

Water Quality Maximum Contaminant Levels (MCL's) Rule R309-103 Summary

Summary

These standards are the highest permissible level allowed in drinking water. Total Coliform, and Nitrate/Nitrite MCL's are applicable to all public drinking water systems. Asbestos, Inorganics, Lead/Copper, VOCs, and Pesticides MCL's are applicable to both Community and Non-Transient Non-Community water system. Radionuclide and THM MCL's are applicable to only community water systems. Turbidity MCL's are applicable to community systems and all public water systems that utilize surface water or groundwater under the direct influence of surface water.

Total Coliform

For a system which collects less than 40 samples per month, no more than one sample per month may be total coliform-positive. For a system which collects 40 or more samples per month, no more than 5.0 percent of the samples collected during a month may be total coliform-positive. Any fecal coliform-positive or Escherichia coliform (E. coli)-positive repeat sample or any total coliform-positive repeat sample following a fecal coliform positive or E. coli-positive routine sample constitutes an acute MCL violation for total coliforms.

Inorganics

<u>Contaminant</u>	<u>MCL's (mg/l)</u>	<u>MCL's (ug/l)</u>
1. Antimony	0.006	6
2. Arsenic	0.05	50
3. Barium	2	2,000
4. Beryllium	0.004	4
5. Cadmium	0.005	5
6. Chromium	0.1	100
7. Cyanide (as free Cyanide)	0.2	200
8. Fluoride	4.0	4,000
9. Mercury	0.002	2
10. Nickel	0.1	100
11. Selenium	0.05	50
12. Sulfate	1000*	1,000,000*
13. Thallium	0.002	2
14. Total Dissolved Solids	2000**	2,000,000**

* If Sulfate is greater than 500 mg/l the water management must demonstrate that no better water is available.

** If TDS is greater than 1000 mg/l the water management must demonstrate that no better water is available.

Nitrate/Nitrite

The MCL's for: Nitrate (as Nitrogen) is 10 mg/l, Nitrite (as Nitrogen) is 1 mg/l and Total Nitrate and Nitrite (as Nitrogen) is 10 mg/l.

Asbestos

The MCL for Asbestos is 7 Million Fibers/liter (longer than 10 microns).

Lead and Copper

The lead action level is exceeded if the concentration of lead in more than 10 percent of tap water samples collected during any monitoring period is greater than 0.015 mg/l or 15 ug/l. The copper action level is exceeded if the concentration of copper in more than 10 percent of tap water samples collected during any monitoring period is greater than 1.3 mg/l or 1,300 ug/l.

Volatile Organic Contaminants (VOC)

<u>Contaminant</u>	<u>MCL's (mg/l)</u>	<u>MCL's (ug/l)</u>
1. Vinyl chloride	0.002	2
2. Benzene	0.005	5
3. Carbon tetrachloride	0.005	5
4. 1,2-Dichloroethane	0.005	5
5. Trichloroethylene	0.005	5
6. para-Dichlorobenzene	0.075	75
7. 1,1-Dichloroethylene	0.007	7
8. 1,1,1-Trichloroethane	0.2	200
9. cis-1,2-Dichloroethylene	0.07	70
10. 1,2-Dichloropropane	0.005	5
11. Ethylbenzene	0.7	700
12. Monochlorobenzene	0.1	100
13. o-Dichlorobenzene	0.6	600
14. Styrene	0.1	100
15. Tetrachloroethylene	0.005	5
16. Toluene	1	1,000
17. trans-1,2-Dichloroethylene	0.1	100
18. Xylenes (total)	10	10,000
19. Dichloromethane	0.005	5
20. 1,2,4-Trichlorobenzene	0.07	70
21. 1,1,2-Trichloroethane	0.005	5

Pesticides

<u>Contaminant</u>	<u>MCL's (mg/l)</u>	<u>MCL's (ug/l)</u>
1. Alachlor	0.002	2
2. Atrazine	0.003	3
3. Carbofuran	0.04	40

Pesticides (cont.)

<u>Contaminant</u>	<u>MCL's (mg/l)</u>	<u>MCL's (ug/l)</u>
4. Chlordane	0.002	2
5. Dibromochloropropane	0.0002	0.2
6. 2,4-D	0.07	70
7. Ethylene dibromide	0.00005	0.05
8. Heptachlor	0.0004	0.4
9. Heptachlor epoxide	0.0002	0.2
10. Lindane	0.0002	0.2
11. Methoxychlor	0.04	40
12. Polychlorinated biphenyls	0.0005	0.5
13. Pentachlorophenol	0.001	1
14. Toxaphene	0.003	3
15. 2,4,5-TP	0.05	50
16. Benzo(a)pyrene	0.0002	0.2
17. Dalapon	0.2	200
18. Di(2-ethylhexyl)adipate	0.4	400
19. Di(2-ethylhexyl)phthalate	0.006	6
20. Dinoseb	0.007	7
21. Diquat	0.02	20
22. Endothall	0.1	100
23. Endrin	0.002	2
24. Glyphosate	0.7	700
25. Hexachlorobenzene	0.001	1
26. Hexachlorocyclopentadiene	0.05	50
27. Oxamyl (Vydate)	0.2	200
28. Picloram	0.5	500
29. Simazine	0.004	4
30. 2,3,7,8-TCDD (Dioxin)	0.00000003	0.00003

Radionclides

The MCL for combined Radium-226 and Radium-228 is 5 pCi/l. The MCL for gross alpha (including Radium-226 but excluding Radon and Uranium) is 15 pCi/l.

Total Trihalomethanes

The maximum contaminant level for community water systems serving a population of 10,000 or more and utilize chlorine as a disinfectant is 100 ug/l.

Turbidity

The turbidity limit for surface water sources or ground water sources under the direct influence of surface water is 0.5 NTU in at least 95 percent of the samples per month. The turbidity limit for slow sand filtration and diatomaceous earth filtration is 1.0 NTU in at least 95 percent of the samples per month. The turbidity level for ground water sources not under the direct influence of surface water is 5.0 NTU.

Secondary Drinking Water Standards

The following are recommended standards for public water systems. These are guidelines for good quality water. If one of these standards is exceeded, it is expected that there will be complaints, but there is not an enforceable health standard involved:

<u>Contaminant</u>	<u>Recommended Levels (mg/l)</u>
1. Aluminum	0.05 to 0.2
2. Chloride	250
3. Color	15 Color Units
4. Copper	1
5. Corrosivity	Non-corrosive
6. Fluoride	2.0
7. Foaming Agents	0.5
8. Iron	0.3
9. Manganese	0.05
10. Odor	3 Threshold Odor Number
11. pH	6.5 to 8.5
12. Silver	0.1
13. Sulfate	250
14. TDS	500
15. Zinc	5