

2022 Consumer Confidence Report

Water System Information

Water System Name: Monterey Mushrooms WS

Report Date: 6/6/23

Type of Water Source(s) in Use: Ground Water: Wells

Name and General Location of Source(s): Well #5 Potable Source. Well #4 Standby. Well #3 Irrigation. Well #2 Irrigation

Drinking Water Source Assessment Information: All wells are treated with sodium hypo chloride. Residual levels checked daily. Monthly routine water test for coliforms and E.coli.

Time and Place of Regularly Scheduled Board Meetings for Public Participation: [Enter Time and Place of Regularly Scheduled Board Meetings for Public Participation] NA

For More Information, Contact: Dennis Powell (831) 274-5543

About This Report

We test the drinking water quality for many constituents as required by state and federal regulations. This report shows the results of our monitoring for the period of January 1 to December 31, 2022 and may include earlier monitoring data.

Importance of This Report Statement in Five Non-English Languages (Spanish, Mandarin, Tagalog, Vietnamese, and Hmong)

Language in Spanish: Este informe contiene información muy importante sobre su agua para beber. Favor de comunicarse [Enter Water System's Name] a [Enter Water System's Address or Phone Number] para asistirlo en español.

Language in Mandarin: 这份报告含有关于您的饮用水的重要讯息。请用以下地址和电话联系 [Enter Water System Name] 以获得中文的帮助: [Enter Water System's Address][Enter Water System's Phone Number].

Language in Tagalog: Ang pag-uulat na ito ay naglalaman ng mahalagang impormasyon tungkol sa inyong inuming tubig. Mangyaring makipag-ugnayan sa [Enter Water System's Name and Address] o tumawag sa [Enter Water System's Phone Number] para matulungan sa wikang Tagalog.

Language in Vietnamese: Báo cáo này chứa thông tin quan trọng về nước uống của bạn. Xin vui lòng liên hệ [Enter Water System's Name] tại [Enter Water System's Address or Phone Number] để được hỗ trợ giúp bằng tiếng Việt.

Language in Hmong: Tsab ntawv no muaj cov ntsiab lus tseem ceeb txog koj cov dej haus. Thov hu rau [Enter Water System's Name] ntawm [Enter Water System's Address or Phone Number] rau kev pab hauv lus Askiv.

Terms Used in This Report

Term	Definition
Level 1 Assessment	A Level 1 assessment is a study of the water system to identify potential problems and determine (if possible) why total coliform bacteria have been found in our water system.
Level 2 Assessment	A Level 2 assessment is a very detailed study of the water system to identify potential problems and determine (if possible) why an <i>E. coli</i> MCL violation has occurred and/or why total coliform bacteria have been found in our water system on multiple occasions.
Maximum Contaminant Level (MCL)	The highest level of a contaminant that is allowed in drinking water. Primary MCLs are set as close to the PHGs (or MCLGs) as is economically and technologically feasible. Secondary MCLs are set to protect the odor, taste, and appearance of drinking water.
Maximum Contaminant Level Goal (MCLG)	The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs are set by the U.S. Environmental Protection Agency (U.S. EPA).
Maximum Residual Disinfectant Level (MRDL)	The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.
Maximum Residual Disinfectant Level Goal (MRDLG)	The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.
Primary Drinking Water Standards (PDWS)	MCLs and MRDLs for contaminants that affect health along with their monitoring and reporting requirements, and water treatment requirements.
Public Health Goal (PHG)	The level of a contaminant in drinking water below which there is no known or expected risk to health. PHGs are set by the California Environmental Protection Agency.
Regulatory Action Level (AL)	The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.
Secondary Drinking Water Standards (SDWS)	MCLs for contaminants that affect taste, odor, or appearance of the drinking water. Contaminants with SDWSs do not affect the health at the MCL levels.
Treatment Technique (TT)	A required process intended to reduce the level of a contaminant in drinking water.
Variances and Exemptions	Permissions from the State Water Resources Control Board (State Board) to exceed an MCL or not comply with a treatment technique under certain conditions.
ND	Not detectable at testing limit.
ppm	parts per million or milligrams per liter (mg/L)
ppb	parts per billion or micrograms per liter (µg/L)
ppt	parts per trillion or nanograms per liter (ng/L)
ppq	parts per quadrillion or picogram per liter (pg/L)
pCi/L	picocuries per liter (a measure of radiation)

Sources of Drinking Water and Contaminants that May Be Present in Source Water

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally-occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity.

Contaminants that may be present in source water include:

- Microbial contaminants, such as viruses and bacteria, that may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- Inorganic contaminants, such as salts and metals, that can be naturally-occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- Pesticides and herbicides, that may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses.
- Organic chemical contaminants, including synthetic and volatile organic chemicals, that are byproducts of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, agricultural application, and septic systems.
- Radioactive contaminants, that can be naturally-occurring or be the result of oil and gas production and mining activities.

Regulation of Drinking Water and Bottled Water Quality

In order to ensure that tap water is safe to drink, the U.S. EPA and the State Board prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. The U.S. Food and Drug Administration regulations and California law also establish limits for contaminants in bottled water that provide the same protection for public health.

About Your Drinking Water Quality

Drinking Water Contaminants Detected

Tables 1, 2, 3, 4, 5, 6, and 8 list all of the drinking water contaminants that were detected during the most recent sampling for the constituent. The presence of these contaminants in the water does not necessarily indicate that the water poses a health risk. The State Board allows us to monitor for certain contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of the data, though representative of the water quality, are more than one year old. Any violation of an AL, MCL, MRDL, or TT is asterisked. Additional information regarding the violation is provided later in this report.

Table 1. Sampling Results Showing the Detection of Coliform Bacteria

Complete if bacteria are detected.

Microbiological Contaminants	Highest No. of Detections	No. of Months in Violation	MCL	MCLG	Typical Source of Bacteria
<i>E. coli</i>	0	0	(a)	0	Human and animal fecal waste

(a) Routine and repeat samples are total coliform-positive and either is *E. coli*-positive or system fails to take repeat samples following *E. coli*-positive routine sample or system fails to analyze total coliform-positive repeat sample for *E. coli*.

Table 2. Sampling Results Showing the Detection of Lead and Copper

Complete if lead or copper is detected in the last sample set.

Lead and Copper	Sample Date	No. of Samples Collected	90 th Percentile Level Detected	No. Sites Exceeding AL	AL	PHG	Typical Source of Contaminant
Lead (ppb)	9/15/2021	5	ND	0	15	0.2	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits
Copper (ppm)		[Enter No.]	[Enter No.]	[Enter No.]	1.3	0.3	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives

Table 3. Sampling Results for Sodium and Hardness

Chemical or Constituent (and reporting units)	Sample Date	Level Detected	Range of Detections	MCL	PHG (MCLG)	Typical Source of Contaminant
Sodium (ppm)	10/9/14	48	[Enter Range]	None	None	Salt present in the water and is generally naturally occurring
Hardness (ppm)	12/21/11	106	[Enter Range]	None	None	Sum of polyvalent cations present in the water, generally magnesium and calcium, and are

						usually naturally occurring
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Table 4. Detection of Contaminants with a Primary Drinking Water Standard

Chemical or Constituent (and reporting units)	Sample Date	Level Detected	Range of Detections	MCL [MRDL]	PHG (MCLG) [MRDLG]	Typical Source of Contaminant
Chromium Hexachrome	9/17/2020	13 UGL	[Enter Range]	50	[Enter No.]	Natural Deposits
			[Enter Range]		[Enter No.]	[Enter Source]
[Enter Contaminant]	[Enter Date]	[Enter No.]	[Enter Range]	[Enter No.]	[Enter No.]	[Enter Source]

Table 5. Detection of Contaminants with a Secondary Drinking Water Standard

Chemical or Constituent (and reporting units)	Sample Date	Level Detected	Range of Detections	SMCL	PHG (MCLG)	Typical Source of Contaminant
[Enter Contaminant]	[Enter Date]	[Enter No.]	[Enter Range]	[Enter No.]	[Enter No.]	[Enter Source]
[Enter Contaminant]	[Enter Date]	[Enter No.]	[Enter Range]	[Enter No.]	[Enter No.]	[Enter Source]
[Enter Contaminant]	[Enter Date]	[Enter No.]	[Enter Range]	[Enter No.]	[Enter No.]	[Enter Source]

Table 6. Detection of Unregulated Contaminants

Chemical or Constituent (and reporting units)	Sample Date	Level Detected	Range of Detections	Notification Level	Health Effects
[Enter Contaminant]	[Enter Date]	[Enter No.]	[Enter Range]	[Enter No.]	[Enter Language]
[Enter Contaminant]	[Enter Date]	[Enter No.]	[Enter Range]	[Enter No.]	[Enter Language]
[Enter Contaminant]	[Enter Date]	[Enter No.]	[Enter Range]	[Enter No.]	[Enter Language]

Additional General Information on Drinking Water

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that the

water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the U.S. EPA's Safe Drinking Water Hotline (1-800-426-4791).

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. U.S. EPA/Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline (1-800-426-4791).

Lead-Specific Language: If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. [Enter Water System's Name] is responsible for providing high quality drinking water but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. [Optional: If you do so, you may wish to collect the flushed water and reuse it for another beneficial purpose, such as watering plants.] If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline (1-800-426-4791) or at <http://www.epa.gov/lead>.

Additional Special Language for Nitrate, Arsenic, Lead, Radon, and *Cryptosporidium*: [Enter Additional Information Described in Instructions for SWS CCR Document]

State Revised Total Coliform Rule (RTCR): [Enter Additional Information Described in Instructions for SWS CCR Document]

Summary Information for Violation of a MCL, MRDL, AL, TT, or Monitoring and Reporting Requirement

Table 7. Violation of a MCL, MRDL, AL, TT or Monitoring Reporting Requirement

Violation	Explanation	Duration	Actions Taken to Correct Violation	Health Effects Language
[Enter Violation Type]	[Enter Violation Explanation]	[Enter Duration]	[Enter Actions Taken]	[Enter Language]
[Enter Violation Type]	[Enter Violation Explanation]	[Enter Duration]	Enter Actions Taken	[Enter Language]

For Water Systems Providing Groundwater as a Source of Drinking Water

Table 8. Sampling Results Showing Fecal Indicator-Positive Groundwater Source Samples

Microbiological Contaminants (complete if fecal-indicator detected)	Total No. of Detections	Sample Dates	MCL [MRDL]	PHG (MCLG) [MRDLG]	Typical Source of Contaminant
<i>E. coli</i>	(In the year) [Enter No.]	[Enter Dates]	0	(0)	Human and animal fecal waste
Enterococci	(In the year) [Enter No.]	[Enter Dates]	TT	N/A	Human and animal fecal waste
Coliphage	(In the year) [Enter No.]	[Enter Dates]	TT	N/A	Human and animal fecal waste

Summary Information for Fecal Indicator-Positive Groundwater Source Samples, Uncorrected Significant Deficiencies, or Violation of a Groundwater TT

Special Notice of Fecal Indicator-Positive Groundwater Source Sample: [Enter Special Notice of Fecal Indicator-Positive Groundwater Source Sample]

Special Notice for Uncorrected Significant Deficiencies: [Enter Special Notice for Uncorrected Significant Deficiencies]

Table 9. Violation of Groundwater TT

Violation	Explanation	Duration	Actions Taken to Correct Violation	Health Effects Language
[Enter Violation]	[Enter Explanation]	[Enter Duration]	[Enter Actions]	[Enter Language]
[Enter Violation]	[Enter Explanation]	[Enter Duration]	[Enter Actions]	[Enter Language]

For Systems Providing Surface Water as a Source of Drinking Water

Table 10. Sampling Results Showing Treatment of Surface Water Sources

Treatment Technique ^(a) (Type of approved filtration technology used)	[Enter Treatment Technique]
Turbidity Performance Standards ^(b) (that must be met through the water treatment process)	<p>Turbidity of the filtered water must:</p> <p>1 – Be less than or equal to [Enter Turbidity Performance Standard to Be Less Than or Equal to 95% of Measurements in a Month] NTU in 95% of measurements in a month.</p> <p>2 – Not exceed [Enter Turbidity Performance Standard Not to Be Exceeded for More Than Eight Consecutive Hours] NTU for more than eight consecutive hours.</p> <p>3 – Not exceed [Enter Turbidity Performance Standard Not to Be Exceeded at Any Time] NTU at any time.</p>

Lowest monthly percentage of samples that met Turbidity Performance Standard No. 1.	[Enter No.]
Highest single turbidity measurement during the year	[Enter No.]
Number of violations of any surface water treatment requirements	[Enter No.]

(a) A required process intended to reduce the level of a contaminant in drinking water.

(b) Turbidity (measured in NTU) is a measurement of the cloudiness of water and is a good indicator of water quality and filtration performance. Turbidity results which meet performance standards are considered to be in compliance with filtration requirements.

Summary Information for Violation of a Surface Water TT

Table 11. Violation of Surface Water TT

Violation	Explanation	Duration	Actions Taken to Correct Violation	Health Effects Language
[Enter Violation]	[Enter Explanation]	[Enter Duration]	[Enter Actions]	[Enter Language]
[Enter Violation]	[Enter Explanation]	[Enter Duration]	[Enter Actions]	[Enter Language]

Summary Information for Operating Under a Variance or Exemption

[Enter Additional Information Described in Instructions for SWS CCR Document]

Summary Information for Revised Total Coliform Rule Level 1 and Level 2 Assessment Requirements

If a water system is required to comply with a Level 1 or Level 2 assessment requirement that is not due to an *E. coli* MCL violation, include the following information below [22 CCR section 64481(n)(1)].

Level 1 or Level 2 Assessment Requirement not Due to an *E. coli* MCL Violation

Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful, waterborne pathogens may be present or that a potential pathway exists through which contamination may enter the drinking water distribution system. We found coliforms indicating the need to look for potential problems in water treatment or distribution. When this occurs, we are required to conduct assessment(s) to identify problems and to correct any problems that were found during these assessments.

The water system shall include the following statements, as appropriate:

During the past year we were required to conduct [Insert Number of Level 1 Assessments] Level 1 assessment(s). [Insert Number of Level 1 Assessments] Level 1 assessment(s) were completed. In addition, we were required to take [Insert Number of Corrective Actions] corrective actions and we completed [Insert Number of Corrective Actions] of these actions.

During the past year [Insert Number of Level 2 Assessment] Level 2 assessments were required to be completed for our water system. [Insert Number of Level 2 Assessments] Level 2 assessments were completed. In addition, we were required to take [Insert Number of Corrective Actions] corrective actions and we completed [Insert Number of Corrective Actions] of these actions.

If the water system failed to complete all the required assessments or correct all identified sanitary defects, the water system is in violation of the treatment technique requirement and shall include the following statements, as appropriate:

During the past year we failed to conduct all of the required assessment(s).

During the past we failed to correct all identified defects that were found during the assessment.

[For Violation of the Total Coliform Bacteria TT Requirement, Enter Additional Information Described in Instructions for SWS CCR Document]

If a water system is required to comply with a Level 2 assessment requirement that is due to an *E. coli* MCL violation, include the information below [22 CCR section 64481(n)(2)].

Level 2 Assessment Requirement Due to an *E. coli* MCL Violation

E. coli are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Human pathogens in these wastes can cause short-term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a greater health risk for infants, young children, the elderly, and people with severely compromised immune systems. We found *E. coli* bacteria, indicating the need to look for potential problems in water treatment or distribution. When this occurs, we are required to conduct assessment(s) identify problems and to correct any problems that were found during these assessments.

We were required to complete a Level 2 assessment because we found *E. coli* in our water system. In addition, we were required to take [Insert Number of Corrective Actions] corrective actions and we completed [Insert Number of Corrective Actions] of these actions.

If a water system failed to complete the required assessment or correct all identified sanitary defects, the water system is in violation of the treatment technique requirement and shall include the following statements, as appropriate:

We failed to conduct the required assessment.

We failed to correct all sanitary defects that were identified during the assessment.

If a water system detects *E. coli* and has violated the *E. coli* MCL, include one or more the following statements to describe any noncompliance, as applicable:

We had an *E. coli*-positive repeat sample following a total coliform positive routine sample.

We had a total coliform-positive repeat sample following an *E. coli*-positive routine sample.

We failed to take all required repeat samples following an *E. coli*-positive routine sample.

We failed to test for *E. coli* when any repeat sample tests positive for total coliform.

[If a water system detects *E. coli* and has not violated the *E. coli* MCL, the water system may include a statement that explains that although they have detected *E. coli*, they are not in violation of the *E. coli* MCL.]

Instructions for Completing the 2022 Consumer Confidence Report (CCR) for Small Water Systems

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INTRODUCTION

State regulations require community water systems (CWSs) and nontransient-noncommunity water systems (NTNCWSs) to provide consumers with an annual Consumer Confidence Report (CCR). The CCR includes information about the water system, water sources, definitions, levels of detected contaminants, water quality compliance/violations, and some educational information. The deadline for distributing the CCR to your consumers is July 1st of each year. In addition to these instructions, the State Water Resources Control Board (State Water Board) has developed CCR templates to help small water systems meet the CCR requirements. These templates, along with the State Water Board’s document titled “Preparing Your California Drinking Water Consumer Confidence Report, Reference Manual for Water Supplier” and its appendices, are available on the State Water Board’s Consumer Confidence Reports (CCRs) website (https://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/CCR.html):

- 2022 CCR template;
- Appendix A – Regulated Contaminants with Primary Drinking Water Standards;
- Appendix B – Regulated Contaminants with Secondary Drinking Water Standards;
- Appendix C – Monitored Contaminants with No Maximum Contaminant Levels (*i.e.*, State Unregulated Chemicals, and Federal Unregulated Contaminant Monitoring Rule [UCMR]);
- Appendix D – State Contaminants with Notification Levels (NLs);
- Appendix E – Special Language for Nitrate, Arsenic, Lead, Radon, *Cryptosporidium*, Groundwater Systems, and Surface Water Systems;
- Appendix F – CCR Certification Form (Suggested Format).

Note that this document is not a substitute for regulations, nor is it a regulation itself. Thus, it does not impose legally-binding requirements on the State Water Board or water suppliers and may not apply to a particular situation based upon its circumstances. This document does not confer legal rights or impose legal obligations upon any member of the public. While the State Water Board has made every effort to ensure the accuracy of the discussion in this document, the statutes, regulations, or other legally binding requirements determine the obligations of the regulated community. In the event of a conflict between the discussion in this document and any statute or regulations, this document would not be controlling.

If you need assistance preparing your CCR, please contact your Drinking Water Field Operations Branch (DWFOB) District Office or Local Primacy Agency (LPA). A copy of the drinking water related regulations is available at www.swrcb.ca.gov/drinking_water/certlic/drinkingwater/Lawbook.shtml.

SPECIAL NOTES

The CCR is intended to inform your customers of the quality of the water served in the previous calendar year (January 1, 2022 – December 31, 2022). However, not all water quality parameters are monitored every year. Therefore, if a parameter was not monitored during the previous year, the water system must report the most recent water quality monitoring data that are not more than nine years old. Results of detections of unregulated contaminants under the federal UCMR are recommended to be included for five years from the date of the last sampling. Water systems that continued to monitor for state unregulated contaminants are encouraged to include the information regarding detected contaminants in the CCR.

For any constituent that exceeded a maximum contaminant level (MCL), maximum residual disinfectant level (MRDL), treatment technique (TT), or regulatory action level (AL) or which otherwise resulted in a violation, the result must be highlighted to stand out. This should be done by using bold font type and marking the level detected with an asterisk (*).

INSTRUCTIONS

To begin using the CCR template, follow the instructions below, step-by-step, marking each section that you have completed. It is preferable that the report is typed; however, it is acceptable to complete the form by hand provided it is done neatly and legibly.

Water System Information

- ☐ **A. Water System's Name and Report Date:** Fill in the water system's name and the date that the report was prepared.
- ☐ **B. Type of Water Source(s) in Use:** Indicate the type of water source(s) in use (for example: well, stream, river, lake, reservoir, etc.).
- ☐ **C. Name and General Location of Source(s):** Specify the name of the source and its general location. For example: Well 1 located in our service area; East Well from the [name-of-aquifer]; South Spring located in [name-of-foothill, mountain, or watershed area], etc. Water systems do not need to provide specific source location for security reasons. Treatment plant location is not required.
- ☐ **D. Drinking Water Source Assessment Information:** If a Drinking Water Source Assessment has been completed for your drinking water source(s), you must provide the following information: the date the assessment was completed (or last updated), that is available, where to get a copy, and a brief summary of your source water's vulnerability to contamination based on the assessment.
 - If the State Water Board or LPA conducted the assessment, it will provide the summary for you to include. If you conducted your own assessment, you may write the summary yourself by following the guidance of the Drinking Water Source Assessment and Protection (DWSAP) Program (https://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/DWSAPGuidance.html).
- ☐ **E. Public Participation:** Indicate the time and place of regularly scheduled board meetings. If regularly scheduled meetings are not held, tell customers how to get information when meetings are announced or list opportunities for public participation in decisions that may affect the quality of the water.
- ☐ **F. Contact Information:** Provide the name and phone number of the water system owner, operator, or other person designated to respond to customer inquiries regarding the water system's CCR.

Tables 1 – 6 Showing the Detection of a Contaminant

The purpose of Tables 1 to 6 is to provide customers with information on any detection of chemicals/constituents, typical sources of contamination, possible health effects, and associated violations. The following steps will help in completing these tables:

☐ G. Table 1: Microbiological Contaminants

- ***E. coli* (State Revised Total Coliform Rule)** – Review your 2022 distribution system coliform bacteria monitoring results. Determine the total number of samples that were *Escherichia coli* (*E. coli*) positive during that time period. Enter that number into the 2nd column. Then, in the 3rd column, enter the number of months in which: (a) routine and repeat samples are total coliform-positive and either is *E. coli*-positive, (b) the water system failed to take repeat samples following an *E. coli*-positive routine sample, or (c) the water system failed to analyze a total coliform-positive repeat sample for *E. coli*.

- ☐ **H. Table 2: Lead and Copper** – Gather and review the most recent distribution system lead and copper sample set results. If there was a detection of lead or copper in any of the samples, enter the sample date (if sampled before 2022), number of samples collected, the 90th percentile level, and the number of sites where an individual sample exceeded the lead or copper AL. The procedure to calculate the 90th percentile is described in the California Code of Regulations, Title 22, section 64678(f).

Tables 3, 4, 5 and 6: Other Chemical or Constituent Reporting – Gather and review the most recent chemical water quality sampling results from your water source(s). Complete Tables 3, 4, 5, and 6 as described below.

- ☐ **I. Table 3: Sodium and Hardness** – Enter the sample date (if sampled before 2022), level detected, and range of detections. There are no drinking water standards for these two constituents, but they must be reported for customer information.
- ☐ **J. Table 4: Primary Drinking Water Standard (MCL, MRDL, TT, or AL)** – For a detection of any chemical/constituent, enter the chemical/constituent name, reporting unit, sample date (if sampled before 2022), level detected, range of detections, MCL/PHG (or MCLG), MRDL/MRDLG, and typical source of contamination. Appendix A lists chemicals and constituents with a primary MCL, MRDL, TT, or AL.
- ☐ **K. Table 5: Secondary Drinking Water Standard (Secondary MCL)** – For a detection of any chemical/constituent, enter the chemical/constituent name, reporting unit, sample date (if sampled before 2022), level detected, range of detections, MCL, and typical source of contamination. Appendix B lists chemicals and constituents with a secondary MCL.

- **Manganese:** If manganese is detected above the NL of 500 µg/L, we encourage you to include the NL health effects language in your CCR. Appendix D lists contaminants with NLs and available health effects language.

□ **L. Table 6: Unregulated Contaminant [see previous Special Notes section concerning UCMR reporting]** – For a detection of any unregulated contaminant for which the State Water Board or U.S. Environmental Protection Agency (EPA) previously required monitoring, enter the chemical/constituent name, reporting unit, sample date, level detected, and range of detection. It is recommended that the NL and health effects language be included, if available. Appendix C presents detailed information about the state unregulated contaminants and federal UCMR. Appendix D lists contaminants with NLs and available health effects language.

- Note that there are some chemicals or constituents that do not have primary or secondary drinking water standards and do not need to be reported if detected. They include the following: Aggressive Index, Alkalinity (Bicarbonate, Carbonate, and Hydroxide), Calcium, Magnesium, and pH.

Additional Instructions for Tables 3, 4, 5, and 6

MCL, MRDL, AL, PHG, MCLG, and MRDLG Levels

Refer to Appendices A and B for the MCL, MRDL, AL, PHG, MCLG, and MRDLG for primary and secondary constituents, as well as the mandatory language for “Typical Source of Contaminant.” Insert this information for detected constituents into the appropriate columns. The MCLG level should be bracketed with “()”; the MRDL and MRDLG levels should be bracketed with “[]”.

Reporting Units

The State Water Board requires that the MCL, MRDL, or AL for a constituent be reported as a number equal to or greater than 1.0 (*i.e.*, 1 µg/L instead of 0.001 mg/L). The MCL, MRDL, AL, PHG, MCLG, and MRDLG levels in Appendices A and B have already been converted to comply with this requirement and can be used in the units as shown. **However, you must ensure that the “Level Detected and Range of Detections” reported in the tables is reported in the same units as the MCL, MRDL, or AL.**

To do this, first check Appendices A and B to find the detected constituent that you must report. Identify the “Unit Measurement” column to determine the units in which the MCL/MRDL/AL must be reported in the CCR. You must then verify that the *Level Detected* is reported in the same units. If necessary, you must convert the level reported on the laboratory analysis to the MCL/MRDL/AL units. The following may help with your unit conversions:

If Appendices A or B gives the MCL/MRDL/AL units in µg/L (ppb), but your lab reported results in units of mg/L (ppm), multiply the lab result by 1,000.

If Appendices A or B gives the MCL/MRDL/AL units in µg/L (ppb ng/L (ppt), but your lab reported results in units of mg/L (ppm), multiply the lab result by 1,000,000.

If Appendices A or B gives the MCL/MRDL/AL units in µg/L (ppb ng/L (ppt), but your lab reported the result in units of µg/L (ppb), multiply the lab result by 1,000.

Example: Chlordane was detected at 0.001 mg/L. Appendix A gives the MCL for chlordane as 100 ng/L. Therefore, multiply the laboratory result by 1,000,000 to obtain the level to be reported in CCR Table 4 (Example: 0.001 mg/L x 1,000,000 = 1,000 ng/L).

Level Detected and Range of Detection

The following describes the procedure to determine the levels and ranges to be reported in the CCR.

- **For a water system with only one source:**

If only one sample was collected in 2022, report the result in the *Level Detected* column. Do not report anything in the *Range of Detections* column. If more than one sample was collected in 2022, report the average in the *Level Detected* column and then enter the range of those results in the *Range of Detections* column.

Example: Finding an “average” and a “range”, if the results are 3, 5, 6, and 9.

Average = Sum of all results divided by the number of results = $[(3+5+6+9) / 4] = 23 / 4 = 5.75$

Range = Lowest result to highest result = 3 to 9

- **For a water system with more than one source where each source was sampled only once in 2022:**

Report the average of the results from all sources in the *Level Detected* column, and then enter the range of those results in the *Range of Detections* column. If the sources are entering the distribution system at the same point, a flow-weighted average may be reported for the *Level Detected* column.

- **For a water system with more than one source where at least one source was sampled more than once in 2022:**

Determine one of the following for each source:

If more than one sample was collected, average those results to use in the next step.

If only one sample was collected, use that sample result in the next step.

Now that you have a single result for each source, determine the average of those results. Report that average in the *Level Detected* column and then enter the range of all results in the *Range of Detections* column. If the sources are entering the distribution system at the same point, a flow-weighted average *may* be reported for the *Level Detected* column.

- **For a water system monitoring the distribution system for a disinfectant residual (e.g., chlorine) and compliance is determined on a system-wide basis by calculating a running annual average (RAA) of all sampling point averages:**

Report the highest RAA in the *Level Detected* column and then enter the range of the sample results from all the sampling points in the *Range of Detections* column.

- **For a water system monitoring the distribution system for disinfection byproducts (e.g., total trihalomethanes [TTHMs] and sum of five haloacetic acids [HAA5]) and compliance is determined on a locational running annual average (LRAA) by calculating an RAA for each monitoring location:**

If monitoring is performed annually – Report the highest 2022 value in the *Level Detected* column and then enter the range of the 2022 sample results from all the monitoring locations in the *Range of Detections* column. If there is only one sample location then the values in both columns would be the same.

If monitoring is performed quarterly – Report the highest 2022 LRAA in the *Level Detected* column and then enter the range of the 2022 sample results from all the monitoring locations in the *Range of Detections* column. If more than one monitoring location exceeds the MCL, include the LRAA for all locations that exceed the MCL.

- **For a water system that has treatment for a chemical contaminant: Report the highest level detected after treatment during 2022 in the “Level Detected” column. Then enter the range of all after-treatment results in the *Range of Detections* column.**

Additional General Information on Drinking Water

- ☐ **M. Additional Special Language for Nitrate, Arsenic, Lead, Radon, and *Cryptosporidium*:** Special language is required for these constituents if the level detected meets the criteria shown in the table below. The language shown on Appendix E must be provided in the CCR section titled *Additional General Information on Drinking Water*.

Contaminant	Criteria
Nitrate (as Nitrogen)	If nitrate level is above 5 mg/L, but below 10 mg/L.
Arsenic	If arsenic level is above 5 µg/L, but below or equal to 10 µg/L.
Lead	<p>If lead level is above 0.015 mg/L (15 µg/L) in more than 5 percent, and up to and including 10 percent, of sites sampled.</p> <ul style="list-style-type: none"> ➤ If your system collected fewer than 20 samples, include the special lead language if any number of samples exceeded the lead AL. ➤ If your system collected 20 samples, include the special lead language if more than 1 sample exceeded the lead AL. ➤ If your system collected 40 samples, include the special lead language if more than 2 samples exceeded the lead AL.
Radon	If radon is detected in any finished water sample.
<i>Cryptosporidium</i>	If <i>Cryptosporidium</i> is detected in any source water or finished water sample.

- ☐ **N. Additional Special Language for Lead:** All CCRs are required to include additional special language for lead, regardless of the results of monitoring. The language shown on Appendix E is already provided in the CCR section titled “Additional General Information on Drinking Water.”
- ☐ **O. State Revised Total Coliform Rule (RTCR):** The statement(s) may be added in the CCR section titled “Additional General Information on Drinking Water.”
 - If *E. coli* was detected and the *E. coli* MCL was not violated, you may include a statement that explains that although *E. coli* was detected, the water system is not in violation of the *E. coli* MCL.

Summary Information for Violation of an MCL, MRDL, AL, TT, or Monitoring and Reporting Requirements (Table 7)

- ☐ **P. Table 7: If the system had a violation of a *primary* or *secondary* drinking water standard (MCL, MRDL, TT, AL or monitoring and reporting requirement):** An asterisk must be placed beside the *Level Detected* value listed in Tables 1, 2, 4, or 5. The CCR must include an explanation of the violation including: duration of the violation, potential adverse health effects (for a primary MCL, MRDL, TT, or AL), and actions taken to address the violation. This information must be provided in the section titled “Summary Information for Contaminants Exceeding an MCL, MRDL, AL or Violation of Any TT or Monitoring and Reporting Requirements.” Please contact your DWFOB District

Office if you are uncertain whether you had any violations of drinking water standards during the year.

☐ State Revised Total Coliform Rule (RTCR):

State RTCR

- ✓ Treatment Technique (TT) Violation: When a water system exceeds a TT trigger specified in Cal. Code Regs., Title 22, § 64426.7(b) and (c) and then fails to conduct the required Level 1 or Level 2 Assessment or corrective actions within the timeframe specified in Cal. Code Regs., Title 22, § 64426.8. See Item X for an explanation of a *E. coli* TT requirement.
- ✓ Treatment Technique (TT) Violation: For a seasonal system, failure to complete the requirements in Cal. Code Regs., Title 22, § 64426.9. Under the State RTCR, a seasonal system means a non-community water system (*i.e.*, nontransient-noncommunity water system or a transient-noncommunity water system) that is not operated as a public water system on a year-round basis and starts up and shuts down at the beginning and end of each operating session.

Potential Adverse Health Effects: Appendix A provides the mandatory language that must be used in this section of the report describing potential adverse health effects for constituents with a primary MCL, MRDL, TT, or AL for which a violation occurred.

If the System had a Violation of a Secondary MCL: There is no mandatory health effects language for violation of a *secondary* MCL. However, you are encouraged to explain that secondary standards are in place to establish an acceptable aesthetic quality of the water.

Example entries for violations of the *iron* secondary MCL are provided below:

Iron MCL Violation: “Iron was found at levels that exceed the secondary MCL of 300 µg/L. The iron MCL was set to protect you against unpleasant aesthetic effects (e.g., color, taste, and odor) and the staining of plumbing fixtures (e.g., tubs and sinks) and clothing while washing. The high iron levels are due to leaching of natural deposits.”

For Water Systems Providing Groundwater as a Source of Drinking Water (Table 8)

- ☐ **Q. Table 8: Sampling Results Showing Fecal Indicator-Positive Groundwater Source Samples** The purpose of this table is to provide customers with information on the microbiological quality of groundwater sources.

Gather and review your 2022 groundwater source monitoring results for *E. coli*, enterococci, and coliphage. Determine the total number of samples that were positive in 2022. Enter that number into the 2nd column. Then, in the 3rd column, enter the dates of the fecal indicator-positive groundwater source samples.

Summary Information for Fecal Indicator-Positive Groundwater Source Samples, Uncorrected Significant Deficiencies, or Violation of a Groundwater TT (Table 9)

Note: Items R, S, and T apply only to CWSs and NTNCWSs using groundwater.

- ☐ **R. If the groundwater system had fecal indicator-positive groundwater source samples:** The CCR must include: (1) source of fecal contamination (if known) and the date(s) of the fecal indicator-positive source sample, (2) if the fecal contamination has been addressed as prescribed by the requirements of the GWR [California Code of Regulations, section 64430, which incorporated by reference the federal GWR – 40 CFR 141.403(a)] and the date the contamination was addressed, (3) for fecal contamination that has not been addressed, the State Water Board-approved plan and schedule for correction, including interim measures, progress to date, and any interim measures completed, and (4) health effects language from Appendix A. This information must be provided in the section titled “Summary Information for Fecal Indicator-Positive Groundwater Source Samples, Uncorrected Significant Deficiencies, or Violation of a Groundwater TT.”

The system must continue to inform customers annually until the fecal contamination in the groundwater source is addressed as prescribed by the requirements of the GWR.

- ☐ **S. If the groundwater system received notice from the State Water Board of a significant deficiency, and that deficiency is not corrected by December 31st of the year covered by the system's CCR:** The CCR must include the nature of the significant deficiency, the date it was identified by the State Water Board, and the State Water Board-approved plan and schedule for correction, including interim measures, progress to date, and any interim measures completed. This information must be provided in the section titled "Summary Information for Fecal Indicator-Positive Groundwater Source Samples, Uncorrected Significant Deficiencies, or Violation of a Groundwater TT."

The system must continue to inform customers annually until the State Water Board determines the significant deficiency is corrected.

In addition, the State Water Board may also require the system to include in the CCR significant deficiencies that were corrected by the end of the calendar year. If the State Water Board directs the system to do this, the system must inform the customers of the significant deficiency, how it was corrected, and the date it was corrected.

- ☐ **T. Table 9: If the groundwater system had a GWR TT violation as shown in the table below:** The CCR must include an explanation of the TT violation including duration of the violation, potential adverse health effects (see Appendix A – Groundwater Systems), and actions taken to address the violation. This information must be provided in the section titled "Summary Information for Fecal Indicator-Positive Groundwater Source Samples, Uncorrected Significant Deficiencies, or Violation of a Groundwater TT." Please contact your DWFOB District Office if you are uncertain whether you had any violations of a TT during the year.

Ground Water Rule (GWR)

- ✓ Failure to maintain 4-log treatment of viruses for more than 4 hours for groundwater systems required to treat.
- ✓ Failure to take corrective action or be in compliance with a plan and schedule for a fecal indicator-positive groundwater source sample.
- ✓ Failure to take corrective action or be in compliance with a plan and schedule for a significant deficiency.

For Systems Providing Surface Water as a Source of Drinking Water (Table 10)

- ☐ **U. Table 10: Sampling Results Showing Treatment of Surface Water Sources:** The purpose of this table is to provide customers with information on the treatment of surface water sources (or sources designated as groundwater under the direct influence of surface water).

In the spaces provided on Table 10, enter the type of approved filtration that is used by your water system (*i.e.*, conventional filtration, direct filtration, slow sand filtration, etc.) and the turbidity performance standards assigned to that technology. Then, gather and review your 2022 filtered water turbidity monitoring results. Find the month with the lowest percentage of samples that met Performance Standard No. 1 as indicated on Table 10. Enter that percentage into the table. Then, enter the highest single turbidity measurement for the year. Lastly, enter the number of violations of any surface water treatment requirement.

Summary Information for Violation of a Surface Water TT (Table 11)

- ☐ **V. Table 11: If the system had a SWTR, IESWTR, LT1ESWTR, FBRR or LT2ESWTR TT violation as shown in the table below:** An asterisk must be placed beside the appropriate entry in Table 8. The CCR must include an explanation of the TT violation including the duration of the violation, potential adverse health effects (see Appendix E – Surface Water Systems), and actions taken to address the violation. This information must be provided in the section titled “Summary Information for Violation of a Surface Water TT.” Please contact your DWFOB District Office if you are uncertain whether you had any violations of a TT during the year.

Surface Water Treatment Rule (SWTR), Interim Enhanced Surface Water Treatment Rule (IESWTR), and Long Term 1 Enhanced Surface Water Treatment Rule

- ✓ Failure to install adequate filtration or disinfection equipment or processes.
- ✓ Failure of the filtration or disinfection equipment or process.
- ✓ Failure to meet inactivation requirements at the treatment plant (CT value).
- ✓ Failure to maintain at least 0.2 mg/L disinfection residual at the distribution system entry point for more than 4 hours.
- ✓ Failure to maintain a distribution system disinfectant residual.
- ✓ Failure to meet source water quality conditions (only filtration avoidance systems).
- ✓ Failure to meet watershed control program requirements (only filtration avoidance systems).
- ✓ Failure to have redundant components for disinfection or automatic shut-off of water delivered to the distribution system (only filtration avoidance systems).

Filtered Backwash Recycling Rule (FBRR)

- ✓ Failure to return recycle flows through the processes of the existing filtration system or to an alternate State Water Board-approved location (conventional and direct filtration systems only).

Long-Term 2 Enhanced Surface Water Treatment Rule (LT2ESWTR)

- ✓ Failure to cover an uncovered finished water reservoir, provide treatment of the reservoir's discharge (to achieve inactivation and/or removal of at least 4-log virus, 3-log *Giardia lamblia*, and 2-log *Cryptosporidium* using a protocol approved by the State Water Board), or be in compliance with a State Water Board-approved schedule to cover the reservoir(s) or treat the reservoir(s) discharge.
- ✓ Filtered Systems
 - Failure to determine and report bin classification.
 - Failure to provide or install an additional level of treatment using a microbial toolbox option by the required date.
 - Failure to achieve required treatment credit to meet the bin classification requirements using a microbial toolbox option.
- ✓ Unfiltered Systems
 - Failure to calculate and report mean *Cryptosporidium* level.
 - Failure to install a second disinfectant to treat for *Cryptosporidium* by required date.
 - Failure to achieve required inactivation level by required date.
 - Failure to maintain required inactivation level based on mean *Cryptosporidium* results.

For Systems Operating Under a Variance or Exemption

- ☐ **W. If the system operated under a variance or exemption at any time during the year covered by the CCR:** The CCR must include an explanation of the reasons for the variance or exemption, the date that it was issued, why it was granted, when it is up for renewal, and a status report on what the system is doing to remedy the problem (e.g., install treatment, find alternative sources or water, etc.) or otherwise comply with the terms and schedules of the variance or exemption. Also, tell the consumers how they may participate in the review of renewal of the variance or exemption. This information must be provided in the section titled "Summary Information for Operating Under a Variance or Exemption."

Summary Information for State Revised Total Coliform Rule Level 1 and Level 2 Assessment Requirements

Note: Please contact your DWFOB District Office if you are uncertain if you need to complete this section or need additional help to complete this section.

- ☐ **X. Level 1 or Level 2 Assessment Requirement not Due to an *E. coli* MCL Violation.** If your water system was required to comply with a Level 1 or Level 2

assessment requirement that was not due to an *E. coli* MCL violation, your CCR must include information on the number of assessments required and completed, corrective actions required and completed, and reasons for conducting assessments and corrective actions. The mandatory language shown on the CCR template under the subsection titled “Level 1 and Level 2 Assessment Requirement not Due to an *E. coli* MCL Violation” must be used. Statements in the second and third paragraphs must be included, as appropriate, filling in the blanks accordingly.

If your water system failed to complete all required assessments or correct all identified sanitary defects, your water system is in violation of the treatment technique violation requirement. Your CCR must include one or both of the following statements, as appropriate. Add the statement(s) as a new paragraph in the space provided.

During the past year we failed to conduct all of the required assessment(s).

During the past year we failed to correct all identified defects that were found during the assessment.

- ☐ **Level 2 Assessment Requirement Due to an *E. coli* MCL Violation.** If your water system was required to comply with a Level 2 Assessment requirement that was due to an *E. coli* MCL violation, your CCR must include information on the number of assessments required and completed, corrective actions required and completed, and reasons for conducting assessments and corrective actions. The mandatory language shown on the CCR template under the subsection titled “Level 2 Assessment Requirement Due to an *E. coli* MCL Violation” must be used. Statements in the second paragraph must be included, filling in the blanks accordingly.

If your water system failed to complete the required assessment or correct all identified sanitary defects, your water system is in violation of the *E. coli* TT requirement. Your CCR must include one or both of the following statements, as appropriate. Add the statement(s) as a new paragraph in the space provided.

We failed to conduct the required assessment.

We failed to correct all sanitary defects that were identified during the assessment.

DISTRIBUTING THE CCR

Water systems are required to mail or directly deliver one copy of the CCR by July 1, 2023 to each customer, the DWFOB District Office, and the California Public Utilities Commission (if the water system is privately-owned). Upon issuing the report, the water system will need to complete and submit Appendix F, *CCR Certification Form* to the DWFOB District Office no later than October 1, 2023.

The State Water Board allows electronic delivery of the CCR. Suggestions on delivery methods, examples, and the certification form to use are available on the State Water Board's website (www.swrcb.ca.gov/drinking_water/certlic/drinkingwater/CCR.shtml).

APPENDIX A: Regulated Contaminants with Primary Drinking Water Standards

Key

Acronym	Definition
AL	Regulatory Action Level
MCL	Maximum Contaminant Level
MCLG	Maximum Contaminant Level Goal
MFL	Million fibers per liter
MRDL	Maximum Residual Disinfectant Level
MRDLG	Maximum Residual Disinfectant Level Goal
Mrem/year	millirems per year (a measure of radiation absorbed by the body)
N/A	Not applicable
NTU	Nephelometric Turbidity Units
PHG	Public Health Goal
pCi/L	picocuries per liter (a measure of radioactivity)
ppb	parts per billion, or micrograms per liter (µg/L)
ppq	parts per quadrillion, or picograms per liter (pg/L)
ppm	parts per million, or milligrams per liter (mg/L)
ppt	parts per trillion, or nanograms per liter (ng/L)
TT	Treatment Technique

Microbiological Contaminants

Contaminant (CCR units)	Traditional MCL	To convert for CCR, multiply by	MCL in CCR units	PHG (MCLG) in CCR units	Major sources in Drinking Water	Health Effects Language
<i>E. coli</i> (state Revised Total Coliform Rule)	0	N/A		(0)	Human and animal fecal waste	<i>E. coli</i> are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Human pathogens in these wastes can cause short-term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a greater health risk for infants, young children, some of the elderly, and people with severely-compromised immune systems.
Coliform Assessment and/or Corrective Action Violations	TT	N/A	TT	N/A	N/A	Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful, waterborne pathogens may be present or that a potential pathway exists through which contamination may enter the drinking water distribution system. We found coliforms indicating the need to look for potential problems in water treatment or distribution. When this occurs, we are required to conduct assessment(s) to identify problems and to correct any problems that were found.
<i>E. coli</i> Assessment and/or Corrective Action Violations	0	N/A	0	(0)	N/A	<i>E. coli</i> are bacteria whose presence indicates that the water may be contaminated with human or animal

Contaminant (CCR units)	Traditional MCL	To convert for CCR, multiply by	MCL in CCR units	PHG (MCLG) in CCR units	Major sources in Drinking Water	Health Effects Language
						wastes. Human pathogens in these wastes can cause short-term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a greater health risk for infants, young children, the elderly, and people with severely compromised immune systems. We violated the standard for <i>E. coli</i> , indicating the need to look for potential problems in water treatment or distribution. When this occurs, we are required to conduct a detailed assessment to identify problems and to correct any problems that are found.
Fecal Indicator <i>E. coli</i> (Ground Water Rule)	0	N/A	0	(0)	Human and animal fecal waste	Fecal coliforms and <i>E. coli</i> are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Microbes in these wastes can cause short-term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a special health risk for infants, young children, some of the elderly, and people with severely compromised immune systems.
Fecal Indicators (enterococci or	TT	N/A	TT	N/A	Human and animal fecal waste	Fecal indicators are microbes whose presence indicates that the water may be contaminated with human or animal

Contaminant (CCR units)	Traditional MCL	To convert for CCR, multiply by	MCL in CCR units	PHG (MCLG) in CCR units	Major sources in Drinking Water	Health Effects Language
coliphage) (Ground Water Rule)						wastes. Microbes in these wastes can cause short-term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a special health risk for infants, young children, some of the elderly, and people with severely compromised immune systems.
Season System Treatment Technique Violations	TT	N/A	TT	N/A	N/A	When this violation includes failure to monitor for total coliforms or <i>E. coli</i> prior to serving water to the public, the mandatory language found at 22 California Code of Regulations section 64465(a)(11) shall be used. When the violation includes failure to complete other actions, the appropriate elements found in sections 64465(a)(1) through (10) to describe the violation shall be used.
Turbidity	TT	N/A	TT	N/A	Soil runoff	Turbidity has no health effects. However, high levels of turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea,

Contaminant (CCR units)	Traditional MCL	To convert for CCR, multiply by	MCL in CCR units	PHG (MCLG) in CCR units	Major sources in Drinking Water	Health Effects Language
<i>Giardia lamblia</i> , Viruses, Heterotrophic Plate Count Bacteria, <i>Legionella</i> , <i>Cryptosporidium</i> Surface water treatment = TT	TT	TT	TT	HPC = N/A; Others = (0)	Naturally present in the environment	cramps, diarrhea, and associated headaches. Inadequately treated water may contain disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea, and associated headaches.

Radioactive Contaminants

Contaminant (CCR units)	Traditional MCL	To convert for CCR, multiply by	MCL in CCR units	PHG (MCLG) in CCR units	Major Sources in Drinking Water	Health Effects Language
Gross Beta Particle Activity (pCi/L)	50 ¹	N/A	50	(0)	Decay of natural and man-made deposits	Certain minerals are radioactive and may emit forms of radiation known as photons and beta radiation. Some people who drink water containing beta and photon emitters in excess of the MCL over many years may have an increased risk of getting cancer.
Strontium-90 (pCi/L)	8	N/A	8	0.35	Decay of natural and man-made deposits	Some people who drink water containing strontium-90 in excess of the MCL over many years may have an increased risk of getting cancer.
Tritium (pCi/L)	20,000	N/A	20,000	400	Decay of natural and man-made deposits	Some people who drink water containing tritium in excess of the MCL over many years may have an increased risk of getting cancer.
Gross Alpha Particle Activity (pCi/L)	15	N/A	15	(0)	Erosion of natural deposits	Certain minerals are radioactive and may emit a form of radiation known as alpha radiation. Some people who drink water containing alpha emitters in excess of the MCL over many years may have an increased risk of getting cancer.

¹ Effective June 11, 2006, the gross beta particle activity MCL is 4 millirem/year annual dose equivalent to the total body or any internal organ. 50 pCi/L is used as a screening level.

Contaminant (CCR units)	Traditional MCL	To convert for CCR, multiply by	MCL in CCR units	PHG (MCLG) in CCR units	Major Sources in Drinking Water	Health Effects Language
Combined Radium (pCi/L)	5	N/A	5	(0) ²	Erosion of natural deposits	Some people who drink water containing radium 226 or 228 in excess of the MCL over many years may have an increased risk of getting cancer.
Total Radium (pCi/L) (for nontransient-noncommunity water systems)	5	N/A	5	N/A	Erosion of natural deposits	Some people who drink water containing radium 223, 224, or 226 in excess of the MCL over many years may have an increased risk of getting cancer.
Uranium (pCi/L)	20	N/A	20	0.43	Erosion of natural deposits	Some people who drink water containing uranium in excess of the MCL over many years may have kidney problems or an increased risk of getting cancer.

² If reporting results for Ra-226 and Ra-228 as individual constituents, the PHG is 0.05 pCi/L for Ra-226 and 0.019 pCi/L for Ra-228.

Inorganic Contaminants

Contaminant (CCR units)	Traditional MCL in mg/L	To convert for CCR, multiply by	MCL in CCR units	PHG (MCLG) in CCR units	Major Sources in Drinking Water	Health Effects Language
Aluminum (mg/L)	1	-	1	0.6	Erosion of natural deposits; residue from some surface water treatment processes	Some people who drink water containing aluminum in excess of the MCL over many years may experience short-term gastrointestinal tract effects.
Antimony (µg/L)	0.006	1,000	6	1	Discharge from petroleum refineries; fire retardants; ceramics; solder electronics; solder	Some people who drink water containing antimony in excess of the MCL over many years may experience increases in blood cholesterol and decreases in blood sugar.
Arsenic (µg/L)	0.010	1,000	10	0.004	Erosion of natural deposits; runoff from orchards; glass and electronics production wastes	Some people who drink water containing arsenic in excess of the MCL over many years may experience skin damage or circulatory system problems, and may have an increased risk of getting cancer.
Asbestos (MFL)	7 MFL	-	7	7	Internal corrosion of asbestos cement water mains; erosion of natural deposits	Some people who drink water containing asbestos in excess of the MCL over many years may have an increased risk of developing benign intestinal polyps.
Barium (mg/L)	1	-	1	2	Discharges of oil drilling wastes and	Some people who drink water containing barium in excess of the

Contaminant (CCR units)	Traditional MCL in mg/L	To convert for CCR, multiply by	MCL in CCR units	PHG (MCLG) in CCR units	Major Sources in Drinking Water	Health Effects Language
Beryllium (µg/L)	0.004	1,000	4	1	from metal refineries; erosion of natural deposits Discharge from metal refineries, coal-burning factories, and electrical, aerospace, and defense industries	MCL over many years may experience an increase in blood pressure. Some people who drink water containing beryllium in excess of the MCL over many years may develop intestinal lesions.
Cadmium (µg/L)	0.005	1,000	5	0.04	Internal corrosion of galvanized pipes; erosion of natural deposits; discharge from electroplating and industrial chemical factories, and metal refineries; runoff from waste batteries and paints	Some people who drink water containing cadmium in excess of the MCL over many years may experience kidney damage.
Chromium [Total] (µg/L)	0.05	1,000	50	(100)	Discharge from steel and pulp mills and chrome plating; erosion of natural deposits	Some people who use water containing chromium in excess of the MCL over many years may experience allergic dermatitis.
Copper (mg/L)	AL = 1.3	-	AL = 1.3	0.3	Internal corrosion of household plumbing systems; erosion of natural deposits;	Copper is an essential nutrient, but some people who drink water containing copper in excess of the action level over a relatively short

Contaminant (CCR units)	Traditional MCL in mg/L	To convert for CCR, multiply by	MCL in CCR units	PHG (MCLG) in CCR units	Major Sources in Drinking Water	Health Effects Language
Cyanide (µg/L)	0.15	1,000	150	150	leaching from wood preservatives	amount of time may experience gastrointestinal distress. Some people who drink water containing copper in excess of the action level over many years may suffer liver or kidney damage. People with Wilson's Disease should consult their personal doctor. Some people who drink water containing cyanide in excess of the MCL over many years may experience nerve damage or thyroid problems.
Fluoride (mg/L)	2.0	-	2.0	1	Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories	Some people who drink water containing fluoride in excess of the federal MCL of 4 mg/L over many years may get bone disease, including pain and tenderness of the bones. Children who drink water containing fluoride in excess of the state MCL of 2 mg/L may get mottled teeth.
Lead (µg/L)	AL = 0.015	1,000	AL = 15	0.2	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers;	Infants and children who drink water containing lead in excess of the action level may experience delays in their physical or mental development. Children may show slight deficits in attention span and

Contaminant (CCR units)	Traditional MCL in mg/L	To convert for CCR, multiply by	MCL in CCR units	PHG (MCLG) in CCR units	Major Sources in Drinking Water	Health Effects Language
					erosion of natural deposits	learning abilities. Adults who drink this water over many years may develop kidney problems or high blood pressure.
Mercury [Inorganic] (µg/L)	0.002	1,000	2	1.2	Erosion of natural deposits; discharge from refineries and factories; runoff from landfills and cropland	Some people who drink water containing mercury in excess of the MCL over many years may experience mental disturbances, or impaired physical coordination, speech and hearing.
Nickel (µg/L)	0.1	1,000	100	12	Erosion of natural deposits; discharge from metal factories	Some people who drink water containing nickel in excess of the MCL over many years may experience liver and heart effects.
Nitrate (mg/L)	10 (as N)	-	10 (as N)	10 (as N)	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits	Infants below the age of six months who drink water containing nitrate in excess of the MCL may quickly become seriously ill and, if untreated, may die because high nitrate levels can interfere with the capacity of the infant's blood to carry oxygen. Symptoms include shortness of breath and blueness of the skin. High nitrate levels may also affect the oxygen-carrying ability of the blood of pregnant women.

Contaminant (CCR units)	Traditional MCL in mg/L	To convert for CCR, multiply by	MCL in CCR units	PHG (MCLG) in CCR units	Major Sources in Drinking Water	Health Effects Language
Nitrite (mg/L)	1 (as N)	-	1 (as N)	1 (as N)	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits	Infants below the age of six months who drink water containing nitrite in excess of the MCL may quickly become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blueness of the skin.
Perchlorate (µg/L)	0.006	1,000	6	1	Perchlorate is an inorganic chemical used in solid rocket propellant, fireworks, explosives, flares, matches, and a variety of industries. It usually gets into drinking water as a result of environmental contamination from historic aerospace or other industrial operations that used or use, store, or dispose of perchlorate and its salts.	Perchlorate has been shown to interfere with uptake of iodide by the thyroid gland, and to thereby reduce the production of thyroid hormones, leading to adverse effects associated with inadequate hormone levels. Thyroid hormones are needed for normal prenatal growth and development of the fetus, as well as for normal growth and development in the infant and child. In adults, thyroid hormones are needed for normal metabolism and mental function.
Selenium (µg/L)	0.05	1,000	50	30	Discharge from petroleum, glass, and	Selenium is an essential nutrient. However, some people who drink

Contaminant (CCR units)	Traditional MCL in mg/L	To convert for CCR, multiply by	MCL in CCR units	PHG (MCLG) in CCR units	Major Sources in Drinking Water	Health Effects Language
Thallium (µg/L)	0.002	1,000	2	0.1	metal refineries; erosion of natural deposits; discharge from mines and chemical manufacturers; runoff from livestock lots (feed additive) Leaching from ore-processing sites; discharge from electronics, glass, and drug factories	water containing selenium in excess of the MCL over many years may experience hair or fingernail losses, numbness in fingers or toes, or circulation system problems. Some people who drink water containing thallium in excess of the MCL over many years may experience hair loss, changes in their blood, or kidney, intestinal, or liver problems.

Synthetic Organic Contaminants including Pesticides and Herbicides

Contaminant (CCR units)	Traditional MCL in mg/L	To convert for CCR, multiply by	MCL in CCR units	PHG (MCLG) in CCR units	Major Sources in Drinking Water	Health Effects Language
2,4-D (µg/L)	0.07	1,000	70	20	Runoff from herbicide used on row crops, range land, lawns, and aquatic weeds	Some people who use water containing the weed killer 2,4-D in excess of the MCL over many years may experience kidney, liver, or adrenal gland problems.
2,4,5-TP [Silvex] (µg/L)	0.05	1,000	50	3	Residue of banned herbicide	Some people who drink water containing Silvex in excess of the MCL over many years may experience liver problems.
Acrylamide	TT	-	TT	(0)	Added to water during sewage/wastewater treatment	Some people who drink water containing high levels of acrylamide over a long period of time may experience nervous system or blood problems, and may have an increased risk of getting cancer.
Alachlor (µg/L)	0.002	1,000	2	4	Runoff from herbicide used on row crops	Some people who use water containing alachlor in excess of the MCL over many years may experience eye, liver, kidney, or spleen problems, or experience anemia, and may have an increased risk of getting cancer.
Atrazine (µg/L)	0.001	1,000	1	0.15	Runoff from herbicide used on row crops and along railroad	Some people who use water containing atrazine in excess of the MCL over many years may

Contaminant (CCR units)	Traditional MCL in mg/L	To convert for CCR, multiply by	MCL in CCR units	PHG (MCLG) in CCR units	Major Sources in Drinking Water	Health Effects Language
Bentazon (µg/L)	0.018	1,000	18	200	Runoff/leaching from herbicide used on beans, peppers, corn, peanuts, rice, and ornamental grasses	Some people who drink water containing bentazon in excess of the MCL over many years may experience prostate and gastrointestinal effects.
Benzo(a)pyrene [PAH] (ng/L)	0.0002	1,000,000	200	7	Leaching from linings of water storage tanks and distribution mains	Some people who use water containing benzo(a)pyrene in excess of the MCL over many years may experience reproductive difficulties and may have an increased risk of getting cancer.
Carbofuran (µg/L)	0.018	1,000	18	0.7	Leaching of soil fumigant used on rice and alfalfa, and grape vineyards	Some people who use water containing carbofuran in excess of the MCL over many years may experience problems with their blood, or nervous or reproductive system problems.
Chlordane (ng/L)	0.0001	1,000,000	100	30	Residue of banned insecticide	Some people who use water containing chlordane in excess of the MCL over many years may experience liver or nervous system problems, and may have an increased risk of getting cancer.

Contaminant (CCR units)	Traditional MCL in mg/L	To convert for CCR, multiply by	MCL in CCR units	PHG (MCLG) in CCR units	Major Sources in Drinking Water	Health Effects Language
Dalapon (µg/L)	0.2	1,000	200	790	Runoff from herbicide used on rights-of-way, and crops and landscape maintenance	Some people who drink water containing dalapon in excess of the MCL over many years may experience minor kidney changes.
Di(2-ethylhexyl) Adipate (µg/L)	0.4	1,000	400	200	Discharge from chemical factories	Some people who drink water containing di(2-ethylhexyl) adipate in excess of the MCL over many years may experience weight loss, liver enlargement, or possible reproductive difficulties.
Di(2-ethylhexyl) Phthalate (µg/L)	0.004	1,000	4	12	Discharge from rubber and chemical factories; inert ingredient in pesticides	Some people who use water containing di(2-ethylhexyl) phthalate well in excess of the MCL over many years may experience liver problems or reproductive difficulties, and may have an increased risk of getting cancer.
Dibromochloropropane [DBCP] (ng/L)	0.0002	1,000,000	200	3	Banned nematocide that may still be present in soils due to runoff/leaching from former use on soybeans, cotton, vineyards, tomatoes, and tree fruit	Some people who use water containing DBCP in excess of the MCL over many years may experience reproductive difficulties and may have an increased risk of getting cancer.

Contaminant (CCR units)	Traditional MCL in mg/L	To convert for CCR, multiply by	MCL in CCR units	PHG (MCLG) in CCR units	Major Sources in Drinking Water	Health Effects Language
Dinoseb (µg/L)	0.007	1,000	7	14	Runoff from herbicide used on soybeans, vegetables, and fruits	Some people who drink water containing dinoseb in excess of the MCL over many years may experience reproductive difficulties.
Dioxin [2,3,7,8-TCDD] (pg/L)	0.00000003	1,000,000,000	30	0.05	Emissions from waste incineration and other combustion; discharge from chemical factories	Some people who use water containing dioxin in excess of the MCL over many years may experience reproductive difficulties and may have an increased risk of getting cancer.
Diquat (µg/L)	0.02	1,000	20	6	Runoff from herbicide use for terrestrial and aquatic weeds	Some people who drink water containing diquat in excess of the MCL over many years may get cataracts.
Endothall (µg/L)	0.1	1,000	100	94	Runoff from herbicide use for terrestrial and aquatic weeds; defoliant	Some people who drink water containing endothall in excess of the MCL over many years may experience stomach or intestinal problems.
Endrin (µg/L)	0.002	1,000	2	0.3	Residue of banned insecticide and rodenticide	Some people who drink water containing endrin in excess of the MCL over many years may experience liver problems.
Epichlorohydrin	TT	-	TT	(0)	Discharge from industrial chemical factories; impurity of some water treatment chemicals	Some people who drink water containing high levels of epichlorohydrin over a long period of time may experience stomach

Contaminant (CCR units)	Traditional MCL in mg/L	To convert for CCR, multiply by	MCL in CCR units	PHG (MCLG) in CCR units	Major Sources in Drinking Water	Health Effects Language
Ethylene Dibromide [EDB] (ng/L)	0.00005	1,000,000	50	10	Discharge from petroleum refineries; underground gas tank leaks; banned nematocide that may still be present in soils due to runoff and leaching from grain and fruit crops	problems, and may have an increased risk of getting cancer. Some people who use water containing ethylene dibromide in excess of the MCL over many years may experience liver, stomach, reproductive system, or kidney problems, and may have an increased risk of getting cancer.
Glyphosate (µg/L)	0.7	1,000	700	900	Runoff from herbicide use	Some people who drink water containing glyphosate in excess of the MCL over many years may experience kidneys problems or reproductive difficulties.
Heptachlor (ng/L)	0.00001	1,000,000	10	8	Residue of banned insecticide	Some people who use water containing heptachlor in excess of the MCL over many years may experience liver damage and may have an increased risk of getting cancer.
Heptachlor Epoxide (ng/L)	0.00001	1,000,000	10	6	Breakdown of heptachlor	Some people who use water containing heptachlor epoxide in excess of the MCL over many years may experience liver damage, and may have an increased risk of getting cancer.

Contaminant (CCR units)	Traditional MCL in mg/L	To convert for CCR, multiply by	MCL in CCR units	PHG (MCLG) in CCR units	Major Sources in Drinking Water	Health Effects Language
Hexachlorobenzene (µg/L)	0.001	1,000	1	0.03	Discharge from metal refineries and agricultural chemical factories; byproduct of chlorination reactions in wastewater	Some people who drink water containing hexachlorobenzene in excess of the MCL over many years may experience liver or kidney problems, or adverse reproductive effects, and may have an increased risk of getting cancer.
Hexachlorocyclopentadiene (µg/L)	0.05	1,000	50	2	Discharge from chemical factories	Some people who use water containing hexachlorocyclopentadiene in excess of the MCL over many years may experience kidney or stomach problems.
Lindane (ng/L)	0.0002	1,000,000	200	32	Runoff/leaching from insecticide used on cattle, lumber, and gardens	Some people who drink water containing lindane in excess of the MCL over many years may experience kidney or liver problems.
Methoxychlor (µg/L)	0.03	1,000	30	0.09	Runoff/leaching from insecticide used on fruits, vegetables, alfalfa, and livestock	Some people who drink water containing methoxychlor in excess of the MCL over many years may experience reproductive difficulties.
Molinate [Ordram] (µg/L)	0.02	1,000	20	1	Runoff/leaching from herbicide used on rice	Some people who use water containing molinate in excess of the MCL over many years may experience reproductive effects.
Oxamyl [Vydate] (µg/L)	0.05	1,000	50	26	Runoff/leaching from insecticide used on	Some people who drink water containing oxamyl in excess of the

Contaminant (CCR units)	Traditional MCL in mg/L	To convert for CCR, multiply by	MCL in CCR units	PHG (MCLG) in CCR units	Major Sources in Drinking Water	Health Effects Language
PCBs [Polychlorinated Biphenyls] (ng/L)	0.0005	1,000,000	500	90	field crops, fruits and ornamentals, especially apples, potatoes, and tomatoes Runoff from landfills; discharge of waste chemicals	MCL over many years may experience slight nervous system effects. Some people who drink water containing PCBs in excess of the MCL over many years may experience changes in their skin, thymus gland problems, immune deficiencies, or reproductive or nervous system difficulties, and may have an increased risk of getting cancer.
Pentachlorophenol (µg/L)	0.001	1,000	1	0.3	Discharge from wood preserving factories, cotton and other insecticidal/herbicide uses	Some people who use water containing pentachlorophenol in excess of the MCL over many years may experience liver or kidney problems, and may have an increased risk of getting cancer.
Picloram (µg/L)	0.5	1,000	500	166	Herbicide runoff	Some people who drink water containing picloram in excess of the MCL over many years may experience liver problems.
Simazine (µg/L)	0.004	1,000	4	4	Herbicide runoff	Some people who use water containing simazine in excess of the MCL over many years may experience blood problems.

Contaminant (CCR units)	Traditional MCL in mg/L	To convert for CCR, multiply by	MCL in CCR units	PHG (MCLG) in CCR units	Major Sources in Drinking Water	Health Effects Language
Thiobencarb (µg/L)	0.07	1,000	70	42	Runoff/leaching from herbicide used on rice	Some people who use water containing thiobencarb in excess of the MCL over many years may experience body weight and blood effects.
Toxaphene (µg/L)	0.003	1,000	3	0.03	Runoff/leaching from insecticide used on cotton and cattle	Some people who use water containing toxaphene in excess of the MCL over many years may experience kidney, liver, or thyroid problems, and may have an increased risk of getting cancer.
1,2,3-Trichloropropane [TCP] (µg/L)	0.000005	1,000	0.005	0.0007	Discharge from industrial and agricultural chemical factories; leaching from hazardous waste sites; used as cleaning and maintenance solvent, paint and varnish remover, and cleaning and degreasing agent; byproduct during the production of other compounds and pesticides.	Some people who drink water containing 1,2,3-trichloropropane in excess of the MCL over many years may have an increased risk of getting cancer.

Volatile Organic Contaminants

Contaminant (CCR units)	Traditional MCL in mg/L	To convert for CCR, multiply by	MCL in CCR units	PHG (MCLG) in CCR units	Major Sources in Drinking Water	Health Effects Language
Benzene (µg/L)	0.001	1,000	1	0.15	Discharge from plastics, dyes and nylon factories; leaching from gas storage tanks and landfills	Some people who use water containing benzene in excess of the MCL over many years may experience anemia or a decrease in blood platelets, and may have an increased risk of getting cancer.
Carbon Tetrachloride (ng/L)	0.0005	1,000,000	500	100	Discharge from chemical plants and other industrial activities	Some people who use water containing carbon tetrachloride in excess of the MCL over many years may experience liver problems and may have an increased risk of getting cancer.
1,2-Dichlorobenzene (µg/L)	0.6	1,000	600	600	Discharge from industrial chemical factories	Some people who drink water containing 1,2-dichlorobenzene in excess of the MCL over many years may experience liver, kidney, or circulatory system problems.
1,4-Dichlorobenzene (µg/L)	0.005	1,000	5	6	Discharge from industrial chemical factories	Some people who use water containing 1,4-dichlorobenzene in excess of the MCL over many years may experience anemia, liver, kidney, or spleen damage, or changes in their blood.
1,1-Dichloroethane (µg/L)	0.005	1,000	5	3	Extraction and degreasing solvent; used in manufacture	Some people who use water containing 1,1-dichloroethane in excess of the MCL over many

Contaminant (CCR units)	Traditional MCL in mg/L	To convert for CCR, multiply by	MCL in CCR units	PHG (MCLG) in CCR units	Major Sources in Drinking Water	Health Effects Language
1,2-Dichloroethane (ng/L)	0.0005	1,000,000	500	400	of pharmaceuticals, stone, clay and glass products; fumigant Discharge from industrial chemical factories	years may experience nervous system or respiratory problems. Some people who use water containing 1,2-dichloroethane in excess of the MCL over many years may have an increased risk of getting cancer.
1,1-Dichloroethylene (µg/L)	0.006	1,000	6	10	Discharge from industrial chemical factories	Some people who use water containing 1,1-dichloroethylene in excess of the MCL over many years may experience liver problems.
cis-1,2-Dichloroethylene (µg/L)	0.006	1,000	6	13	Discharge from industrial chemical factories; major biodegradation byproduct of TCE and PCE groundwater contamination	Some people who use water containing cis-1,2-dichloroethylene in excess of the MCL over many years may experience liver problems.
trans-1,2-Dichloroethylene (µg/L)	0.01	1,000	10	50	Discharge from industrial chemical factories; minor biodegradation byproduct of TCE and PCE	Some people who drink water containing trans-1,2-dichloroethylene in excess of the MCL over many years may experience liver problems.

Contaminant (CCR units)	Traditional MCL in mg/L	To convert for CCR, multiply by	MCL in CCR units	PHG (MCLG) in CCR units	Major Sources in Drinking Water	Health Effects Language
Dichloromethane (µg/L)	0.005	1,000	5	4	groundwater contamination Discharge from pharmaceutical and chemical factories; insecticide	Some people who drink water containing dichloromethane in excess of the MCL over many years may experience liver problems and may have an increased risk of getting cancer.
1,2-Dichloropropane (µg/L)	0.005	1,000	5	0.5	Discharge from industrial chemical factories; primary component of some fumigants	Some people who use water containing 1,2-dichloropropane in excess of the MCL over many years may have an increased risk of getting cancer.
1,3-Dichloropropene (ng/L)	0.0005	1,000,000	500	200	Runoff/leaching from nematocide used on croplands	Some people who use water containing 1,3-dichloropropene in excess of the MCL over many years may have an increased risk of getting cancer.
Ethylbenzene (µg/L)	0.3	1,000	300	300	Discharge from petroleum refineries; industrial chemical factories	Some people who use water containing ethylbenzene in excess of the MCL over many years may experience liver or kidney problems.
Methyl-tert-butyl ether (µg/L)	0.013	1,000	13	13	Leaking underground storage tanks; discharge from petroleum and chemical factories	Some people who use water containing methyl-tert-butyl ether in excess of the MCL over many years may have an increased risk of getting cancer.

Contaminant (CCR units)	Traditional MCL in mg/L	To convert for CCR, multiply by	MCL in CCR units	PHG (MCLG) in CCR units	Major Sources in Drinking Water	Health Effects Language
Monochlorobenzene (µg/L)	0.07	1,000	70	70	Discharge from industrial and agricultural chemical factories and dry cleaning facilities	Some people who use water containing monochlorobenzene in excess of the MCL over many years may experience liver or kidney problems.
Styrene (µg/L)	0.1	1,000	100	0.5	Discharge from rubber and plastic factories; leaching from landfills	Some people who drink water containing styrene in excess of the MCL over many years may experience liver, kidney, or circulatory system problems.
1,1,2,2-Tetrachloroethane (µg/L)	0.001	1,000	1	0.1	Discharge from industrial and agricultural chemical factories; solvent used in production of TCE, pesticides, varnish and lacquers	Some people who drink water containing 1,1,2,2-tetrachloroethane in excess of the MCL over many years may experience liver or nervous system problems.
Tetrachloroethylene (PCE) (µg/L)	0.005	1,000	5	0.06	Discharge from factories, dry cleaners, and auto shops (metal degreaser)	Some people who use water containing tetrachloroethylene in excess of the MCL over many years may experience liver problems, and may have an increased risk of getting cancer.
1,2,4-Trichlorobenzene (µg/L)	0.005	1,000	5	5	Discharge from textile-finishing factories	Some people who use water containing 1,2,4-trichlorobenzene in excess of the MCL over many years may experience adrenal gland changes.

Contaminant (CCR units)	Traditional MCL in mg/L	To convert for CCR, multiply by	MCL in CCR units	PHG (MCLG) in CCR units	Major Sources in Drinking Water	Health Effects Language
1,1,1-Trichloroethane (µg/L)	0.200	1,000	200	1000	Discharge from metal degreasing sites and other factories; manufacture of food wrappings	Some people who use water containing 1,1,1-trichloroethane in excess of the MCL over many years may experience liver, nervous system, or circulatory system problems.
1,1,2-Trichloroethane (µg/L)	0.005	1,000	5	0.3	Discharge from industrial chemical factories	Some people who use water containing 1,1,2-trichloroethane in excess of the MCL over many years may experience liver, kidney or immune system problems.
Trichloroethylene [TCE] (µg/L)	0.005	1,000	5	1.7	Discharge from metal degreasing sites and other factories	Some people who use water containing trichloroethylene in excess of the MCL over many years may experience liver problems and may have an increased risk of getting cancer.
Toluene (µg/L)	0.15	1,000	150	150	Discharge from petroleum and chemical factories; underground gas tank leaks	Some people who use water containing toluene in excess of the MCL over many years may experience nervous system, kidney, or liver problems.
Trichlorofluoromethane (µg/L)	0.15	1,000	150	1300	Discharge from industrial factories; degreasing solvent; propellant and refrigerant	Some people who use water containing trichlorofluoromethane in excess of the MCL over many years may experience liver problems.

Contaminant (CCR units)	Traditional MCL in mg/L	To convert for CCR, multiply by	MCL in CCR units	PHG (MCLG) in CCR units	Major Sources in Drinking Water	Health Effects Language
1,1,2-Trichloro-1,2,2-trifluoroethane (mg/L)	1.2	-	1.2	4	Discharge from metal degreasing sites and other factories; dry-cleaning solvent; refrigerant	Some people who use water containing 1,1,2-trichloro-1,2,2-trifluoroethane in excess of the MCL over many years may experience liver problems.
Vinyl Chloride (ng/L)	0.0005	1,000,000	500	50	Leaching from PVC piping; discharge from plastics factories; biodegradation byproduct of TCE and PCE groundwater contamination	Some people who use water containing vinyl chloride in excess of the MCL over many years may have an increased risk of getting cancer.
Xylenes (mg/L)	1.750	-	1.750	1.8	Discharge from petroleum and chemical factories; fuel solvent	Some people who use water containing xylenes in excess of the MCL over many years may experience nervous system damage.

Disinfection Byproducts, Disinfectant Residuals, and Disinfection Byproduct Precursors

Contaminant (CCR units)	Traditional MCL or [MRDL] in mg/L	To convert for CCR, multiply by	MCL or [MRDL] in CCR units	PHG, (MCLG or MRDLG)	Major Sources in Drinking Water	Health Effects Language
TTHMs [Total Trihalomethanes] (µg/L)	0.080	1,000	80	N/A	Byproduct of drinking water disinfection	Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience liver, kidney, or central nervous system problems, and may have an increased risk of getting cancer.
HAA5 [Sum of 5 Haloacetic Acids] (µg/L)	0.060	1,000	60	N/A	Byproduct of drinking water disinfection	Some people who drink water containing haloacetic acids in excess of the MCL over many years may have an increased risk of getting cancer.
Bromate (µg/L)	0.010	1,000	10	0.1	Byproduct of drinking water disinfection	Some people who drink water containing bromate in excess of the MCL over many years may have an increased risk of getting cancer.
Chloramines (mg/L)	[MRDL = 4.0 (as Cl ₂)]	-	[MRDL = 4.0 (as Cl ₂)]	[MRDLG = 4 (as Cl ₂)]	Drinking water disinfectant added for treatment	Some people who use water containing chloramines well in excess of the MRDL could experience irritating effects to their eyes and nose. Some people who drink water containing chloramines well in excess of the MRDL could experience stomach discomfort or anemia.

Contaminant (CCR units)	Traditional MCL or [MRDL] in mg/L	To convert for CCR, multiply by	MCL or [MRDL] in units	PHG, (MCLG or MRDLG)	Major Sources in Drinking Water	Health Effects Language
Chlorine (mg/L)	[MRDL = 4.0 (as Cl ₂)]	-	[MRDL = 4.0 (as Cl ₂)]	[MRDLG = 4 (as Cl ₂)]	Drinking water disinfectant added for treatment	Some people who use water containing chlorine well in excess of the MRDL could experience irritating effects to their eyes and nose. Some people who drink water containing chlorine well in excess of the MRDL could experience stomach discomfort.
Chlorite (mg/L)	1.0	-	1.0	0.05	Byproduct of drinking water disinfection	Some infants and young children who drink water containing chlorite in excess of the MCL could experience nervous system effects. Similar effects may occur in fetuses of pregnant women who drink water containing chlorite in excess of the MCL. Some people may experience anemia.
Chlorine Dioxide (µg/L)	[MRDL = 0.8 (as ClO ₂)]	1,000	[MRDL = 800 (as ClO ₂)]	[MRDLG = 800 (as ClO ₂)]	Drinking water disinfectant added for treatment	Some infants and young children who drink water containing chlorine dioxide in excess of the MRDL could experience nervous system effects. Similar effects may occur in fetuses of pregnant women who drink water containing chlorine dioxide in excess of the MRDL. Some people may experience anemia.

Contaminant (CCR units)	Traditional MCL or [MRDL] in mg/L	To convert for CCR, multiply by	MCL or [MRDL] in CCR units	PHG, (MCLG or MRDLG)	Major Sources in Drinking Water	Health Effects Language
Control of DBP Precursors (TOC)	TT	-	TT	N/A	Various natural and manmade sources	Total organic carbon (TOC) has no health effects. However, total organic carbon provides a medium for the formation of disinfection byproducts. These byproducts include trihalomethanes (THMs) and haloacetic acids (HAAs). Drinking water containing these byproducts in excess of the MCL may lead to adverse health effects, liver or kidney problems, or nervous system effects, and may lead to an increased risk of cancer.

APPENDIX B: Regulated Contaminants with Secondary Drinking Water Standards

Monitoring required by section 64449 of the California Code of Regulations, Title 22.

Constituent	Secondary MCL (units)	To convert to CCR, multiply by	MCL in CCR units	Typical Source of Contaminant
Aluminum	0.2 mg/L	1,000	200 µg/L	Erosion of natural deposits; residual from some surface water treatment processes
Color	15 Units	-	15 Units	Naturally-occurring organic materials
Copper	1.0 mg/L	-	1.0 mg/L	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Foaming Agents [MBAS]	0.5 mg/L	1,000	500 µg/L	Municipal and industrial waste discharges
Iron	0.3 mg/L	1,000	300 µg/L	Leaching from natural deposits; industrial wastes
Manganese	0.05 mg/L	1,000	50 µg/L	Leaching from natural deposits
Methyl- <i>tert</i> -butyl ether [MTBE]	0.005 mg/L	1,000	5 µg/L	Leaking underground storage tanks; discharge from petroleum and chemical factories
Odor--- Threshold	3 Units	-	3 Units	Naturally-occurring organic materials
Silver	0.1 mg/L	1,000	100 µg/L	Industrial discharges
Thiobencarb	0.001 mg/L	1,000	1 µg/L	Runoff/leaching from rice herbicide
Turbidity	5 Units	-	5 Units	Soil runoff
Zinc	5.0 mg/L	-	5.0 mg/L	Runoff/leaching from natural deposits; industrial wastes

Total Dissolved Solids [TDS]	1,000 mg/L	-	1,000 mg/L	Runoff/leaching from natural deposits
Specific Conductance	1,600 μ S/cm	-	1,600 μ S/cm	Substances that form ions when in water; seawater influence
Chloride	500 mg/L	-	500 mg/L	Runoff/leaching from natural deposits; seawater influence
Sulfate	500 mg/L	-	500 mg/L	Runoff/leaching from natural deposits; industrial wastes

Note: There are no PHGs, MCLGs, or mandatory standard health effects language for these constituents because secondary MCLs are set on the basis of aesthetic concerns.

APPENDIX C: Monitored Contaminants with No MCLs

Background

The 1996 Amendments to the SDWA required the U.S. EPA to establish criteria for a monitoring program for unregulated contaminants, and to publish, once every five years, a list of no more than 30 contaminants to be monitored by public water systems (PWS). Section 64450 of the California Code of Regulations also required certain water systems to monitor a number of unregulated contaminants, with contaminant lists that were published or revised in 1990, 1996, 2000, and 2003. This section of the California Code of Regulations was repealed effective October 18, 2007. Water systems that continued to monitor for state unregulated contaminants are encouraged, but not required, to include the information regarding detected contaminants in the CCR. Although Section 64450 of the California Code of Regulations was repealed, the State Water Board may request water systems to monitor for specific contaminants per HSC section 116375(b).

Federal UCMR 1 (2001 – 2003 Monitoring)

The U.S. EPA published the first list of contaminants to monitor as part of the UCMR in September 1999. Contaminants were divided into two lists: Assessment Monitoring (List 1), and Screening Survey (List 2). Assessment Monitoring of List 1 contaminants was conducted by large PWS serving more than 10,000 people and 800 representative small PWS serving 10,000 or fewer people. Assessment Monitoring was conducted by each PWS over a 12-month period between 2001 and 2003. Screening Survey was conducted by a randomly selected set of 300 large and small PWSs for List 2 contaminants. Screening Survey for chemical contaminants was conducted in 2001 and 2002 for small and large PWS, respectively. Screening Survey for *Aeromonas* was conducted in 2003 for small and large PWS.

UCMR 1 List 1 – Assessment Monitoring	UCMR 1 List 2 – Screening Survey
<ul style="list-style-type: none">✓ 2,4-dinitrotoluene✓ 2,6-dinitrotoluene✓ Acetochlor✓ DCPA mono-acid degradate✓ DCPA di-acid degradate✓ 4,4'-DDE✓ EPTC✓ Molinate✓ MTBE✓ Nitrobenzene✓ Perchlorate✓ Terbacil	<ul style="list-style-type: none">✓ 1,2-diphenylhydrazine✓ 2-methyl-phenol✓ 2,4-dichlorophenol✓ 2,4-dinitrophenol✓ 2,4,6-trichlorophenol✓ <i>Aeromonas</i>✓ Alachlor ESA✓ Diazinon✓ Disulfoton✓ Diuron✓ Fonofos✓ Linuron✓ Nitrobenzene✓ Prometon

	<ul style="list-style-type: none"> ✓ Hexahydro-1,3,5-trinitro-1,3,5-triazine [RDX] ✓ Terbufos
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Federal UCMR 2 (2008 – 2010 Monitoring)

The U.S. EPA published the second list of contaminants to monitor as part of the UCMR in January 2007. Assessment Monitoring was required of all PWS serving more than 10,000 people and 800 representative PWS serving 10,000 or fewer people for List 1 contaminants. Assessment Monitoring was required of each PWS during a 12-month period from January 2008 to December 2010. Screening Survey was required of all PWS serving more than 100,000 people, 320 representative PWS serving 10,001 to 100,000 people, and 480 representative PWS serving 10,000 or fewer people for List 2 contaminants. Screening Survey was required of each PWS during a 12-month period from January 2008 to December 2010.

UCMR 2 List 1 – Assessment Monitoring	UCMR 2 List 2 – Screening Survey
<ul style="list-style-type: none"> ✓ Dimethoate ✓ Terbufos sulfone ✓ 2,2',4,4'-tetrabromodiphenyl ether ✓ 2,2',4,4',5-pentabromodiphenyl ether ✓ 2,2',4,4',5,5'-hexabromobiphenyl ✓ 2,2',4,4',5,5'-hexabromodiphenyl ether ✓ 2,2',4,4',6-pentabromodiphenyl ether ✓ 1,3-dinitrobenzene ✓ 2,4,6-trinitrotoluene (TNT) ✓ Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX) 	<ul style="list-style-type: none"> ✓ Acetochlor ethane sulfonic acid ✓ Acetochlor oxanilic acid ✓ Alachlor ethane sulfonic acid ✓ Alachlor oxanilic acid ✓ Metolachlor ethane sulfonic acid ✓ Metolachlor oxanilic acid ✓ Acetochlor ✓ Alachlor ✓ Metolachlor ✓ N-nitrosodiethylamine (NDEA) ✓ N-nitrosodimethylamine (NDMA) ✓ N-nitroso-di-n-butylamine (NDBA) ✓ N-nitroso-di-n-propylamine (NDPA) ✓ N-nitrosomethylethylamine (NMEA) ✓ N-nitrosopyrrolidine (NPYR)

Federal UCMR 3 (2013 – 2015 Monitoring)

The third UCMR list of contaminants was published in May 2012. Assessment Monitoring (List 1 Contaminants) was required of all PWS serving more than 10,000 people and 800 representative PWS serving 10,000 or fewer people. Assessment Monitoring was required of each PWS during a 12-month period from January 2013 to December 2015. Screening Survey (List 2 Contaminants) was required of all PWS serving more than 100,000 people, 320 representative PWS serving 10,001 to 100,000 people, and 480 representative PWS serving 10,000 or fewer people.

Screening Survey was required of each PWS during a 12-month period from January 2013 to December 2015.

Pre-screen Testing (List 3 Contaminants) was required from a selection of 800 representative PWS serving 1,000 or fewer people that do not disinfect. These PWS were selected because they have groundwater wells that were located in areas of karst or fractured bedrock. Monitored lasted 12 months between January 2013 and December 2015.

UCMR 3 List 1 – Assessment Monitoring	UCMR 3 List 2 – Screening Survey	UCMR 3 List 3 – Pre-Screen Testing
<ul style="list-style-type: none"> ✓ 1,2,3-trichloropropane ✓ 1,3-butadiene ✓ Chloromethane (methyl chloride) ✓ 1,2-dichloroethane ✓ Bromomethane (methyl bromide) ✓ Chlorodifluoromethane (HCFC-22) ✓ Bromochloromethane (halon 1011) ✓ 1,4-dioxane ✓ Vanadium ✓ Molybdenum ✓ Cobalt ✓ Strontium ✓ Chromium (total) ✓ Chromium-6 ✓ Chlorate ✓ Perfluorooctanesulfonate acid (PFOS) ✓ Perfluorooctanoic acid (PFOA) ✓ Perfluorononanoic acid (PFNA) ✓ Perfluorohexanesulfonic acid (PFHxS) ✓ Perfluoroheptanoic acid (PFHpA) ✓ Perfluorobutanesulfonic acid (PFBS) 	<ul style="list-style-type: none"> ✓ 17-β-estradiol ✓ 17-α-ethynylestradiol (ethinyl estradiol) ✓ 16-α-hydroxyestradiol (estriol) ✓ Equilin ✓ Estrone ✓ Testosterone ✓ 4-androstene-3,17-dione 	<ul style="list-style-type: none"> ✓ Enteroviruses ✓ Noroviruses

Federal UCMR 4 (2018 – 2020 Monitoring)

The fourth list of contaminants to monitor as part of the UCMR was published by the U.S. EPA in December 2016.

PWSs are required to monitor for 10 cyanotoxins at the entry point to the distribution system during a 4-consecutive month period from March 2018 through November 2020,

according to the table below. PWSs are also required to monitor for 20 additional chemical contaminants and indicators during a 12-month period from January 2018 through December 2020. The sampling site for these additional chemicals is the entry point to the distribution system, except for HAAs that need to be monitored at the Stage 2 D/DBPR sampling sites. The two indicators, *i.e.*, TOC and bromide, need to be monitored at source water intakes.

System Size (Population Served)	10 Cyanotoxins	20 Chemicals
Small Systems (25 – 10,000)	800 randomly selected surface water or ground water under the direct influence of surface water (GWUDI) systems	A different group of 800 randomly selected surface water systems, GWUDI and groundwater systems
Large Systems (10,001 or more)	All surface water and GWUDI systems	All surface water, groundwater and GWUDI systems

The 10 cyanotoxins and 20 additional chemical contaminants and indicators are listed in the table below.

UCMR 4 Chemical Contaminants and Indicators

Cyanotoxins	Minimum Reporting Level
Total Microcystin	0.3 µg/L
Microcystin-LA	0.008 µg/L
Microcystin-LF	0.006 µg/L
Microcystin-LR	0.02 µg/L
Microcystin-LY	0.009 µg/L
Microcystin-RR	0.006 µg/L
Microcystin-YR	0.02 µg/L
Nodularin	0.005 µg/L
Anatoxin-a	0.03 µg/L
Cylindrospermopsin	0.09 µg/L

Additional Chemicals	Minimum Reporting Level
Germanium	0.3 µg/L
Manganese	0.4 µg/L

Alpha-hexachlorocyclohexane	0.01 µg/L
Chlorpyrifos	0.03 µg/L
Dimethipin	0.2 µg/L
Ethoprop	0.03 µg/L
Oxyfluorfen	0.05 µg/L
Profenofos	0.3 µg/L
Tebuconazole	0.2 µg/L
Total Permethrin (cis- & trans-)	0.04 µg/L
Tribufos	0.07 µg/L
HAA5	N/A
HAA6Br ¹	N/A
HAA9 ²	N/A
1-butanol	2.0 µg/L
2-methoxyethanol	0.4 µg/L
2-propen-1-ol	0.5 µg/L
butylated hydroxyanisole	0.03 µg/L
o-toluidine	0.007 µg/L
quinoline	0.02 µg/L
Total Organic Carbon (TOC)	N/A
Bromide	N/A

¹ HAA6Br: Bromochloroacetic acid, bromodichloroacetic acid, dibromoacetic acid, dibromochloroacetic acid, monobromoacetic acid, and tribromoacetic acid.

² HAA9: Bromochloroacetic acid, bromodichloroacetic acid, chlorodibromoacetic acid, dibromoacetic acid, dichloroacetic acid, monobromoacetic acid, monochloroacetic acid, tribromoacetic acid, and trichloroacetic acid.

Reporting

U.S. EPA is essentially silent on the issue of reporting federal UCMR contaminants beyond the previous calendar year's detections, other than to say it is not required and that data older than five years need not be reported. As a result, the State Water Board recommends systems to report data for five years from the date of the last sampling.

APPENDIX D: State Contaminants with Notification Levels

Inclusion of the Notification Level (NL) and health effects language for contaminant concentrations detected above the NL is recommended, but not required.

Chemical	Notification Level	Health Effects Language (Optional)
Boron	1 mg/L	Boron exposures resulted in decreased fetal weight (developmental effects) in newborn rats.
n-Butylbenzene	260 µg/L	Exposures to cumene (isopropylbenzene), a surrogate for n-, sec-, and tert-butylbenzene, resulted in increased kidney weight in rats.
sec-Butylbenzene	260 µg/L	Exposures to cumene (isopropylbenzene), a surrogate for n-, sec-, and tert-butylbenzene, resulted in increased kidney weight in rats.
tert-Butylbenzene	260 µg/L	Exposures to cumene (isopropylbenzene), a surrogate for n-, sec-, and tert-butylbenzene, resulted in increased kidney weight in rats.
Carbon Disulfide	160 µg/L	Carbon disulfide exposures resulted in decreased motor conduction velocity in people.
Chlorate	800 µg/L	Animal studies demonstrated that chlorate exposure in rats caused adverse effects to the pituitary and thyroid glands.
2-Chlorotoluene	140 µg/L	2-Chlorotoluene exposures resulted in decrease in body weight gain in rats.
4-Chlorotoluene	140 µg/L	4-Chlorotoluene is expected to have health effects similar to those of 2-chlorotoluene.
Diazinon	1.2 µg/L	Diazinon exposures may result in neurotoxic effects.
Dichlorodifluoromethane [Freon 12]	1 mg/L	Dichlorodifluoromethane exposures resulted in reduced body weight in rats.
1,4-Dioxane	1 µg/L	1,4-Dioxane exposures resulted in cancer, based on studies in laboratory animals.
Ethylene Glycol	14 mg/L	Ethylene glycol exposures resulted in kidney toxicity in rats.

Chemical	Notification Level	Health Effects Language (Optional)
Formaldehyde	100 µg/L	Formaldehyde exposures resulted in reduced weight gain and histopathology in rats.
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine [HMX]	350 µg/L	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine exposures resulted in liver lesions in rats.
Isopropylbenzene	770 µg/L	Isopropylbenzene exposures resulted in increased kidney weight in rats.
Manganese	500 µg/L	Manganese exposures resulted in neurological effects. High levels of manganese in people have been shown to result in adverse effects to the nervous system.
Methyl Isobutyl Ketone [MIBK]	120 µg/L	Methyl isobutyl ketone exposures resulted in increased kidney and liver weight, and kidney pathology in rats.
Naphthalene	17 µg/L	Naphthalene exposures resulted in decreased body weight in rats.
N-Nitrosodiethylamine [NDEA]	10 ng/L	N-nitrosodiethylamine exposures resulted in cancer in a variety of laboratory animals.
N-Nitrosodimethylamine [NDMA]	10 ng/L	N-nitrosodimethylamine exposures resulted in cancer in a variety of laboratory animals.
N-Nitrosodi-n-propylamine [NDPA]	10 ng/L	N-nitrosodi-n-propylamine exposures resulted in cancer in a variety of laboratory animals.
Perfluorobutane sulfonic acid (PFBS)	500 ng/L	Perfluorobutane sulfonic acid exposures resulted in decreased thyroid hormone in pregnant female mice.
Perfluorohexane Sulfonic Acid [PFHxS]	3 ng/L	Perfluorohexane sulfonic acid exposures resulted in decreased total thyroid hormone in male rats.
Perfluorooctanoic Acid [PFOA]	5.1 ng/L **	Perfluorooctanoic acid exposures resulted in increased liver weight and cancer in laboratory animals.
Perfluorooctanesulfonic Acid [PFOS]	6.5 ng/L **	Perfluorooctanesulfonic acid exposures resulted in immune suppression and cancer in laboratory animals.
Propachlor	90 µg/L	Propachlor exposures resulted in decrease in weight gain, decrease in food intake, and relative liver weight increase in rats.

Chemical	Notification Level	Health Effects Language (Optional)
n-Propylbenzene	260 µg/L	Exposures to cumene (isopropylene), a surrogate for n-propylbenzene, resulted in increased kidney weight in rats.
Hexahydro-1,3,5-trinitro-1-3-5-triazine [RDX]	300 ng/L	Hexahydro-1,3,5-trinitro-1-3-5-triazine exposures resulted in liver carcinomas and adenomas in female mice.
Tertiary Butyl Alcohol [TBA]	12 µg/L	Tert-butyl alcohol exposures resulted in cancer in laboratory animals.
1,2,4-Trimethylbenzene	330 µg/L	1,2,4-Trimethylbenzene exposures resulted in increased serum phosphorus levels in rats.
1,3,5-Trimethylbenzene	330 µg/L	1,3,5-Trimethylbenzene exposures resulted in increased serum phosphorus levels in rats.
2,4,6-Trinitrotoluene [TNT]	1 µg/L	2,4,6-Trinitrotoluene exposures resulted in urinary bladder transitional cell papillomas and squamous cell carcinomas in female rats.
Vanadium	50 µg/L	Vanadium exposures resulted in developmental and reproductive effects in rats.

** The July 2018 notification levels for PFOA of 14 ng/L and for PFOS of 13 ng/L were superseded on August 22, 2019, with new notification levels 5.1 ng/L for PFOA and 6.5 ng/L for PFOS.

APPENDIX E: Special Language for Nitrate, Arsenic, Lead, Radon, *Cryptosporidium*, Ground Water Systems, and Surface Water Systems

- (A) **Nitrate:** For systems that detect nitrate **above 5 mg/L as nitrogen, but below 10 mg/L as nitrogen**, the following language is REQUIRED:

Nitrate in drinking water at levels above 10 mg/L is a health risk for infants of less than six months of age. Such nitrate levels in drinking water can interfere with the capacity of the infant's blood to carry oxygen, resulting in serious illness; symptoms include shortness of breath and blueness of the skin. Nitrate levels above 10 mg/L may also affect the ability of the blood to carry oxygen in other individuals, such as pregnant women and those with specific enzyme deficiencies. If you are caring for an infant, or you are pregnant, you should ask advice from your health care provider.

If a utility cannot demonstrate to the State Water Board with at least five years of the most current monitoring data that its nitrate levels are stable, it must also add the following language to the preceding statement on nitrate:

Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity.

- (B) **Arsenic:** For systems that detect arsenic **above 5 µg/L, but below or equal to 10 µg/L**, the following language is REQUIRED:

While your drinking water meets the federal and state standard for arsenic, it does contain low levels of arsenic. The arsenic standard balances the current understanding of arsenic's possible health effects against the cost of removing arsenic from drinking water. The U.S. Environmental Protection Agency continues to research the health effects of low levels of arsenic, which is a mineral known to cause cancer in humans at high concentrations and is linked to other health effects such as skin damage and circulatory problems.

- (C) **Lead³:** Consistent with 40 CFR section 141.154(d)(1), every Consumer Confidence Report (CCR) must include the lead-specific language shown below. A water system may provide its own educational statement, but only after consulting with the State Water Board.

³ All water systems are required to comply with the state Lead and Copper Rule (LCR). Water systems are also required to comply with the federal LCR, and its revisions and corrections. The 2007 Short-term Revisions of the LCR included mandatory language requirements that have not yet been adopted by the State Water Board.

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. [NAME OF UTILITY] is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. [Optional: If you do so, you may wish to collect the flushed water and reuse it for another beneficial purpose, such as watering plants.] If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at <http://www.epa.gov/lead>.

Consistent with the California Code of Regulations, section 64482(c), systems that detect lead above 15 µg/L in more than 5 percent, and up to and including 10 percent, of sites sampled (or if your system samples fewer than 20 sites and has even one sample above the Action Level [AL]), the following language is REQUIRED:

Infants and young children are typically more vulnerable to lead in drinking water than the general population. It is possible that lead levels at your home may be higher than at other homes in the community as a result of materials used in your home's plumbing. If you are concerned about elevated lead levels in your home's water, you may wish to have your water tested and/or flush your tap for 30 seconds to 2 minutes before using tap water. Additional information is available from the U.S. EPA Safe Drinking Water Hotline (1-800-426-4791).

- (D) **Radon:** Systems that performed monitoring that indicates the presence of radon in the finished water MUST include the results of the monitoring and an explanation of the significance of the results. The following language MAY be used:

We constantly monitor the water supply for various contaminants. We have detected radon in the finished water supply in _____ out of _____ samples tested. There is no federal regulation for radon levels in drinking water. Exposure over a long period of time to air transmitting radon may cause adverse health effects.

The language below MAY be included if the level of information is helpful.

Radon is a radioactive gas that you cannot see, taste, or smell. It is found throughout the U.S. Radon can move up through the ground and into a home through cracks and holes in the foundation. Radon can build up to high levels in all types of homes. Radon can also get into indoor air when released from tap water from showering, washing dishes, and other household activities. Compared to radon entering the home through soil, radon entering the home through tap water will in most cases be a small source of radon in indoor air. Radon is a known

human carcinogen. Breathing air containing radon can lead to lung cancer. Drinking water containing radon may also cause increased risk of stomach cancer. If you are concerned about radon in your home, test the air in your home. Testing is inexpensive and easy. You should pursue radon removal for your home if the level of radon in your air is 4 picocuries per liter of air (pCi/L) or higher. There are simple ways to fix a radon problem that are not too costly. For additional information, call your State radon program (1-800-745-7236, the U.S. EPA Safe Drinking Water Act Hotline (1-800-426-4791), or the National Safe Council Radon Hotline (1-800-767-7236).

- (E) **Cryptosporidium:** Systems that have performed any monitoring for *Cryptosporidium* that indicates that *Cryptosporidium* may be present in the source water or finished water MUST include the results of the monitoring and an explanation of the significance of the results. The following language MAY be used:

Cryptosporidium is a microbial pathogen found in surface water throughout the U.S. Although filtration removes Cryptosporidium, the most commonly-used filtration methods cannot guarantee 100 percent removal. Our monitoring indicates the presence of these organisms in our source water and/or finished water. Current test methods do not allow us to determine if the organisms are dead or if they are capable of causing disease. Ingestion of Cryptosporidium may cause cryptosporidiosis, an abdominal infection. Symptoms of infection include nausea, diarrhea, and abdominal cramps. Most healthy individuals can overcome the disease within a few weeks. However, immuno-compromised people, infants, small children, and the elderly are at greater risk of developing life-threatening illness. We encourage immuno-compromised individuals to consult their doctor regarding appropriate precautions to take to avoid infection. Cryptosporidium must be ingested to cause disease, and it may be spread through means other than drinking water.

- (F) **Groundwater Systems:** For ground water systems that had a treatment technique (TT) violation described in Item S of the document titled “*Instructions for Completing the 2022 CCR for Small Water Systems*”, the following language MAY be used to describe the potential health effects. The U.S. Environmental Protection Agency (EPA) did not provide standard health effect language for these TT violations in the Ground Water Rule; U.S. EPA provided the language in their guidance to water systems.

Inadequately protected or treated water may contain disease-causing organisms. These organisms can cause symptoms such as diarrhea, nausea, cramps, and associated headaches.

- (G) **Surface Water Systems:** For surface water systems that had a TT violation under the **Surface Water Treatment Rule (SWTR)**, **Interim Enhanced Surface Water Treatment Rule (IESWTR)**, **Filter Backwash Recycling Rule (FBRR)**, or **Long-term 1 Enhanced Surface Water Treatment Rule (LT1ESWTR)**, as described in

Item U of the document titled “*Instructions for Completing the 2022 CCR for Small Water Systems*”, the following language is REQUIRED to describe the potential health effects:

Inadequately treated water may contain disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea, and associated headaches.

For surface water systems that had a TT violation under the **Long-term 2 Enhanced Surface Water Treatment Rule (LT2ESWTR)**, as described in Item U of the document titled “*Instructions for Completing the 2022 CCR for Small Water Systems*”, the following language MAY be used to describe the potential health effects. U.S. EPA did not provide standard health effect language for these TT violations in the LT2ESWTR; U.S. EPA provided the language in their guidance to water systems.

LT2ESWTR TT Violation and Health Effects Language

LT2ESWTR TT Violation	Health Effects Language
Uncovered and Untreated Finished Water Reservoir	<i>Inadequately protected water may contain disease-causing organisms. These organisms can cause symptoms such as diarrhea, nausea, cramps, and associated headaches.</i>
Determine and Report Bin Classification	<i>Inadequately treated water may contain disease-causing organisms. These organisms can cause symptoms such as diarrhea, nausea, cramps, and associated headaches.</i>
Provide or Install an Additional Level of Treatment	<i>Inadequately treated water may contain disease-causing organisms. These organisms can cause symptoms such as diarrhea, nausea, cramps, and associated headaches.</i>