

EPA Water Standards or Guidelines and their significance

**The EPA establishes Maximum Contaminant Levels (MCLs)
In the absence of an EPA MCL, states may provide guidelines**

Common Terms; Units of measure	Meaning
mg/L	milligrams per liter, also parts per million (ppm)
ug/L	micrograms per liter, also parts per billion (ppb)
P/A	presence / absence, when even "1 bacterial colony" is considered unsatisfactory
TNTC	too numerous to count, used for bacterial tests
pCi/L	pico Curies per liter, a measurement of radioactivity, used for radon
NTU	Nephelometric turbidity unit, a measurement of the clarity of water
LD	Level of detection; the lowest level the lab equipment is able to find
BDL	Below the level of detection with the lab's equipment
CU	Color Units, a standardized measure of the color of water
TON	Threshold Odor Number, for measuring odor as detectable by the human nose.

PARAMETER	Standard	Comment
Coliform Bacteria	0	Test is done on a presence / absence basis
E-Coli Bacteria	0	Test is done on a presence / absence basis. E coli is a serious water quality problem, do not drink this water until resolved.
Arsenic	.010 mg/L	Arsenic is a naturally occurring element that contributes to various cancers, neurological disorders and circulatory problems.
Chlorides	250 mg/L	Elevated levels are usually due to road salting or sea water intrusion near the coast. The water will begin to taste salty at 250 mg/L.
Color	15 C.U.	A measurement of the color of water; color is usually due to the presence of iron.
Copper	1.3 mg/L	Copper will be found in the water when conditions, such as low pH or the presence of chlorides, make the water corrosive to copper plumbing systems.
Fluoride	2 / 4 mg/L	Fluoride has a primary standard of 4 mg/L and a secondary standard of 2 mg/L. Fluoride is an important element, however beyond a beneficial level it can cause problems with bones and teeth.
Hardness	150 mg/L	Usually made up of calcium carbonate or magnesium carbonate, impacts the usability of the water.

Iron	.3 mg/L	The standard of .3 mg/L is set because this is the level where staining (laundry, toilets, appliances) will normally occur.
Lead	.015 mg/L	In this region lead will be found in the water due to the previous use of lead solder in plumbing systems, or due to the small lead content of some brass fixtures.
Manganese	.05 mg/L	The standard of .05 mg/L is set because this is the level where staining will normally occur. This is an aesthetic issue.
MtBE	By State	13 ug/L NH; 70 ug/L MA. Methyl tertiary butyl ether is a gasoline additive that is believed to be carcinogenic
Nitrates	10 mg/L	A natural phenomenon due to the decomposition of organic matter; can be elevated due to agricultural practices or lawn fertilization.
Nitrite	1 mg/L	In addition to the issues related to nitrate, the presence of nitrite also can imply problems from human or animal waste or wastewater disposal.
Odor	3 TON	Odors tend to dissipate quickly so it is very difficult for labs to quantify odors; this measurement is based on a dilution process.
pH	6.5-8.5	A measure of the relative acidity of the water. 7 is neutral; below 7 is acidic.
Radium	5 pCi/L	A radioactive element associated with bone cancers.
Radon	By State	2,000 pCi/L NH; 10,000 pCi/L MA. Radon is a colorless, odorless gas that is the result of the decay of uranium and radium. Radon presents a risk when the air is breathed; contributes to the risk of lung cancer.
Sodium	250 mg/L	Some natural sodium occurs in this region; but most elevated levels are due to road salting or sea water intrusion near the coast.
Sulfate	250 mg/L	A natural mineral which contributes to a white crust left where water evaporates. At extremely high levels can lead to gastrointestinal distress.
Turbidity	5 NTU	A measurement of the clarity of the water; in this region high turbidity is usually due to iron, clay or silt.
Uranium	30 ug/L	A radioactive element associated with kidney cancers.
Volatiles & Synthetics	Vary	Volatile organic compounds and synthetic organic compounds have individual standards and are associated with a variety of health issues.