

Contaminant	Unit Measure ment	MCL (AL) [MRDL]	PHG (MCLG) [MRDLG]	Typical Source of Contaminant	Health Effects Language
Microbiological Contaminants					
Total Coliform Bacteria (Total Coliform Rule)	MCL: For systems that collect less than 40 samples per month: No more than 1 positive monthly sample For systems that collect 40 or more samples per month: More than 5.0% of monthly samples are positive		(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 <i>E. coli</i> (Total Coliform Rule)	MCL: A routine sample and a repeat sample are total coliform positive, and one of these is also fecal coliform or <i>E. coli</i> positive		(0)	Human and animal fecal waste	Fecal coliforms and <i>E. coli</i> are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Microbes in these wastes can cause short-term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a special health risk for infants, young children, some of the elderly, and people with severely compromised immune systems.
Fecal Indicator (<i>E. coli</i>) (Ground Water Rule)	0		(0)	Human and animal fecal waste	Fecal coliforms and <i>E. coli</i> are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Microbes in these wastes can cause short-term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a special health risk for infants, young children, some of the elderly, and people with severely compromised immune systems.
Fecal Indicators (enterococci or coliphage) (Ground Water Rule)		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.

Contaminant	Unit Measurement	MCL (AL) [MRDL]	PHG (MCLG) [MRDLG]	Typical Source of Contaminant	Health Effects Language
Turbidity		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.
<i>Giardia lamblia</i> , viruses, heterotrophic plate count bacteria, <i>Legionella</i> , <i>Cryptosporidium</i>		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.

ATTACHMENT 2

Regulated Contaminants with SECONDARY DRINKING WATER STANDARDS ^(a)

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

Contaminant	Unit Measurement	MCL	Typical Source of Contaminant	Notification Level	Notification Level Health Effects Language (Optional)
Aluminum	ppb	200	Erosion of natural deposits; residual from some surface water treatment processes		
Color	Units	15	Naturally-occurring organic materials		
Copper	ppm	1.0	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives		
Foaming Agents (MBAS)	ppb	500	Municipal and industrial waste discharges		
Iron	ppb	300	Leaching from natural deposits; industrial wastes		
Manganese	ppb	50	Leaching from natural deposits	500	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-tert-butyl ether (MTBE)	ppb	5	Leaking underground storage tanks; discharge from petroleum and chemical factories		
Odor--Threshold	Units	3	Naturally-occurring organic materials		
Silver	ppb	100	Industrial discharges		
Thiobencarb	ppb	1	Runoff/leaching from rice herbicide		
Turbidity	Units	5	Soil runoff		
Zinc	ppm	5.0	Runoff/leaching from natural deposits; industrial wastes		
Total Dissolved Solids (TDS)	ppm	1000	Runoff/leaching from natural deposits		
Specific Conductance	µS/cm	1600	Substances that form ions when in water; seawater influence		
Chloride	ppm	500	Runoff/leaching from natural deposits; seawater influence		
Sulfate	ppm	500	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.

ATTACHMENT 3

State Regulated Contaminants with No Maximum Contaminant Levels (i.e., Unregulated Chemicals)

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 requirement, 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.

Chemicals	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.
Chromium VI (Hexavalent chromium)	n/a	n/a
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.

ATTACHMENT 4

Federal Regulated Contaminants with No Maximum Contaminants Levels (i.e., Federal UCMR 1 and UCMR 2)

Background

The 1996 Amendments to the Safe Drinking Water Act required the EPA 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, EPA 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.

A randomly selected sample of 800 small water systems serving 10,000 or fewer people conducted List 1 - Assessment Monitoring over a 12-month period between 2001 and 2003. A subset of the 800 small water systems were also required to participate in a List 2 - Screening Survey in 2001 (chemical contaminants) and 2003 (*Aeromonas*).

Small system monitoring was paid for by the EPA, including provisions for sampling equipment and sample shipping, testing, and analysis.

The State Drinking Water Agency or the EPA informed you if your system was selected.

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	<i>Aeromonas</i>
EPTC	Alachlor ESA
Molinate	Diazinon
MTBE	Disulfoton
Nitrobenzene	Diuron
Perchlorate	Fonofos
Terbacil	Linuron
	Nitrobenzene
	Prometon
	RDX
	Terbufos

UCMR 2 (2008 – 2010 Monitoring)

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

A randomly selected sample of 800 small water systems serving 10,000 or fewer people is required to conduct List 1 - Assessment Monitoring over a 12-month period from January 2008 – December 2010.

A subset of the 800 small water systems are also required to participate in a List 2 - Screening Survey over a 12-month period from January 2008 – December 2010.

Small system monitoring is paid for by the EPA, including provisions for sampling equipment and sample shipping, testing, and analysis.

The State Drinking Water Agency or the EPA informed you if your system was selected.

List 1 Assessment Monitoring	List 2 Screening Survey
Dimethoate Terbufos sulfone 2,2',4,4'-tetrabromodiphenyl ether 2,2',4,4',5-pentabromodiphenyl ether 2,2',4,4',5,5'-hexabromobiphenyl 2,2',4,4',5,5'-hexabromodiphenyl ether 2,2',4,4',6-pentabromodiphenyl ether 1,3-dinitrobenzene 2,4,6-trinitrotoluene (TNT) Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	Acetochlor ethane sulfonic acid Acetochlor oxanilic acid Alachlor ethane sulfonic acid Alachlor oxanilic acid Metolachlor ethane sulfonic acid Metolachlor oxanilic acid Acetochlor Alachlor Metolachlor N-nitrosodiethylamine (NDEA) N-nitrosodimethylamine (NDMA) N-nitroso-di-n-butylamine (NDBA) N-nitroso-di-n-propylamine (NDPA) N-nitrosomethylethylamine (NMEA) N-nitrosopyrrolidine (NPYR)

ATTACHMENT 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 Attachment 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
Dichlorodifluoromethane (Freon 12)	1 ppm	See Attachment 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 Attachment 3
1,2,3-Trichloropropane (1,2,3-TCP)	5 ppt	See Attachment 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 Attachment 3

ATTACHMENT 6

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

- (A) **Nitrate:** For systems that detect nitrate (as NO₃) **above 23 mg/L, but below 45 mg/L**, the following language is REQUIRED:

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 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 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 Department with at least five years of the most current monitoring data that its nitrate levels are stable, it must also add the following language to the preceding statement on nitrate:

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

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

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

- (C) **Lead:** For systems that detect lead above 15 ppb 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), the following language is REQUIRED:

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

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

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

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

Radon is a radioactive gas that you cannot see, taste, or smell. It is found throughout the U.S. Radon can move up through the ground and into a home through cracks and holes in the foundation. Radon can build up to high levels in all types of homes. Radon can also get into indoor air when released from tap water from showering, washing dishes, and other household activities. Compared to radon entering the home through soil, radon entering the home through tap water will in most cases be a small source of radon in indoor air. Radon is a known human carcinogen. Breathing air containing radon can lead to lung cancer. Drinking water containing radon may also cause increased risk of stomach cancer. If you are concerned about radon in your home, test the air in your home. Testing is inexpensive and easy. You should pursue radon removal for your home if the level of radon in your air is 4 picocuries per liter of air (pCi/L) or higher. There are simple ways to fix a radon problem that are not too costly. For additional information, call your State radon program (1-800-745-7236, the EPA Safe Drinking Water Act Hotline (1-800-426-4791), or the National Safe Council Radon Hotline (1-800-SOS-RADON).

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

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

(F) Additional Special Language for Lead: For community water systems, the following language is REQUIRED:

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. [INSERT 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>.

(G) Ground Water Systems: For ground water systems that had a TT violation described in Item S of the SWS CCR Form Instructions, the following language MAY be used to describe the potential health effects. USEPA did not provide standard health effect language for these TT violations in the Federal Ground Water Rule; USEPA provided the language in their guidance to water systems.

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

(H) Surface Water Systems: For surface water systems that had a TT violation under the SWTR, IESWTR, FBRR, or Federal LT1ESWTR , the following language is REQUIRED to describe the potential health effects:

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

For surface water systems that had a TT violation under the **Federal LT2ESWTR**, the following language MAY be used to describe the potential health effects. USEPA did not provide standard health effect language for these TT violations in the Federal LT2ESWTR; USEPA provided the language in their guidance to water systems.

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