitor for the presence of drinking water contaminants throughout the entire water system. As of October 2012, the standard that applies to the City of Napa's system for disinfection byproducts changed significantly. The maximum limit for the annual average of trihalomethanes at each location is 80 micrograms per liter (ug/L). The January 2015 results for trihalomethanes in your area *ranged from 80.1 – 97.0 ug/L* and therefore requires this notification.

#### What should I do?

**No specific corrective actions are needed. You do not need to boil your water.** However, if you have specific health concerns, consult your doctor.

#### What does this mean?

This is not an emergency. If it had been, you would have been notified immediately. Some people who drink water containing disinfection byproducts in excess of the maximum limit over many years may experience liver, kidney, or central nervous system problems, and may have an increased risk of getting cancer. These diseases, however, are not caused solely by chemicals in drinking water, but result from many other factors. If you have specific health concerns, consult your doctor.



## CITY of NAPA

### What is being done?

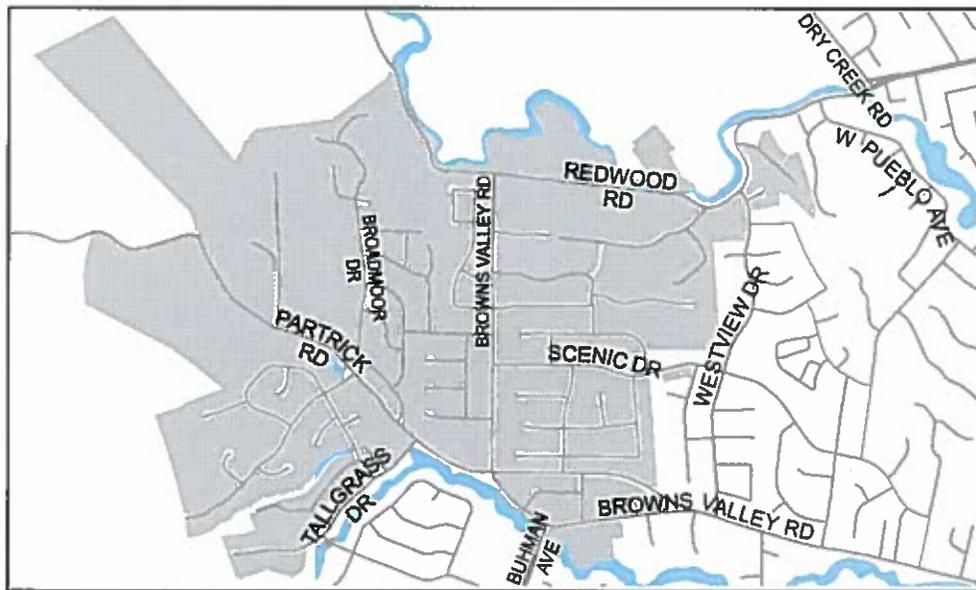
We continually work to protect the watersheds and our source water quality with the goal of minimizing organic content in the water, and we are working to reduce detention time in the water system. We are also working to develop sufficient funds to upgrade our water treatment. In short, we are actively exploring all options to reduce trihalomethanes. We will continue to inform you on a quarterly basis if the problem persists.

For more information, please call (707) 253-0822 and ask to speak with Erin Kebbas Water Quality Manager for the City of Napa. The mailing address is PO Box 660, Napa, CA 94559-0660 or visit [www.cityofnapa.org/water](http://www.cityofnapa.org/water) for more information and FAQs.

This notice is being sent to you by the City of Napa.

State Water System ID#: 2810003

Date distributed: March 3, 2015



*Potentially Affected Area*

### Secondary Notification Requirements

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.



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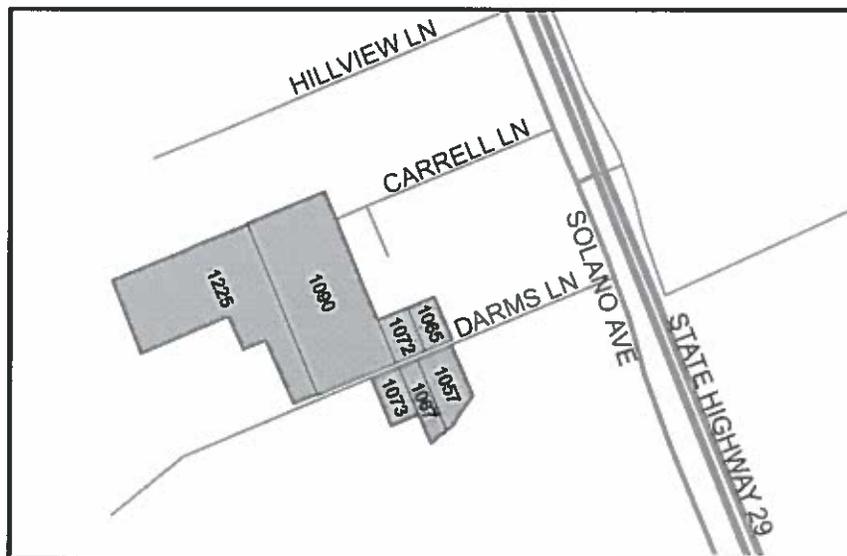
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## CITY of NAPA

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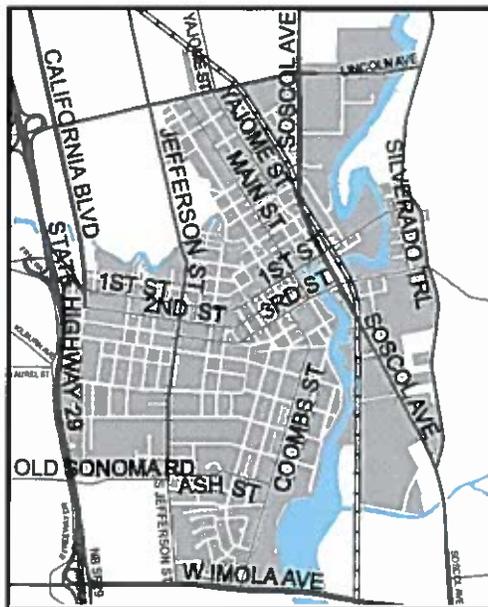
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Gene Parks photo

SEARCH

Search...



## Water Division

The Water Division is responsible for the operation, maintenance, and improvement of the municipal water system serving more than 85,000 people in the City of Napa and adjacent areas. The Division is dedicated to providing a safe and reliable supply of high-quality drinking water for its residential, commercial, industrial, and institutional customers.

A comprehensive review of the City's water system is contained in the Urban Water Management Plan. The Plan describes and evaluates water supply sources, projected demand, water conservation and water shortage contingency programs, and overall water service reliability through 2035.

### NOTICE: FAQs about the New Standards for Disinfection Byproducts in Drinking Water

#### THE DROUGHT:



The Governor has declared a Drought State of Emergency, encouraging all Californians to take personal actions to reduce water usage. Please visit our Water Conservation section for local water saving ideas, including generous rebate programs, and get some great tips from the Save Our Water campaign. Customers are urged to let Mother Nature take over during the rainy season and turn off automatic sprinkler systems. The State Water Board has approved statewide emergency regulations to increase water conservation and the City is required to enforce local prohibitions on water waste.

#### EMERGENCY DROUGHT REGULATIONS

REPORT WATER WASTE: Call 707-257-9521 or Email



# Operational Evaluation Reporting Form

## I. GENERAL INFORMATION

### A. Facility Information

Facility Name: City of Napa PWSID: CA2810003  
 Facility Address: PO Box 660  
 City: Napa State: CA Zip: 94559

### B. Report Prepared by:

(Print): Erin Kebbas Date prepared: \_\_\_\_\_  
 (Signature): \_\_\_\_\_  
 Contact Telephone Number: (707) 253-0822

## II. MONITORING RESULTS

### A. Provide the Compliance Monitoring Site(s) where the OEL was Exceeded.

1072 Darms Lane (2810003-024)

*Note: The site name or number should correspond to a site in your Stage 2 DBPR compliance monitoring plan.*

### B. Monitoring Results for the Site(s) Identified in II.A (include duplicate pages if there was more than one exceedance)

1. Check TTHM or HAA5 to indicate which result caused the OEL exceedance.  TTHM  HAA5

2. Enter your results for TTHM or HAA5 (whichever you checked above).

	Quarter			Operational Evaluation Value
	Results from Two Quarters Ago	Prior Quarter's Results	Current Quarter	
	A	B	C	
Date sample was collected	07-09-14	10-01-14	01-07-15	$D = (A+B+(2 \cdot C))/4$
TTHM (mg/L)	144.20	27.8	104.6	98.90
HAA5 (mg/L)	77.20	30.1	52.0	45.23

*Note: The operational evaluation value is calculated by summing the two previous quarters of TTHM or HAA5 values plus twice the current quarter value, divided by four. If the value exceeds 0.080 mg/L for TTHM or 0.060 mg/L for HAA5, an OEL exceedance has occurred.*

C. Has an OEL exceedance occurred at this location in the past?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
If NO, proceed to item D. If YES, when did exceedance occur?	July 2014	
Was the cause determined for the previous exceedance(s)? <i>potentially</i>	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Are the previous evaluations/determinations applicable to the current OEL exceedance?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No

**III. OPERATIONAL EVALUATION FINDINGS**

A. Did the State allow you to limit the scope of the operational evaluation?  Yes  No  
 If NO, proceed to item B. If YES, attach written correspondence from the State.

B. Did the distribution system cause or contribute to your OEL exceedance(s)?  Yes  No  
 Possibly  
 If NO, proceed to item C. If YES or POSSIBLY, explain (attach additional pages if necessary):

*Due to abnormally high July 2014 result which was completely atypical for the individual site, the quarter will remain through the next compliance reporting. Source water(s) are historically organic-rich, coupled with high residence times at a dead end location.*

C. Did the treatment system cause or contribute to your OEL exceedance(s)?  Yes  No  
 Possibly  
 If NO, proceed to item D. If YES or POSSIBLY, explain (attach additional pages if necessary):

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

D. Did source water quality cause or contribute to your OEL exceedance(s)?  Yes  No  
 Possibly  
 If NO, proceed to item E. If YES or POSSIBLY, explain (attach additional pages if necessary):

*Due to continuing, potential drought conditions, NBA water was maximized so as to preserve local reservoirs in addition to public conservation efforts. The NBA source water quality is organic-rich with above average TOC, UV and chlorine demand values with low seasonal distribution demands.*

E. Attach all supporting operational or other data that support the determination of the cause(s) of your OEL exceedance(s).

F. If you are unable to determine the cause(s) of the OEL exceedance(s), list the steps that you can use to better identify the cause(s) in the future (attach additional pages if necessary):

*We are currently comparing our hydraulic model and water quality data for verification.*

G. List steps that could be considered to minimize future OEL exceedances (attach additional pages if necessary)

*We are currently working to minimize future OEL exceedances through hydraulic modeling, additional water quality testing, storage tank improvements and treatment plant operations.*

H. Total Number of Pages Submitted, Including Attachments and Checklists: \_\_\_\_\_

# Operational Evaluation Reporting Form

## I. GENERAL INFORMATION

### A. Facility Information

Facility Name: City of Napa PWSID: CA2810003  
 Facility Address: PO Box 660  
 City: Napa State: CA Zip: 94559

### B. Report Prepared by:

(Print): Erin Kebbas Date prepared: \_\_\_\_\_  
 (Signature): \_\_\_\_\_  
 Contact Telephone Number: (707) 253-0822

## II. MONITORING RESULTS

### A. Provide the Compliance Monitoring Site(s) where the OEL was Exceeded.

770 Jackson Street (2810003-008)

*Note: The site name or number should correspond to a site in your Stage 2 DBPR compliance monitoring plan.*

### B. Monitoring Results for the Site(s) Identified in II.A (include duplicate pages if there was more than one exceedance)

1. Check TTHM or HAA5 to indicate which result caused the OEL exceedance.  TTHM  HAA5

2. Enter your results for TTHM or HAA5 (whichever you checked above).

	Quarter			Operational Evaluation Value
	Results from Two Quarters Ago	Prior Quarter's Results	Current Quarter	
	A	B	C	$D = (A+B+(2*C))/4$
Date sample was collected	07-09-14	10-01-14	01-07-15	
TTHM (mg/L)	65.6	64.2	98.5	81.70
HAA5 (mg/L)	3.8	15.8	2.6	6.20

*Note: The operational evaluation value is calculated by summing the two previous quarters of TTHM or HAA5 values plus twice the current quarter value, divided by four. If the value exceeds 0.080 mg/L for TTHM or 0.060 mg/L for HAA5, an OEL exceedance has occurred.*

C. Has an OEL exceedance occurred at this location in the past?  Yes  No

If NO, proceed to item D. If YES, when did exceedance occur?

Was the cause determined for the previous exceedance(s)?  Yes  No

Are the previous evaluations/determinations applicable to the current OEL exceedance?  Yes  No

**III. OPERATIONAL EVALUATION FINDINGS**

A. Did the State allow you to limit the scope of the operational evaluation?  Yes  No  
 If NO, proceed to item B. If YES, attach written correspondence from the State.

B. Did the distribution system cause or contribute to your OEL exceedance(s)?  Yes  No  
 Possibly  
 If NO, proceed to item C. If YES or POSSIBLY, explain (attach additional pages if necessary):  
System hydraulic modeling indicates average residence times with detectable chlorine residuals surrounding location. Similar water age in other areas of distribution system have lower THM results with higher HAA results.

C. Did the treatment system cause or contribute to your OEL exceedance(s)?  Yes  No  
 Possibly  
 If NO, proceed to item D. If YES or POSSIBLY, explain (attach additional pages if necessary):  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

D. Did source water quality cause or contribute to your OEL exceedance(s)?  Yes  No  
 Possibly  
 If NO, proceed to item E. If YES or POSSIBLY, explain (attach additional pages if necessary):  
High source water TOC, UV and chlorine demand, combined with low distribution system demands.

E. Attach all supporting operational or other data that support the determination of the cause(s) of your OEL exceedance(s).

F. If you are unable to determine the cause(s) of the OEL exceedance(s), list the steps that you can use to better identify the cause(s) in the future (attach additional pages if necessary):  
We are currently comparing our hydraulic model and water quality data for verification.

G. List steps that could be considered to minimize future OEL exceedances (attach additional pages if necessary)  
We are currently working to minimize future OEL exceedances through hydraulic modeling, additional water quality testing, storage tank improvements and treatment plant operations.

H. Total Number of Pages Submitted, Including Attachments and Checklists: \_\_\_\_\_

# Operational Evaluation Reporting Form

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### B. Report Prepared by:

(Print): Erin Kebbas Date prepared: \_\_\_\_\_  
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 Contact Telephone Number: (707) 253-0822

## II. MONITORING RESULTS

### A. Provide the Compliance Monitoring Site(s) where the OEL was Exceeded.

4152 Browns Valley Road (2810003-028)

*Note: The site name or number should correspond to a site in your Stage 2 DBPR compliance monitoring plan.*

### B. Monitoring Results for the Site(s) Identified in II.A (include duplicate pages if there was more than one exceedance)

1. Check TTHM or HAA5 to indicate which result caused the OEL exceedance.  TTHM  HAA5

2. Enter your results for TTHM or HAA5 (whichever you checked above).

	Quarter			Operational Evaluation Value
	Results from Two Quarters Ago	Prior Quarter's Results	Current Quarter	
	A	B	C	
Date sample was collected	07-09-14	10-01-14	01-07-15	$D = (A+B+(2 \cdot C))/4$
TTHM (mg/L)	75.1	129.1	95.7	98.90
HAA5 (mg/L)	21.9	41.0	59.0	45.23

*Note: The operational evaluation value is calculated by summing the two previous quarters of TTHM or HAA5 values plus twice the current quarter value, divided by four. If the value exceeds 0.080 mg/L for TTHM or 0.060 mg/L for HAA5, an OEL exceedance has occurred.*

C. Has an OEL exceedance occurred at this location in the past?		<input checked="" type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
If NO, proceed to item D. If YES, when did exceedance occur?		October 2014	
Was the cause determined for the previous exceedance(s)? <i>potentially</i>		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Are the previous evaluations/determinations applicable to the current OEL exceedance?		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No

**III. OPERATIONAL EVALUATION FINDINGS**

A. Did the State allow you to limit the scope of the operational evaluation?  Yes  No  
 If NO, proceed to item B. If YES, attach written correspondence from the State.

B. Did the distribution system cause or contribute to your OEL exceedance(s)?  Yes  No  
 Possibly

If NO, proceed to item C. If YES or POSSIBLY, explain (attach additional pages if necessary):

*Due to abnormally high October 2014 result which was completely atypical for the individual site due to rezoning required from August 2014 earthquake, the quarter will remain through the next compliance reporting. The complete loss of "B" Tank distribution storage tank, located on Montana Drive, forced 307 addresses rezoned from zone 4 to zone 3 thus resulting in flow and pressure changes. Although source water(s) are historically organic-rich, THM result is abnormal and inconsistent with all stage 2 quarterly THM water quality testing because of distribution changes.*

C. Did the treatment system cause or contribute to your OEL exceedance(s)?  Yes  No  
 Possibly

If NO, proceed to item D. If YES or POSSIBLY, explain (attach additional pages if necessary):

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

D. Did source water quality cause or contribute to your OEL exceedance(s)?  Yes  No  
 Possibly

If NO, proceed to item E. If YES or POSSIBLY, explain (attach additional pages if necessary):

*Due to continuing, potential drought conditions, NBA water was maximized so as to preserve local reservoirs in addition to public conservation efforts. The NBA source water quality is organic-rich with above average TOC, UV and chlorine demand values with low seasonal distribution demands.*

E. Attach all supporting operational or other data that support the determination of the cause(s) of your OEL exceedance(s).

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# Treatment Process Evaluation Checklist

Page 1 of 4

NO DATA AVAILABLE

Facility Name: City of Napa

Checklist Completed by: Erin Kebbas

Date: January 2015

A. Review finished water data for the time period prior to the OEL exceedance(s) and compare to historical finished water data using the following questions:

- |   |   |  |
|---|---|--|
| Were DBP precursors (TOC, DOC, SUVA, bromide, etc.) higher than normal?                                 | <input type="checkbox"/> Yes            | <input checked="" type="checkbox"/> No |
| Was finished water pH higher or lower than normal?  | <input type="checkbox"/> Yes            | <input checked="" type="checkbox"/> No |
| Was the finished water temperature higher than normal?  | <input type="checkbox"/> Yes            | <input checked="" type="checkbox"/> No |
| Was finished water turbidity higher than normal?  | <input type="checkbox"/> Yes            | <input checked="" type="checkbox"/> No |
| Was the disinfectant concentration leaving the plant(s) higher than normal?                             | <input type="checkbox"/> Yes            | <input checked="" type="checkbox"/> No |
| Were finished water TTHM/HAA5 levels higher than normal?  | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No            |
| Were operational and water quality data available to the system operator for effective decision making? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No            |

B. Does the treatment process include predisinfection?  Yes  No

**If NO, proceed to item C. If YES, answer the following questions for the period in which an OEL exceedance occurred:**

Yes      No

- |                          |                          |   |
|--------------------------|--------------------------|---|
| <input type="checkbox"/> | <input type="checkbox"/> | Was disinfected raw water stored for an unusually long time?                          |
| <input type="checkbox"/> | <input type="checkbox"/> | Were treatment plant flows lower than normal?   |
| <input type="checkbox"/> | <input type="checkbox"/> | Were treatment plant flows equally distributed among different trains?                |
| <input type="checkbox"/> | <input type="checkbox"/> | Were water temperatures high or warmer than usual?                                    |
| <input type="checkbox"/> | <input type="checkbox"/> | Were chlorine feed rates outside the normal range?                                    |
| <input type="checkbox"/> | <input type="checkbox"/> | Was a disinfectant residual present in the treatment train following predisinfection? |
| <input type="checkbox"/> | <input type="checkbox"/> | Were online instruments utilized for process control?                                 |
| <input type="checkbox"/> | <input type="checkbox"/> | Did you switch to free chlorine as the oxidant?                                       |
| <input type="checkbox"/> | <input type="checkbox"/> | Was there a recent change (or addition) of pre-oxidant?                               |
| <input type="checkbox"/> | <input type="checkbox"/> | Did you change the location of the predisinfection application?                       |

C. Does your treatment process include presedimentation?  Yes  No

**If NO, proceed to item D. If YES, answer the following questions for the period in which an OEL exceedance occurred:**

Yes      No

- |                          |                          |  |
|--------------------------|--------------------------|--|
| <input type="checkbox"/> | <input type="checkbox"/> | Were flows low?  |
| <input type="checkbox"/> | <input type="checkbox"/> | Were flows high?   |
| <input type="checkbox"/> | <input type="checkbox"/> | Were online instruments utilized for process control?          |
| <input type="checkbox"/> | <input type="checkbox"/> | Was sludge removed from the presedimentation basin?            |
| <input type="checkbox"/> | <input type="checkbox"/> | Was sludge allowed to accumulate for an excessively long time? |
| <input type="checkbox"/> | <input type="checkbox"/> | Do you add a coagulant to your presedimentation basin?         |
| <input type="checkbox"/> | <input type="checkbox"/> | Was there a problem with the coagulant feed?                   |

D. Does your treatment process include coagulation and/or flocculation?  Yes  No

If NO, proceed to item E. If YES, answer the following questions for the period in which an OEL exceedance occurred:

- | Yes                                 | No                                  |   |
|-------------------------------------|-------------------------------------|---|
| <input type="checkbox"/>            | <input checked="" type="checkbox"/> | Were there any feed pump failures or were feed pumps operating at improper feed rates?                      |
| <input checked="" type="checkbox"/> | <input type="checkbox"/>            | Were chemical feed systems controlled by flow pacing?   |
| <input type="checkbox"/>            | <input checked="" type="checkbox"/> | Were there changes in coagulation practices or the feed point?  |
| <input type="checkbox"/>            | <input checked="" type="checkbox"/> | Did you change the type or manufacturer of the coagulant?   |
| <input type="checkbox"/>            | <input checked="" type="checkbox"/> | Do you suspect that the coagulant in use at the time of the OEL exceedance did not meet industry standards? |
| <input type="checkbox"/>            | <input checked="" type="checkbox"/> | Did the pH or alkalinity change at the point of coagulant addition?   |
| <input type="checkbox"/>            | <input checked="" type="checkbox"/> | Were there broken or plugged mixers?  |
| <input type="checkbox"/>            | <input checked="" type="checkbox"/> | Were flow rates above the design rate or was there short-circuiting?  |

E. Does your treatment process include sedimentation or clarification?  Yes  No

If NO, proceed to item F. If YES, answer the following questions for the period in which an OEL exceedance occurred:

- | Yes                      | No                                  |   |
|--------------------------|-------------------------------------|---|
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | Were there changes in plant flow rate that may have resulted in a decrease in settling time or carry-over of process solids?  |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | Were settled water turbidities higher than normal?  |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | Was there any disruption in the sludge blanket that may have resulted in carryover to the point of disinfection?  |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | Was there any maintenance in the basin that may have stirred sludge from the bottom of the basin and caused it to carry over to the point of disinfectant addition? |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | Was sludge allowed to accumulate for an excessively long time or was there a malfunction in the sludge removal equipment?   |

F. Does your treatment process include filtration?  Yes  No

If NO, proceed to item G. If YES, answer the following questions for the period in which an OEL exceedance occurred:

- | Yes                      | No                                  |   |
|--------------------------|-------------------------------------|---|
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | Was there an increase in individual or combined filter effluent turbidity or particle counts?   |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | Was there an increase in turbidity or particle loading onto the filters?  |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | Was there an increase in flow onto the filters or malfunction of the rate of flow controllers?  |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | Were any filters taken off-line for an extended period of time that caused the other filters to operate near maximum design capacity and creating the conditions for possible breakthrough? |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | Were any filters operated beyond their normal filter run time?  |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | Were there any unusual spikes in individual filter effluent turbidity (which may indicate particulate or colloidal TOC breakthrough) in the days leading to the excursion?                  |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | Were all filters run in a filter-to-waste mode during initial filter ripening?  |
| <input type="checkbox"/> | <input type="checkbox"/>            | If GAC filters are used, is it possible the adsorptive capacity of the GAC bed was reached before reactivation occurred (leave blank if not applicable)?                                    |
| <input type="checkbox"/> | <input type="checkbox"/>            | If biological filtration is used, were there any process upsets that may have resulted in the breakthrough of TOC (leave blank if not applicable)?  |

G. Does your treatment process include primary disinfection by injecting chlorine prior to a clearwell?  Yes  No

If NO, proceed to item H. If YES, answer the following questions for the period in which an OEL exceedance occurred:

- | Yes                      | No                                  |  |
|--------------------------|-------------------------------------|--|
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | Was there a sudden increase in the amount of chlorine fed or an increase in the chlorine residual? |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | Was there an increase in clearwell holding time?   |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | Was the plant shut down or were plant flows low? <i>Normal low demand season</i>                   |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | Was there an increase in clearwell water temperature?  |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | Did you switch to free chlorine recently as the primary disinfectant?                              |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | Was the inactivation of <i>Giardia</i> and/or viruses exceptionally high?                          |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | Was there a change in the mixing strategy (i.e. mixers not used, adjustment of tank level)?        |

H. Does your plant recycle spent filter backwash or other streams?  Yes  No

If NO, proceed to item I. If YES, answer the following questions for the period in which an OEL exceedance occurred:

- | Yes                      | No                                  |   |
|--------------------------|-------------------------------------|---|
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | Did a change in the recycle stream quality contribute to increased DBP precursor loading that was not addressed by treatment plant processes? |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | Did a recycle event result in flows in excess of typical or design flows?   |

I. Do you inject a disinfectant after your clearwell to maintain a distribution system residual?  Yes  No

If NO, proceed to Item J. If YES, answer the following questions for the period in which an OEL exceedance occurred:

Yes No

- Was there a sudden increase in the amount of chlorine fed?
- Was there a switch from chloramines to free chlorine for a burnout period?
- If using chloramines, was the chlorine to ammonia ratio in the proper range?
- Was there a problem with either chlorine or ammonia mixing?

J. Did concern about complying with a rule other than Stage 2 DBPR, such as the Lead and Copper rule, the LT2ESWTR, or any other rule constrain your options to reduce the DBP levels at this site? For example, are you limited by other treatment targets/requirements in your ability to control precursors in coagulation/flocculation?  Yes  No

If NO, proceed to Item K. If YES, explain below and consult EPA's *Simultaneous Compliance Guidance Manual* for alternative compliance approaches.

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**K. Conclusion**

Did treatment factors and/or variations in the plant performance contribute to the OEL exceedance(s)?  Yes  No

Possibly

If YES or POSSIBLY, explain below.

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# Distribution System Evaluation Checklist

System Name: City of Napa

Checklist Completed by: Erin Kebbas

Date: January 2015

A. Do you have disinfectant residual or temperature data for the monitoring location where you experienced the OEL exceedance?  Yes  No

**If NO, proceed to item B. If YES, answer the following questions for the period in which an OEL exceedance occurred:**

Yes No

Was the water temperature higher than normal for that time of the year at that location?

Was the disinfectant residual lower than normal for that time of the year at that location?

Was the disinfectant residual higher than normal for that time of the year at that location?

B. Do you have maintenance records available for the time period just prior to the OEL exceedance?  Yes  No

**If NO, proceed to item C. If YES, answer the following questions:**

Yes No

Did any line breaks or replacements occur in the vicinity of the exceedance?

Were any storage tanks or reservoirs taken off-line and cleaned?

Did flushing or other hydraulic disturbances (e.g., fires) occur in the vicinity of the exceedance?

Were any valves operated in the vicinity of the OEL exceedances?

C. If your system is metered, do you have access to historical records showing water use at individual service connections?  Yes  No

**If NO, proceed to item D. If YES, was overall water use in your system unusually low, indicating higher than normal water age? *seasonal norm***  Yes  No

D. Do you have high-volume customers in your system (e.g., an industrial processing plant)?  Yes  No

**If NO, proceed to item E. If YES, was there a change in water use by a high-volume customer?**  Yes  No

E. Is there a finished water storage facility hydraulically upstream from the monitoring location where you experienced the OEL exceedance?  Yes  No

**If NO, proceed to item F. If YES, review storage facility operations and water quality data to answer the following questions for the period in which the OEL exceedance occurred:**

Yes No

Was a disinfectant residual detected in the stored water or at the tank outlet?

Do you know of any mixing problems with the tank or reservoir?

Does the facility operate in "last in-first out" mode?

Was the tank or reservoir drawn down more than usual prior to OEL exceedance, indicating a possible discharge of stagnant water?

Was there a change in water level fluctuations that would have resulted in increased water age within the tank or reservoir?

# Distribution System Evaluation Checklist

F. Does your system practice booster chlorination?  Yes  No  
If NO, proceed to item G. If YES, was there an increase in booster chlorination feed rates?  Yes  No

G. Did you have customer complaints in the vicinity of the OEL exceedance?  Yes  No  
If NO, proceed to item H. If YES, explain.

*We had customer complaints of low pressure/no water resulting from the August 2014 earthquake where we experienced the complete loss of the "B" Tank distribution storage tank located on Montana Drive. There were 307 residents rezoned from zone 4 to zone 3 while the tank was repaired and put back into service.*

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H. Did concern about complying with a rule other than Stage 2 DBPR, such as the Lead and Copper rule, the TCR, or any other rule constrain your options to reduce the DBP levels at this site? For example, are you limited by the need to maintain a detectable disinfectant residual in your ability to control DBP levels in the distribution system?  Yes  No

If NO, proceed to item I. If YES, explain below and consult EPA's *Simultaneous Compliance Guidance Manual* for alternative compliance approaches.

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## I. Conclusion

Did the distribution system cause or contribute to the OEL exceedance(s)?  Yes  No  
 Possibly

If NO, proceed to evaluations of treatment systems and source water. If YES or POSSIBLY, explain below.

*July 2014 THM result, which carries through the monitoring period, from 1072 Darms Lane is completely atypical for the individual site as well as when compared to the other stage 2 sample locations. Although source water(s) are historically organic-rich, THM result is abnormal and inconsistent with all stage 2 quarterly THM water quality testing. Contract laboratory, CLS, was e-mailed for obvious laboratory reporting abnormalities but unverified.*

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*October 2014 THM result, which carries through the monitoring period, from 4152 Browns Valley Road is completely atypical for the individual site as well as when compared to the other stage 2 sample locations due to rezoning required from August 2014 earthquake. Due to complete loss of "B" Tank distribution storage tank, located on Montana Drive, 307 addresses were rezoned from zone 4 to zone 3 thus resulting in flow and pressure changes. Although source water(s) are historically organic-rich, THM result is abnormal and inconsistent with all stage 2 quarterly THM water quality testing because of emergency distribution changes.*

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# Source Water Evaluation Checklist

NO DATA AVAILABLE

System Name: City of Napa

Checklist Completed by: Erin Kebbas

Date: January 2015

A. Do you have source water temperature data?  Yes  No

If NO, proceed to item B. If YES, was the source water temperature high?  Yes  No

If NO, proceed to item B. If YES, answer the following questions for the time period prior to the OEL exceedance.

Yes No

- Was the raw water storage time longer than usual?
- Did you place another water source on-line?
- Were river/reservoir flow rates lower than usual? If yes, indicate the location of lower flow rates and the anticipated impact on the OEL exceedance.
- Did point or non-point sources in the watershed contribute to the OEL exceedance?

B. Do you have data that characterizes organic matter in your source water (e.g., TOC, DOC, SUVA, color, THM formation potential)?  Yes  No

If NO, proceed to item C. If YES, were these values higher than normal?  Yes  No

If NO, proceed to item C. If YES, answer the following questions for the time period prior to the OEL exceedance.

Yes No

- Did heavy rainfall or snowmelt occur in the watershed?
- Did you place another water source on-line?
- Did lake or reservoir turnover occur?
- Did point or non-point sources in the watershed contribute to the OEL exceedance?
- Did an algal bloom occur in the source water?
- If algal blooms were present, were appropriate algae control measures employed (e.g. addition of copper sulfate)?
- Did a taste and odor incident occur?

C. Do you have source water bromide data?  Yes  No

If NO, proceed to item D. If YES, were the bromide levels higher or lower than normal?  Yes  No

If NO, proceed to item D. If YES, answer the following questions for the time period prior to the OEL exceedance.

Yes No

- Has saltwater intrusion occurred? *unknown*
- Are you experiencing a long-term drought? *potentially*
- Did heavy rainfall or snowmelt occur in the watershed?
- Did you place another water source on-line?
- Are you aware of any industrial spills in the watershed?

**Source Water Evaluation Checklist**

D. Do you have source water turbidity or particle count data?  Yes  No

If NO, proceed to item E. If YES, were the turbidity values or particle counts higher than normal?  Yes  No

If NO, proceed to item E. If YES, answer the following questions for the time period prior to the OEL exceedance.

Yes No

- Did lake or reservoir turnover occur?
- Did heavy rainfall or snowmelt occur in the watershed?
- Did logging, fires, or landslides occur in the watershed?
- Were river/reservoir flow rates higher than normal?

E. Do you have source water pH or alkalinity data?  Yes  No

If NO, proceed to item F. If YES, was the pH or alkalinity different from normal values?  Yes  No

If NO, proceed to item F. If YES, answer the following questions for the time period prior to the OEL exceedance.

Yes No

- Was there an algal bloom in the source water?
- If algal blooms were present, were algae control measures employed?
- Did heavy rainfall or snowmelt occur in the watershed?
- Has the PWS experienced diurnal pH changes in source water?

**F. Conclusion**

Did source water quality factors contribute to your OEL exceedance?  Yes  No  
 Possibly

If YES or POSSIBLY, explain below.

*City of Napa data (such as TOC, DOC, SUVA, and color) characterizes excessive organic matter, which is the norm, in our NBA source water. NBA source water was maximized so as to preserve our local reservoirs due to potential drought conditions. The higher source water organics and extended residence times due to drought conservation measures supported an OEL exceedance.*

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