

Back to Main Menu

National Primary Drinking Water Standards					
Primary (Health Related) Inorganic Contaminants					
Contaminant	MCLG	MCL	WQA Recommended Treatment Methods	Potential Health Effects from Ingestion of Water	Sources of Contaminant in Drinking Water
Antimony	<ul style="list-style-type: none"> 0.006 mg/L 	<ul style="list-style-type: none"> 0.006 mg/L 	<ul style="list-style-type: none"> Coagulation/Filtration Submicron Filtration Reverse Osmosis Ultrafiltration Distillation 	<ul style="list-style-type: none"> Increase in blood cholesterol Decrease in blood glucose 	<ul style="list-style-type: none"> Fire retardants Ceramics Electronics Solder Discharge from petroleum refineries
<u>Arsenic (+3)</u>	<ul style="list-style-type: none"> zero 	<ul style="list-style-type: none"> 10 ppb (P)* (Total arsenic) Currently 50 ppb 	<ul style="list-style-type: none"> Chemical Oxidation Reverse Osmosis Distillation Iron Based Media Anion Exchange Activated Alumina 	<ul style="list-style-type: none"> Skin damage Circulatory system problems Increased risk of cancer 	<ul style="list-style-type: none"> Discharge from semiconductor manufacturing Petroleum refining Wood preservatives Animal feed additives Herbicides Erosion of natural deposits
Arsenic (+5)	<ul style="list-style-type: none"> zero 	<ul style="list-style-type: none"> 10 ppb (P)* (Total arsenic) Currently 50 ppb 	<ul style="list-style-type: none"> Coagulation/Filtration Submicron Filtration Anion Exchange Activated Alumina Reverse Osmosis Distillation Electrodialysis Iron Based Media 	<ul style="list-style-type: none"> See Arsenic (+3) above 	<ul style="list-style-type: none"> See Arsenic (+3) above
Arsenic (organic complexes)	<ul style="list-style-type: none"> zero 	<ul style="list-style-type: none"> 10 ppb (P)* (Total arsenic) Currently 50 ppb 	<ul style="list-style-type: none"> Activated Carbon 	<ul style="list-style-type: none"> See Arsenic (+3) above 	<ul style="list-style-type: none"> See Arsenic (+3) above
Asbestos (fibers > 10µm)	<ul style="list-style-type: none"> 7 MFL 	<ul style="list-style-type: none"> 7 MFP (million fibers per liter, >10µm) 	<ul style="list-style-type: none"> Coagulation/Filtration Submicron Filtration Reverse Osmosis Ultrafiltration Distillation 	<ul style="list-style-type: none"> Increased risk of developing benign intestinal polyps 	<ul style="list-style-type: none"> Asbestos cement in water systems Natural Deposits
Barium	<ul style="list-style-type: none"> 2.0 mg/L 	<ul style="list-style-type: none"> 2.0 mg/L 	<ul style="list-style-type: none"> Cation Exchange Reverse Osmosis Distillation Electrodialysis 	<ul style="list-style-type: none"> Circulatory system effects 	<ul style="list-style-type: none"> Natural deposits Discharge of drilling wastes Discharge from metal refineries
Beryllium	<ul style="list-style-type: none"> 0.004 mg/L 	<ul style="list-style-type: none"> 0.004 mg/L 	<ul style="list-style-type: none"> Coagulation/Filtration Submicron Filtration Activated Carbon Activated Alumina Cation Exchange Reverse Osmosis Distillation Electrodialysis 	<ul style="list-style-type: none"> Intestinal lesions 	<ul style="list-style-type: none"> Discharge from electrical, aerospace, defense industries Discharge from metal refineries and coal-burning

			<ul style="list-style-type: none"> • Ultrafiltration 		factories
Cadmium	<ul style="list-style-type: none"> • 0.005 mg/L 	<ul style="list-style-type: none"> • 0.005 mg/L 	<ul style="list-style-type: none"> • Coagulation/Filtration • Submicron Filtration • Cation Exchange • Reverse Osmosis • Distillation • Electrodialysis 	<ul style="list-style-type: none"> • Kidney effects 	<ul style="list-style-type: none"> • Galvanized pipe corrosion • Natural deposits • Batteries • Paints
Chlorine	<ul style="list-style-type: none"> • <u>4 mg/L (P)</u> * — 	<ul style="list-style-type: none"> • <u>4 mg/L (P)*</u> 	<ul style="list-style-type: none"> • Activated Carbon • Reverse Osmosis 	<ul style="list-style-type: none"> • Cancer 	<ul style="list-style-type: none"> • Chemical added to disinfect municipal water
Chromium (+3)	<ul style="list-style-type: none"> • 0.1 mg/L 	<ul style="list-style-type: none"> • 0.1 mg/L (total chromium) 	<ul style="list-style-type: none"> • Coagulation/Filtration • Cation Exchange • Reverse Osmosis • Distillation • Electrodialysis 	<ul style="list-style-type: none"> • Liver disorders • Kidney disorders • Circulatory disorders 	<ul style="list-style-type: none"> • Natural deposits • Steel and pulp mills
Chromium (+6)	<ul style="list-style-type: none"> • See Chromium (+3) above 	<ul style="list-style-type: none"> • See Chromium (+3) above 	<ul style="list-style-type: none"> • Anion Exchange • Reverse Osmosis • Distillation • Electrodialysis 	<ul style="list-style-type: none"> • See Chromium (+3) above 	<ul style="list-style-type: none"> • See Chromium (+3) above
Chromium (organic complexes)	<ul style="list-style-type: none"> • See Chromium (+3) above 	<ul style="list-style-type: none"> • See Chromium (+3) above 	<ul style="list-style-type: none"> • Activated Carbon 	<ul style="list-style-type: none"> • See Chromium (+3) above 	<ul style="list-style-type: none"> • See Chromium (+3) above
Copper	<ul style="list-style-type: none"> • 1.3 mg/L 	<ul style="list-style-type: none"> • 1.3 mg/L (action level) 	<ul style="list-style-type: none"> • Cation Exchange (20% - 90%) • Reverse Osmosis • Distillation • Electrodialysis • Corrosion control • Polyphosphate/Silicate feed 	<ul style="list-style-type: none"> • Gastrointestinal irritation 	<ul style="list-style-type: none"> • Natural/industrial deposits • Wood preservatives • Plumbing
Cyanide	<ul style="list-style-type: none"> • 0.2 mg/L 	<ul style="list-style-type: none"> • 0.2 mg/L 	<ul style="list-style-type: none"> • Chemical Oxidation • Anion Exchange • Reverse Osmosis • Distillation • Electrodialysis 	<ul style="list-style-type: none"> • Thyroid damage • Nervous system damage 	<ul style="list-style-type: none"> • Electroplating • Steel • Plastics • Mining • Fertilizer
Fluoride	<ul style="list-style-type: none"> • 4.0 mg/L 	<ul style="list-style-type: none"> • 4.0 mg/L 	<ul style="list-style-type: none"> • Activated Alumina • Bone Char • Reverse Osmosis • Distillation • Electrodialysis 	<ul style="list-style-type: none"> • Skeletal & dental fluorosis 	<ul style="list-style-type: none"> • Natural deposits • Fertilizer • Aluminum industries • Water additive
Lead	<ul style="list-style-type: none"> • zero 	<ul style="list-style-type: none"> • 0.015 mg/L (action level) 	<ul style="list-style-type: none"> • Cation Exchange (20% - 90%) • Coagulation/Filtration • Reverse Osmosis • Distillation • Electrodialysis 	<ul style="list-style-type: none"> • Kidney damage • Nervous system damage • Impedes mental and physical development 	<ul style="list-style-type: none"> • Natural/industrial deposits • Plumbing • Solder • Brass alloy faucets
Mercury (organic complexes)	<ul style="list-style-type: none"> • 0.002 mg/L (Total mercury) 	<ul style="list-style-type: none"> • 0.002 mg/L (Total mercury) 	<ul style="list-style-type: none"> • Activated Carbon 	<ul style="list-style-type: none"> • Kidney damage 	<ul style="list-style-type: none"> • Crop runoff • Natural deposits • Batteries • Electrical switches
Mercury (+2)	<ul style="list-style-type: none"> • See Mercury 	<ul style="list-style-type: none"> • See Mercury 	<ul style="list-style-type: none"> • Submicron Filtration/ Activated Carbon • Cation Exchange (20% - 90%) 	<ul style="list-style-type: none"> • See Mercury 	<ul style="list-style-type: none"> • See Mercury

	(organic) above	(organic) above	<ul style="list-style-type: none"> Reverse Osmosis Distillation Electrodialysis 	(organic) above	(organic) above
Mercury (HgCl ₃ -)	<ul style="list-style-type: none"> See Mercury (organic) above 	<ul style="list-style-type: none"> See Mercury (organic) above 	<ul style="list-style-type: none"> Anion Exchange Reverse Osmosis Distillation Electrodialysis 	<ul style="list-style-type: none"> See Mercury (organic) above 	<ul style="list-style-type: none"> See Mercury (organic) above
Nickel	<ul style="list-style-type: none"> 0.1 mg/L 	<ul style="list-style-type: none"> 0.1 mg/L 	<ul style="list-style-type: none"> Cation Exchange Reverse Osmosis Distillation Electrodialysis 	<ul style="list-style-type: none"> Heart damage Liver damage 	<ul style="list-style-type: none"> Metal alloys Electroplating Batteries Chemical production
Nitrate (as nitrogen)	<ul style="list-style-type: none"> 10 mg/L 	<ul style="list-style-type: none"> 10 mg/L 	<ul style="list-style-type: none"> Anion Exchange Reverse Osmosis (sensitive to pressure) Distillation Electrodialysis 	<ul style="list-style-type: none"> Methemoglobinemia 	<ul style="list-style-type: none"> Animal waste Fertilizer Natural deposits Septic tanks Sewage
Nitrite (as nitrogen)	<ul style="list-style-type: none"> 1 mg/L 	<ul style="list-style-type: none"> 1 mg/L 	<ul style="list-style-type: none"> Chemical Oxidation Anion Exchange Reverse Osmosis Distillation Electrodialysis 	<ul style="list-style-type: none"> Methemoglobinemia 	<ul style="list-style-type: none"> Same as nitrate; rapidly converted to nitrate.
Selenium (+4)	<ul style="list-style-type: none"> 0.05 mg/L (total selenium) 	<ul style="list-style-type: none"> 0.05 mg/L (total selenium) 	<ul style="list-style-type: none"> Coagulation/Filtration Submicron Filtration/ Activated Carbon Anion Exchange Activated Alumina Reverse Osmosis Distillation Electrodialysis 	<ul style="list-style-type: none"> Hair and fingernail loss Circulatory problems 	<ul style="list-style-type: none"> Natural deposits Mining Smelting Coal/Oil combustion
Selenium (+6)	<ul style="list-style-type: none"> See Selenium (+4) above 	<ul style="list-style-type: none"> see Selenium (+4) above 	<ul style="list-style-type: none"> Anion Exchange Activated Alumina Reverse Osmosis Distillation Electrodialysis 	<ul style="list-style-type: none"> See Selenium (+4) above 	<ul style="list-style-type: none"> See Selenium (+4) above
Sulfate	<ul style="list-style-type: none"> 500 mg/L (proposed standard) 	<ul style="list-style-type: none"> 500 mg/L (proposed standard) 	<ul style="list-style-type: none"> Anion Exchange Reverse Osmosis Distillation Electrodialysis 	<ul style="list-style-type: none"> Diarrhea 	<ul style="list-style-type: none"> Natural deposits
Thallium	<ul style="list-style-type: none"> 0.0005 mg/L 	<ul style="list-style-type: none"> 0.002 mg/L 	<ul style="list-style-type: none"> Cation Exchange Activated Alumina Distillation 	<ul style="list-style-type: none"> Kidney, liver, brain, intestinal damage 	<ul style="list-style-type: none"> Electronics Drugs Alloys Glass

[Back to Main Menu](#)