U.S. EPA
National Primary Drinking Water Regulations

National Primary Drinking Water Regulations are enforceable drinking water standards expressed as Maximum Contaminant Levels (MCLs) or treatment technique requirements. The MCL is the maximum permissible level of a contaminant in water which is delivered to any user of a public water system. A treatment technique is a drinking water treatment requirement established in lieu of an MCL, typically used when setting an MCL would be too difficult or when compliance with an MCL would be too costly.

An action level is not an MCL, it is simply a level that triggers additional action. If a certain contaminant is measured at or above the action level for that contaminant, treatment may be required or recommended by EPA.

Volatile Organic Chemicals (VOCs)	MCL, in mg/l
Benzene	0.005
Carbon Tetrachloride	0.005
1, 2-Dichloroethane	0.005
Trichloroethylene	0.005
p-Dichlorobenzene	0.075
1, 1-Dichloroethylene	0.007
1,1,1-Trichloroethane	0.2
Vinyl Chloride	0.002
cis-1, 2-Dichloroethylene	0.07
1, 2-Dichloropropane	0.005
Ethylbenzene	0.7
Chlorobenzene	0.1
o-Dichlorobenzene	0.6
Styrene	0.1
Tetrachloroethylene	0.005
Toluene	1
trans-1, 2-Dichloroethylene	0.1
Xylenes (Total)	10
Dichloromethane	0.005
1, 2, 4-Trichlorobenzene	0.07
1, 1, 2-Trichloroethane	0.005

Synthetic Organic Chemicals (SOCs)	MCL, in mg/l
Alachlor	0.002
Atrazine	0.003
Carbofuran	0.04
Chlordane	0.002
Dibromochloropropane	0.0002
2, 4-D	0.07
Endrin	0.002
Ethylene dibromide	0.00005
Heptachlor	0.0004

Heptachlor epoxide	0.0002
Lindane	0.0002
Methoxychlor	0.04
Polychlorinated biphenyls (PCBs)	0.0005
Pentachlorophenol	0.001
Toxaphene	0.003
2, 4, 5-TP	0.05
Benzo (a) pyrene	0.0002
Dalapon	0.2
Di (2-ethylhexyl) adipate	0.4
Di (2-ethylhexyl) phthalate	0.006
Dinoseb	0.007
Diquat	0.02
Endothall	0.1
Glyphosate	0.7
Hexachlorobenzene	0.001
Hexachlorocyclopentadiene	0.05
Oxamyl (Vydate)	0.2
Picloram	0.5
Simazine	0.004
2, 3, 7, 8-TCDD (Dioxin)	$3x10^{-8}$

(Aldicarb, Aldicarb Sulfone, and Aldicarb Sulfoxide have been remanded back to EPA for further regulation.)

Inorganic Chemicals	**MCL, in mg/l**
Antimony	0.006
Arsenic	0.05
Asbestos*	7 Million Fibers/Liter
Barium	2
Beryllium	0.004
Cadmium	0.005
Chromium	0.1
Cyanide	0.2
Fluoride	4.0
Mercury	0.002
Nitrate (as N)	10
Nitrite (as N)	1
Total Nitrate/Nitrite (as N)	10
Selenium	0.05
Thallium	0.002

*Fibers longer than 10 micrometers
(Nickel has been remanded back to EPA for further regulation.)

Radionuclides — MCL

Gross alpha particle activity	15 pCi/L
Combined radium-226 and radium-228	5 pCi/L
Tritium	20,000 pCi/L
Strontium	8 pCi/L
Beta particle and photon radioactivity	4 millirem/year
Radioactivity (Total, for 2 or more radionuclides)	4 millirem/year

Radon (proposed for regulation in drinking water; action level for indoor air is 4 pCi/l)

Other Contaminants — MCL

Total Coliform Bacteria (depends on system size; includes repeat sampling requirements for fecal coliform bacteria)	No more than 1 sample or 5% of monthly
Total Trihalomethanes, annual average of four quarterly samples (only for systems serving $\geq$ 10,000 people)	0.10 mg/l

Alternate Requirements

Lead and Copper Rule - for all public water systems, treatment requirements depend on system size.

Contaminant	**Treatment Technique or Other Requirements**
Lead	Below action level of 0.15 mg/l or treatment
Copper	Below action level of 1.3 mg/l or treatment
Acrylamide 0.05%	Based on 1 ppm (or equivalent)
Epichlorohydrin 0.01%	Based on 20 ppm (or equivalent)

Surface Water Treatment Rule - requires filtration for all surface water systems and ground water systems under the direct influence of surface water.

Contaminant	**Treatment Technique or Other Requirements**
Giardia lamblia	Filtration/Disinfection
Legionella	Filtration/Disinfection
Turbidity	Filtration or other requirements
Viruses	Filtration/Disinfection

Unregulated Volatile Organic Chemicals (VOCs) - Monitoring Requirements

Chloroform
Bromodichloromethane
Chlorodibromomethane
1, 1-Dichloropropene
1, 1-Dichloroethane
1, 1, 2, 2-Tetrachloroethane
1, 3-Dichloropropane
Chloromethane
Bromomethane
n-Propylbenzene
tert-Butylbenzene
Bromochloromethane
Naphthalene
1, 3, 5-Trimethylbenzene
2, 2-Dichloropropane
1, 2, 3-Trichlorobenzene
Fluorotrichloromethane
1, 2, 3-Trichloropropane
1, 1, 1, 2-Tetrachloroethane
Chloroethane
m-Dichlorobenzene
o-Chlorotoluene
p-Chlorotoluene
Bromobenzene
1, 3-Dichloropropene
1, 2, 3-Trichlorobenzene
Isopropylbenzene
sec-Butylbenzene
Dichlorodifluoromethane
n-Butylbenzene
Hexachlorobutadiene
1, 2, 4-Trimethylbenzene
p-Isopropyltoluene

Unregulated Synthetic Organic Chemicals (SOCs) - Monitoring Requirements

Aldrin
Carbaryl
Dieldrin
Methomyl
Metribuzin
Butachlor
Dicamba
3-Hydroxycarbofuran
Metolachlor
Propachlor

U.S. EPA National Secondary Drinking Water Standards

Secondary Drinking Water Standards are not MCLs, but unenforceable federal guidelines regarding taste, odor, color and certain other non-aesthetic effects of drinking water. EPA recommends them to the States as reasonable goals, but federal law does not require water systems to comply with them. States may, however, adopt their own enforceable regulations governing these contaminants. To be safe, check your State's drinking water rules.

Contaminants	Suggested Level
Aluminum	0.05 - 0.2 mg/l
Chloride	250 mg/l
Color	15 color units
Copper	1 mg/l
Corrosivity	Non-corrosive
Fluoride	2.0 mg/l
Foaming agents	0.5 mg/l
Iron	0.3 mg/l
Manganese	0.05 mg/l
Odor	3 threshold odor number
pH	6.5 - 8.5
Silver	0.1 mg/l
Sulfate	250 mg/l
Total dissolved solids (TDS)	500 mg/l
Zinc	5 mg/l