Preparing Your CALIFORNIA Drinking Water Consumer Confidence Report (CCR)

Guidance for Water Suppliers

January 2, 2015 update

(Information added since Jan 2014 has been highlighted in yellow; some out-of-date guidance has simply been deleted)

Disclaimer

This document provides guidance to water suppliers on the State Water Resources Control Board (State Board), Division of Drinking Water's current interpretation of the California Consumer Confidence Report regulations that took effect May 26, 2001, and were revised September 1, 2006. The guidance is designed to implement State and national policy on these issues. 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 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 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.

The general description provided here may not apply to a particular situation based on the circumstances. Interested parties are free to raise questions and objections about the substance of this guidance and the appropriateness of the application of this guidance to a particular situation. State decision makers retain the discretion to adopt approaches on a case-by-case basis that differ from this guidance where appropriate. The State Board may change this guidance in the future.

NOTE: Subsequent to the 2014 data CCR, there are certain to be changes in required content in terms of newly adopted Maximum Contaminant Levels, Public Health Goals, and other revised regulatory requirements. These will be posted on the State Board's website, but the guidance itself may not be revised accordingly, most specifically, the appendices. Therefore, the water supplier should be aware that this guidance provides the details necessary to do only the CCR due July 2015.

Contents

Acronyms

AL	Action Level
AWQR	Annual Water Quality Report
CCR	Consumer Confidence Report
CDC	Centers for Disease Control
CFR	Code of Federal Regulations
CT	Contact-Time
DBPP	Disinfection Byproduct Precursor
DDW	Division of Drinking Water
DLR	Detection Limit for Purposes of Reporting
DWSRF	Drinking Water State Revolving Fund
FBRR	Filter Backwash Recycling Rule
GWR	Ground Water Rule
HAA5	Haloacetic Acids (five)
IESWTR	Interim Enhanced Surface Water Treatment Rule
LCR	Lead and Copper Rule
LPA	Local Primacy Agency
LT1ESWTR	Long-Term 1 Enhanced Surface Water Treatment Rule
LT2ESWTR	Long-Term 2 Enhanced Surface Water Treatment Rule
LRAA	Locational Running Annual Average
MCL	Maximum Contaminant Level
MCLG	Maximum Contaminant Level Goal
MDA	Minimum Detectable Activity
mg/L	milligrams per liter
mrem	millirems
mrem/yr	millirems per year
MRDL	Maximum Residual Disinfectant Level
MRDLG	Maximum Residual Disinfectant Level Goal
N/A or n/a	Not Applicable
ND	Non-Detected
NTU	Nephelometric Turbidity Units
pCi/L	picocuries per liter
PDWS	Primary Drinking Water Standard
PHG	Public Health Goal
ppb	parts per billion
ppm	parts per million
ppt	parts per trillion
ppq	parts per quadrillion
PWS	Public Water System
RAA	Running Annual Average
Stage 1 D/DBPR	Stage 1 Disinfectants and Disinfection Byproducts Rule
Stage 2 D/DBPR	Stage 2 Disinfectants and Disinfection Byproducts Rule
SWRCB	State Water Resources Control Board

SWTR	Surface Water Treatment Rule
TCR	Total Coliform Rule
TOC	Total Organic Carbon
TT	Treatment Technique
TTHM	Total Trihalomethanes
UCMR	Unregulated Contaminant Monitoring Rule
USEPA	United States Environmental Protection Agency

Introduction

This guide is intended to be used by water suppliers who are preparing their annual Consumer Confidence Reports (CCR). It explains the requirements for report content, format, and distribution required for conformance with the State regulations [Title 22, Chapter 15, Article 20] and law [California Health and Safety Code, section 116470]. The State regulations took effect on May 26, 2001, and were subsequently amended on September 1, 2006, with the adoption of the Public Notification regulations.

As the system operator/manager, you are a guardian of the quality of your drinking water supply and of the public health in your community. It is important to communicate to your customers, and your customers have the right to know, the source of their water and what is in the water they drink. CCRs help consumers to make informed choices that affect the health of themselves and their families. The reports also encourage consumers to consider and appreciate the challenges of delivering safe drinking water. Educated consumers are more likely to help protect their drinking water sources and to understand the true costs of safe drinking water.

Water suppliers, states, and USEPA are all working to educate consumers about the sources, quality, and delivery of their drinking water, and to increase their involvement in decisions about it. Systems and states encourage citizens to participate in decision-making regarding source water assessment and protection programs and use of the Drinking Water State Revolving Fund (DWSRF), which provides funding for infrastructure upgrades and treatment improvements. Consumers who are familiar with the basic drinking water information in CCRs will be able to participate more effectively in these processes.

I. What is a consumer confidence report (CCR)?

In 1996, Congress amended the Safe Drinking Water Act, adding a requirement that water systems deliver to their customers a brief annual water quality report, similar to the Annual Water Quality Report (AWQR) that California water systems began distributing in 1990. However, the CCR regulatory requirements are more specific and detailed in terms of content and format than those for the AWQR. These CCRs summarize information that your water system already collects to comply with regulations. The CCR regulation does not require you to engage in any new monitoring to complete your CCR.

The CCR includes information on source water, levels of any detected contaminants, and compliance with drinking water regulations (including monitoring requirements), plus some educational information. Most reports fit on a few sheets of paper. A report that contains *too much* information or is full of technical jargon can discourage consumers from learning about their drinking water. Beyond a mandatory requirement, a CCR is an opportunity to communicate the value of water (both as a product and as a service), to promote wise use, to build community trust and customer satisfaction, and to encourage investment in resource protection and infrastructure.

II. Who must prepare a CCR?

Every community water system and every nontransient-noncommunity water system must prepare and distribute a report.

A system may contract with a laboratory or other third-party to provide monitoring data analysis or CCR development assistance. If the system chooses to use a laboratory/third-party to assist with the development of the CCR, the system must work with the laboratory/third-party to make sure that all of the required elements are included in the CCR. Otherwise, a system may need to add the missing elements. Regardless of who prepared the CCR, the system is ultimately responsible of the content and must always distribute the CCR to its customer.

Wholesale systems (drinking water systems that sell water to one or more systems) are not responsible for creating a CCR for their consecutive systems (systems that purchase water from the wholesale system), nor are they responsible for providing data on contaminants that the consecutive system monitors (such as total coliforms, lead, or TTHMs). However, wholesale systems are responsible for providing the consecutive system with relevant source information and monitoring and compliance data so that the consecutive system can include this information in their CCR.

In some cases, a consecutive system will contract with the wholesale system to produce the report. There are several options in this relationship. If the consecutive system had no new data to add, it could simply send out the wholesale system's CCR with a cover letter explaining their relationship. If the consecutive system did need to add data, it might choose to reprint the wholesaler system's CCR with a new title/letterhead and the additional data (most consecutive systems will at least need total coliform data). Either of these options is acceptable. Regardless of who produces the CCR, the consecutive system is still responsible for ensuring that its customers receive a report containing all required content.

III. When must a water system distribute its CCR?

You must deliver your annual CCR to consumers by July 1 of each year. The first report prepared according to the state CCR requirements was due July 1, 2001. The CCRs are based on data collected during, or prior to, the previous calendar year. For example, data collected between January and December 2014 must be reported in the 2014 CCR, which is due to customers by July 1, 2015. If you monitor less frequently than annually, you will need to use your most recent data even though it is outside of the previous calendar year. This is further discussed in Part IV, Item 4.

A new community or nontransient-noncommunity water system must deliver its first report by July 1 of the year after its first full calendar year in operation, and annually thereafter.

A wholesale system must provide the consecutive system with the previous calendar year's monitoring data and other information by April 1 of each year unless the two systems make a different contractual agreement. This gives the consecutive system enough time to prepare their CCR before the July 1 deadline.

IV. What content is required in the CCR?

This guidance describes California's requirements for a CCR and suggests (using the words "we encourage," "should," and "may") other sections or explanations that will help your customers understand the report. **Note** that California requires more information and, in some cases, different information than the federal rule, so be sure to follow state regulations and this guidance, not the federal rule or guidance. If you are familiar with the federal requirements, you should be aware of the following differences between the federal and state rules; the state regulations require:

- Both community and nontransient-noncommunity water systems to distribute CCRs.
- Inclusion of public health goals (PHGs) in place of MCLGs for detected contaminants, unless no PHG has been adopted.
- Modified language for definitions.
- Additional definitions (PHG and primary drinking water standard).
- Modified language for contaminant sources and health effects.
- Inclusion of secondary MCLs for any detected contaminants along with any detected levels for sodium and hardness.
- Use of State MCLs only (USEPA MCLs are not required).
- In addition to information on how to obtain a copy of a completed source water assessment, both the completion date (or when last updated) and a vulnerability summary written by the party conducting the assessment.
- A notice in Spanish informing people that the information therein is important; notices in other languages are required if specific regulatory criteria is met [see Section 64481(l)].

The State Board encourages you to tailor the content of your CCR to local conditions. If you think that an added picture or graph would help your customers to understand your report, add it. If your customers would benefit from an explanation of your need for new treatment facilities, tell them. Provide information to your consumers in a way that they understand. For example, when discussing units of measure, explain it in terms that a consumer may understand: a ppm is equivalent to 1 second in 11.5 days. As long as any additional educational information is consistent with, and not detracting from, the purpose of the report, you may add it. For example, the CCR regulation does not require a title for your report. However, you should give your report a title to catch the customer's attention. You may call the report a "Consumer Confidence Report," a "Water Quality Report," or choose another title.

Customers are most interested in a clear statement of whether or not their drinking water meets all standards. Although it is not required by the regulations, you will help your customers if you tell them whether their water met all drinking water standards. Be cautious in using the word "safe" since water that meets standards and is safe for most people might not be safe for infants, chemotherapy patients, or people with HIV/AIDS. Also, using the term "safe" if you have had an MCL or regulatory action level (AL) exceedance can be misleading to the customer.

EXAMPLE – Last year, as in years past, your tap water met all USEPA and State drinking water health standards. Water System vigilantly safeguards its water supplies and once again, we are proud to report that our system has never violated a maximum contaminant level or any other water quality standard. [**or, if you had a violation, begin with:** *Last year, we conducted more than __ tests for over 80 contaminants. We only detected __ of these contaminants, and found only __ at a level higher than the State allows. As we told you at the time, our water temporarily exceeded drinking water standards. For more information, see the paragraph marked* ***Violation*** *on the back.*] *This brochure is a snapshot of last year's water quality. Included are details about where your water comes from, what it contains, and how it compares to State standards. We are committed to providing you with information because informed customers are our best allies.*

Research conducted by the American Water Works Association Research Foundation described three important phases in facilitating customer understanding of the information in a CCR:

- **Initial Sort**: Customers are less likely to discard the CCR as "junk mail" if it looks professional, distinct, and prominently displays the utility's name. However, glossy full-color reports are not necessary.

- **Skimming**: For the reader who chooses to skim the document, important and concise messages about water quality that are prominently displayed will attract attention. However, statements about the safety of water should not be over-stated, and specific warnings regarding health risks for sensitive sub-populations must be included. The use of color will draw attention and can be used to guide the reader through the CCR. Maps, simple tables, and photographs present information quickly and effectively.

- **Reading**: If the above challenges are addressed, a customer will hopefully choose to read the entire CCR. The document should not be designed to persuade the reader, it should inform the reader. A brief table of contents at the very beginning will help to guide the reader. Contaminant tables should be simple and should not require special instructions. The use of large fonts in an uncrowded format is desirable. Discussions regarding detected contaminants are helpful and should promote creditability.

Eight basic items must be included in all CCRs. These items are summarized in the following Checklist for Completed CCR shown on the next page.

CHECKLIST FOR COMPLETED CCR
Basic CCR Requirements

Item 1 – Water System Information

- ☐ Name/phone number of contact person
- ☐ Information on public participation opportunities
- ☐ Information in Spanish that report content is important or offer additional information
- ☐ Information for other non-English speaking populations, if applicable

Item 2 – Sources of Water

- ☐ Type, name, and location of water sources
- ☐ If source water assessment completed: completion date (or when last updated), availability and how to obtain it, and vulnerability assessment

Item 3 – Definitions (specific language)

- ☐ MCL
- ☐ MCLG
- ☐ PHG
- ☐ Primary drinking water standard
- ☐ Others as needed (MRDL, MRDLG, regulatory action level, treatment technique, variances and exemptions)

Item 4 – Reported Levels of Detected Contaminants (in one or more tables)

- ☐ Summary of data on detected regulated and unregulated contaminants [both federal and state lists]
- ☐ MCL or MRDL expressed as a number equal to or greater than 1.0 and the PHG (or MCLG) or MRDLG in the same units
- ☐ TT or regulatory action level designation if there is no MCL or MRDL
- ☐ Compliance monitoring data in MCL/MRDL units for year of report, with detected level and range of sample results (see regulations and guidance Appendix C)
- ☐ For turbidity: reporting differs (see regulations and guidance)
- ☐ For coliforms: reporting differs (see regulations and guidance)
- ☐ For lead/copper: 90^{th} percentile value, no. of sites sampled, and no. of sites exceeding action level
- ☐ For unregulated contaminants: average and range of contaminant detections
- ☐ If monitoring less than once a year: date of most recent sample, result, and statement that data is from most recent sampling
- ☐ Known or likely source of each detected contaminant with an MCL/MRDL/TT/regulatory AL
- ☐ MCL/MRDL/TT/regulatory AL violations highlighted
- ☐ Definitions of all units used in the table

Item 5 – Information on Monitoring for *Cryptosporidium*, Radon, and Other Contaminants

- ☐ Warning for vulnerable populations about *Cryptosporidium*, if detected
- ☐ Explanation of radon and its presence in the finished water, if detected
- ☐ Explanation of unregulated contaminants and their presence in drinking water, if detected

Item 6 – Compliance with Other Drinking Water Regulations

- ☐ Explanation of violation: length of violation, potential health effects (health effects language available for primary MCL, MRDL, TT, and regulatory AL), and steps taken to correct the violation
- ☐ Special notices for GWR

Item 7 – Variances and Exemptions

- ☐ Explanation of variance/exemption, if applicable

Item 8 – Required Educational Information (specific language)

- ☐ Explanation of contaminants and their presence in drinking water
- ☐ Explanation regarding contaminants that may reasonably be expected to be found in drinking water, including bottled water
- ☐ Information to customers that some people may be more vulnerable to contaminants in drinking water
- ☐ Informational statements on nitrate, arsenic, and lead, if applicable

Each item is discussed in detail below.

Item 1: Water system information

Identify the name of your water system, and provide the following information about it:

- The name and telephone number of a person at the water system who can answer questions about the report.

- A list of known opportunities for public participation in decisions that affect drinking water quality (e.g., time and place of regularly-scheduled water board or city/county council meetings). If you do not have regularly-scheduled meetings, tell customers how to get information when meetings are announced.

All systems in California must contain information in Spanish expressing the importance of the report or offer additional information (i.e., a telephone number or address where Spanish-speaking residents may contact the system to obtain a translated copy of the report in Spanish or assistance in Spanish).

In addition, for each non-English speaking group other than Spanish-speaking that exceeds 1,000 residents or 10% of the residents in the community, the system must include information in the appropriate language(s) expressing the importance of the report or offer additional information in that language (i.e., a telephone number or address where such residents may contact the system to obtain a translated copy of the report or assistance in the appropriate language). To help determine what languages are needed, systems can get information on non-English speaking populations from census data (www.census.gov), county offices, and local agencies supporting different ethnic groups.

EXAMPLE – This report contains important information about your drinking water. Translate it, or speak with someone who understands it.

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

- **French:** Ce rapport contient des informations importantes sur votre eau potable. Traduisez-le ou parlez en avec quelqu'un qui le comprend bien.

- **Additional Languages:** See Appendix E.

Item 2: Source(s) of water

Describe your water type (e.g., ground water, surface water, or a blend), the commonly-used name(s) (if such a name exists), and the general locations of your water source(s) (e.g., Well 1 located in our service area; East Well from the *name-of-aquifer*; or South Spring located in *name-of-foothill, mountain, or watershed area*). We encourage you to provide a simple map of your system's sources without a detailed description of their location for security reasons. Note

that water systems currently have the flexibility to address security concerns. Listing the water body where the intake is located for a surface water source and the name of the principal aquifer for a ground water source would be appropriate. Treatment plant location is not required.

For some more complicated systems, explaining your various interconnections and back-up sources may be difficult, but it is important that consumers understand that the source of their water may vary during the year. Remember to include in your table of detected contaminants monitoring data for these "additional" sources if you use water from them. If your situation is complex, you may need to describe the types of sources and how they are used; work with someone from the State Board or Local Primacy Agency (LPA) to decide what information belongs in your report.

If a source water assessment has been completed, tell customers the date it was completed (or last updated), that it is available, and where to get a copy, and provide a brief summary of your source water's vulnerability to contamination based on the assessment findings.

In cases where the information is available, we encourage you to highlight potential significant source of contamination in the source water area. Including this information in the CCR is an opportunity for you to provide customers with an explanation for why a contaminant is present in the source water.

If the State 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. The following is an example provided by the Drinking Water Source Assessment and Protection Program.

EXAMPLE – An assessment of the drinking water source(s) for Water System was completed in month and year. The source(s) are considered most vulnerable to the following activities associated with contaminants detected in the water supply: _____, _____, and _____. In addition, the source is considered most vulnerable to these activities: _____, _____, _____, and _____.

A copy of the complete assessment is available at SWRCB, DDW District Office address or Water System Address. You may request a summary of the assessment be sent to you by contacting SWRCB, DDW district engineer or Water System Representative at phone number.

If you do not have information from the source water assessment, we encourage you to include any other information about potential sources of contamination that is readily available to you; for example, information contained in a sanitary survey.

We also encourage you to use the CCR as a way to discuss appropriate source water protection actions that are in the planning stages or are already in place. This discussion is an ideal opportunity to invite public participation in locally based source water protection efforts as well. Systems may also wish to provide ways they can protect the source water. **Remember, this is your opportunity to educate your customers about the impacts they and others have on the quality of source water**.

Item 3: Definitions

Every CCR must include definitions of key terms that consumers will need to understand the contaminant data. You must use the definitions listed below.

- **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.

- **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.

- **Primary Drinking Water Standard (PDWS)**: MCLs and MRDLs for contaminants that affect health along with their monitoring and reporting requirements, and water treatment requirements.

Include the following definitions only if you treat your water with a chemical disinfectant in any part of the treatment process or provide water that contains a chemical disinfectant:

- **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.

Include the following definitions only if your report contains information on a detected contaminant that is regulated by a regulatory action level (e.g., lead) or a treatment technique (e.g., turbidity):

- **Regulatory Action Level**: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.

- **Treatment Technique (TT)**: A required process intended to reduce the level of a contaminant in drinking water.

Include the following definition only if your water system operated under a variance or exemption during the calendar year that the report describes:

- **Variances and Exemptions**: State Board permission to exceed an MCL or not comply with a treatment technique under certain conditions.

Item 4: Reporting levels of detected contaminants

An essential part of the CCR is the table that shows the highest level of each detected contaminant (this is usually the value you report to the State Board to determine compliance) and range of levels of that contaminant you found during the CCR calendar year (assuming more than one sample was collected). See Appendix C for how to interpret monitoring data and determine the levels to enter in the tables.

A detected contaminant is any contaminant detected at or above its detection level for purposes of reporting (DLR) (See Appendix B). **Do not include contaminants in the table that are not detected or are detected below the DLR.** If you sometimes distribute water from emergency or back-up sources, you generally need to include monitoring results from these sources in the ranges of detections that you report in the table, unless the source's contribution is insignificant (e.g., one day per year).

The main table of **detected** contaminants must contain only data about (1) regulated contaminants [contaminants subject to an MCL, MRDL, regulatory action level (AL), or treatment technique (TT)], (2) unregulated contaminants for which USEPA or the State Board requires monitoring under 40 CFR 141.40[1] or California Code of Regulations, Title 22, Chapter 15, Section 64450[2], respectively, and (3) sodium and hardness. See page 24 for special instructions about *Cryptosporidium*, radon, and other contaminants.

You may make several tables to separate regulated contaminants from unregulated contaminants. You may want to organize your table(s) by contaminant type (e.g., microbial, inorganic) or sampling site (e.g., treatment plant, distribution system). Report any additional monitoring data in another section of the CCR, separated from the regulated contaminant data (e.g., data specified in the regulations). If you want to list all the contaminants that you monitored but did not detect, you must do so outside of the table(s) of detected contaminants.

To ensure that consumers can easily compare detected contaminant levels to their MCLs, your table must display the MCL for each contaminant in units that express it as a number equal to or greater than 1.0. For contaminants with primary MCLs, report the PHG (use the MCLG if no

[1] USEPA 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 5 years need not be reported. As a result, the State Board recommends systems to report the data for 5 years.

[2] Results of monitoring under former section 64450 (UCMR) need only be included for 5 years from the date of the last required sampling or until any of the detected contaminants becomes regulated and subject to routine monitoring requirements, whichever comes first. Water systems that continue to monitor for UCMR contaminants are encouraged to include the information in the CCR to keep their customers informed. Section 64450 was repealed effective October 18, 2007.

PHG has been set) and level of the detected contaminant in the same units as the MCL.[3] For example, atrazine is usually reported in mg/L. It is easier for customers to see that your water contains atrazine at a level two times lower than the MCL if you report the MCL as 1 ppb and the detected level as 0.5 ppb than if you were to report the MCL as 0.001 mg/L and the detected level as 0.0005 mg/L. In this case, you convert by multiplying the detected level and MCL by 1000. When you round results to determine compliance, round before multiplying the results by these factors. If the MCL units for a contaminant are already expressed in a number greater than 1.0 (e.g., the MCL for nitrate is 45 ppm), there is no conversion factor to apply to the MCL or detected contaminant level.

The CCR includes data from monitoring completed during the previous calendar year. For example, data collected between January and December 2014 must be reported in the 2014 CCR, which is due to customers by July 1, 2015. However, if you have monitoring waivers, or for another reason monitor less than once per year, use your most recent data even though it is outside of the calendar year. For example, if you monitor once every three years for lindane and detect lindane in a sample, report that detected level each of the three years until you take a new sample.

If the report contains detection data that is not from the calendar year indicated, the table must show the date of monitoring and the report must contain a brief statement explaining that the data presented is from the most recent monitoring done in compliance with regulations.

EXAMPLE – The State allows us to monitor for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of our data, though representative, are more than one year old.

You do not need to report monitoring results that are more than nine years old.

THE TABLE MUST CONTAIN THE FOLLOWING, FOR EACH DETECTED CONTAMINANT:

1) If the contaminant is regulated by a MCL or MRDL (See Appendices A-1 and A-2):

   a) The MCL or MRDL, expressed as a number equal to or greater than 1.0.

   b) The PHG (or MCLG, if no PHG has been set) or MRDLG, expressed in the same units as the MCL or MRDL.

      Note: Secondary MCLs do not have PHGs or MCLGs because secondary MCLs are set to protect the aesthetics of water and PHGs and MCLGs are based on health concerns.

   c) The level of that contaminant expressed in the same units as the MCL and PHG (or MCLG, if no PHG has been set) or MRDL and MRDLG.

[3] For monitoring under the Stage 1 Disinfectants and Disinfection Byproducts Rule, use the same approach for the MRDL and MRDLG. Appendix A-1 shows the conversion factor for each contaminant.

2) If the contaminant is regulated by a treatment technique (TT) (See Appendix A-1):

   a) Put the letters "TT" in place of the MCL.

   b) Put "N/A" (not applicable) in place of the PHG or MCLG when no PHG or MCLG is listed in Appendix A-1.

3) If the contaminant is regulated as an action level (AL) (See Appendix A-1):

   a) The AL expressed as a number equal to or greater than 1.0.

   b) The PHG (or MCLG, if no PHG has been set) in the same units as the AL.

4) If the contaminant is unregulated (i.e., regulated and has no MCL) (See Appendices A-3 and A-4):

   a) The average level of that contaminant and the range of results.

5) The level of the contaminant must be represented as follows (See Appendix C for examples):

   a) If compliance with an MCL is determined by the results of a single sample, an initial sample averaged with one or two confirmation sample(s), or an average of four quarterly or six monthly samples, report the results as follows:

      - For a single sampling site, or multiple sampling sites for which data is being individually listed in the CCR, include the sample result. If more than one sample was collected, include the average and range of the sample results.

      - For more than one sampling site, each of which has been sampled only once and for which data is being summarized together in the CCR, include the average and range of the sample results. If the waters from the sampling sites are entering the distribution system at the same point, a flow-weighted average may be reported.

      - For multiple sampling sites, one or more of which has been sampled more than once and for which data is being summarized together in the CCR, include the average of the individual sampling site averages and the range of all the sample results. If the waters from the sampling sites are entering the distribution system at the same point, a flow-weighted average may be reported.

   b) If compliance is determined by a running annual average (RAA) of all the samples taken from a sampling point (e.g., chemical contaminants), include the highest RAA (as reported to the State Board for compliance purposes) and the range of the sample results. If sampling points are summarized together, include the highest RAA of any of the sampling points and the range of sample results from all the sampling points.

   c) If compliance is determined by monitoring after treatment is installed to remove a contaminant, include the average level detected in the water entering the distribution system and the range of sample results.

d) If a compliance determination was made in the year for which sample results are being reported and the determination was based on an average of results from both the previous and reporting years, include the highest compliance determination average and the range; where the range is based only on results from the year for which data is being reported.

e) For TTHM and HAA5:

- State Stage 2 D/DBPR (for systems that have only Stage 2 D/DBPR data for 2014) – If compliance is determined based on a locational running annual average (LRAA), include the highest LRAA for TTHM and HAA5 and the range of individual samples results for all monitoring locations. If more than one monitoring location exceeds the TTHM or HAA5 MCL, include the LRAA for all locations that exceed the MCL.

- State Stage 1 D/DBPR and State Stage 2 D/DBPR (for systems that have both data for 2014) – see table below:

If Stage 2 D/DBPR monitoring began…	Include the…
2nd Quarter of 2014	• Stage 1 D/DBPR system-wide RAA from the 1st quarter of 2014; • Range of results for all samples taken in 2014; and • If the Stage 2 D/DBPR LRAA was exceeded in the 2nd, 3rd, or 4th quarter of 2014, the LRAA for all locations that exceed the MCL
3rd Quarter of 2014	• Highest Stage 1 D/DBPR system-wide RAA from the 1st or 2nd quarter of 2014; • Range of results for all samples taken in 2014; and • If the Stage 2 D/DBPR LRAA was exceeded in the 3rd or 4th quarter of 2014, the LRAA for all locations that exceed the MCL
4th Quarter of 2014	• Highest Stage 1 D/DBPR system-wide RAA from the 1st, 2nd, or 3rd quarter of 2014; • Range of results for all samples taken in 2014; and • If the Stage 2 D/DBPR LRAA was exceeded in the 4th quarter of 2014, the LRAA for all locations that exceed the MCL

f) For turbidity:

- For turbidity (when reported pursuant to Section 64652.5 – regulated as a TT for systems that have met criteria for avoiding filtration), include the highest single measurement found in any month. You should explain the reasons for measuring turbidity.

EXAMPLE – Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of water quality. High turbidity can hinder the effectiveness of disinfectants.

- For turbidity (when reported pursuant to Section 64653 – regulated as a TT for systems that filter and use turbidity as an indicator of filtration performance), include the highest single measurement and the lowest monthly percentage of samples meeting the turbidity limits specified in Section 64653 for the relevant filtration technology. You should explain the reasons for measuring turbidity.

EXAMPLE – Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of the effectiveness of our filtration system.

g) For lead and/or copper:

- Include the 90th percentile value from the most recent sampling (if it is a number greater than zero), number of sites sampled, and the number of sites that exceeded the action level. Do not report related water quality parameter data.

h) For total coliforms, fecal coliforms, and *E. coli* under the Total Coliform Rule (TCR):

- For total coliforms (systems that collect fewer than 40 samples per month), include the highest number of positive samples collected in any one month.

- For total coliforms (systems that collect 40 or more samples per month), include the highest percentage of positive samples collected in any one month.

- For fecal coliforms and *E. coli*, include the total number of positive samples collected that year.

i) For fecal indicator-positive source samples under the Ground Water Rule (GWR):

- For *E. coli*, list the MCL and MCLG as zero.

- For enterococci or coliphage, list "TT" in the column for MCL and "N/A" in the column for MCLG.

- For *E. coli*, enterococci, or coliphage, include the total number of positive samples for the year and special notice language provided in the table or elsewhere in the CCR. Refer to Item 6 for more information on special notice language requirements for fecal indicator-positive ground water source samples.

j) For beta particles:

- If you detect beta particles in your water at or below 50 pCi/L, you should report the detected level in pCi/L. So that consumers may have a standard against which to compare that detected level, you should include "50 pCi/L*" in the MCL column (rather than the actual MCL of 4 mrem/year) and a footnote to the table that says "*SWRCB considers 50 pCi/L to be the level of concern for beta particles."

- If you detected beta particles above 50 pCi/L, you must determine the actual radioactive constituents present in the water to calculate the dose exposure level in mrem/year, and must report the detected level and MCL as mrem/year.

k) In addition to detected contaminant, the CCR regulations require that all treatment technique violations be reported in a detected contaminant table(s). TT violations are listed below and are organized by rule (refer to Item 6 for specific information about failure to install adequate filtration or disinfection equipment or processes or a failure of those processes, violations associated with acrylamide and epichlorohydrin, and violations associated with LCR).

- Surface Water Treatment Rule (SWTR), Interim Enhanced Surface Water Treatment Rule (IESWTR), and Long Term 1 Enhanced Surface Water Treatment Rule (LT1ESWTR)

  - ✓ 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 ppm disinfection residual at the 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).

- Filter Backwash Recycling Rule (FBRR)

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

- 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 Board), or be in compliance with a state-approved schedule to cover the reservoir(s) or treat the reservoir(s) discharge by April 1, 2009.

  - ✓ 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.

- Ground Water Rule (GWR)

  - ✓ Failure to maintain at least 4-log treatment of viruses for more than 4 hours for ground water systems that are required to treat.

  - ✓ Failure to take corrective action, if necessary based on a fecal indicator-positive sample, or be in compliance with a plan and schedule for a fecal indicator-positive ground water source sample.

  - ✓ Failure to take corrective action, if necessary based on a significant deficiency, or be in compliance with a plan and schedule for a significant deficiency.

- Lead and Copper Rule (LCR)

  - ✓ Failure to meet corrosion control treatment, source water treatment, lead service line replacement, or public education requirements.

- Chemical

  - ✓ Acrylamide – Failure to not exceed specified level (i.e., 0.05% monomer in polyacrylamide dosed at 1 mg/L, or equivalent).

  - ✓ Epichlorohydrin – Failure to not exceed specified level (i.e., 0.01% residual at of epichlorohydrin dosed at 20 mg/L, or equivalent).

The State Board recommends that systems include TT violations listed in (k) above in a table adjacent to the main detected contaminant table. The table must include an explanation of the violation, the length of the violation, any potential adverse health effects, and steps taken to correct the violation. The following is an example of a GWR TT violation.

TT Violation	Explanation	Length	Steps Taken to Correct the Violation	Health Effects Language
Failed to maintain 4-log treatment of viruses	On January 10, 2010, state inspection of our water system identified a malfunctioning chlorine pump. As a result, the water from one of our wells (Well 1) was not adequately disinfected for 2 weeks.	2 weeks	As directed by the State Water Resources Control Board, we took immediate action to resolve this problem by repairing the malfunctioning chlorine pump. Regular testing since the pump was repaired has demonstrated that we are once again providing water that meets the state's standards for disinfection to our customers.	Inadequately treated or inadequately protected water may contain disease-causing organisms. These organisms can cause symptoms such as diarrhea, nausea, cramps, and associated headaches.

l) The likely source(s) of that contaminant, to the best of your knowledge. If the source of the contamination is known, the CCR should identify a specific point source, such as "Al's chicken houses" or the "Super-Shiny Paper Mill". If you lack specific information on the likely source of a contaminant, include one or more of the typical sources listed in Appendices A-1 (for chemicals with primary MCLs, MRDLs, TTs, and regulatory ALs) and A-2 (for chemicals with secondary MCLs) that is most applicable to your situation.

m) For any contaminant detected in violation of a MCL, MRDL, or TT or exceeding a regulatory AL, clearly highlight in the table the violation or exceedance. This indication could, for example, take the form of a different color type, a larger or bolder font, or a large star. Near, but not in, the table, include an explanation of the length of the violation/exceedance, potential adverse health effects (from Appendix A-1 for primary MCLs, MRDLs, TTs, and regulatory ALs), and actions you took to address the violation/exceedance.

n) If you have detected unregulated contaminants for which State Board or federal rules require monitoring (for example, section 64450[4] or 40 CFR 141.40 (federal UCMR3), except *Cryptosporidium*) include the average of all of the year's monitoring results and the range of detections. See Appendices A-3 and A-4 for lists of these contaminants.

We encourage you to include more information on the potential health effects of these contaminants if the results indicate a health concern. We consider any detection above a proposed MCL, California notification level, or EPA health advisory level to indicate concern. You may call the Safe Drinking Water Hotline (1-800-426-4791) for this information or find it on USEPA's website (http://water.epa.gov/drink/standards/hascience.cfm). California notification levels are available on the State Board's website (**Error! Hyperlink reference not valid.**http://www.swrcb.ca.gov/drinking_water/certlic/drinkingwater/NotificationLevels.shtml). For these contaminants, the State Board recommends that the report contain an explanation of the significance of the results, noting the existence of the proposed MCL, California notification level (See Appendices A-3 and A-5 for available optional health effects language), or USEPA health advisory.

You may wish to explain the reasons for unregulated contaminant monitoring with a statement like the following.

> *EXAMPLE – Unregulated contaminant monitoring helps USEPA and the State Water Resources Control Board to determine where certain contaminants occur and whether the contaminants need to be regulated.*

Multiple distribution systems

If your system supplies water through two or more distribution systems that are not physically interconnected and that are fed by different raw water sources, you must issue a CCR that includes information on the source water, levels of any detected contaminants, and compliance with drinking water rules for all distribution systems. You may issue one or multiple reports to your customers. If you issue one report, make sure to include a separate column of detection data for each service area in the main table of detected contaminants.

Including Tier 3 Public Notices in CCRs

If you are required to provide Tier 3 public notice for a monitoring violation or other type of violation or situation, you may consider including the notice in your CCR. If you use the CCR for public notification, make sure you meet the content requirements under the Public Notification Rule. Also, remember that the timing and delivery requirements for CCRs differ

[4] Results of monitoring under former section 64450 (UCMR) need only be included for 5 years from the date of the last required sampling or until any of the detected contaminants becomes regulated and subject to routine monitoring requirements, whichever comes first. Water systems that continue to monitor for UCMR contaminants are encouraged to include the information in the CCR to keep their customers informed. Section 64450 was repealed effective October 18, 2007.

from those for public notices. Be careful to adhere to the Public Notification requirement that Tier 3 public notice be completed no later than 12 months from the date the violation or situation occurred. To minimize the timing conflict, you can publish the CCR early – as soon after the end of the calendar year as possible; or mail a separate public notice for the violations occurring in January through June of the current year in the same envelope as your CCR covering the previous calendar year's violations.

Item 5: Reporting on *Cryptosporidium*, radon, and other contaminants

Cryptosporidium

If your system has performed monitoring that indicates the presence of *Cryptosporidium* in either the source water or the finished water, you must include the following information separate from the detected contaminant table:

- A summary of the results of monitoring. You should identify if the data is for the source water or finished water. You may choose whether or not to report the actual analytical results as part of this summary.

- An explanation of the significance of the results. Tell customers if they need to be concerned by the information that the CCR provides.

> *EXAMPLE* – Cryptosporidium *is a microbial pathogen found in surface water throughout the U.S. Although filtration removes C*ryptosporidium, *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 C*ryptosporidium *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 and 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.*

Radon

If your system has performed monitoring that indicates the presence of radon in its finished water[5], include in your CCR:

- The results of monitoring (the analytical values reported by the laboratory).
- An explanation of the significance of the results. Tell customers if they need to be concerned by the information that the CCR provides.

> *EXAMPLE – 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 USEPA Safe Drinking Water Act Hotline (1-800-426-4791), or the National Safety Council Radon Hotline (1-800-767-7236).*

Other contaminants

If your system has performed voluntary monitoring that indicates the presence of non-regulated contaminants in the finished water, we strongly encourage you to report any results that may indicate a health concern. Public knowledge of potential problems is in the interest of you and your customers. We consider any detection above a proposed MCL, California notification level, or USEPA health advisory level to indicate concern. Call the Safe Drinking Water Hotline (1-800-426-4791) or visit USEPA's web site (http://water.epa.gov/drink/standards/hascience.cfm) for this information. California notification levels are available at the State Board's website (http://www.swrcb.ca.gov/drinking_water/certlic/drinkingwater/NotificationLevels.shtml). For these contaminants, the State Board recommends that the CCR contain:

- The results of monitoring.

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[5] Federal regulations do not specify the time period for reporting radon. USEPA recommends reporting radon similarly to unregulated contaminant monitoring – include radon results in the report covering the calendar year that monitoring was conducted (from: Consumer Confidence Report Rule Web Cast: May 25, 2005 Question & Answer Document; http://water.epa.gov/learn/training/dwatraining/upload/dwaNPDWR-CCRwebcast05.pdf).

- An explanation of the significance of the results, noting the existence of the proposed MCL, California notification level (See Appendices A-3 and A-5 for available optional health effects language), or USEPA health advisory.

Item 6: Compliance with other drinking water regulations

Other than the Ground Water Rule – Special Notice Requirements

If your water system violated one of the following requirements during the year covered by your CCR, the report must describe the violation(s). Just as you must explain the potential health effects of any MCL violation, you must provide a clear and readily understandable explanation of any other violation, potential adverse health effects (if any), and the steps the system has taken to correct the violation.

- Treatment techniques (Must include length of violation)

  (1) Filtration and disinfection requirements (Surface Water Treatment Rule; Interim Enhanced Surface Water Treatment Rule; and Long Term Stage 1 Enhanced Surface Water Treatment Rule). If you violated the TT discussed in Part IV, Item 4, include the health effects language for *Giardia lamblia*, viruses, heterotrophic plate count bacteria, *Legionella*, and *Cryptosporidium* listed in Appendix A-1.

  (2) Filter Backwash Recycle Rule (if using conventional or direct filtration). If you violated the TT discussed in Part IV, Item 4, include the health effects language for *Giardia lamblia*, viruses, heterotrophic plate count bacteria, *Legionella*, and *Cryptosporidium* listed in Appendix A-1.

  (3) Long-Term 2 Enhanced Surface Water Treatment Rule. If you violated the TT discussed in Part IV, Item 4, see the example in Appendix C.

  (4) Ground Water Rule. If you violated the TT discussed in Part IV, Item 4, see the example in Appendix C.

  (5) Stage 1 Disinfectants and Disinfection Byproducts Rule (if using conventional filtration). If you violated the TT discussed in Part IV, Item 4, include the health effects language for control of DBP precursors (TOC) listed in Appendix A-1.

  (6) Lead and copper control requirements. If you violated the TT discussed in Part IV, Item 4, must include the health effects language for lead or copper listed in Appendix A-1.

  (7) Acrylamide and Epichlorohydrin. If you violated the TT discussed in Part IV, Item 4, include the health effects language for acrylamide or epichlorohydrin listed in Appendix A-1.

Note: The State Board recommends that systems include TT violations listed here in a table adjacent to the main detected contaminant table. See Part IV, Item 4 for more discussion on presenting TT violations.

- Monitoring and reporting of compliance data. If your system failed to take the sample on time (i.e., failure to monitor), the CCR should say "health effects unknown". If your system took the samples accurately and on-time, but mailed the results late, you do not need to discuss health effects.

- Record keeping requirements.

- Special monitoring requirements.[6]

- Terms of a variance, an exemption, or an administrative or judicial order.

Ground Water Rule – Special Notice Requirements

The Ground Water Rule (GWR) requires community and nontransient-noncommunity water systems using groundwater to provide special notice in their CCR for the following two situations:

Special Notice for Uncorrected Significant Deficiencies

If you are a ground water system that receives notice from the State Board of a significant deficiency, you must inform your customers of any significant deficiencies that are not corrected by December 31st of the year covered by your CCR. The CCR must include the following information:

- The nature of the significant deficiency and the date it was identified by the State Board.

- The State Board -approved plan and schedule for correction, including interim measures, progress to date, and any interim measures completed.

You must continue to inform your customers annually until the State Board determines the significant deficiency is corrected.

Note: The State Board may also require you to include in your CCR significant deficiencies that were corrected by the end of the calendar year. If you are directed by the State Board to do this, you must inform your customers of the significant deficiency, how it was corrected, and the date it was corrected in that year's CCR.

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[6] Results of monitoring under section 64450 (UCMR) and sections 64449(b)(2) and (g). Results of monitoring under former section 64450 (UCMR) need only be included for 5 years from the date of the last required sampling or until any of the detected contaminants becomes regulated and subject to routine monitoring requirements, whichever comes first. Water systems that continue to monitor for UCMR contaminants are encouraged to include the information in the CCR to keep their customers informed. Section 64450 was repealed effective October 18, 2007. See footnote 1 concerning federal UCMR contaminants.

Special Notice for a Fecal Indicator-Positive Ground Water Source Sample

If you are a ground water system that receives notice from a laboratory of a fecal indicator-positive ground water source sample and the sample is not invalidated by the State Board, you must inform your customers in the next CCR. The CCR must include the following information for a fecal indicator-positive ground water source sample:

- The source of the fecal contamination (if it is known) and the date(s) of the fecal indicator-positive source sample.

- If the fecal contamination has been addressed as prescribed by the requirements of the GWR [section 64430, which incorporates by reference the federal GWR – 40 CFR 141.403(a)] and the date the contamination was addressed.

- For fecal contamination that has not been addressed, the State Board-approved plan and schedule for correction, including interim measures, progress to date, and any interim measures completed.

- The health effects language for fecal indicators (*E. coli*, enterococci or coliphage), as provided in Appendix A-1.

Since fecal indicator-positive ground water source samples must be included in the detected contaminant table, this special notice language can be included below the table or elsewhere in the report. Appendix C contains an example on how to present fecal indicator-positive ground water source samples and the special notice text in a CCR.

You must continue to inform customers annually until the fecal contamination in the ground water source is addressed as prescribed by the requirements of the GWR.

Item 7: Variances and Exemptions

If your system operated under a variance or exemption at any time during the year covered by the CCR, 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 of water, etc.) or otherwise comply with the terms and schedules of the variance or exemption. Also, tell your customers how they may participate in the review or renewal of the variance or exemption.

Item 8: Educational information

For all CCRs

Every CCR must contain certain educational information, prominently displayed somewhere in the report.

Your CCR must contain basic information about drinking water contaminants. Use the following mandatory language.

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 by-products 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.*

In order to ensure that tap water is safe to drink, the U.S. Environmental Protection Agency (USEPA) and the State Water Resources Control Board (State Board) prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. State Board regulations also establish limits for contaminants in bottled water that provide the same protection for public health.

The following mandatory statement is a brief explanation regarding contaminants that may reasonably be expected to be found in drinking water, including bottled 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 water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the USEPA's Safe Drinking Water Hotline (1-800-426-4791).

The next mandatory statement informs customers that some people may be more vulnerable to contaminants in drinking water than the general population and encourages those who may be particularly at risk from infection to seek advice from their health care provider.

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. USEPA/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).*

Special requirements for nitrate, arsenic, and lead

You must include in your CCR the relevant special educational statement for nitrate, arsenic, and lead in the specified situations. You may include additional information, either before or after the required statement.

- **Nitrate** – Systems with nitrate above 23 ppm (50% of the MCL), but below 45 ppm (the MCL) (as nitrate, NO_3) must include the following statement:

  Nitrate in drinking water at levels above 45 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 a serious illness; symptoms include shortness of breath and blueness of the skin. Nitrate levels above 45 mg/L may also affect the ability of the blood to carry oxygen in other individuals, such as pregnant women and those with certain 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 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.

- **Arsenic** – Systems with arsenic above 5 ppb (50% of the MCL), but below or equal to 10 ppb (the MCL) must include the following statement:

  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 costs 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.

- **Lead** – Systems with lead above 15 ppb (the regulatory AL) in more than 5%, and up to and including 10%, of sites sampled (or if your system samples fewer than 20 sites and has even one sample above the AL), you must include the following statement:

> *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 USEPA Safe Drinking Water Hotline (1-800-426-4791).*

Beginning with the CCR report due in July 1, 2010, **community water systems**[7] must include the lead-specific language shown below [see 40 CFR 141.154(d)(1)]. A water system may provide its own educational statement, but only after consulting with the State 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. 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/safewater/lead.*

Other educational information

You are not limited to providing only the required information in your report. You may want to include:

- An explanation (or include a diagram of) your system's treatment processes.

  Note: Although the CCR regulations do not require you to provide treatment information in your CCR, the State Board strongly recommends that you use the CCR as an opportunity to inform your consumers about the treatment processes applied to their water, particularly fluoridation if it is used. Even though there is a fluoridation regulation that requires you to inform your consumers when fluoridation is initiated, or taken off line for an extended period, it is quite likely that many consumers are unaware that

[7] A community water system that exceeds the lead regulatory action level must include both the lead special education statement and the community water system lead-specific language in the CCR.

fluoride is being added or being received from another water system. This information could potentially affect decisions your consumers make regarding fluoride supplements and treatments. You may want to provide the address for the State Board's fluoridation website, where consumers may obtain more information about fluoridation, oral health, and current issues (http://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/Fluoridation.shtml) .

- Source water protection tips (refer to Appendix F for example language regarding source water protection tips).

- Water and energy conservation tips (refer to Appendix F for example language regarding water conservation tips).

- The cost of making the water safe to drink including the cost of sustaining the infrastructure.

- Efforts your system has made to promote "green infrastructure" (e.g., stormwater pollution prevention measures).

- A statement from the mayor or general manager.

- Information to educate customers about taste and odor issues, affiliations with programs such as the Partnership for Safe Water, opportunities for public participation, etc.

You may want to provide the address for USEPA's drinking water website (http://water.epa.gov/drink/index.cfm). The only limitation on this information is that it must not interfere with the educational purpose of the CCR.

V. What should the CCR look like?

You do not need a fancy computer or a graphic designer to produce a CCR that is easy to read and inviting to your customers. The best way to design your CCR is to spend some time looking at other CCRs. See what catches your eye, and copy it. A few things to consider:

- Limit wordiness – write short sentences and keep your paragraphs short as well.

- Do not make your text size too small. You might want to squeeze a few extra sentences in your CCR, but if you add too much, people might ignore the entire report.

- Give a draft of your CCR to relatives or friends who are not drinking water experts and ask them if it makes sense. Ask customers for their comments when you publish the CCR.

- Do not distract from your main message with graphics and/or pictures that do not complement your message.

- Be as simple, truthful, and straight forward as possible. Avoid acronyms, initials, and jargon.

- Consider printing the CCR on recycled paper and taking other steps to make the CCR "environmentally friendly". If you hope to get your customers involved in protecting source water, set a good example for them.

VI. How must the CCR be distributed?

General

You must mail or deliver a copy of your CCR to each of your customers, and make a good faith effort to get CCRs to non-bill-paying consumers. Deliver your CCR annually by July 1 of each year. You may include your CCR with water bills, if feasible, or you may send it as a separate mailer. Sending your CCR as a separate mailer will likely be more effective, and you will reach renters who may not receive water fills directly. You must also make your CCR available to the public upon request.

Systems that serve 100,000 or more people must post their CCRs on a publicly-accessible site on the Internet. We encourage other systems to post their CCRs as well. Many local governments have sites where you can post your CCR, even if your system itself does not have a Web site. USEPA provides a mechanism that allows systems to link their CCR to the USEPA Web site (http://water.epa.gov/lawsregs/rulesregs/sdwa/ccr/compliancehelp.cfm).

Consumers not receiving water bills

It is in your system's interest to spread the word about the quality of its water. Since many consumers of your water may not receive bills (people such as apartment renters or workers), you must make "good faith" efforts to reach non-bill paying consumers. A "good faith" effort means selecting the most appropriate method(s) to reach those consumers from a menu of options that the State Board recommends. Those options include but are not limited to:

- Posting the CCR on the Internet using Web sites, email notifications, Podcasts, blogs, or Tweets.

- Mailing the CCR to postal patrons in metropolitan areas; mailing to all postal patrons is recommended.

- Advertising the availability of the CCR in news media (e.g., newspapers, TV, and radio).

- Publishing the complete CCR in a local newspaper.

- Posting the CCR in public places such as cafeterias, lunch rooms, and lobbies of public buildings, libraries, churches, and schools.

- Delivering multiple copies of the CCRs for distribution by single-billed customers such as apartment buildings or large private employers.

- Delivering the CCR to community organizations.

State and local agencies and media outlets

Send a copy to the State Board or LPA, depending on who oversees your regulatory compliance, when you mail it to customers. Within three months of the CCR's due date, submit to the State Board a certification (see Appendix D for a sample form) that you distributed the CCR, and that its information is correct and consistent with the compliance monitoring data previously submitted to the State Board. In addition, if your system is investor-owned, send a copy of the CCR to the California Public Utilities Commission by July 1. We also encourage you to send copies to local TV and radio stations and newspapers.

Electronic delivery

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

VII. How long must the CCR be kept?

Keep your report on file for three years.

Appendix A-1: Regulated Contaminants with Primary MCLs, MRDLs, TTs, or ALs

Key
AL = Regulatory Action Level
MCL = Maximum Contaminant Level
MCLG = Maximum Contaminant Level Goal
MRDL = Maximum Residual Disinfectant Level
MRDLG = Maximum Residual Disinfectant Level Goal
PHG = Public Health Goal
TT = Treatment Technique

MFL = million fibers per liter
NTU = Nephelometric Turbidity Units

n/a = not applicable
pCi/L = picocuries per liter (a measure of radioactivity)
mrem/year = millirems per year (a measure of radiation absorbed by the body)

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
ppq = parts per quadrillion, or picograms per liter

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
Microbiological Contaminants						
Total Coliform Bacteria (Total Coliform Rule)	MCL: **Systems that collect ≥40 samples/month:** more than 5.0% of monthly samples are positive; **Systems that collect <40 samples/month:** no more than 1 positive monthly sample			(0)	Naturally present in the environment	Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially-harmful, bacteria may be present. Coliforms were found in more samples than allowed and this was a warning of potential problems.
Fecal coliform and *E. coli* (Total Coliform Rule)	MCL: a routine sample and a repeat sample are total coliform positive, and one of these is also fecal coliform or *E. coli* positive			(0)	Human and animal fecal waste	Fecal coliforms and *E. coli* 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.

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
Fecal Indicator *E. coli* (Ground Water Rule)	0	-	0	(0)	Human and animal fecal waste	Fecal coliforms and *E. coli* 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 coliphage) (Ground Water Rule)	TT	-	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 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.
Turbidity	TT	-	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, cramps, diarrhea, and associated headaches.
Giardia lamblia Viruses Heterotrophic plate count bacteria *Legionella* *Cryptosporidium*	Surface water treatment = TT			HPC = n/a; Others = (0)	Naturally present in the environment	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.

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
Radioactive Contaminants						
Gross Beta particle activity (pCi/L)	50 [(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.
(a) Effective 6/11/2006, 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.						
Strontium-90 (pCi/L)	8	-	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	-	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	-	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.
Combined radium (pCi/L)	5	-	5	(0)[(b)]	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		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.
(b) 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.						
Uranium (pCi/L)	20	-	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.
Inorganic Contaminants						
Aluminum (ppm)	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.

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
Antimony (ppb)	0.006	1000	6	20	Discharge from petroleum refineries; fire retardants; ceramics; 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 (ppb)	0.010	1000	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 (ppm)	1	-	1	2	Discharges of oil drilling wastes and from metal refineries; erosion of natural deposits	Some people who drink water containing barium in excess of the MCL over many years may experience an increase in blood pressure.
Beryllium (ppb)	0.004	1000	4	1	Discharge from metal refineries, coal-burning factories, and electrical, aerospace, and defense industries	Some people who drink water containing beryllium in excess of the MCL over many years may develop intestinal lesions.
Cadmium (ppb)	0.005	1000	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 (ppb)	0.05	1000	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.

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
Copper (ppm)	AL = 1.3	-	AL = 1.3	0.3	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives	Copper is an essential nutrient, but some people who drink water containing copper in excess of the action level over a relatively short 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.
Cyanide (ppb)	0.15	1000	150	150	Discharge from steel/metal, plastic and fertilizer factories	Some people who drink water containing cyanide in excess of the MCL over many years may experience nerve damage or thyroid problems.
Fluoride (ppm)	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.
Hexavalent Chromium (ppb)	0.010	1000	10	0.02	Discharge from electroplating factories, leather tanneries, wood preservation, chemical synthesis, refractory production, and textile manufacturing facilities; erosion of natural deposits	Some people who drink water containing hexavalent chromium in excess of the MCL over many years may have an increased risk of getting cancer.
Lead (ppb)	AL = 0.015	1000	AL = 15	0.2	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits	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 learning abilities. Adults who drink this water over many years may develop kidney problems or high blood pressure.
Mercury [inorganic] (ppb)	0.002	1000	2	1.2	Erosion of natural deposits; discharge from refineries	Some people who drink water containing mercury in excess of the MCL over many years may experience

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
					and factories; runoff from landfills and cropland	mental disturbances, or impaired physical coordination, speech and hearing.
Nickel (ppb)	0.1	1000	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 (ppm)	45 (as NO3)	-	45 (as NO3)	45 (as NO3)	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.
Nitrite (ppm)	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 (ppb)	0.006	1000	6	6	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 affects 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.

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
Selenium (ppb)	0.05	1000	50	30	Discharge from petroleum, glass, and metal refineries; erosion of natural deposits; discharge from mines and chemical manufacturers; runoff from livestock lots (feed additive)	Selenium is an essential nutrient. However, some people who drink 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.
Thallium (ppb)	0.002	1000	2	0.1	Leaching from ore-processing sites; discharge from electronics, glass, and drug factories	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						
2,4-D (ppb)	0.07	1000	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] (ppb)	0.05	1000	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 (ppb)	0.002	1000	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 (ppb)	0.001	1000	1	0.15	Runoff from herbicide used on row crops and along railroad and highway right-of-ways	Some people who use water containing atrazine in excess of the MCL over many years may experience cardiovascular system problems or reproductive difficulties.

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 (ppb)	0.018	1000	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] (ppt)	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 (ppb)	0.018	1000	18	1.7	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 (ppt)	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.
Dalapon (ppb)	0.2	1000	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 (ppb)	0.4	1000	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 (ppb)	0.004	1000	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.

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
Dibromochloropropane [DBCP] (ppt)	0.0002	1,000,000	200	1.7	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.
Dinoseb (ppb)	0.007	1000	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] (ppq)	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 (ppb)	0.02	1000	20	15	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 (ppb)	0.1	1000	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 (ppb)	0.002	1000	2	1.8	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 problems, and may have an increased risk of getting cancer.
Ethylene dibromide [EDB] (ppt)	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	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.

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
Glyphosate (ppb)	0.7	1000	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 (ppt)	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 (ppt)	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.
Hexachlorobenzene (ppb)	0.001	1000	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 (ppb)	0.05	1000	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 (ppt)	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 (ppb)	0.03	1000	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] (ppb)	0.02	1000	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.

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
Oxamyl [Vydate] (ppb)	0.05	1000	50	26	Runoff/leaching from insecticide used on field crops, fruits and ornamentals, especially apples, potatoes, and tomatoes	Some people who drink water containing oxamyl in excess of the MCL over many years may experience slight nervous system effects.
PCBs [Polychlorinated biphenyls] (ppt)	0.0005	1,000,000	500	90	Runoff from landfills; discharge of waste chemicals	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 (ppb)	0.001	1000	1	0.3	Discharge from wood preserving factories, cotton and other insecticidal/herbicidal 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 (ppb)	0.5	1000	500	500	Herbicide runoff	Some people who drink water containing picloram in excess of the MCL over many years may experience liver problems.
Simazine (ppb)	0.004	1000	4	4	Herbicide runoff	Some people who use water containing simazine in excess of the MCL over many years may experience blood problems.
Thiobencarb (ppb)	0.07	1000	70	70	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 (ppb)	0.003	1000	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.

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
Volatile Organic Contaminants						
Benzene (ppb)	0.001	1000	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 (ppt)	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 (ppb)	0.6	1000	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 (ppb)	0.005	1000	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 (ppb)	0.005	1000	5	3	Extraction and degreasing solvent; used in manufacture of pharmaceuticals, stone, clay and glass products; fumigant	Some people who use water containing 1,1-dichloroethane in excess of the MCL over many years may experience nervous system or respiratory problems.
1,2-Dichloroethane (ppt)	0.0005	1,000,000	500	400	Discharge from industrial chemical factories	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 (ppb)	0.006	1000	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.

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
cis-1,2-Dichloroethylene (ppb)	0.006	1000	6	100	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 (ppb)	0.01	1000	10	60	Discharge from industrial chemical factories; minor biodegradation byproduct of TCE and PCE groundwater contamination	Some people who drink water containing trans-1,2-dichloroethylene in excess of the MCL over many years may experience liver problems.
Dichloromethane (ppb)	0.005	1000	5	4	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 (ppb)	0.005	1000	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 (ppt)	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 (ppb)	0.3	1000	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 (ppb)	0.013	1000	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.
Monochlorobenzene (ppb)	0.07	1000	70	70	Discharge from industrial and agricultural chemical factories and drycleaning facilities	Some people who use water containing monochlorobenzene in excess of the MCL over many years may experience liver or kidney 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
Styrene (ppb)	0.1	1000	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 (ppb)	0.001	1000	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) (ppb)	0.005	1000	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 (ppb)	0.005	1000	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.
1,1,1-Trichloroethane (ppb)	0.200	1000	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 (ppb)	0.005	1000	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] (ppb)	0.005	1000	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 (ppb)	0.15	1000	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.

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
Trichlorofluoromethane (ppb)	0.15	1000	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.
1,1,2-Trichloro-1,2,2-trifluoroethane (ppm)	1.2	-	1.2	4	Discharge from metal degreasing sites and other factories; drycleaning 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 (ppt)	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 (ppm)	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.

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
Disinfection Byproducts, Disinfectant Residuals, and Disinfection Byproduct Precursors						
TTHMs [Total Trihalomethanes] (ppb)	0.080	1000	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.
Haloacetic Acids (ppb)	0.060	1000	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 (ppb)	0.010	1000	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.

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
Chloramines (ppm)	[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.
Chlorine (ppm)	[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 (ppm)	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 (ppb)	[MRDL = 0.8 (as ClO_2)]	1000	[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.
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 A-2: Regulated Contaminants with Secondary MCLs[(a)]

Monitoring Required by Section 64449, Chapter 15, Title 22, California Code of Regulations

Constituent	Secondary MCL (units)	To convert to CCR, multiply by	MCL in CCR units	Typical Source of Contaminant
Aluminum	0.2 mg/L	1000	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	1000	500 µg/L	Municipal and industrial waste discharges
Iron	0.3 mg/L	1000	300 µg/L	Leaching from natural deposits; industrial wastes
Manganese	0.05 mg/L	1000	50 µg/L	Leaching from natural deposits
Methyl-*tert*-butyl ether [MTBE]	0.005 mg/L	1000	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	1000	100 µg/L	Industrial discharges
Thiobencarb	0.001 mg/L	1000	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	1,000 mg/L	-	1,000 mg/L	Runoff/leaching from natural deposits
Specific Conductance	1,600 µS/cm	-	1,600 µS/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

(a) There are no PHGs, MCLGs, or mandatory standard health effects language for these constituents because secondary MCLs are set on the basis of aesthetics.

Appendix A-3: State Regulated Contaminants with No MCLs

i.e., "Unregulated Contaminants"

Monitoring Formerly Required by
Repealed Section 64450, Chapter 15, Title 22, California Code of Regulations

Results of monitoring under former section 64450 (UCMR) need only be included for 5 years from the date of the last required sampling or until any of the detected contaminants becomes regulated and subject to routine monitoring requirements, whichever comes first. Water systems that continue to monitor for UCMR contaminants are encouraged to include the information in the CCR to keep their customers informed. Section 64450 was repealed effective October 18, 2007.

Inclusion of the notification level and health effects language for levels above the notification level is only recommended, not required.

Chemical	Notification Level	Health Effects Language (Optional)
Boron	1 ppm	The babies of some pregnant women who drink water containing boron in excess of the notification level may have an increased risk of developmental effects, based on studies in laboratory animals.
Dichlorodifluoromethane (Freon 12)	1 ppm	Some people who drink water containing dichlorodifluoromethane far in excess of the notification level may experience neurological and cardiac effects. Long-term exposures to dichlorodifluoromethane resulted in smaller body weight in laboratory animals.
Ethyl-tert-butyl ether (ETBE)	n/a	n/a
tert-Amyl-methyl ether (TAME)	n/a	n/a
tert-Butyl alcohol (TBA)	12 ppb	Some people who use water containing tert-butyl alcohol in excess of the notification level over many years may have an increased risk of getting cancer, based on studies in laboratory animals.
Trichloropropane (1,2,3-TCP)	5 ppt	Some people who use water containing 1,2,3-trichloropropane in excess of the notification level over many years may have an increased risk of getting cancer, based on studies in laboratory animals.
Vanadium	50 ppb	The babies of some pregnant women who drink water containing vanadium in excess of the notification level may have an increased risk of developmental effects, based on studies in laboratory animals.

Appendix A-4: Federal Regulated Contaminants with No MCLs

Background

The 1996 Amendments to the Safe Drinking Water Act required the USEPA to establish criteria for a monitoring program for unregulated contaminants and to publish a list of contaminants to be monitored.

UCMR 1 (2001 – 2003 Monitoring)

In 1999, USEPA revised the Unregulated Contaminant Monitoring Rule to incorporate a tiered monitoring approach. UCMR 1 had assessment monitoring (List 1) and screening survey (List 2) components.

Assessment monitoring was conducted by large public water systems (PWS) serving more than 10,000 people and 800 representative small PWS serving 10,000 or fewer people for List 1 contaminants. Assessment monitoring was conducted by each PWS over a 12-month period between 2001 and 2003.

Screening monitoring was conducted by a randomly selected set of 300 large and small PWSs for List 2 contaminants. Screening monitoring for chemical contaminants was conducted in 2001 and 2002 for small and large PWS, respectively. Screening monitoring for *Aeromonas* was conducted in 2003 for small and large PWS.

UCMR 1	
List 1 – Assessment Monitoring	**List 2 – Screening Survey**
2,4-dinitrotoluene	1,2-diphenylhydrazine
2,6-dinitrotoluene	2-methyl-phenol
Acetochlor	2,4-dichlorophenol
DCPA mono-acid degradate	2,4-dinitrophenol
DCPA di-acid degradate	2,4,6-trichlorophenol
4,4'-DDE	*Aeromonas*
EPTC	Alachlor ESA
Molinate	Diazinon
MTBE	Disulfoton
Nitrobenzene	Diuron
Perchlorate	Fonofos
Terbacil	Linuron
	Nitrobenzene
	Prometon
	RDX
	Terbufos

UCMR 2 (2008 – 2010 Monitoring)

In 2007, USEPA revised the Unregulated Contaminant Monitoring Rule to establish a new set of unregulated contaminants.

Assessment monitoring is 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 is required of each PWS during a 12-month period from January 2008 – December 2010.

Screening monitoring is 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 monitoring is required of each PWS during a 12-month period from January 2008 – December 2010.

UCMR 2	
List 1 – Assessment Monitoring	**List 2 – Screening Survey**
Dimethoate	Acetochlor ethane sulfonic acid
Terbufos sulfone	Acetochlor oxanilic acid
2,2',4,4'-tetrabromodiphenyl ether	Alachlor ethane sulfonic acid
2,2',4,4',5-pentabromodiphenyl ether	Alachlor oxanilic acid
2,2',4,4',5,5'-hexabromobiphenyl	Metolachlor ethane sulfonic acid
2,2',4,4',5,5'-hexabromodiphenyl ether	Metolachlor oxanilic acid
2,2',4,4',6-pentabromodiphenyl ether	
1,3-dinitrobenzene	Acetochlor
2,4,6-trinitrotoluene (TNT)	Alachlor
Hexahydro-1,3,5-trinitro-1,3,5-trazine (RDX)	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)

UCMR 3 (2013 – 2015 Monitoring)

In 2012, USEPA revised the Unregulated Contaminant Monitoring Rule to establish a new set of unregulated contaminants.

Assessment monitoring (List 1 Contaminants) is required of all PWS serving more than 10,000 people and 800 representative PWS serving 10,000 or fewer people. Assessment monitoring is required of each PWS during a 12-month period from January 2013 – December 2015.

Screening monitoring (List 2 Contaminants) is 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 monitoring is required of each PWS during a 12-month period from January 2013 – December 2015.

Pre-screen testing (List 3 Contaminants) is required of select 800 representative PWS serving 1,000 or fewer people that do not disinfect. These PWS with wells that are located in areas of karst or fractured bedrock will monitor during a 12-month period from January 2013 – December 2015.

<table>
<tr><th colspan="2">UCMR 3</th></tr>
<tr><td rowspan="2">List 1 – Assessment Monitoring
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)</td><td>List 2 – Screening Survey
17-β-estradiol
17-α-ethynylestradiol (ethinyl estradiol)
16-α-hydroxyestradiol (estriol)
Equilin
Estrone
Testosterone
4-anderostene-3,17-dione</td></tr>
<tr><td>List 3 – Pre-Screen Testing
Enteroviruses
Noroviruses</td></tr>
</table>

Appendix A-5: State Contaminants with Notification Levels

Inclusion of the notification level and health effects language for levels above the notification level is only recommended, not required.

Chemical	Notification Level	Health Effects Language (Optional)
Boron	1 ppm	See Appendix A-3
n-Butylbenzene	260 ppb	n/a
sec-Butylbenzene	260 ppb	n/a
tert-Butylbenzene	260 ppb	n/a
Carbon disulfide	160 ppb	n/a
Chlorate	800 ppb	n/a
2-Chlorotoluene	140 ppb	n/a
4-Chlorotoluene	140 ppb	n/a
Diazinon	1.2 ppb	n/a
Dichlodifluoromethane (Freon 12)	1 ppm	See Appendix A-3
1,4-Dioxane	1 ppb	Some people who use water containing 1,4-dioxane in excess of the Notification Level over many years may experience liver or kidney problems and may have an increased risk of getting cancer, based on studies in laboratory animals.
Ethylene glycol	14 ppm	n/a
Formaldehyde	100 ppb	n/a
HMX	350 ppb	n/a
Isopropylbenzene	770 ppb	n/a
Manganese	500 ppb	The notification level for manganese is used to protect consumers from neurological effects. High levels of manganese in people have been shown to result in effects of the nervous system.
Methyl isobutyl ketone (MIBK)	120 ppb	n/a
Naphthalene	17 ppb	n/a
N-Nitrosodiethylamine (NDEA)	10 ppt	n/a
N-Nitrosodimethylamine (NDMA)	10 ppt	n/a
N-Nitrosodi-n-propylamine (NDPA)	10 ppt	n/a
Propachlor	90 ppb	n/a
n-Propylbenzene	260 ppb	n/a
RDX	300 ppt	n/a
Tertiary butyl alcohol (TBA)	12 ppb	See Appendix A-3
1,2,3-Trichloropropane (1,2,3-TCP)	5 ppt	See Appendix A-3
1,2,4-Trimethylbenzene	330 ppb	n/a
1,3,5-Trimethylbenzene	330 ppb	n/a
2,4,6-Trinitrotoluene (TNT)	1 ppb	n/a
Vanadium	50 ppb	See Appendix A-3

Appendix B: California's Detection Limits for Purposes of Reporting (DLRs)

Most contaminants with primary MCLs have DLRs that are in the Title 22 regulations. All other DLRs may be found on the State Board's website via the link labeled "Chemical IDs and Detection Limits for Purposes of Reporting (DLRs)" at http://www.swrcb.ca.gov/drinking_water/certlic/drinkingwater/EDT.shtml.

Many of the DLRs are for contaminants that you do not have to report in your CCR; however, the State Board encourages you to report any of these that you find, particularly if there is (1) a proposed regulation for the detected chemical or (2) health guidance available (USEPA health advisory or State Board notification level).

If you are uncertain about the inclusion of certain data, talk to your primacy agency. If you cannot find a contaminant listed below and your lab analysis provides a detected value for that contaminant, the State Board recommends that you report it in your CCR. If you're uncertain, always provide too much data rather than too little.

Appendix C: Reporting Monitoring Data

This appendix provides examples of monitoring data and instructions on how to report certain detects in the CCR.

❖ Example that demonstrates reporting for 1 sampling site and 1 sampling date [section 64481(d)(2)(D)1.A.]:

- Example Data – Barium Monitoring

Barium MCL	1 ppm
MCL in CCR units	1 ppm
March 2014 Result	0.003 ppm

- Example CCR Table Excerpt

Contaminant (CCR units)	MCL	PHG	Average	Range	Sample Date	Violation	Typical Source
Barium (ppm)	1	2	0.003	N/A	2010	No	Discharges of oil drilling wastes and from metal refineries; erosion of natural deposits

Note: System will report this same result each CCR year (2014, 2015, and 2016) until the next sample is taken.

❖ Example that demonstrates reporting for 1 sampling site and multiple sampling dates [section 64481(d)(2)(D)1.A.]:

- Example Data – Xylenes Monitoring

Xylenes MCL	1.750 ppm				
MCL in CCR units	1.750 ppm				
2014 Results for Source Reported Individually in CCR Table (ppm)	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Average
	1	1	2	ND	1

- Example CCR Table Excerpt

Contaminant (CCR units)	MCL	PHG	Average	Range	Sample Date	Violation	Typical Source
Xylenes (ppm)	1.750	1.8	1	ND - 2	2014	No	Discharge from petroleum and chemical factories; fuel solvent

❖ Example that demonstrates reporting for multiple sampling sites and 1 sampling date [section 64481(d)(2)(D)1.B.]:

- Example Data – Barium Monitoring

Barium MCL	1 ppm		
MCL in CCR units	1 ppm		
Source	Well 1	Well 2	Well 3
March 2014 Results (ppm)	0.60	0.46	ND
	Average = 0.35		

If these sources enter the distribution system at the same point, a flow-weighted average may be reported instead of the average computed as follows:

Assuming Wells 1, 2, and 3 contributed 20%, 40%, and 40%, respectively.
Weighted average = 0.2(0.60 ppm) + 0.4(0.46 ppm) + 0.4(ND ppm) = 0.30 ppm.

- Example CCR Table Excerpt

Contaminant (CCR units)	MCL	PHG	Average	Range	Sample Date	Violation	Typical Source
Barium (ppm)	1	2	0.35	ND – 0.60	2014	No	Discharges of oil drilling wastes and from metal refineries; erosion of natural deposits

Note: System will report these same results each CCR year (2014, 2015, and 2016) until the next sample is taken.

If reporting a flow-weighted average:

Contaminant (CCR units)	MCL	PHG	Average	Range	Sample Date	Violation	Typical Source
Barium (ppm)	1	2	0.30	ND – 0.60	2014	No	Discharges of oil drilling wastes and from metal refineries; erosion of natural deposits

Note: System will report these same results each CCR year (2014, 2015, and 2016) until the next sample is taken.

❖ **Example that demonstrates reporting for multiple sampling sites and multiple sampling dates (compliance: 4 quarter or 6 month average) [section 64481(d)(2)(D)1.C.]:**

- Example Data – Xylenes Monitoring

Xylenes MCL	1.750 ppm				
MCL in CCR units	1.750 ppm				
Source	2014 Results (ppm)				
	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Average
Well 1	1	1	2	ND	1
Well 2	Not sampled	Not sampled	Not sampled	2	2
Well 3	Not sampled	1	2	ND	1
All wells					1.3

- Example CCR Table Excerpt

Contaminant (CCR units)	MCL	PHG	Average	Range	Sample Date	Violation	Typical Source
Xylenes (ppm)	1.750	1.8	1.3	ND - 2	2014	No	Discharge from petroleum and chemical factories; fuel solvent

❖ **Example that demonstrates reporting of multiple sampling sites and multiple sampling dates (compliance: running annual average on individual source basis) [section 64481(d)(2)(D)2.]:**

- Example Data – Dalapon Monitoring

Dalapon MCL	0.2 ppm							
MCL in CCR units	200 ppb							
Source	2014 Results (ppb)							
	1st Qtr		2nd Qtr		3rd Qtr		4th Qtr	
	Sample Result	Running Average*	Sample Result	Running Average*	Sample Result	Running Average*	Sample Result	Running Average
Well 1	74	42	60	47	28	50	43	52
Well 2	36	26	12	21	6	17	9	16

* Running averages are based on data from previous quarters not reported on this table.

- Example CCR Table Excerpt

Contaminant (CCR units)	MCL	PHG	Average	Range	Sample Date	Violation	Typical Source
Dalapon (ppb)	200	790	52	6 - 74	2014	No	Runoff from herbicide used on rights-of-way, and crops and landscape maintenance

❖ **Example that demonstrates reporting of multiple sampling sites and multiple sampling dates (compliance: running annual average on system-wide basis – TTHM and HAA5) [section 64481(d)(2)(D)3.]:**

- Example Data – TTHM Monitoring (Stage 1 D/DBPR)

TTHM MCL	0.080 ppm			
MCL in CCR units	80 ppb			
Location	2014 TTHM Results (ppb)			
	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr
Site A	45	60	125	70
Site B	40	55	115	60
Site C	45	60	105	70
Site D	50	65	135	80
System-wide Quarterly Average	45	60	120	70
System-wide Running Annual Average*	73	74	73	74

* System-wide running annual average for quarters 1 – 3 are based on results from previous quarters not reported on this table.

- Example CCR Table Excerpt

Contaminant (CCR units)	MCL	PHG (or MCLG)	Average	Range	Sample Date	Violation	Typical Source
TTHM (ppb)	80	N/A	74	40 - 135	2014	No	Byproduct of drinking water disinfection

- IDSE Sampling Under the Federal Stage 2 D/DBPR - Obsolete

  No longer required to include IDSE results of samples collected under the federal Stage 2 D/DBPR, when determining the range (but not he average) of TTHM and HAA5 results. IDSE samples were collected in 2008, 2009, or 2010, depending on size of system population served.

❖ **Example that demonstrates reporting of multiple sampling sites and multiple sampling dates (compliance: locational running annual average – TTHM and HAA5) [section 64481(d)(2)(D).2.B.]:**

For a System That Has Only Stage 2 D/DBPR Monitoring Data for 2014 (no LRAA exceedance)

- Example Data – TTHM Monitoring (state Stage 2 D/DBPR)

TTHM MCL	0.080 ppm			
MCL in CCR units	80 ppb			
Location	2014 TTHM Results (ppb)			
	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr
Site 1	45	60	125	70
*Site 1 LRAA**	*44*	*59*	*74*	*75*
Site 2	40	55	115	60
*Site 2 LRAA**	*39*	*53*	*67*	*68*
Site 3	45	60	105	70
*Site 3 LRAA**	*44*	*61*	*69*	*70*
Site 4	50	65	120	75
*Site 4 LRAA**	*49*	*63*	*74*	*78*

* LRAA for quarters 1 – 3 are based on results from previous quarters not reported on this table.

- Example CCR Table Excerpt

Contaminant (CCR units)	MCL	PHG (or MCLG)	Average	Range	Sample Date	Violation	Typical Source
TTHM (ppb)	80	N/A	78	40 - 125	2014	No	Byproduct of drinking water disinfection

For a System That Began Stage 2 D/DBPR Monitoring in 4th Quarter of 2014 (no LRAA exceedance)

- Example Data – TTHM Monitoring (state Stage 2 D/DBPR)

TTHM MCL	0.080 ppm			
MCL in CCR units	80 ppb			
Location	2014 TTHM Results (ppb)			
	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr
Stage 1 D/DBPR Monitoring				
Site A	45	60	65	n/a
Site B	40	55	60	n/a
Site C	45	60	75	n/a
Site D	50	65	80	n/a
System-wide Quarterly Average	45	60	70	n/a
System-wide Running Annual Average*	73	65	75	n/a
Stage 2 D/DBPR Monitoring				
Site 1	n/a	n/a	n/a	70
Site 1 LRAA	*n/a*	*n/a*	*n/a*	*n/a*
Site 2	n/a	n/a	n/a	60
Site 2 LRAA	*n/a*	*n/a*	*n/a*	*n/a*
Site 3	n/a	n/a	n/a	70
Site 3 LRAA	*n/a*	*n/a*	*n/a*	*n/a*
Site 4	n/a	n/a	n/a	75
Site 4 LRAA	*n/a*	*n/a*	*n/a*	*n/a*

* System-wide running annual average for quarters 1 – 3 are based on results from previous quarters not reported on this table.

- Example CCR Table Excerpt

Contaminant (CCR units)	MCL	PHG (or MCLG)	Average	Range	Sample Date	Violation	Typical Source
TTHM (ppb)	80	N/A	75	40 - 80	2014	No	Byproduct of drinking water disinfection

For a System That Began Stage 2 D/DBPR Monitoring in 4th Quarter of 2014 (LRAA exceedance)

- Example Data – TTHM Monitoring (state Stage 2 D/DBPR)

TTHM MCL	0.080 ppm			
MCL in CCR units	80 ppb			
Location	2014 TTHM Results (ppb)			
	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr
Stage 1 D/DBPR Monitoring				
Site A	45	60	65	n/a
Site B	40	55	60	n/a
Site C	45	60	75	n/a
Site D	50	65	80	n/a
System-wide Quarterly Average	45	60	70	n/a
System-wide Running Annual Average*	73	65	75	n/a
Stage 2 D/DBPR Monitoring				
Site 1	n/a	n/a	n/a	460
Site 1 LRAA (**)	*n/a*	*n/a*	*n/a*	*115*
Site 2	n/a	n/a	n/a	60
Site 2 LRAA	*n/a*	*n/a*	*n/a*	*58*
Site 3	n/a	n/a	n/a	76
Site 3 LRAA	*n/a*	*n/a*	*n/a*	*50*
Site 4	n/a	n/a	n/a	76
Site 4 LRAA	*n/a*	*n/a*	*n/a*	*53*

* System-wide running annual average for quarters 1 – 3 are based on results from previous quarters not reported on this table.

** 4th Qtr LRAA = (460+0+0+0)/4 = 115

For CCR reporting of first year Stage 2 D/DBPR monitoring results, LRAA should be calculated with respect to the MCL.

- Example CCR Table Excerpt

Contaminant (CCR units)	MCL	PHG (or MCLG)	Average	Range	Sample Date	Violation	Typical Source
TTHM (ppb)	80	N/A	75, 115	40 - 460	2014	Yes *	Byproduct of drinking water disinfection

* See page 22, Item m) for instructions on how to highlight the violation in the table and the additional information to include near, but not in the table.

Example that demonstrates reporting of turbidity results [section 64481(d)(2)(E)]:

- Example Data – Turbidity Monitoring

  When reporting turbidity as an indicator of filtration performance, systems must report the highest single measurement and the lowest monthly percentage of samples meeting the requirements specified for that technology. In this situation, you may want to report the data in 2 rows of your table.

- Example CCR Table Excerpt

  For conventional or direct filtration (systems subject to the state Interim Enhanced Surface Water Treatment Rule or Long Term 1 Enhanced Surface Water Treatment Rule):

Contaminant	MCL	PHG	Level Found	Range	Sample Date	Violation	Typical Source
Turbidity	TT = 1 NTU	N/A	0.7 NTU	N/A	2014	No	soil runoff
	TT = 95% of samples ≤0.3 NTU		93%	N/A			

  For diatomaceous earth filtration:

Contaminant	MCL	PHG	Level Found	Range	Sample Date	Violation	Typical Source
Turbidity	TT = 5.0 NTU	N/A	1 NTU	N/A	2014	No	soil runoff
	TT = 95% of samples ≤0.5 NTU		93%	N/A			

  For slow sand filtration:

Contaminant	MCL	PHG	Level Found	Range	Sample Date	Violation	Typical Source
Turbidity	TT = 5.0 NTU	N/A	1 NTU	N/A	2014	No	Soil runoff
	TT = 95% of samples ≤1.0 NTU		93%	N/A			

  For alternative filtration technology:

Contaminant	MCL	PHG	Level Found	Range	Sample Date	Violation	Typical Source
Turbidity	TT = *	N/A		N/A	2014		Soil runoff
	TT = *			N/A			

  * Refer to turbidity limits established by the State Board.

❖ Example that demonstrates reporting of lead results [section 64481(d)(2)(F)]:

- Example Data – Lead Monitoring

Lead Action Level (90th percentile)			0.015 ppm							
AL in CCR units			15 ppb							
July 2014 Lead Results (ppb)	Site 1	Site 2	Site 3	Site 4	Site 5	Site 6	Site 7	Site 8	Site 9	Site 10
	ND	ND	8	12	9	5	ND	ND	6	10

To calculate the 90th percentile: The results of all samples taken during a monitoring period shall be placed in ascending order from the sample with the lowest concentration to the sample with the highest concentration. Each sample result shall be assigned a number starting with the number 1 for the lowest value. The number of samples taken during the monitoring period shall be multiplied by 0.9. The contaminant concentration in the numbered sample yielded by this calculation is the 90th percentile.

Example:

July 2014 Lead Results (ppb)	Order 1	Order 2	Order 3	Order 4	Order 5	Order 6	Order 7	Order 8	Order 9	Order 10
	ND	ND	ND	ND	5	6	8	9	10	12

10 samples x 0.9 = 9; therefore, the ninth value is the 90th percentile value (10 ppb).

Report in CCR Table: 90th percentile = 10, # of sites sampled = 10, and # of sites above action level (15) = 0.

For small systems collecting 5 samples, if the average of the two highest samples is below the reporting level of 5 ppb, then there is no need to report any detection for lead. If there is only one sample with a detection, then the detected level is divided by 2 and if the result is at or above 5 ppb, then it should be reported on the CCR.

If your system takes (a) 20 or more samples and more than 5% (and up to and including 10%) of the samples are above the regulatory AL or (b) fewer than 20 samples and one sample is above the regulatory AL, you must include the educational language provided on page 30. All community water systems must include the education language provided on page 30.

Water quality parameter data that you collect in association with the Lead and Copper Rule should not be included in the report.

- Example CCR Table Excerpt

Contaminant (CCR units)	MCL	PHG	Average	Range	Sample Date	Violation	Typical Source
Lead (ppb)	AL = 15	0.2	10	10 sites samples; 0 sites over action level	2014	No	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits

❖ Example that demonstrates reporting of fluoride results [sections 64481(d)(2)(D)1.A. and B]:

- Example CCR Table Excerpt (assume 1 sampling site and 1 sampling date)

Contaminant (CCR units)	MCL	PHG	Average	Range	Sample Date	Violation	Typical Source
Fluoride (naturally occurring) (ppm) **	2.0	1	0.3	---	2014	---	Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories

** (Sample wording if fluoride added to the water): *Our water system treats your water by adding fluoride to the naturally occurring level to help prevent dental caries in consumers. State regulations require the fluoride levels in the treated water be maintained within a range of [list control range] ppm with an optimum dose of [list value] ppm. Our monitoring showed that the fluoride levels in the treated water ranged from [list range] with an average of [list value] ppm. Information about fluoridation, oral health, and current issues is available from http://www.swrcb.ca.gov/drinking_water/certlic/drinkingwater/Fluoridation.shtml.*

❖ Example that demonstrates reporting of radioactivity results [section 64481(c)(1)]:

Gross alpha monitoring results are used for two purposes: To determine compliance with the gross alpha MCL and to screen for radium and uranium. In both cases, an average of four quarterly samples is used unless the samples have been composited.

Determining MCL compliance: Counting errors and minimum detectable activity (MDA) are not included in the averages of gross alpha, uranium, or radium data used to determine compliance with the MCLs. Therefore, they are not included in the data reported in the CCR.

Screening to determine if radium and uranium testing is necessary: When the gross alpha data is averaged to determine whether radium or uranium testing should be conducted, counting errors are added in and the MDA is substituted in for any zero result. Confusion about radioactivity data reporting for the CCR has resulted from the way the average is calculated for screening purposes, but this approach is not appropriate for CCR data reporting.

❖ Example that demonstrates reporting of sodium and hardness results [section 64481(c)(4)]:

Although sodium and hardness do not have MCLs, they are of interest to many consumers who are concerned about sodium intake and may believe that the hardness of the water could affect their health. Therefore, monitoring is required and detections should be included in the table(s) along with the other data on water quality. Since there are no MCLs/PHGs/MCLGs, just indicate that in the table in some way (e.g., none, N/A).

No "typical source" is required, though a system may wish to include information such as:

"Hardness" is the sum of polyvalent cations present in the water, generally magnesium and calcium. The cations are usually naturally occurring.

"Sodium" refers to the salt present in the water and is generally naturally occurring.

❖ Example that demonstrates reporting of Stage 1 D/DBPR TOC treatment technique violations (surface water treatment plants with conventional treatment or precipitative softening):

- Treatment Technique Violation Reporting

  If any of the following apply, you must report a treatment technique violation for enhanced coagulation or enhanced softening (if applicable):

  - ✓ Alternative compliance criteria for enhanced coagulation or enhanced softening cannot be met.
  - ✓ Quarterly TOC monitoring does not demonstrate the percentage removal of TOC (demonstrated in the table below).
  - ✓ A system does not obtain state approval for alternate minimum TOC removal (Step 2) requirements.

- Example Data – For a conventional surface water treatment system with source water TOC between 2 – 4 mg/L and with a source water alkalinity between 0 – 50 mg/L.

- Example CCR Table Excerpt

TT Violation	Explanation	Length	Steps Taken to Correct the Violation	Health Effect Language
Failure to remove required amount of total organic carbon (TOC) (DBPP)	On March 3rd, we collected samples for TOC before and after our treatment process to determine the percentage of TOC we were removing. Results showed that we were removing 25 percent of the TOC. We are required to remove 35 percent of the TOC.	1 month	We examined our treatment processes to see if we could improve our removal of TOC. We made some adjustments to our process on March 29th. Samples collected after that time show that we are able to achieve 35 percent removal.	Total organic carbon (TOC) has no health effects. However, TOC 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 getting cancer.

❖ Example that demonstrates reporting of LT2ESWTR treatment technique violations:

- Treatment Technique Violation Reporting

  For violation of treatment techniques under the LT2ESWTR, the system must provide an explanation of the violation, an indication of the length of the violation, information on steps taken to correct the violation, and health effects language. Because there are no standard health effects language provided for these treatment techniques, the system would have to write language specific to the violation. You can use the health effect language for contaminants as an example or template.

- Example CCR Table Excerpt

TT Violation	Explanation	Length	Steps Taken to Correct the Violation	Health Effect Language
Uncovered and Untreated Finished Water Reservoir	The Alma finished water reservoir is uncovered and the discharge is not treated. We were required to address this situation by April 1, 2009.	17 months	We have hired an engineering firm to design a cover for the tank. We intend to have the tank covered by September 2010.	Inadequately protected water may contain disease-causing organisms. These organisms can cause symptoms such as diarrhea, nausea, cramps, and associated headaches.
Determine and Report Bin Classification	After conducting our source water monitoring for *Cryptosporidium*, we were required to determine and report our Bin Classification by [date].	1 month	We have since determined our bin classification and reported this to the SWRCB.	Inadequately treated water may contain disease-causing organisms. These organisms can cause symptoms such as diarrhea, nausea, cramps, and associated headaches.
Provide or Install an Additional Level of Treatment	Based on our bin classification, we were required to provide or install an additional level of treatment by [date].	6 months	We hired an engineering firm to prepare a preliminary engineering report. The report listed treatment alternatives. We selected one of the alternatives and are in the process of constructing it. We anticipate that it will be completed by [date].	Inadequately treated water may contain disease-causing organisms. These organisms can cause symptoms such as diarrhea, nausea, cramps, and associated headaches.

❖ Example that demonstrates reporting of GWR special notice for fecal indicator-positive ground water source sample:

- Example Data – *E. coli*

  This system was triggered to conduct source water monitoring after a TCR positive sample in December 2014. In this example, both the distribution and the source samples were positive for *E. coli*. The system took five additional source samples and one was positive. Below is an example of reporting for both the TCR violation and the GWR special notice.

  The required special notice language for fecal indicator-positive samples must be provided in the CCR. For this example, we have included it as footnote to the table.

- Example CCR Table Excerpt – *E. coli*

Contaminant	MCL	MCLG	Your Water	Range	Sample Date	Violation	Typical Source
E. coli (in the distribution system)	0	0	1 positive sample	ND - 1	2014	Yes *	Human or animal fecal waste
E. coli (at the ground water source)**	0	0	2 positive samples	ND - 1	2014	No	Human or animal fecal waste

* We were notified on December 9, 2014, of an *E. coli* positive sample in the distribution system. You may remember receiving public notification of this violation on December 10. For reasons discussed in the next paragraph, we took Well 1 off-line on December 11. The duration of the violation was two days. We are addressing this contaminated well as discussed below.

** On December 20, 2014, we sampled the sources (Well 1 and Well 2) for the fecal-indicator, *E. coli*. We were notified on December 11 that Well 1 tested positive for *E. coli*. On December 12, we took five additional samples and were notified on December 13 that two of the five samples were positive for *E. coli*. We immediately took Well 1 off-line at that time. Our system is in contact with the SWRCB, and we have a state-approved plan to abandon this well and replace it with a new well. We will have the new well completed by July 5, 2015, and the old well will be abandoned by July 15, 2015. As an interim measure, we have moved to only utilizing this well as an emergency source and have not had to utilize it since the sampling revealed the contamination.

Health Effects: Fecal coliforms and *E. coli* 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.

- Example Data – Enterococci or Coliphage

  If the system had sampled for (and found) enterococci or coliphage as their fecal indicator, the table would read as shown in the sample below.

- Example CCR Table Excerpt – Enterococci or Coliphage

Contaminant	MCL	MCLG	Your Water	Range	Sample Date	Violation	Typical Source
Enterococci (at the ground water source)*	TT	N/A	2 positive samples	ND - 1	2014	No	Human or animal fecal waste
Coliphage (at the ground water source)*	TT	N/A	2 positive samples	ND - 1	2014	No	Human or animal fecal waste

* Special notice required text and health effects language would be provided in the CCR – possibly in a footnote to the table as shown in the previous example for *E. coli*.

Health Effects: Fecal indicators are microbes 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.

❖ Example that demonstrate reporting of GWR treatment technique violations for failure to take corrective action for fecal indicator-positive ground water source sample:

- Example Data

  If in the example shown on the previous page, the system did not complete corrective action(s) within 120 days (or earlier if required by SWRCB) of the fecal indicator-positive source sample or failed to be in compliance with a SWRCB-approved corrective action plan and schedule, they will be in violation of the treatment technique.

- Example CCR Table Excerpt

TT Violation	Explanation	Length	Steps Taken to Correct the Violation	Health Effect Language
Corrective Action for Ground Water Fecal Indicator Source Sample(s)	We were required to take corrective action to address the fecal contamination in our well.	3 months	We have contacted the SWRCB and are now on a corrective action plan. We will abandon the contaminated well and drill a new one. We will have the new well completed by July 5, 2015, and the old well will be abandoned by July 15, 2015.	Inadequately protected or treated water may contain disease-causing organisms. These organisms can cause symptoms such as diarrhea, nausea, cramps, and associated headaches.

❖ **NOTE: How to determine "sample result" for a single sample with 1 or 2 confirmation samples (compliance: alone or averaged with other samples)**

Xylenes (ppb)	Initial Sample	Confirmation 1	Confirmation 2	Sample Result
Well 1	36	ND	16	26
Well 2	18	6	not needed	12
Well 3	7	ND	ND	ND

Appendix D: Certification Form (suggested format)

Consumer Confidence Report
Certification Form
(to be submitted with a copy of the CCR)

(to certify electronic delivery of the CCR, use the certification form on the State Board's website at http://www.swrcb.ca.gov/drinking_water/certlic/drinkingwater/CCR.shtml)

Water System Name: _____

Water System Number: _____

The water system named above hereby certifies that its Consumer Confidence Report was distributed on _____ (*date*) to customers (and appropriate notices of availability have been given). Further, the system certifies that the information contained in the report is correct and consistent with the compliance monitoring data previously submitted to the State Water Resources Control Board, Division of Drinking Water.

Certified by: Name: _____

Signature: _____

Title: _____

Phone Number: ( ) _____ Date: _____

To summarize report delivery used and good-faith efforts taken, please complete the below by checking all items that apply and fill-in where appropriate:

☐ CCR was distributed by mail or other direct delivery methods. Specify other direct delivery methods used: _____

_____

☐ "Good faith" efforts were used to reach non-bill paying consumers. Those efforts included the following methods:

- ☐ Posting the CCR on the Internet at www._____
- ☐ Mailing the CCR to postal patrons within the service area (attach zip codes used)
- ☐ Advertising the availability of the CCR in news media (attach copy of press release)
- ☐ Publication of the CCR in a local newspaper of general circulation (attach a copy of the published notice, including name of newspaper and date published)
- ☐ Posted the CCR in public places (attach a list of locations)
- ☐ Delivery of multiple copies of CCR to single-billed addresses serving several persons, such as apartments, businesses, and schools
- ☐ Delivery to community organizations (attach a list of organizations)
- ☐ Other (attach a list of other methods used)

☐ *For systems serving at least 100,000 persons*: Posted CCR on a publicly-accessible internet site at the following address: www._____

☐ *For investor-owned utilities*: Delivered the CCR to the California Public Utilities Commission

Appendix E: List of Translations of "Note of Importance" for CCR

Pursuant to Section 64481(l), Chapter 15, Title 22, your CCR is required to contain information in Spanish on the importance of the report or contain a telephone number or address where Spanish-speaking residents may contact the water system to obtain a translated copy of the report or assistance in Spanish. For any language that is spoken by a non-English speaking group that exceeds 1,000 residents or 10% of the residents in a community, the CCR is required to contain the same information in the appropriate language(s).

For your use, the State Board is compiling as many translations of the below statement as provided to the State Board from other parties. If a utility has a translation not available on this website that it would like to share with other utilities, please contact Michael McKibben at (619) 525-4023 or Michael.McKibben@waterboards.ca.gov. None of these translations have been independently verified.

This report contains important information about your drinking water. Translate it, or speak with someone who understands it.

Spanish

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

Arabic

"هذا ألتقرير يحتوي على معلومآ ت مهّمة تتعلق بمياه ألشفة (أو ألشرب).
ترجم ألتقرير , أو تكلم مع شخص يستطيع أن يفهم ألتقرير."

Chinese (Traditional)

此份有關你的食水報告,內有重要資料和訊息,請找他人為你翻譯及解釋清楚。

Chinese (Simplified)

此份有关你的食水报告,内有重要资料和讯息,请找他人为你翻译及解释清楚。

Farsi

این اطلاعیه شامل اطلاعات مهمی راجع به آب آشامیدنی است.اگر نمیتوانید این اطلاعات را بزبان انگلیسی

بخوانید لطفا از کسی که میتواند یاری بگیرید تا مطالب را برای شما به فارسی ترجمه کند.

French

Cé rapport contient des information importantes concernant votre eau potable. Veuillez traduire, ou parlez avec quelqu' un qui peut le comprendre.

German

Dieser Bericht enthält wichtige Information über Ihr Trinkwasser. Bitte übersetzen Sie ihn oder sprechen Sie mit jemandem, der ihn versteht.

Greek

Η κατοιθεν αναφορα παρουσιαζη σπουδαιες πληροφορειες για το ποσιμο νερο σας. Πρακακλω να το μεταφρασετε η να το σξολειασετε με καποιον που το καταλαβαινη απολητως.

Hebrew

הדו"ח הזה מכיל מידע חשוב לגבי מי השתייה שלך
תרגם את הדו"ח או דבר עם מישהו שמבין אותו

Hindi

यह सूचना महत्वपूर्ण है ।
कृपा करके किसी से :सका अनुवाद करायें ।

Hmong

Daimntawv tshaj tawm no muaj lus tseemceeb txog koj cov dej haus. Tshab txhais nws, los yog tham nrog tej tug neeg uas totaub txog nws.

Irish

Tá eolas tábhachtach san tuairisc faoi uisce inólta. Aistrigh é, nó labhair le duine cé a thuigeann é.

Italian

Questo rapporto contiene informazioni inportanti che riguardano la vostra aqua potabile. Traducetelo, o parlate con una persona qualificata in grado di spiegarvelo.

Japanese

この報告書には上水道に関する重要な情報が記されております。翻訳を御依頼なされるか、内容をご理解なさっておられる方にお尋ね下さい。

Khamer

របាយការណ៍នេះមានពត៌មានសំខាន់អំពីទឹកបរិភោគ ។ សូមបកប្រែឬពិគ្រោះជាមួយអ្នកដែលមើលយល់របាយការណ៍នេះ ។

Korean

이 안내는 매우 중요합니다.
본인을 위해 번역인을 사용하십시요.

Laotion

ລາຍງານນີ້ມີຂໍ້ມູນສຳຄັນກ່ຽວກັບນ້ຳປະປາຂອງທ່ານ. ຈົ່ງໃຫ້ຄົນອື່ນແປຄວາມໃຫ້ທ່ານ, ຫລືໃຫ້ປຶກສາກັບຄົນໃດຄົນໜຶ່ງທີ່ເຂົ້າໃຈເລື້ອງ.

Polish

Ta broszura zawiera wazne informacje dotyczace jakosci wody do picia. Przetlumacz zawartosc tej broszury lub skontaktuj sie z osoba ktora pomoze ci w zrozumieniu zawartych informacji.

Punjabi

ਇਹ ਸੂਚਨਾ ਮਹਤੱਵਪੂਰਣ ਹੈ।
ਕ੍ਰਿਪਾ ਕਰਕੇ ਕਿਸੀ ਤੋ ਇਸ ਦਾ ਅਨੁਵਾਦ ਕਰਾਉ।

Russian

Этот отчет содержит важную информацию о вашей питьевой воды. Переведите его или поговорите с тем, кто это понимает.

Swahili

Shauri hii niya kufahamisha uzuri wa maji ya kunyua. Shauri nilazima egeuzwe kwa yoyote hajui Kiingereza.

Tagalog

Mahalaga ang impormasyong ito. Mangyaring ipasalin ito.

Turkish

Bu rapor içme suyunuzla ilgili önemli bilgi içermektedir. Bunu tercüme edin veya anlayan biri ile görüşün.

Vietnamese

Chi tiết này thật quan trọng.
Xin nhờ người dịch cho quý vị.

Appendix F: Source Water Protection and Water Conservation Tips for Consumers

An example of how source water protection and water conservations tips could appear in a CCR are shown in the tables below.

Source Water Protection Tips for Consumers – Example Language
Protection of drinking water is everyone's responsibility. You can help protect your community's drinking water source in several ways: • Eliminate excess use of lawn and garden fertilizers and pesticides – they contain hazardous chemicals that can reach your drinking water source. • Pick up after your pets. • If you have your own septic system, properly maintain your system to reduce leaching to water sources or consider connecting to a public water system. • Dispose of chemicals properly; take used motor oil to a recycling center. • Volunteer in your community. Find a watershed or wellhead protection organization in your community and volunteer to help. If there are no active groups, consider starting one. Use USEPA's Adopt Your Watershed to locate groups in your community, or visit the Watershed Information Network's How to Start a Watershed Team. • Organize a storm drain stenciling project with your local government or water supplier. Stencil a message next to the street drain reminding people "Dump No Waste – Drains to River" or "Protect Your Water". Produce and distribute a flyer for households to remind residents that storm drains dump directly into your local water body.

Water Conservation Tips for Consumers – Example Language

Did you know that the average U.S. household uses approximately 400 gallons of water per day or 100 gallons per person per day? Luckily, there are many low-cost and no-cost ways to conserve water. Small changes can make a big difference – try one today and soon it will become second nature.

- Take short showers – a 5 minutes shower uses 4 to 5 gallons of water compared to up to 50 gallons for a bath.
- Shut off water while brushing your teeth, washing your hair, and shaving and save up to 500 gallons a month.
- Use a water-efficient showerhead. They are inexpensive, easy to install, and can save you up to 750 gallons a month.
- Run your clothes washer and dishwasher only when they are full. You can save up to 1,000 gallons a month.
- Water plants only when necessary.
- Fix leaking toilets and faucets. Faucet washers are inexpensive and take only a few minutes to replace. To check your toilet for a leak, place a few drops of food coloring in the tank and wait. If it seeps into the toilet bowl without flushing, you have a leak. Fixing it or replacing it with a new, more efficient model can save up to 1,000 gallons a month.
- Adjust sprinklers so only your lawn is watered. Apply water only as fast as the soil can absorb it and during the cooler parts of the day to reduce evaporation.
- Teach your kids about water conservation to ensure a future generation that uses water wisely. Make it a family effort to reduce next month's water bill!
- Visit www.epa.gov/watersense for more information.