

California Code of Regulations, Title 22, Chapter 15

ARTICLE 2. GENERAL REQUIREMENTS

Section 64413.1. Classification of Water Treatment Facilities.

(a) Each water treatment facility shall be classified pursuant to Table 64413.1-A based on the calculation of total points for the facility using the factors specified in subsection(b).

**Table 64413.1-A.
Water Treatment Facility Class Designations**

Total Points	Class
Less than 20	T1
20 through 39	T2
40 through 59	T3
60 through 79	T4
80 or more	T5

(b) The calculation of total points for each water treatment facility shall be the sum of the points derived in each of paragraphs (1) through (13) except where a treatment facility treats more than one source, in which case the source with the highest average of each contaminant shall be used to determine the point value in paragraphs (2) through (5).

(1) For water source, the points are determined pursuant to Table 64413.1-B.

**Table 64413.1-B.
Points for Source Water Used by the Facility**

Type of source water used by the facility	Points
Groundwater and/or purchased treated water meeting primary and secondary drinking water standards, as defined in § 116275 of the Health and Safety Code	2
Water that includes any surface water or groundwater under the direct influence of surface water	5

(2) For influent microbiological water quality, points shall be determined by using the median of all total coliform analyses completed in the previous 24 months pursuant to Table 64413.1-C:

**Table 64413.1-C.
Influent Water Microbiological Quality Points**

Median Coliform Density Most Probable Number Index (MPN)	Points
less than 1 per 100 mL	0
1 through 100 per 100 mL	2
greater than 100 through 1,000 per 100 mL	4
greater than 1,000 through 10,000 per 100 mL	6
greater than 10,000 per 100 mL	8

(3) For facilities treating surface water or groundwater under the direct influence of surface water, points for influent water turbidity shall be determined pursuant to Table 64413.1-D on the basis of the previous 24 months of data, except that if turbidity data is missing for one or more of the months, the points given for turbidity shall be 5. The maximum influent turbidity sustained for at least one hour according to an on-line turbidimeter shall be used unless such data is not available, in which case, the maximum influent turbidity identified by grab sample shall be used. For facilities that have not been in operation for 24 months, the available data shall be used. For facilities whose permit specifies measures to ensure that influent turbidity will not exceed a specified level, the points corresponding to that level shall be assigned.

**Table 64413.1-D.
Influent Water Turbidity Points**

Maximum Influent Turbidity Level Nephelometric Turbidity Units (NTU)	Points
Less than 15	0
15 through 100	2
Greater than 100	5

(4) The points for influent water perchlorate, nitrate, ~~or~~ nitrite levels shall be determined by an average of the three most recent sample results, pursuant to Table 64413.1-E.

**Table 64413.1-E.
Influent Water Perchlorate, Nitrate, and Nitrite Points**

<u>Perchlorate</u> , <u>Nitrate</u> , and <u>Nitrite</u> Data Average	Points
Less than or equal to the maximum contaminant level (MCL), as specified in Table 64431-A	0
Greater than the MCL	5

(5) The points for other influent water contaminants with primary MCLs shall be a sum of the points for each of the inorganic contaminants (Table 64431-A), organic contaminants (Table 64444-A) and radionuclides (Tables ~~4~~, ~~§64442~~ and 64443). The points for each contaminant shall be based on an average of the three most recent sample results, pursuant to Table 64413.1-F. If monitoring for a contaminant has been waived pursuant to §§ 64432(k), 64432.2(c), or 64445(d), the points shall be zero for that contaminant.

**Table 64413.1-F.
Influent Water Chemical and Radiological Contaminant Points**

Contaminant Data Average	Points
Less than or equal to the MCL	0
Greater than the MCL	2
5 Times the MCL or greater	5

(6) The total points for surface water filtration treatment shall be the sum of the points of those treatment processes utilized by the facility for compliance with §64652, pursuant to Table 64413.1-G.

**Table 64413.1-G.
Points for Surface Water Filtration Treatment**

Treatment	Points
Conventional, direct, or inline	15
Diatomaceous earth	12
Slow sand, membrane, cartridge, or bag filter	8
Backwash recycled as part of process	5

(7) The points for each treatment process utilized by the facility and not included in paragraph (6) that is used to reduce the concentration of one or more contaminants for which a primary MCL exists, pursuant to Table 64431-A, Table 64444-A, and Tables ~~4~~ of ~~§64442~~ and 64443, shall be 10. Blending shall only be counted as a treatment process if one of the blended sources exceeds a primary MCL.

(8) The points for each treatment process not included in paragraphs (6), or (7) that is used to reduce the concentration of one or more contaminants for which a secondary MCL exists, pursuant to Tables 64449-A and 64449-B, shall be 3. Blending shall only be counted as a treatment process if one of the blended sources exceeds a secondary MCL.

(9) The points for each treatment process not included in paragraphs (6), (7), or (8) that is used for corrosion control or fluoridation shall be 3.

(10) The total points for disinfection treatment shall be the sum of the points for those treatment processes utilized by the facility for compliance with §64654(a), pursuant to Table 64413.1-H.

**Table 64413.1-H.
Points for Disinfection Treatment**

Treatment Process	Points
Ozone	10
Chlorine and/or chloramine	10
Chlorine dioxide	10
Ultra violet (UV)	7

(11) The points for disinfection/oxidation treatment not included in paragraphs (6), (7), (8), or (10) shall be a sum of the points for all the treatment processes used at the facility pursuant to Table 64413.1-I.

**Table 64413.1-I.
Points for Disinfection/Oxidation Treatment without Inactivation Credit**

Treatment Process	Points
Ozone	5
Chlorine and/or chloramine	5
Chlorine dioxide	5
Ultra violet (UV)	3
Other oxidants	5

(12) The points for any other treatment process that alters the physical or chemical characteristics of the drinking water and that was not included in paragraphs (6), (7), (8), (9), (10), or (11) shall be 3.

(13) The points for facility flow shall be 2 per million gallons per day or fraction thereof of maximum permitted treatment facility capacity, up to a maximum of 50 points; except that for facilities utilizing only blending, the points shall be based on the flow from the contaminated source and the dilution flow required to meet the MCL(s) specified in Tables 64431-A, 64444-A, 64449-A, 64449-B, and Tables ~~4~~ of §64442 and 64443.

Note: Authority cited: Sections 100275 and 106910, Health and Safety Code. Reference: Sections 106875, 106910 and 116555, Health and Safety Code.

ARTICLE 4. PRIMARY STANDARDS -- INORGANIC CHEMICALS

Section 64431. Maximum Contaminant Levels - Inorganic Chemicals.

(a) ~~Public water systems shall comply with the~~ The primary MCLs for the drinking water chemicals shown in Table 64431-A as specified in this article. ~~shall not be exceeded in the water supplied to the public.~~

Table 64431-A
Maximum Contaminant Levels
Inorganic Chemicals

<i>Chemical</i>	<i>Maximum Contaminant Level, mg/L</i>
Aluminum	1.
Antimony	0.006
Arsenic	0.05
Asbestos	7 MFL*
Barium	1.
Beryllium	0.004
Cadmium	0.005
Chromium	0.05
Cyanide	0.15
Fluoride	2.
Mercury	0.002
Nickel	0.1
Nitrate (as NO ₃)	45.
Nitrate + Nitrite (sum as nitrogen)	10.
Nitrite (as nitrogen)	1.
<u>Perchlorate</u>	<u>0.006</u>
Selenium	0.05
Thallium	0.002

*MFL = million fibers per liter; MCL for fibers exceeding 10 um in length.

NOTE: Authority cited: Sections 100275, 116293(b), 116350, 116365 and 116375, Health and Safety Code.

Reference: Sections 116365 and 116470, Health and Safety Code.

Section 64432. Monitoring and Compliance--Inorganic Chemicals.

(a) All public water systems shall monitor to determine compliance with the nitrate and nitrite MCLs in Table 64431-A, pursuant to subsections ~~64432(c) through (e) of this section~~ and Section 64432.1. All community and nontransient-noncommunity water systems shall monitor to determine compliance with the perchlorate MCL, pursuant to subsections (c), (d), (j), and (k), and Section 64432.3. All community and nontransient-noncommunity water systems shall also monitor to determine compliance with the other MCLs in Table 64431-A, pursuant to subsections ~~64432(b) through (l) of this section~~, and, for asbestos, section 64432.2. Monitoring shall be conducted in the year designated by the Department of each compliance period beginning with the compliance period starting January 1, 1993.

(b) The frequency of monitoring conducted to determine compliance with the MCLs for the inorganic chemicals listed in Table 64431-A, except for asbestos, ~~and~~ nitrate/nitrite and perchlorate, shall be as follows:

(1) Each compliance period, all community and nontransient-noncommunity systems using groundwater shall monitor once during the year designated by the Department. The Department will designate the year based on historical monitoring frequency and laboratory capacity. All community and nontransient-noncommunity systems using approved surface water shall monitor annually. All systems monitoring at distribution entry points which have combined surface and groundwater sources shall monitor annually.

(2) Quarterly samples shall be collected and analyzed for any chemical if analyses of such samples indicate a continuous or persistent trend toward higher levels of that chemical, based on an evaluation of previous data.

(c) For the purposes of Sections 64432, 64432.1, ~~and~~ 64432.2, and 64432.3, detection shall be defined by the detections limits for purposes of reporting (DLRs) in Table 64432-A.

Table 64432-A
Detection Limits for Purposes of Reporting (DLRs) for Regulated Inorganic Chemicals

<i>Chemical</i>	<i>Detection Limit for Purposes of Reporting (DLR) (mg/L)</i>
Aluminum	0.05
Antimony	0.006
Arsenic	0.002
Asbestos	0.2 MFL>10um*
Barium	0.1
Beryllium	0.001
Cadmium	0.001
Chromium	0.01

Cyanide	0.1
Fluoride	0.1
Mercury	0.001
Nickel	0.01
Nitrate (as NO ₃)	2.
Nitrite (as nitrogen)	0.4
<u>Perchlorate</u>	<u>0.004</u>
Selenium	0.005
Thallium	0.001

* MFL=million fibers per liter; DLR for fibers exceeding 10 um in length.

(d) Samples shall be collected from each water source or a supplier may collect a minimum of one sample at every entry point to the distribution system which is representative of each source after treatment. The system shall collect each sample at the same sampling site, unless a change is approved by the Department.

(e) A water system may request approval from the Department to composite samples from up to five sampling sites, provided that the number of sites to be composited is less than the ratio of the MCL to the DLR. Approval will be based on a review of three years of historical data, well construction and aquifer information for groundwater, and intake location, similarity of sources, and watershed characteristics for surface water. Compositing shall be done in the laboratory.

(1) Systems serving more than 3,300 persons shall composite only from sampling sites within a single system. Systems serving 3,300 persons or less may composite among different systems up to the 5-sample limit.

(2) If any inorganic chemical is detected in the composite sample at a level equal to or greater than one fifth of the MCL, a follow-up sample shall be analyzed within 14 days from each sampling site included in the composite for the contaminants which exceeded the one-fifth-MCL level. If available, duplicates of the original sample taken from each sampling site used in the composite may be used instead of resampling; the analytical results shall be reported within 14 days. The water supplier may collect up to two additional samples each from one or more of the sources to confirm the result(s).

(3) Compliance for each site shall be determined on the basis of the individual follow-up samples, or on the average of the follow-up and confirmation sample(s) if the supplier collects confirmation sample(s) for each detection.

(f) If the level of any inorganic chemical, except for nitrate, nitrite, ~~or~~ nitrate plus nitrite, or perchlorate, exceeds the MCL, the water supplier shall do one of the following:

(1) Inform the Department within 48 hours and monitor quarterly beginning in the next quarter after the violation occurred; or

(2) Inform the Department within seven days from the receipt of the analysis and collect one additional sample within 14 days to confirm the result. If the average of the two samples collected exceeds the MCL, this information shall be reported to the

Department within 48 hours and the water supplier shall monitor quarterly beginning in the next quarter after the violation occurred.

(g) For systems monitoring quarterly, compliance shall be determined by a running annual average; if any one sample would cause the annual average to exceed the MCL, the system is out of compliance immediately. For systems monitoring annually or less frequently, compliance shall be determined based on the initial sample or the average of the initial and confirmation samples, if a confirmation sample is collected.

(h) If a system using groundwater has collected a minimum of two quarterly samples or a system using approved surface water has collected a minimum of four quarterly samples and the sample results have been below the MCL, the system may apply to the Department for a reduction in monitoring frequency.

(i) Water quality data collected prior to January 1, 1990, and/or data collected in a manner inconsistent with this section shall not be used in the determination of compliance with the monitoring requirements for inorganic chemicals.

(j) Water quality data collected in compliance with the monitoring requirements of this section by a wholesaler ~~agency~~ providing water to a public water system shall be acceptable for use by that system for compliance with the monitoring requirements of this section.

(k) A water system may apply to the Department for a waiver from the monitoring frequencies specified in paragraph (b)(1) of this section, if the system has conducted at least three rounds of monitoring (three periods for groundwater sources or three years for approved surface water sources) and all previous analytical results are less than the MCL. The water system shall specify the basis for its request. If granted a waiver, a system shall collect a minimum of one sample per source while the waiver is in effect and the term of the waiver shall not exceed one compliance cycle (i.e., nine years).

(l) A water system may be eligible for a waiver from the monitoring frequencies for cyanide specified in paragraph (b)(1) of this section without any prior monitoring if it is able to document that it is not vulnerable to cyanide contamination pursuant to the requirements in Section 64445(d)(1) or (d)(2).

(m) Transient-noncommunity water systems shall monitor for the inorganic chemicals in Table 64431-A as follows:

- (1) All sources shall be monitored at least once for fluoride;
- (2) Surface water sources for parks and other facilities with an average daily population use of more than 1000 people and/or which are determined to be subject to potential contamination based on a sanitary survey shall be monitored at the same frequency as community water systems.

NOTE: Authority cited: Sections 100275, 116293(b) and 116375, Health and Safety Code. Reference: Section_116385, Health and Safety Code.

Section 64432.3. Monitoring and Compliance – Perchlorate.

(a) For initial monitoring for the perchlorate MCL, each community and nontransient-noncommunity water system shall collect two samples at each source in a year, five to seven months apart. At least one of the samples shall be collected during the period from May 1 through September 30~~July 31~~ (vulnerable time), unless the Department specifies a different vulnerable time for the water system due to seasonal conditions related to use, manufacture and/or weather.

(b) Data collected since January 3~~June 30~~, 2001, that is in conformance with subsection (a) may be used to comply with the initial monitoring requirement.

(c) After meeting the initial monitoring requirements in subsection (a) and if no perchlorate is detected, during each compliance period each water system:

(1) Using groundwater, shall monitor once during the year designated by the Department;

(2) Using approved surface, water shall monitor annually; and

(3) Monitoring at distribution entry points which have combined surface and groundwater sources, shall monitor annually; if perchlorate is detected in the water from the combined sources, the water system shall sample each source individually to determine which is contaminated.

(d) The water supplier shall require the laboratory to notify the supplier within 48 hours of the result whenever the level of perchlorate in a single sample exceeds the MCL, and shall ensure that a contact person is available to receive such analytical results 24-hours a day. The water supplier shall also require the laboratory to immediately notify the Department of any perchlorate MCL exceedance if the laboratory cannot make direct contact with the designated contact person within 48 hours. Within 48 hours of notification of the result, the water supplier shall:

(1~~A~~) Collect and analyze a confirmation sample, and

(2~~B~~) If the average of the two perchlorate sample results exceeds the MCL, report the result to the Department within 48 hours. If the average does not exceed the MCL, inform the Department of the results within seven days from the receipt of the original analytical result.

(3~~C~~) If a system is unable to resample within 48 hours, it shall ~~notify~~ issue a Tier 1 notice to the consumers in accordance with sections 64463 and 64463.1 and shall collect and analyze a confirmation sample within two weeks of notification of the results of the first sample.

(e) A water system shall monitor quarterly any source in which perchlorate has been detected. After four consecutive quarterly samples indicate that perchlorate is not present at or above the DLR, a system may request that the Department reduce monitoring to the frequencies specified in paragraphs (c)(1) through (3).

(f) A water system serving less than 10,000 persons may apply to the Department for a variance from the perchlorate MCL if it can demonstrate that the estimated annualized

cost per household for treatment to comply with the MCL exceeds 1% of the median household income in the community within which the customers served by the water system reside.

NOTE: Authority cited: Sections 100275, 116275, 116293(b), 116375, and 116430(a), Health and Safety Code. Reference: Sections 116275, and 116385, Health and Safety Code.

Section 64432.8. Sampling of Treated Water Sources.

(a) Each water supplier utilizing treatment to comply with one or more MCL(s) in Table 64431-A shall collect monthly samples of the treated water at a site prior to the distribution system and analyze for the chemical(s) for which treatment is being applied. If the treated water exceeds an MCL, within 48 hours of receipt of the result, ~~the confirmation,~~ the water supplier shall resample the treated water to confirm the result and report the initial result to the Department. The result of the analysis of the confirmation sample shall be reported to the Department within 24 hours of receipt of the confirmation result.

(b) The Department may require more frequent monitoring based on an evaluation of the treatment process used, the treatment effectiveness and efficiency, and the concentration of the inorganic chemical in the water source.

NOTE: Authority cited: Sections 100275 and 116375, Health and Safety Code.
Reference: Sections 116275, 116361, and 116385, Health and Safety Code.

64447.2. Best available technologies (BAT) - inorganic chemicals

The technologies listed in Table 64447.2-A are the best available technology, treatment techniques, or other means available for achieving compliance with the MCLs in table 64431-A for inorganic chemicals.

Table 64447.2-A
Best Available Technologies (BAT)
Inorganic Chemicals

<i>Chemical</i>	<i>Best Available Technologies (BATs)</i>
Aluminum	10
Antimony	2, 7
Arsenic	1, 2, 5, 6, 7
Asbestos	2, 3, 8
Barium	5, 6, 7, 9
Beryllium	1, 2, 5, 6, 7
Cadmium	2, 5, 6, 7
Chromium	2, 5, 6 ^a , 7
Cyanide	5, 7, 11
Fluoride	1
Mercury	2 ^b , 4, 6 ^b , 7 ^b
Nickel	5, 6, 7
Nitrate	5, 7, 9
Nitrite	5, 7
<u>Perchlorate</u>	<u>5, 12</u>
Selenium	1, 2 ^c , 6, 7, 9
Thallium	1, 5

^aBAT for Chromium III only.

^bBAT only if influent mercury concentrations <10 ug/L.

^cBAT for Selenium IV only.

Key to BATs in Table 64447.2-A:

- 1 = Activated Alumina
- 2 = Coagulation/Filtration (not BAT for systems < 500 service connections)
- 3 = Direct and Diatomite Filtration
- 4 = Granular Activated Carbon
- 5 = Ion Exchange
- 6 = Lime Softening (not BAT for systems < 500 service connections)
- 7 = Reverse Osmosis
- 8 = Corrosion Control

- 9 = Electrodialysis
- 10 = Optimizing treatment and reducing aluminum added
- 11 = Chlorine oxidation
- 12 = Biological fluidized bed reactor

NOTE: Authority cited: Sections 116293(b) and 116370, Health and Safety Code.
Reference: Section 116350, Health and Safety Code.

ARTICLE 17. SPECIAL MONITORING REQUIREMENTS FOR
UNREGULATED CHEMICALS

~~64450. Unregulated Chemicals --- Monitoring.~~

~~(a) Community water systems and nontransient noncommunity water systems shall monitor for the chemicals in Table 64450, pursuant to subsection (b):~~

Table 64450
Unregulated Chemicals

Chemical	Synonyms
(1) Boron	
(2) Chromium VI	Hexavalent chromium
(3) Dichlorodifluoromethane	Difluorodichloromethane
(4) Ethyl tert-butyl ether	ETBE
(5) Perchlorate	
(6) tert-Amyl methyl ether	TAME
(7) tert-Butyl alcohol	TBA
(8) 1,2,3-Trichloropropane	TCP
(9) Vanadium	

~~(b) All vulnerable community and nontransient noncommunity water systems shall conduct and complete one round of monitoring for hexavalent chromium by December 31, 2002, and for the other unregulated chemicals in table 64450 by December 31, 2003. Monitoring shall be conducted by collecting source water samples, or samples from the distribution entry points that are representative of typical operating conditions. At least one of the samples shall be collected during the period from May 1 through July 31 (vulnerable time), unless the Department specifies a different vulnerable time for the water system due to seasonal conditions related to use, manufacture and/or weather. Monitoring shall be as follows:~~

~~(1) Surface water systems shall collect four quarterly samples at each sample site; the system shall select either the first, second, or third month of a quarter and sample in that same month of each of four consecutive quarters.~~

~~(2) Ground water systems shall collect two samples in a single year, five to seven months apart.~~

~~(3) The water system shall collect each sample at the same sampling site, unless a change is approved by the Department.~~

~~(e) A water system may apply to the Department for a monitoring waiver for one or more of the chemicals on table 64450 in accordance with sections 64445(d)(1) and (2).~~

~~(d) If a system serves fewer than 150 service connections, it may be eligible for an exemption from the monitoring requirements of this section, based on a Departmental review of the previous five years of sampling data. To request an exemption, the system operator shall submit a written request to the Department that includes a statement that the system is available for sampling by the Department.~~

~~(e) A water system that has monitoring data collected after January 1, 1998, that meets the requirements in subsection (b) may use that data to comply with the monitoring requirements in this section.~~

Note: ~~Authority cited: Sections 100275, 116350 and 116375, Health and Safety Code.~~
Reference: ~~Sections 116385 and 116555, Health and Safety Code.~~

ARTICLE 18. NOTIFICATION OF THE WATER CONSUMERS AND THE
DEPARTMENT.

Section 64463.1. Tier 1 Public Notice.

(a) Each water system shall give public notice pursuant to this section and section 64465 if any of the following occurs:

(1) Violation of the total coliform MCL when:

(A) Fecal coliform or *E. coli* are present in the distribution system, or

(B) When any repeat sample tests positive for coliform and the water system fails to test for fecal coliforms or *E. coli* in the repeat sample;

(2) Violation of the MCL for nitrate, nitrite, or total nitrate and nitrite, or when the water system fails to take a confirmation sample within 24 hours of the system's receipt of the first sample showing an exceedance of the nitrate or nitrite MCL;

(3) Violation of a Chapter 17 treatment technique requirement resulting from a single exceedance of a maximum allowable turbidity level if:

(A) The Department determines after consultation with the water system and a review of the data that a Tier 1 public notice is required, or

(B) The consultation between the Department and the water system does not take place within 24 hours after the water system learns of the violation;

(4) Occurrence of a waterborne microbial disease outbreak, as defined in section 64651.91 or other waterborne emergency, a failure or significant interruption in water treatment processes, a natural disaster that disrupts the water supply or distribution system, or a chemical spill or unexpected loading of possible pathogens into the source water that has the potential for adverse effects on human health as a result of short-term exposure; ~~or~~

(5) Other violation or occurrence that has the potential for adverse effects on human health as a result of short-term exposure, as determined by the Department based on a review of all available toxicological and analytical data; or

(6) Violation of the MCL for perchlorate or when a system is unable to resample within 48 hours of the system's receipt of the first sample showing an exceedance of the perchlorate MCL as specified in section 64432.3(d)(3).

(b) As soon as possible within 24 hours after learning of any of the violations in subsection (a) or being notified by the Department that it has determined there is a potential for adverse effects on human health [pursuant to paragraph (a)(4) or (5)], the water system shall:

(1) Give public notice pursuant to this section

(2) Initiate consultation with the Department within the same timeframe; and

(3) Comply with any additional public notice requirements that are determined by the consultation to be necessary to protect public health.

(c) Each water system shall deliver the public notice in a manner designed to reach residential, transient, and nontransient users of the water system and shall use, as a minimum, one of the following forms:

- (1) Radio or television;
- (2) Posting in conspicuous locations throughout the area served by the water system;
- (3) Hand delivery to persons served by the water system; or
- (4) Other method approved by the Department, based on the method's ability to inform water system users.

Note: Authority cited: Sections 116325, 116350 and 116375, Health and Safety Code.
Reference: Section 116450, Health and Safety Code.

Section 64465. Public Notice Content and Format.

(a) Each public notice given pursuant to this article, except Tier 3 public notices for variances and exemptions pursuant to subsection (b), shall contain the following:

- (1) A description of the violation or occurrence, including the contaminant(s) of concern, and (as applicable) the contaminant level(s);
- (2) The date(s) of the violation or occurrence;
- (3) Any potential adverse health effects from the violation or occurrence, including the appropriate standard health effects language from appendices 64465-A through G;
- (4) The population at risk, including subpopulations particularly vulnerable if exposed to the contaminant in drinking water;
- (5) Whether alternative water supplies should be used;
- (6) What actions consumers should take, including when they should seek medical help, if known;
- (7) What the water system is doing to correct the violation or occurrence;
- (8) When the water system expects to return to compliance or resolve the occurrence;
- (9) The name, business address, and phone number of the water system owner, operator, or designee of the water system as a source of additional information concerning the public notice;
- (10) A statement to encourage the public notice recipient to distribute the public notice to other persons served, using the following standard language: "Please share this information with all the other people who drink this water, especially those who may not have received this public notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this public notice in a public place or distributing copies by hand or mail"; and
- (11) For a water system with a monitoring and testing procedure violation, this language shall be included: "We are required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not your drinking water meets health standards. During [*compliance period dates*], we [*'did not monitor or test'* or *'did not complete all monitoring or testing'*] for [*contaminant(s)*], and therefore, cannot be sure of the quality of your drinking water during that time."

(b) A Tier 3 public notice for a water system operating under a variance or exemption shall include the elements in this subsection. If a water system has violated its variance or exemption conditions, the public notice shall also include the elements in subsection (a).

- (1) An explanation of the reasons for the variance or exemption;
- (2) The date on which the variance or exemption was issued;
- (3) A brief status report on the steps the water system is taking to install treatment, find alternative sources of water, or otherwise comply with the terms and schedules of the variance or exemption; and
- (4) A notice of any opportunity for public input in the review of the variance or exemption.

(c) Each public notice given pursuant to this article shall contain information in Spanish regarding the importance of the notice, or contain a telephone number or address where Spanish-speaking residents may contact the water system to obtain a translated copy of the public notice or assistance in Spanish. For each non-English speaking group other than Spanish-speaking that exceeds 1,000 residents or 10% of the residents in the community served, whichever is less, the public notice shall:

- (1) Contain information in the appropriate language(s) regarding the importance of the notice, or
- (2) Contain a telephone number or address where such residents may contact the water system to obtain a translated copy of the notice or assistance in the appropriate language.

(d) Each public notice given pursuant to this article shall:

- (1) Be displayed such that it catches people's attention when printed or posted and be formatted in such a way that the message in the public notice can be understood at the eighth-grade level;
- (2) Not contain technical language beyond an eighth-grade level or print smaller than 12 point; and
- (3) Not contain language that minimizes or contradicts the information being given in the public notice.

**Appendix 64465-A. Health Effects Language
Microbiological Contaminants.**

<i>Contaminant</i>	<i>Health Effects language</i>
Total Coliform	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/ <i>E. Coli</i>	Fecal coliforms and <i>E. coli</i> are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Microbes in these wastes can cause short-term effects, such as

	diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a special health risk for infants, young children, some of the elderly, and people with severely compromised immune systems.
Turbidity	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.

**Appendix 64465-B. Health Effects Language
Surface Water Treatment**

<i>Contaminant</i>	<i>Health Effects language</i>
Giardia lamblia Viruses Heterotrophic plate count bacteria Legionella Cryptosporidium	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.

**Appendix 64465-C. Health Effects Language
Radioactive Contaminants.**

<i>Contaminant</i>	<i>Health Effects Language</i>
Gross Beta particle activity	Certain minerals are radioactive and may emit forms of radiation known as photons and beta radiation. Some people who drink water containing beta and photon emitters in excess of the MCL over many years may have an increased risk of getting cancer.
Strontium-90	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	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	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 226/228	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.

Uranium	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.
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**Appendix 64465-D. Health Effects Language
Inorganic Contaminants.**

<i>Contaminant</i>	<i>Health Effects Language</i>
Aluminum	Some people who drink water containing aluminum in excess of the MCL over many years may experience short-term gastrointestinal tract effects.
Antimony	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	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	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	Some people who drink water containing barium in excess of the MCL over many years may experience an increase in blood pressure.
Beryllium	Some people who drink water containing beryllium in excess of the MCL over many years may develop intestinal lesions.
Cadmium	Some people who drink water containing cadmium in excess of the MCL over many years may experience kidney damage.
Chromium	Some people who use water containing chromium in excess of the MCL over many years may experience allergic dermatitis.
Copper	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	Some people who drink water containing cyanide in excess of the MCL over many years may experience nerve damage or thyroid problems.
Fluoride	<i>For the Consumer Confidence Report:</i> 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. <i>For a Public Notice:</i> This is an alert about your drinking water and a cosmetic dental problem that might affect children under nine years of age. At low levels, fluoride can help prevent cavities, but children drinking water containing more than 2 milligrams per liter (mg/L) of fluoride may develop cosmetic discoloration of their permanent teeth (dental fluorosis). The drinking water provided by your community water system [name] has a

	<p>fluoride concentration of [<i>insert value</i>] mg/L.</p> <p>Dental fluorosis may result in a brown staining and/or pitting of the permanent teeth. This problem occurs only in developing teeth, before they erupt from the gums. Children under nine should be provided with alternative sources of drinking water or water that has been treated to remove the fluoride to avoid the possibility of staining and pitting of their permanent teeth. You may also want to contact your dentist about proper use by young children of fluoride-containing products. Older children and adults may safely drink the water. Drinking water containing more than 4 mg/L of fluoride can increase your risk of developing bone disease.</p> <p>For more information, please call [<i>water system contact name</i>] of [<i>water system name</i>] at [<i>phone number</i>]. Some home water treatment units are also available to remove fluoride from drinking water. To learn more about available home water treatment units, you may call the California Department of Health Services Water Treatment Device Unit at (916) 323-6111.</p>
Lead	<p>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.</p>
Mercury	<p>Some people who drink water containing mercury in excess of the MCL over many years may experience mental disturbances, or impaired physical coordination, speech and hearing.</p>
Nickel	<p>Some people who drink water containing nickel in excess of the MCL over many years may experience liver and heart effects.</p>
Nitrate	<p>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.</p>
Nitrite	<p>Infants below the age of six months who drink water containing nitrite in excess of the MCL may become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blueness of the skin.</p>
Perchlorate	<p><u>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.</u></p>
Selenium	<p>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.</p>

Thallium	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.
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**Appendix 64465-E. Health Effects Language
Volatile Organic Contaminants.**

<i>Contaminant</i>	<i>Health Effects Language</i>
Benzene	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	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	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	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	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	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	Some people who use water containing 1,1-dichloroethylene in excess of the MCL over many years may experience liver problems.
cis-1,2-Dichloroethylene	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	Some people who drink water containing trans-1,2-dichloroethylene in excess of the MCL over many years may experience liver problems.
Dichloromethane	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	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	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	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	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	Some people who use water containing monochlorobenzene in excess of the MCL over many years may experience liver or kidney problems.
Styrene	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	Some people who drinking water containing 1,1,2,2-tetrachloroethane in excess of the MCL over many years may experience liver or nervous system problems.
Tetrachloroethylene	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	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	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	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)	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	Some people who use water containing toluene in excess of the MCL over many years may experience nervous system, kidney, or liver problems.
Trichlorofluoro-methane	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	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	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	Some people who use water containing xylenes in excess of the MCL over many years may experience nervous system damage.

**Appendix 64465-F. Health Effects Language
Synthetic Organic Contaminants.**

CONTAMINANT	<i>Health Effects Language</i>
2,4-D	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)	Some people who drink water containing Silvex in excess of the MCL over many years may experience liver problems.
Alachlor	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	Some people who use water containing atrazine in excess of the MCL over many years may experience cardiovascular system problems or reproductive difficulties.
Bentazon	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]	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	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	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	Some people who drink water containing dalapon in excess of the MCL over many years may experience minor kidney changes.
Dibromochloropropane (DBCP)	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.
Di (2-ethylhexyl) adipate	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	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.
Dinoseb	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):	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	Some people who drink water containing diquat in excess of the MCL over many years may get cataracts.

Endothall	Some people who drink water containing endothall in excess of the MCL over many years may experience stomach or intestinal problems.
Endrin	Some people who drink water containing endrin in excess of the MCL over many years may experience liver problems.
Ethylene dibromide (EDB)	Some people who use water containing ethylene dibromide in excess of the MCL over many years may experience liver, stomach, reproductive system, or kidney problems, and may have an increased risk of getting cancer.
Glyphosate	Some people who drink water containing glyphosate in excess of the MCL over many years may experience kidney problems or reproductive difficulties.
Heptachlor	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	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	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	Some people who use water containing hexachlorocyclopentadiene in excess of the MCL over many years may experience kidney or stomach problems.
Lindane	Some people who drink water containing lindane in excess of the MCL over many years may experience kidney or liver problems.
Methoxychlor	Some people who drink water containing methoxychlor in excess of the MCL over many years may experience reproductive difficulties.
Molinate (Ordram)	Some people who use water containing molinate in excess of the MCL over many years may experience reproductive effects.
Oxamyl [Vydate]:	Some people who drink water containing oxamyl in excess of the MCL over many years may experience slight nervous system effects.
PCBs [Polychlorinated biphenyls]:	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	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	Some people who drink water containing picloram in excess of the MCL over many years may experience liver problems.
Simazine	Some people who use water containing simazine in excess of the MCL over many years may experience blood problems.
Thiobencarb	Some people who use water containing thiobencarb in excess of the MCL

	over many years may experience body weight and blood effects.
Toxaphene	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.

**Appendix 64465-G. Health Effects Language
Disinfection Byproducts, Byproduct Precursors, and Disinfectant Residuals**

<i>Contaminant</i>	<i>Health Effects language</i>
TTHMs [Total Trihalomethanes]:	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	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	Some people who drink water containing bromate in excess of the MCL over many years may have an increased risk of getting cancer.
Chloramines	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	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	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 (2 consecutive daily samples at the entry point to the distribution system that are greater than the MRDL)	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. <i>Add for public notification only:</i> The chlorine dioxide violations reported today are the result of exceedances at the treatment facility only, not within the distribution system that delivers water to consumers. Continued compliance with chlorine dioxide levels within the distribution system minimizes the potential risk of these violations to consumers.
Chlorine dioxide (one	Some infants and young children who drink water containing chlorine

<p>or more distribution system samples are above the MRDL.)</p>	<p>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. <i>Add for public notification only:</i> The chlorine dioxide violations reported today include exceedances of the State standard within the distribution system that delivers water to consumers. These violations may harm human health based on short-term exposures. Certain groups, including fetuses, infants, and young children, may be especially susceptible to nervous system effects from excessive chlorine dioxide exposure.</p>
<p>Control of DBP precursors (TOC)</p>	<p>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 getting cancer.</p>

**Appendix 64465-H. Health Effects Language
Other Treatment Techniques**

<i>Contaminant</i>	<i>Health Effects language</i>
<p>Acrylamide</p>	<p>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.</p>
<p>Epichlorohydrin</p>	<p>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.</p>

NOTE: Authority cited: Sections 116325, 116350, and 116375, Health and Safety Code.
Reference: Section 116450, Health and Safety Code.

Section 64481. Content of the Consumer Confidence Report.

(a) Each Consumer Confidence Report shall contain information on the source of the water delivered, including:

(1) The type of water delivered by the water system, e.g., surface water, ground water; and the commonly used name (if any) and location of the body (or bodies) of water.

(2) If a source water assessment has been completed, notification that the assessment is available, how to obtain it, the date it was completed or last updated, and a brief summary of the system's vulnerability to potential sources of contamination, using language provided by the Department if the Department conducted the assessment.

(b) For any of the following terms used in the Consumer Confidence Report, the water system shall provide the specified language below:

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

(2) Maximum Contaminant Level or 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."

(3) Maximum Contaminant Level Goal or 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."

(4) Public Health Goal or 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."

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

(6) Treatment technique: "A required process intended to reduce the level of a contaminant in drinking water."

(7) Variances and exemptions: "Department permission to exceed an MCL or not comply with a treatment technique under certain conditions."

(c) If any of the following are detected, information for each pursuant to subsection (d) shall be included in the Consumer Confidence Report:

(1) Contaminants subject to an MCL, regulatory action level, or treatment technique (regulated contaminants), as specified in sections 64426.1, 64431, 64439, 64441, 64443, 64444, 64448, 64449, 64653 and 64672.3;

(2) Contaminants specified in section 64450 for which monitoring is required (unregulated contaminants) or in 40 CFR Parts 9, 141 and 142 (Federal Register 64(180), p. 50556-50620, September 17, 1999); and

(3) Disinfection by-products or microbial contaminants detected in the finished water for which monitoring is required by 40 CFR §§141.142 and 141.143 (Information Collection Rule, Federal Register 61, p 24354, May 14, 1996;), except as provided under subsection (e).

(4) Sodium and hardness.

(d) For contaminants identified in subsection (c), the water system shall include in the Consumer Confidence Report one table or several adjacent tables that have been developed pursuant to this subsection. Any additional monitoring results that a water system chooses to include in its Consumer Confidence Report shall be displayed separately.

(1) The data in the table(s) shall be derived from data collected to comply with U.S. Environmental Protection Agency (USEPA) and Department monitoring and analytical requirements during calendar year 2000 for the first Consumer Confidence Report and subsequent calendar years thereafter except that:

(A) Where a system is allowed to monitor for regulated contaminants less often than once a year, the table(s) shall include the date and results of the most recent sampling and the Consumer Confidence Report shall include a brief statement indicating that the data presented in the table(s) are from the most recent testing done in accordance with the regulations. No data older than 9 years need be included.

(B) Results of monitoring in compliance with 40 CFR §§141.142 and 141.143 (Information Collection Rule, Federal Register 61, p 24354, May 14, 1996), need only be included in the table(s) for 5 years from the date of the last sampling or until any of the detected contaminants becomes regulated and subject to routine monitoring requirements, whichever comes first. Both the average and range sample results for the most recent year of sampling shall be included for any detected contaminant.

(2) For detected regulated contaminants (listed in subsection (c)(1)), the table(s) shall include:

(A) The MCL expressed as a number equal to or greater than 1.0;

(B) For a primary MCL, the public health goal (PHG) in the same units as the MCL; or if no PHG has been set for the contaminant, the table shall include the USEPA maximum contaminant level goal in the same units as the MCL.

(C) For a detected contaminant that does not have an MCL, the table(s) shall indicate whether there is a treatment technique or specify the regulatory action level applicable to that contaminant, and the Consumer Confidence Report shall include the appropriate language specified in subsection (b);

(D) For detected contaminants subject to an MCL, except turbidity and total coliforms, the sample result(s) collected at compliance monitoring sampling points shall be reported in the same units as the MCL as follows:

1. When compliance 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, results shall be reported as follows:

2. For a single sampling point, or multiple sampling points for which data is being individually listed on the Consumer Confidence Report: The sample result; if more than one sample was collected, the average and range of the sample results.

A. For more than one sampling point, each of which has been sampled only once and for which data is being summarized together on the Consumer Confidence Report: The average and range of the sample results. If the waters from the

sampling points are entering the distribution system at the same point, a flow-weighted average may be reported.

B. For multiple sampling points, one or more of which has been sampled more than once and for which data is being summarized together on the Consumer Confidence Report: The average of the individual sampling point averages and range of all the sample results. If the waters from the sampling points are entering the distribution system at the same point, a flow-weighted average may be reported.

3. When compliance with the MCL is determined by calculating a running annual average of all samples taken at a sampling point: The highest running annual average of the sampling point and the range of sample results or, if sampling points are summarized together for the Consumer Confidence Report, the highest running annual average of any of the sampling points and the range of sample results from all the sampling points.

4. When compliance with the MCL is determined on a system-wide basis by calculating a running annual average of all sampling point averages: The highest running annual average and the range of sample results from all the sampling points.

5. When compliance with the MCL is determined on the basis of monitoring after treatment installed to remove a contaminant: The average level detected in the water entering the distribution system and the range of sample results.

6. If an MCL compliance determination was made in the year for which sample results are being reported and that determination was based on an average of results from both the previous and reporting years, then the compliance determination average shall be reported, but the range shall be based only on results from the year for which data is being reported.

(E) For turbidity:

1. When it is reported pursuant to the requirements of section 64652.5 (filtration avoidance): The highest value.

2. When it is reported pursuant to section 64653 (filtration): The highest single measurement based on compliance reporting and the lowest monthly percentage of samples meeting the turbidity limits specified in section 64653 for the filtration technology being used.

(F) For lead and copper: The 90th percentile value of the most recent round of sampling, the number of sites sampled, and the number of sampling sites exceeding the action level.

(G) For total coliform:

1. The highest monthly number of positive samples for systems collecting fewer than 40 samples per month; or

2. The highest monthly percentage of positive samples for systems collecting at least 40 samples per month.

(H) For fecal coliform or *E. coli*: the total number of positive samples during the year.

(I) The likely source(s) of detected contaminants for any detected contaminant with an MCL. If the water system lacks specific information on the likely source, the table(s) shall include one or more of the typical sources for that contaminant listed in appendices 64481-A or 64481-B that are most applicable to the system.

(3) The table(s) shall clearly identify any data indicating violations of MCLs or treatment techniques and the Consumer Confidence Report shall give information on each violation including the length of the violation, potential adverse health effects (primary MCLs only), and actions taken by the system to address the violation. To describe the potential health effects, the system shall use the relevant language pursuant to appendices 64465-A through H.

(4) For detected unregulated contaminants for which monitoring is required (except *Cryptosporidium*), the table(s) shall contain the average and range at which the contaminant was detected.

(e) If the system has performed any monitoring for *Cryptosporidium*, including monitoring performed to satisfy the requirements of 40 CFR § 141.143 (Information Collection Rule, Federal Register 61, p 24354, May 14, 1996), that indicates that *Cryptosporidium* may be present in the source water or the finished water, the Consumer Confidence Report shall include a summary of the monitoring results and an explanation of their significance.

(f) If the system has performed any monitoring for radon that indicates that radon is present in the finished water, the Consumer Confidence Report shall include the monitoring results and an explanation of their significance.

(g) For the year covered by the report, the Consumer Confidence Report shall note any violations of (1) through (7) and give related information, including any potential adverse health effects, and the steps the system has taken to correct the violation.

(1) Monitoring and reporting of compliance data.

(2) Filtration and disinfection prescribed by sections 64652, 64652.5, 64653, or 64654. For systems that have failed to install adequate filtration or disinfection equipment or processes, or have had a failure of such equipment or processes that constitutes a violation, the Consumer Confidence Report shall include the following language as part of the explanation of potential adverse health effects: "Inadequately treated water may contain organisms that can cause illness when consumed. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea, and associated headaches."

(3) One or more actions prescribed by the lead and copper requirements in sections 64673 through 64679. To address potential adverse health effects, the Consumer Confidence Report shall include the applicable language pursuant to appendix 64465-D for lead, copper, or both.

(4) Treatment technique requirements for Acrylamide and Epichlorohydrin in section 64448; to address potential adverse health effects, the Consumer Confidence Report shall include the relevant language from appendix 64465-H.

(5) Recordkeeping of compliance data.

(6) Special monitoring requirements prescribed by sections 64450-1, and 64449(c)(2) and (i).

(7) Terms of a variance, an exemption, or an administrative or judicial order.

(h) If a system is operating under the terms of a variance or an exemption issued under section 116430 or 116425 of the Health and Safety Code, the Consumer Confidence Report shall contain:

- (1) An explanation of the reasons for the variance or exemption;
- (2) The date on which the variance or exemption was issued;
- (3) A brief status report on the steps the system is taking to install treatment, find alternative sources of water, or otherwise comply with the terms and schedules of the variance or exemption; and
- (4) A notice of any opportunity for public input in the review, or renewal, of the variance or exemption.

(i) The Consumer Confidence Report shall contain the language in paragraphs (1) through (4).

(1) “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.”

(2) “Contaminants that may be present in source water include:

(A) Microbial contaminants, such as viruses and bacteria, that may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.

(B) 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.

(C) Pesticides and herbicides, that may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses.

(D) 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.

(E) Radioactive contaminants, that can be naturally-occurring or be the result of oil and gas production and mining activities.”

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

(4) “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).”

(j) All Consumer Confidence Reports shall prominently display the following language: “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).”

(k) The Consumer Confidence Report shall include the telephone number of the owner, operator, or designee of the water system as a source of additional information concerning the report.

(l) All Consumer Confidence Reports shall contain information in Spanish regarding the importance of the report or contain a telephone number or address where Spanish-speaking residents may contact the system to obtain a translated copy of the report or assistance in Spanish. For each non-English speaking group other than Spanish-speaking that exceeds 1,000 residents or 10% of the residents in a community, whichever is less, the Consumer Confidence Report shall contain information in the appropriate language(s) regarding the importance of the report or contain 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.

(m) The Consumer Confidence Report shall include information (e.g., time and place of regularly scheduled board meetings) about opportunities for public participation in decisions that may affect the quality of the water.

Appendix 64481-A. Typical Origins of Contaminants with Primary MCLs

CONTAMINANT	MAJOR ORIGINS IN DRINKING WATER
<i>Microbiological</i>	
Total coliform bacteria	Naturally present in the environment
Fecal coliform and <i>E. coli</i>	Human and animal fecal waste
Turbidity	Soil runoff
<i>Radioactive</i>	
Gross Beta particle activity	Decay of natural and man-made deposits
Strontium-90	Decay of natural and man-made deposits
Tritium	Decay of natural and man-made deposits
Gross Alpha particle activity	Erosion of natural deposits
Combined radium 226/228	Erosion of natural deposits

Uranium	Erosion of natural deposits
<i>Inorganic</i>	
Aluminum	Erosion of natural deposits; residue from some surface water treatment processes
Antimony	Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder
Arsenic	Erosion of natural deposits; runoff from orchards; glass and electronics production wastes
Asbestos	Internal corrosion of asbestos cement water mains; erosion of natural deposits
Barium	Discharges of oil drilling wastes and from metal refineries; erosion of natural deposits
Beryllium	Discharge from metal refineries, coal-burning factories, and electrical, aerospace, and defense industries
Cadmium	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
Chromium	Discharge from steel and pulp mills and chrome plating; erosion of natural deposits
Copper	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Cyanide	Discharge from steel/metal, plastic and fertilizer factories
Fluoride	Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories
Lead	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits
Mercury	Erosion of natural deposits; discharge from refineries and factories; runoff from landfills and cropland
Nickel	Erosion of natural deposits; discharge from metal factories
Nitrate	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits
Nitrite	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits

<u>Perchlorate</u>	<u>Perchlorate is an inorganic chemical used in solid rocket propellant, repellent, 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.</u>
Selenium	Discharge from petroleum, glass, and metal refineries; erosion of natural deposits; discharge from mines and chemical manufacturers; runoff from livestock lots (feed additive)
Thallium	Leaching from ore-processing sites; discharge from electronics, glass, and drug factories
<i>Synthetic organic</i>	
2,4-D	Runoff from herbicide used on row crops, range land, lawns, and aquatic weeds
2,4,5-TP (Silvex)	Residue of banned herbicide
Acrylamide	Added to water during sewage/wastewater treatment
Alachlor	Runoff from herbicide used on row crops
Atrazine	Runoff from herbicide used on row crops and along railroad and highway right-of-ways
Bentazon	Runoff/leaching from herbicide used on beans, peppers, corn, peanuts, rice, and ornamental grasses
Benzo(a)pyrene [PAH]	Leaching from linings of water storage tanks and distribution mains
Carbofuran	Leaching of soil fumigant used on rice and alfalfa, and grape vineyards
Chlordane	Residue of banned insecticide
Dalapon	Runoff from herbicide used on right-of-ways, and crops and landscape maintenance
Dibromochloropropane (DBCP)	Banned nematocide that may still be present in soils due to runoff/leaching from former use on soybeans, cotton, vineyards, tomatoes, and tree fruit
Di(2-ethylhexyl) adipate	Discharge from chemical factories
Di(2-ethylhexyl) phthalate	Discharge from rubber and chemical factories; inert ingredient in pesticides
Dinoseb	Runoff from herbicide used on soybeans, vegetables, and fruits
Dioxin [2,3,7,8-TCDD]	Emissions from waste incineration and other combustion; discharge from chemical factories
Diquat	Runoff from herbicide use for terrestrial and aquatic weeds
Endothall	Runoff from herbicide use for terrestrial and aquatic

	weeds; defoliant
Endrin	Residue of banned insecticide and rodenticide
Epichlorohydrin	Discharge from industrial chemical factories; impurity of some water treatment chemicals
Ethylene dibromide (EDB)	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
Glyphosate	Runoff from herbicide use
Heptachlor	Residue of banned insecticide
Heptachlor epoxide	Breakdown of heptachlor
Hexachlorobenzene	Discharge from metal refineries and agricultural chemical factories; byproduct of chlorination reactions in wastewater
Hexachlorocyclo-pentadiene	Discharge from chemical factories
Lindane	Runoff/leaching from insecticide used on cattle, lumber, gardens
Methoxychlor	Runoff/leaching from insecticide used on fruits, vegetables, alfalfa, livestock
Molinate [Ordram]	Runoff/leaching from herbicide used on rice
Oxamyl [Vydate]	Runoff/leaching from insecticide used on field crops, fruits and ornamentals, especially apples, potatoes, and tomatoes
Pentachlorophenol	Discharge from wood preserving factories, cotton and other insecticidal/herbicidal uses
Picloram	Herbicide runoff
Polychlorinated biphenyls [PCBs]	Runoff from landfills; discharge of waste chemicals
Simazine	Herbicide runoff
Thiobencarb	Runoff/leaching from herbicide used on rice
Toxaphene	Runoff/leaching from insecticide used on cotton and cattle
<i>Volatile organic</i>	
Benzene	Discharge from plastics, dyes and nylon factories; leaching from gas storage tanks and landfills
Carbon tetrachloride	Discharge from chemical plants and other industrial activities
1,2-Dichlorobenzene	Discharge from industrial chemical factories
1,4-Dichlorobenzene	Discharge from industrial chemical factories
1,1-Dichloroethane	Extraction and degreasing solvent; used in manufacture of pharmaceuticals, stone, clay and glass products; fumigant
1,2-Dichloroethane	Discharge from industrial chemical factories
1,1-Dichloroethylene	Discharge from industrial chemical factories
cis-1,2-Dichloroethylene	Discharge from industrial chemical factories; major

	biodegradation byproduct of TCE and PCE groundwater contamination
trans-1,2-Dichloroethylene	Discharge from industrial chemical factories; minor biodegradation byproduct of TCE and PCE groundwater contamination
Dichloromethane	Discharge from pharmaceutical and chemical factories; insecticide
1,2-Dichloropropane	Discharge from industrial chemical factories; primary component of some fumigants
1,3-Dichloropropene	Runoff/leaching from nematocide used on croplands
Ethylbenzene	Discharge from petroleum refineries; industrial chemical factories
<u>Methyl-tert-butyl ether (MTBE)</u>	<u>Leaking underground storage tanks; discharge from petroleum and chemical factories.</u>
Monochlorobenzene	Discharge from industrial and agricultural chemical factories and drycleaning facilities
Styrene	Discharge from rubber and plastic factories; leaching from landfills
1,1,2,2-Tetrachloroethane	Discharge from industrial and agricultural chemical factories; solvent used in production of TCE, pesticides, varnish and lacquers
Tetrachloroethylene (PCE)	Discharge from factories, dry cleaners, and auto shops (metal degreaser)
1,2,4-Trichlorobenzene	Discharge from textile-finishing factories
1,1,1-Trichloroethane	Discharge from metal degreasing sites and other factories; manufacture of food wrappings
1,1,2-Trichloroethane	Discharge from industrial chemical factories
Trichloroethylene (TCE)	Discharge from metal degreasing sites and other factories
TTHMs[total trihalomethanes]	By-product of drinking water chlorination
Toluene	Discharge from petroleum and chemical factories; underground gas tank leaks
Trichlorofluoromethane	Discharge from industrial factories; degreasing solvent; propellant and refrigerant
1,1,2-Trichloro-1,2,2-Trifluoroethane	Discharge from metal degreasing sites and other factories; drycleaning solvent; refrigerant
Vinyl chloride	Leaching from PVC piping; discharge from plastics factories; biodegradation byproduct of TCE and PCE groundwater contamination
Xylenes	Discharge from petroleum and chemical factories; fuel solvent

Appendix 64481-B. Typical Origins of Contaminants with Secondary MCLs

CONTAMINANT	MAJOR ORIGINS IN DRINKING WATER
Aluminum	Erosion of natural deposits; residual from some surface water treatment processes
Color	Naturally-occurring organic materials
Corrosivity	Natural or industrially-influenced balance of hydrogen, carbon and oxygen in the water; affected by temperature and other factors.
Foaming Agents (MBAS)	Municipal and industrial waste discharges
Iron	Leaching from natural deposits; industrial wastes
Manganese	Leaching from natural deposits
Methyl-tert-butyl ether (MTBE)	Leaking underground storage tanks; discharge from petroleum and chemical factories;
Odor---Threshold	Naturally-occurring organic materials
Silver	Industrial discharges
Thiobencarb	Runoff/leaching from rice herbicide
Turbidity	Soil runoff
Zinc	Runoff/leaching from natural deposits; industrial wastes
Total dissolved solids	Runoff/leaching from natural deposits
Specific conductance	Substances that form ions when in water; seawater influence
Chloride	Runoff/leaching from natural deposits; seawater influence
Sulfate	Runoff/leaching from natural deposits; industrial wastes

NOTE: Authority cited: Sections 116350 and 116375, Health and Safety Code.
 Reference: Sections 116275 and 116470, Health and Safety Code.