

MCLs, DLRs, PHGs, for Regulated Drinking Water Contaminants

Updated September 2024

The following tables include California's maximum contaminant levels (MCLs), detection limits for purposes of reporting (DLRs), public health goals (PHGs) from the Office of Environmental Health Hazard Assessment (OEHHA). For comparison, Federal MCLs and Maximum Contaminant Level Goals (MCLGs) from the U.S. EPA are also displayed.

Inorganic Chemicals Table (22 CCR §64431)

(Units are in milligrams per liter (mg/L), unless otherwise stated; n/a = not applicable)

Inorganic Chemicals	California				Federal	
	MCL	DLR	PHG	PHG Date	MCL	MCLG
Aluminum	1	0.05	0.6	2001	--	--
Antimony	0.006	0.006	0.001	2016	0.006	0.006
Arsenic	0.010	0.002	0.000004	2004	0.010	zero
Asbestos ¹	7	0.2	7	2003	7	7
Barium	1	0.1	2	2003	2	2
Beryllium	0.004	0.001	0.001	2003	0.004	0.004
Cadmium	0.005	0.001	0.00004	2006	0.005	0.005
Chromium, Hexavalent	0.010	0.0001	0.00002	2011	--	--
Chromium, Total	0.05	0.01	none ²	n/a	0.1	0.1
Cyanide	0.15	0.1	0.15	1997	0.2	0.2
Fluoride	2	0.1	1	1997	4.0	4.0
Mercury (inorganic)	0.002	0.001	0.0012	1999 ³	0.002	0.002
Nickel	0.1	0.01	0.012	2001	--	--
Nitrate (as nitrogen, N)	10 as N	0.4	10 as N ⁴	2018	10	10
Nitrite (as N)	1 as N	0.4	1 as N	2018	1	1
Nitrate + Nitrite (as N)	10 as N	--	10 as N	2018	--	--
Perchlorate	0.006	0.002	0.001	2015	--	--
Selenium	0.05	0.005	0.03	2010	0.05	0.05
Thallium	0.002	0.001	0.0001	1999 ⁵	0.002	0.0005

¹ Asbestos units are in million fibers per liter (MFL); for fibers >10 microns long.

² In November 2001, OEHHA withdrew the 0.0025 mg/L PHG adopted in 1999.

³ OEHHA's review of mercury (inorganic) in 2005 resulted in no change to the PHG.

⁴ The PHG for nitrate can also be expressed as 45 mg/L of NO₃.

⁵ OEHHA's review of thallium in 2004 resulted in no change to the PHG.

Copper and Lead Table (22 CCR §64678)

Primary drinking water standards for lead and copper are not called MCLs; instead, they are called “Action Levels” under the Lead and Copper Rule.

(Units are in milligrams per liter (mg/L), unless otherwise stated)

Contaminants	California				Federal	
	Action Level	DLR	PHG	PHG Date	Action Level	MCLG
Copper	1.3	0.05	0.3	2008	1.3	1.3
Lead	0.015	0.005	0.0002	2009	0.015	zero

Radiological Table (22 CCR §64442 and §64443)

(Units are picocuries per liter (pCi/L), unless otherwise stated; n/a = not applicable)

Radionuclides	California				Federal	
	MCL	DLR	PHG	PHG Date	MCL	MCLG
Gross alpha particle activity ⁶	15	3	none ⁷	n/a	15	zero
Beta/photon emitters ⁸	4 mrem/yr	4	none ⁷	n/a	4 mrem/yr	zero
Radium-226	--	1	0.05	2006	--	--
Radium-228	--	1	0.019	2006	--	--
Radium-226 + Radium-228	5	--	--	--	5	zero
Strontium-90	8	2	0.35	2006	--	--
Tritium	20,000	1,000	400	2006	--	--
Uranium	20	1	0.43	2001	30 µg/L	zero

Volatile Organic Chemicals (VOCs) (22 CCR §64444)

(Units are in milligrams per liter (mg/L), unless otherwise stated)

Volatile Organic Chemicals	California				Federal	
	MCL	DLR	PHG	PHG Date	MCL	MCLG
Benzene	0.001	0.0005	0.00015	2001	0.005	zero
Carbon tetrachloride	0.0005	0.0005	0.0001	2000	0.005	zero
1,2-Dichlorobenzene	0.6	0.0005	0.6	1997 ⁹	0.6	0.6

⁶ Excludes alpha particle activity from radon and uranium.

⁷ OEHHA concluded in 2003 that a PHG was not practical.

⁸ Beta/photon emitters California and Federal MCLs are in units of millirems per year (mrem/yr) annual dose equivalent to the total body or any internal organ. The DLR is in units of pCi/L of gross beta particle activity.

⁹ OEHHA's review of 1,2-dichlorobenzene in 2009 resulted in no change to the PHG.

Volatile Organic Chemicals	California				Federal	
	MCL	DLR	PHG	PHG Date	MCL	MCLG
1,4-Dichlorobenzene (p-DCB)	0.005	0.0005	0.006	1997	0.075	0.075
1,1-Dichloroethane (1,1-DCA)	0.005	0.0005	0.003	2003	--	--
1,2-Dichloroethane (1,2-DCA)	0.0005	0.0005	0.0004	1999 ¹⁰	0.005	zero
1,1-Dichloroethylene (1,1-DCE)	0.006	0.0005	0.01	1999	0.007	0.007
cis-1,2-Dichloroethylene	0.006	0.0005	0.013	2018	0.07	0.07
trans-1,2-Dichloroethylene	0.01	0.0005	0.05	2018	0.1	0.1
Dichloromethane (Methylene chloride)	0.005	0.0005	0.004	2000	0.005	zero
1,2-Dichloropropane	0.005	0.0005	0.0005	1999	0.005	zero
1,3-Dichloropropene	0.0005	0.0005	0.0002	1999 ¹¹	--	--
Ethylbenzene	0.3	0.0005	0.3	1997	0.7	0.7
Methyl tertiary butyl ether (MTBE)	0.013	0.003	0.013	1999	--	--
Monochlorobenzene	0.07	0.0005	0.07	2014	0.1	0.1
Styrene	0.1	0.0005	0.0005	2010	0.1	0.1
1,1,2,2-Tetrachloroethane	0.001	0.0005	0.0001	2003	--	--
Tetrachloroethylene (PCE)	0.005	0.0005	0.00006	2001	0.005	zero
Toluene	0.15	0.0005	0.15	1999	1	1
1,2,4-Trichlorobenzene	0.005	0.0005	0.005	1999	0.07	0.07
1,1,1-Trichloroethane (1,1,1-TCA)	0.200	0.0005	1	2006	0.2	0.2
1,1,2-Trichloroethane (1,1,2-TCA)	0.005	0.0005	0.0003	2006	0.005	0.003
Trichloroethylene (TCE)	0.005	0.0005	0.0017	2009	0.005	zero
Trichlorofluoromethane (Freon 11)	0.15	0.005	1.3	2014	--	--
1,1,2-Trichloro-1,2,2-Trifluoroethane (Freon 113)	1.2	0.01	4	1997 ¹²	--	--
Vinyl chloride	0.0005	0.0005	0.00005	2000	0.002	zero
Xylenes	1.750	0.0005	1.8	1997	10	10

¹⁰ OEHHA's review of 1,2-dichloroethane (1,2-DCA) in 2005 resulted in no change to the PHG.

¹¹ OEHHA's review of 1,3-dichloropropene in 2006 resulted in no change to the PHG.

¹² OEHHA's review of 1,1,2-Trichloro-1,2,2-Trifluoroethane (Freon 113) in 2011 resulted in no change to the PHG.

Synthetic Organic Chemicals (SOCs) (22 CCR §64444)

(Units are in milligrams per liter (mg/L), unless otherwise stated)

Synthetic Organic Chemicals	California				Federal	
	MCL	DLR	PHG	PHG Date	MCL	MCLG
Alachlor	0.002	0.001	0.004	1997	0.002	zero
Atrazine	0.001	0.0005	0.00015	1999	0.003	0.003
Bentazon	0.018	0.002	0.2	1999 ¹³	--	--
Benzo(a)pyrene	0.0002	0.0001	0.000007	2010	0.0002	zero
Carbofuran	0.018	0.005	0.0007	2016	0.04	0.04
Chlordane	0.0001	0.0001	0.00003	1997 ¹⁴	0.002	zero
Dalapon	0.2	0.01	0.79	1997 ¹⁵	0.2	0.2
1,2-Dibromo-3-chloropropane (DBCP)	0.0002	0.00001	0.000003	2020	0.0002	zero
2,4-Dichlorophenoxyacetic acid (2,4-D)	0.07	0.01	0.02	2009	0.07	0.07
Di(2-ethylhexyl)adipate	0.4	0.005	0.2	2003	0.4	0.4
Di(2-ethylhexyl)phthalate (DEHP)	0.004	0.003	0.012	1997	0.006	zero
Dinoseb	0.007	0.002	0.014	1997 ¹⁶	0.007	0.007
Diquat	0.02	0.004	0.006	2016	0.02	0.02
Endothal	0.1	0.045	0.094	2014	0.1	0.1
Endrin	0.002	0.0001	0.0003	2016	0.002	0.002
Ethylene dibromide (EDB)	0.00005	0.00002	0.00001	2003	0.00005	zero
Glyphosate	0.7	0.025	0.9	2007	0.7	0.7
Heptachlor	0.00001	0.00001	0.000008	1999	0.0004	zero
Heptachlor epoxide	0.00001	0.00001	0.000006	1999	0.0002	zero
Hexachlorobenzene	0.001	0.0005	0.00003	2003	0.001	zero
Hexachlorocyclopentadiene	0.05	0.001	0.002	2014	0.05	0.05
Lindane	0.0002	0.0002	0.000032	1999 ¹⁷	0.0002	0.0002
Methoxychlor	0.03	0.01	0.00009	2010	0.04	0.04

¹³ OEHHA's review of bentazon in 2009 resulted in no change to the PHG.

¹⁴ OEHHA's review of chlordane in 2006 resulted in no change to the PHG.

¹⁵ OEHHA's review of dalapon in 2009 resulted in no change to the PHG.

¹⁶ OEHHA's review of dinoseb in 2010 resulted in no change to the PHG.

¹⁷ OEHHA's review of lindane in 2005 resulted in no change to the PHG.

Synthetic Organic Chemicals	California				Federal	
	MCL	DLR	PHG	PHG Date	MCL	MCLG
Molinate	0.02	0.002	0.001	2008	--	--
Oxamyl	0.05	0.02	0.026	2009	0.2	0.2
Pentachlorophenol	0.001	0.0002	0.0003	2009	0.001	zero
Picloram	0.5	0.001	0.166	2016	0.5	0.5
Polychlorinated biphenyls (PCBs)	0.0005	0.0005	0.00009	2007	0.0005	zero
Simazine	0.004	0.001	0.004	2001	0.004	0.004
Thiobencarb	0.07	0.001	0.042	2016	--	--
Toxaphene	0.003	0.001	0.00003	2003	0.003	zero
1,2,3-Trichloropropane	0.000005	0.000005	0.0000007	2009	--	--
2,3,7,8-TCDD (dioxin)	3 x10 ⁻⁸	5 x10 ⁻⁹	5 x10 ⁻¹¹	2010	3 x10 ⁻⁸	zero
2,4,5-TP (Silvex)	0.05	0.001	0.003	2014	0.05	0.05

Disinfection Byproducts Table (22 CCR §64533)

(Units are in milligrams per liter (mg/L), unless otherwise stated)

Disinfection Byproducts	California				Federal	
	MCL	DLR	PHG	PHG Date	MCL	MCLG
Total Trihalomethanes	0.080	--	--	--	0.080	--
Bromodichloromethane	--	0.0010	0.00006	2020	--	zero
Bromoform	--	0.0010	0.0005	2020	--	zero
Chloroform	--	0.0010	0.0004	2020	--	0.07
Dibromochloromethane	--	0.0010	0.0001	2020	--	0.06
Haloacetic Acids (five) (HAA5)	0.060	--	--	--	0.060	--
Monochloroacetic Acid	--	0.0020	0.053	2022	--	0.07
Dichloroacetic Acid	--	0.0010	0.0002	2022	--	zero
Trichloroacetic Acid	--	0.0010	0.0001	2022	--	0.02
Monobromoacetic Acid	--	0.0010	0.025	2022	--	--
Dibromoacetic Acid	--	0.0010	0.00003	2022	--	--
Bromate	0.010	0.0050 ¹⁸	0.0001	2009	0.01	zero
Chlorite	1.0	0.020	0.05	2009	1	0.8

¹⁸ The DLR for Bromate is 0.0010 mg/L for analysis performed using EPA Method 317.0 Revision 2.0, EPA Method 321.8, or EPA Method 326.0.

Disinfectant Residuals Table (22 CCR §64533.5)

Limits for disinfectant residuals are not called MCLs; instead, they are called “Maximum Residual Disinfectant Levels” (MRDLs).

(Units are in milligrams per liter (mg/L), unless otherwise stated)

Disinfectant Residuals	California				Federal	
	MRDL	DLR	PHG	PHG Date	MRDL	MRDLG
Chlorine	4.0 (as Cl ₂)	--	--	--	4.0	4
Chloramines	4.0 (as Cl ₂)	--	--	--	4.0	4
Chlorine dioxide	0.8 (as ClO ₂)	--	--	--	0.8	0.8

Chemicals soon to be regulated in drinking water in California

(Units are in nanograms per liter (ng/L), unless otherwise stated)

Chemicals	California				Federal	
	MCL	DLR	PHG	PHG Date	MCL	MCLG
N-Nitrosodimethylamine (NDMA)	--	--	3	2006	--	--
Perfluorooctanoic acid (PFOA)	--	--	0.007	2024	4.0 ¹⁹	zero
Perfluorooctane sulfonic acid (PFOS)	--	--	1	2024	4.0 ¹⁹	zero
Perfluorohexane sulfonic acid (PFHxS)	--	--	--	--	10.0 ¹⁹	10
Perfluorononanoate (PFNA)	--	--	--	--	10.0 ¹⁹	10
2,3,3,3-Tetrafluoro-2-(heptafluoropropoxy)propanoate (HFPO-DA or GenX Chemicals)	--	--	--	--	10.0 ¹⁹	10
PFAS Hazard Index ²⁰ (includes HFPO-DA, PFBS ²¹ , PFHxS, and PFNA)	--	--	--	--	1 ¹⁹ (unitless)	1 (unitless)

¹⁹ The Federal PFAS MCLs have an effective date of April 26, 2029.

²⁰ PFAS Hazard Index = $(\text{[HFPO-DA}_{\text{water}} \text{ ng/L}]/\text{[10 ng/L]}) + (\text{[PFBS}_{\text{water}} \text{ ng/L}]/\text{[2000 ng/L]}) + (\text{[PFNA}_{\text{water}} \text{ ng/L}]/\text{[10 ng/L]}) + (\text{[PFHxS}_{\text{water}} \text{ ng/L}]/\text{[10 ng/L]})$

²¹ Perfluorobutane Sulfonate (PFBS).