



# DRINKING WATER GUIDELINES

Your comprehensive source for EWG Health Guidelines to ensure safe drinking water for everyone. Our database shows the maximum concentration of a drinking water contaminant that EWG scientists consider safe.

CONTAMINANT	FEDERAL LEGAL LIMIT	HEALTH STANDARDS	POTENTIAL EFFECTS
Aluminum	<b>NO LEGAL LIMIT</b>	CALIFORNIA PUBLIC HEALTH GOAL <b>600 ppb</b>	Central nervous system harm
Antimony	<b>6 ppb</b>	CALIFORNIA PUBLIC HEALTH GOAL <b>1 ppb</b>	Liver, stomach and intestinal harm
Arsenic	<b>10 ppb</b>	CALIFORNIA PUBLIC HEALTH GOAL <b>0.004 ppb</b>	Cancer, nervous system harm, integumentary system harm, risk of stroke, risk of diabetes
Atrazine	<b>3 ppb</b>	EWG RECOMMENDED HEALTH GUIDELINE <b>0.1 ppb</b>	Cancer, harm to developing fetus, hormone disruption, reproductive system harm, central nervous system harm
Barium	<b>2 ppm</b>	ENVIRONMENTAL PROTECTION AGENCY <b>0.7 ppm</b>	kidney harm, high blood pressure, cardiovascular system harm
Benzene	<b>5 ppb</b>	CALIFORNIA PUBLIC HEALTH GOAL <b>0.15 ppb</b>	Cancer, blood cell harm, central nervous system harm, disruption in child development, immune system harm
Benzo[a]pyrene	<b>0.2 ppb</b>	CALIFORNIA PUBLIC HEALTH GOAL <b>0.007 ppb</b>	Cancer, immune system harm, reproductive system harm, disruption of child development, central nervous system harm
Beryllium	<b>4 ppb</b>	CALIFORNIA PUBLIC HEALTH GOAL <b>1 ppb</b>	Stomach and intestinal harm, harm to the lungs, skeletal system harm

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Bromate	10 ppb	CALIFORNIA PUBLIC HEALTH GOAL <b>0.1 ppb</b>	Cancer
Bromochloroacetic acid	<b>NO LEGAL LIMIT</b>	EWG RECOMMENDED HEALTH GUIDELINE <b>0.02 ppb</b>	Cancer, harm to fetus development
Bromodichloroacetic acid	<b>NO LEGAL LIMIT</b>	EWG RECOMMENDED HEALTH GUIDELINE <b>0.04 ppb</b>	Cancer, harm to fetus development
Bromodichloromethane	<b>NO LEGAL LIMIT</b>	CALIFORNIA OFFICE OF ENVIRONMENTAL HEALTH HAZARD ASSESSMENT <b>0.4 ppb</b>	Cancer, reproductive harm, harm to fetus and child development
Bromoform	<b>NO LEGAL LIMIT</b>	CALIFORNIA OFFICE OF ENVIRONMENTAL HEALTH HAZARD ASSESSMENT <b>5 ppb</b>	Cancer, reproductive harm, harm to fetus and child development
Cadium	5 ppb	CALIFORNIA PUBLIC HEALTH GOAL <b>0.04 ppb</b>	Cancer, kidney harm, behavioral change
Carbofuran	40 ppb	CALIFORNIA PUBLIC HEALTH GOAL <b>0.7 ppb</b>	Central nervous system harm, reproductive system harm
Carbon tetrachloride	5 ppb	CALIFORNIA PUBLIC HEALTH GOAL <b>0.1 ppb</b>	Cancer, liver and kidney harm, central nervous system harm, decreased fertility
Chlorate	<b>NO LEGAL LIMIT</b>	ENVIRONMENTAL PROTECTION AGENCY <b>210 ppb</b>	Horomone disruption
Chlordane	2 ppb	CALIFORNIA PUBLIC HEALTH GOAL <b>0.03 ppb</b>	Cancer, hormone disruption, reproductive harm, disruption of child development

CONTAMINANT	FEDERAL LEGAL LIMIT	HEALTH STANDARDS	POTENTIAL EFFECTS
Chlorodibromoacetic acid	NO LEGAL LIMIT	EWG RECOMMENDED HEALTH GUIDELINE 0.02 ppb	Cancer, harm to fetal development
Chlorite	1 ppm	CALIFORNIA PUBLIC HEALTH GOAL 0.050 ppm	Blood cell harm, thyroid hormone disruption, reproductive harm
Chloroform	NO LEGAL LIMIT	CALIFORNIA OFFICE OF ENVIRONMENTAL HEALTH HAZARD ASSESSMENT 1 ppb	Cancer, harm to fetus development
Chloromethane	NO LEGAL LIMIT	ENVIRONMENTAL PROTECTION AGENCY 2.69 ppb	Cancer
Chromium (hexavalent)	NO LEGAL LIMIT	CALIFORNIA PUBLIC HEALTH GOAL 0.02 ppb	Cancer, liver harm, reproductive harm
Cobalt	NO LEGAL LIMIT	ENVIRONMENTAL PROTECTION AGENCY 70 ppb	Cardiovascular harm, change in blood chemistry, stomach and intestinal harm
Copper	NO LEGAL LIMIT	CALIFORNIA PUBLIC HEALTH GOAL 300 ppb	Diarrhea, weight loss, vomiting
Cyanide	200 ppb	CALIFORNIA PUBLIC HEALTH GOAL 150 ppb	Central nervous system harm, thyroid harm
Di(2-ethylhexyl) adipate	400 ppb	CALIFORNIA PUBLIC HEALTH GOAL 200 ppb	Harm to fetus development, liver harm
Di(2-ethylhexyl) phthalate	6 ppb	ENVIRONMENTAL PROTECTION AGENCY 3 ppb	Male reproductive harm, immune system harm, fetal development harm, hormone disruption

CONTAMINANT	FEDERAL LEGAL LIMIT	HEALTH STANDARDS	POTENTIAL EFFECTS
Dibromoacetic acid	NO LEGAL LIMIT	EWG RECOMMENDED HEALTH GUIDELINE 0.04 ppb	Cancer, harm to fetal development
Dibromochloromethane	NO LEGAL LIMIT	CALIFORNIA OFFICE OF ENVIRONMENTAL HEALTH HAZARD ASSESSMENT 0.7 ppb	Cancer, harm to fetal development
Dichloroacetic acid	NO LEGAL LIMIT	EWG RECOMMENDED HEALTH GUIDELINE 0.2 ppb	Cancer, harm to fetus development
p-Dichlorobenzene	75 ppb	CALIFORNIA PUBLIC HEALTH GOAL 6 ppb	Cancer, liver, kidney and thyroid harm
Dichloromethane (methylene chloride)	5 ppb	CALIFORNIA PUBLIC HEALTH GOAL 4 ppb	Cancer, reproductive harm, harm to child development, liver harm
Diquat	20 ppb	CALIFORNIA PUBLIC HEALTH GOAL 6 ppb	Fetus development change, body weight change, kidney harm, cataracts
Endothall	100 ppb	CALIFORNIA PUBLIC HEALTH GOAL 94 ppb	Stomach and intestinal harm, eye damage, skin irritation
Endrin	2 ppb	CALIFORNIA PUBLIC HEALTH GOAL 0.3 ppb	Cancer, central nervous system harm, immune system harm, reproductive harm
Ethylbenzene	700 ppb	CALIFORNIA PUBLIC HEALTH GOAL 300 ppb	Cancer, lung, liver and kidney harm, central nervous system harm
Ethylene dibromide	0.05 ppb	CALIFORNIA PUBLIC HEALTH GOAL 0.01 ppb	Cancer, reproductive harm, central nervous system harm, fetus development harm

CONTAMINANT	FEDERAL LEGAL LIMIT	HEALTH STANDARDS	POTENTIAL EFFECTS
Glyphosate	700 ppb	EWG RECOMMENDED HEALTH GUIDELINE <b>5 ppb</b>	Cancer, harm to fetal development, kidney harm
Haloacetic acids (HAA5)	60 ppb	EWG RECOMMENDED HEALTH GUIDELINE <b>0.1 ppb</b>	Cancer, harm to fetal development
Heptachlor	0.4 ppb	CALIFORNIA PUBLIC HEALTH GOAL <b>0.008 ppb</b>	Cancer, hormone disruption, central nervous system harm
Heptachlor epoxide	0.2 ppb	CALIFORNIA PUBLIC HEALTH GOAL <b>0.006 ppb</b>	Cancer, hormone disruption, liver harm
Hexachlorobenzene	1 ppb	CALIFORNIA PUBLIC HEALTH GOAL <b>0.03 ppb</b>	Cancer, central nervous system harm, hormone disruption
Hexachlorocyclopentadiene	50 ppb	CALIFORNIA PUBLIC HEALTH GOAL <b>2 ppb</b>	Stomach and intestinal harm, change to the liver and kidneys, lung irritation
Lead	15 ppb	CALIFORNIA PUBLIC HEALTH GOAL <b>0.2 ppb</b>	Harm to the central nervous system
Lindane	0.2 ppb	CALIFORNIA PUBLIC HEALTH GOAL <b>0.032 ppb</b>	Cancer, central nervous system harm, immune system harm
Manganese	<b>NO LEGAL LIMIT</b>	MINNESOTA DEPARTMENT OF HEALTH <b>100 ppb</b>	Central nervous system harm, behavioral change
Mercury (inorganic)	2 ppb	CALIFORNIA PUBLIC HEALTH GOAL <b>1.2 ppb</b>	Central nervous system harm, disruption to fetal and child development, kidney and immune system harm

CONTAMINANT	FEDERAL LEGAL LIMIT	HEALTH STANDARDS	POTENTIAL EFFECTS
Methoxychlor	40 ppb	CALIFORNIA PUBLIC HEALTH GOAL <b>0.09 ppb</b>	Hormone disruption reproductive system harm, kidney, liver, immune system, and nervous system harm
Molybdenum	<b>NO LEGAL LIMIT</b>	ENVIRONMENTAL PROTECTION AGENCY <b>40 ppb</b>	Change in blood chemistry, gout
Monobromoacetic acid	<b>NO LEGAL LIMIT</b>	EWG RECOMMENDED HEALTH GUIDELINE <b>25 ppb</b>	Disruption in fetal development
Monochloroacetic acid	<b>NO LEGAL LIMIT</b>	EWG RECOMMENDED HEALTH GUIDELINE <b>53 ppb</b>	Disruption in fetal development
Monochlorobenzene (chlorobenzene)	100 ppb	CALIFORNIA PUBLIC HEALTH GOAL <b>70 ppb</b>	Liver and kidney harm
MTBE	<b>NO LEGAL LIMIT</b>	CALIFORNIA PUBLIC HEALTH GOAL <b>13 ppb</b>	Cancer
N-Nitrosodimethylamine (NDMA)	<b>NO LEGAL LIMIT</b>	CALIFORNIA PUBLIC HEALTH GOAL <b>0.003 ppb</b>	Cancer
Nitrate (measured as Nitrogen)	10 ppm	EWG RECOMMENDED HEALTH GUIDELINE <b>0.14 ppm</b>	Cancer, disruption of fetus and child development
Oxamyl	200 ppb	CALIFORNIA PUBLIC HEALTH GOAL <b>26 ppb</b>	Central nervous system harm, child development disruption
Pentachlorophenol	1 ppb	CALIFORNIA PUBLIC HEALTH GOAL <b>0.3 ppb</b>	Cancer, harm to child development, immune system harm, hormone disruption

CONTAMINANT	FEDERAL LEGAL LIMIT	HEALTH STANDARDS	POTENTIAL EFFECTS
Perchlorate	NO LEGAL LIMIT	CALIFORNIA PUBLIC HEALTH GOAL <b>1 ppb</b>	Hormone disruption, fetal growth harm, child development harm
Perfluorobutane sulfonate (PFBS)	NO LEGAL LIMIT	EWG RECOMMENDED HEALTH GUIDELINE <b>0.001 ppb</b>	Cancer, immune system and liver harm, hormone disruption, fetal and child development disruption
Monobromoacetic acid	NO LEGAL LIMIT	EWG RECOMMENDED HEALTH GUIDELINE <b>25 ppb</b>	Disruption in fetal development
Monochloroacetic acid	NO LEGAL LIMIT	EWG RECOMMENDED HEALTH GUIDELINE <b>53 ppb</b>	Disruption in fetal development
Monochlorobenzene (chlorobenzene)	100 ppb	CALIFORNIA PUBLIC HEALTH GOAL <b>70 ppb</b>	Liver and kidney harm
MTBE	NO LEGAL LIMIT	CALIFORNIA PUBLIC HEALTH GOAL <b>13 ppb</b>	Cancer
N-Nitrosodimethylamine (NDMA)	NO LEGAL LIMIT	CALIFORNIA PUBLIC HEALTH GOAL <b>0.003 ppb</b>	Cancer
Nitrate (measured as Nitrogen)	10 ppm	EWG RECOMMENDED HEALTH GUIDELINE <b>0.14 ppm</b>	Cancer, disruption of fetus and child development
Oxamyl	200 ppb	CALIFORNIA PUBLIC HEALTH GOAL <b>26 ppb</b>	Central nervous system harm, child development disruption
Pentachlorophenol	1 ppb	CALIFORNIA PUBLIC HEALTH GOAL <b>0.3 ppb</b>	Cancer, harm to child development, immune system harm, hormone disruption

CONTAMINANT	FEDERAL LEGAL LIMIT	HEALTH STANDARDS	POTENTIAL EFFECTS
Perfluoroheptanoic acid (PFHPA)	<b>NO LEGAL LIMIT</b>	EWG RECOMMENDED HEALTH GUIDELINE <b>0.001 ppb</b>	Cancer, immune system and liver harm, hormone disruption, fetal and child development harm
Perfluorohexane sulfonate (PFHXS)	<b>NO LEGAL LIMIT</b>	EWG RECOMMENDED HEALTH GUIDELINE <b>0.001 ppb</b>	Cancer, immune system and liver harm, hormone disruption, fetal and child development harm
Perfluorononanoic acid (PFNA)	<b>NO LEGAL LIMIT</b>	EWG RECOMMENDED HEALTH GUIDELINE <b>0.001 ppb</b>	Cancer, immune system and liver harm, hormone disruption, fetal and child development harm
Perfluorooctane sulfonate (PFOS)	<b>NO LEGAL LIMIT</b>	EWG RECOMMENDED HEALTH GUIDELINE <b>0.001 ppb</b>	Cancer, immune system and liver harm, hormone disruption, fetal and child development harm
Perfluorooctanoic acid (PFOA)	<b>NO LEGAL LIMIT</b>	EWG RECOMMENDED HEALTH GUIDELINE <b>0.007 ppb</b>	Cancer, immune system and liver harm, hormone disruption, fetal and child development harm
Picloram	<b>500 ppb</b>	CALIFORNIA PUBLIC HEALTH GOAL <b>166 ppb</b>	Liver, kidney, and reproductive harm
Polychlorinated biphenyls (PCBs)	<b>0.5 ppb</b>	CALIFORNIA PUBLIC HEALTH GOAL <b>0.09 ppb</b>	Breast cancer, prostate cancer, hormone disruption, immune and nervous system harm
Nitrate (measured as Nitrogen)	<b>10 ppm</b>	EWG RECOMMENDED HEALTH GUIDELINE <b>0.14 ppm</b>	Cancer, disruption of fetus and child development
Radium-226	5 pCi/L for combined radium-226 and radium-228	CALIFORNIA PUBLIC HEALTH GOAL <b>0.05 pCi/L</b>	Cancer
Radium-228	5 pCi/L for combined radium-226 and radium-228	CALIFORNIA PUBLIC HEALTH GOAL <b>0.019 ppb</b>	Cancer



CONTAMINANT	FEDERAL LEGAL LIMIT	HEALTH STANDARDS	POTENTIAL EFFECTS
Selenium	50 ppb	CALIFORNIA PUBLIC HEALTH GOAL <b>30 ppb</b>	Horomone disruption, child development disruption, central nervous system and skin damage
Simazine	4 ppb	EWG RECOMMENDED HEALTH GUIDELINE <b>0.1 ppb</b>	Cancer, fetus development disruption, horomone disruption, reproductive harm, behavioral change
Stronium	<b>NO LEGAL LIMIT</b>	ENVIRONMENTAL PROTECTION AGENCY <b>1.5 ppm</b>	Harm to bones
Stronium-90	<b>NO LEGAL LIMIT</b>	CALIFORNIA PUBLIC HEALTH GOAL <b>0.35 pCi/L</b>	Cancer, harm to bones
Styrene	100 ppb	CALIFORNIA PUBLIC HEALTH GOAL <b>0.5 ppb</b>	Cancer, harm to the liver, brain and nervous system harm
Tetrachloro-ethylene (perchloroethylene)	5 ppb	CALIFORNIA PUBLIC HEALTH GOAL <b>0.06 ppb</b>	Lung, breast and colon cancer, kidney, liver, and central nervous system harm
Thallium	2 ppb	CALIFORNIA PUBLIC HEALTH GOAL <b>0.1 ppb</b>	Hair loss, liver, central nervous system, and male reproductive system harm
Toluene	1 ppm	CALIFORNIA PUBLIC HEALTH GOAL <b>0.15 ppm</b>	Brain, nervous system, liver, immune system, and reproductive harm, fetal development harm
Total trihalo-methanes (TTHMs)	80 ppb	EWG RECOMMENDED HEALTH GUIDELINE <b>0.15 ppb</b>	Bladder and skin cancer, fetal growth disruption
Toxaphene	3 ppb	CALIFORNIA PUBLIC HEALTH GOAL <b>0.03 ppb</b>	Cancer, brain, nervous system, and kidney harm, horomone disruption

CONTAMINANT	FEDERAL LEGAL LIMIT	HEALTH STANDARDS	POTENTIAL EFFECTS
Tribromoacetic acid	<b>NO LEGAL LIMIT</b>	EWG RECOMMENDED HEALTH GUIDELINE <b>0.04 ppb</b>	Disruption in fetal development
Trichloroacetic acid	<b>NO LEGAL LIMIT</b>	EWG RECOMMENDED HEALTH GUIDELINE <b>0.1 ppb</b>	Cancer, reproductive harm, disruption in child development
Trichloroethylene	<b>5 ppb</b>	MINNESOTA DEPARTMENT OF HEALTH <b>0.4 ppb</b>	Cancer, change to fetal growth, liver and kidney harm
Trichlorofluoromethane	<b>NO LEGAL LIMIT</b>	CALIFORNIA PUBLIC HEALTH GOAL <b>1.3 ppm</b>	Liver harm, central nervous system change, harm to the heart and blood vessels
Trichlorotrifluoroethane	<b>NO LEGAL LIMIT</b>	CALIFORNIA PUBLIC HEALTH GOAL <b>4 ppm</b>	Liver harm, central nervous system change, harm to the heart and blood vessels
Tritium	<b>NO LEGAL LIMIT</b>	CALIFORNIA PUBLIC HEALTH GOAL <b>400 pCi/L</b>	Cancer
Uranium	<b>30 ppb*</b>	CALIFORNIA PUBLIC HEALTH GOAL <b>0.43 pCi/L</b>	Cancer, kidney harm
Vanadium	<b>NO LEGAL LIMIT</b>	ENVIRONMENTAL PROTECTION AGENCY <b>21 ppb</b>	Blood chemistry change, reproductive harm, child development disruption
Vinyl chloride	<b>2 ppb</b>	CALIFORNIA PUBLIC HEALTH GOAL <b>0.05 ppb</b>	Liver cancer, liver harm, central nervous system change
Xylenes (total)	<b>10 ppm</b>	CALIFORNIA PUBLIC HEALTH GOAL <b>1.8 ppm</b>	Brain and nervous system harm, central nervous system change, fetal development change

CONTAMINANT	FEDERAL LEGAL LIMIT	HEALTH STANDARDS	POTENTIAL EFFECTS
1,1-Dichloroethane	<b>NO LEGAL LIMIT</b>	CALIFORNIA PUBLIC HEALTH GOAL <b>3 ppb</b>	Cancer, cardiovascular changes
1,1,2-Trichloroethane	<b>5 ppb</b>	CALIFORNIA PUBLIC HEALTH GOAL <b>0.3 ppb</b>	Liver cancer, kidney harm, central nervous system change
1,2-Dibromo-3-chloropropane	<b>0.2 ppb</b>	CALIFORNIA PUBLIC HEALTH GOAL <b>0.0017 ppb</b>	Testicular cancer, male reproductive harm, infertility
1,2-Dichloroethane	<b>5 ppb</b>	CALIFORNIA PUBLIC HEALTH GOAL <b>0.4 ppb</b>	Cancer, immune system, stomach, intestinal, liver, kidney, brain, and nervous system harm
1,2 Dichloropropane	<b>5 ppb</b>	CALIFORNIA PUBLIC HEALTH GOAL <b>0.5 ppb</b>	Liver cancer, liver harm, kidney harm, change in blood cells
1,2,3-Trichloropropane	<b>NO LEGAL LIMIT</b>	CALIFORNIA PUBLIC HEALTH GOAL <b>0.0007 ppb</b>	Cancer
1,2,4-Trichlorobenzene	<b>70 ppb</b>	CALIFORNIA PUBLIC HEALTH GOAL <b>5 ppb</b>	Cancer, adrenal gland harm
1,3-Butadiene	<b>NO LEGAL LIMIT</b>	ENVIRONMENTAL PROTECTION AGENCY <b>0.0103 ppb</b>	Cancer, brain, nervous system, reproductive, and child development harm, blood and kidney harm
1,4-Dioxane	<b>NO LEGAL LIMIT</b>	ENVIRONMENTAL PROTECTION AGENCY <b>0.35 ppb</b>	Cancer, lung irritation, kidney harm
p-Dichlorobenzene	<b>75 ppb</b>	CALIFORNIA PUBLIC HEALTH GOAL <b>6 ppb</b>	Cancer, liver, kidney, and thyroid harm
2,4-D (2,4-dichlorophenoxyacetic acid)	<b>70 ppb</b>	CALIFORNIA PUBLIC HEALTH GOAL <b>20 ppb</b>	Horomone disruption, liver, kidney, thyroid, brain and nervous system harm, immune system change