

**PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF DRINKING WATER MANAGEMENT
MAXIMUM CONTAMINANT LEVELS (MCLs)
MAXIMUM RESIDUAL DISINFECTANT LEVELS (MRDLs)**

PRIMARY CONTAMINANTS**Volatile Organic Chemicals (VOCs):**

BENZENE	0.005	mg/L	MONOCHLOROBENZENE	0.1	mg/L
CARBON TETRACHLORIDE	0.005	mg/L	STYRENE	0.1	mg/L
o-DICHLOROBENZENE	0.6	mg/L	TETRACHLOROETHYLENE	0.005	mg/L
para-DICHLOROBENZENE	0.075	mg/L	TOLUENE	1	mg/L
1,2-DICHLOROETHANE	0.005	mg/L	1,2,4-TRICHLOROBENZENE	0.07	mg/L
1,1-DICHLOROETHYLENE	0.007	mg/L	1,1,1-TRICHLOROETHANE	0.2	mg/L
cis-1,2-DICHLOROETHYLENE	0.07	mg/L	1,1,2-TRICHLOROETHANE	0.005	mg/L
trans-1,2-DICHLOROETHYLENE	0.1	mg/L	TRICHLOROETHYLENE	0.005	mg/L
DICHLOROMETHANE	0.005	mg/L	VINYL CHLORIDE	0.002	mg/L
1,2-DICHLOROPROPANE	0.005	mg/L	XYLENES (Total)	10	mg/L
ETHYLBENZENE	0.7	mg/L			

Synthetic Organic Chemicals (SOCs):

ALACHLOR	0.002	mg/L	GLYPHOSATE	0.7	mg/L
ATRAZINE	0.003	mg/L	HEPTACHLOR	0.0004	mg/L
BENZO(a)PYRENE	0.0002	mg/L	HEPTACHLOR EPOXIDE	0.0002	mg/L
CARBOFURAN	0.04	mg/L	HEXACHLOROBENZENE	0.001	mg/L
CHLORDANE	0.002	mg/L	HEXACHLOROCYCLOPENTADIENE	0.05	mg/L
2,4-D	0.07	mg/L	LINDANE	0.0002	mg/L
DALAPON	0.2	mg/L	METHOXYCHLOR	0.04	mg/L
DIBROMOCHLOROPROPANE (DBCP)	0.0002	mg/L	OXAMYL (Vydate)	0.2	mg/L
DI(2-ETHYLHEXYL) ADIPATE	0.4	mg/L	PCBs	0.0005	mg/L
DI(2-ETHYLHEXYL) PHTHALATE	0.006	mg/L	PENTACHLOROPHENOL	0.001	mg/L
DINOSEB	0.007	mg/L	PICLORAM	0.5	mg/L
DIQUAT	0.02	mg/L	SIMAZINE	0.004	mg/L
ENDOTHALL	0.1	mg/L	2,3,7,8-TCDD (Dioxin)	3 x 10 ⁻³	mg/L
ENDRIN	0.002	mg/L	TOXAPHENE	0.003	mg/L
ETHYLENE DIBROMIDE (EDB)	0.00005	mg/L	2,4,5-TP (Silvex)	0.05	mg/L

Disinfection By Products: Note 1

TOTAL TRIHALOMETHANES (TTHMs) (Chloroform, Chlorodibromomethane, Bromoform & Bromodichloromethane)	0.1	mg/L	Until December 31, 2003 for CWSs using groundwater sources and serving 10,000 or more people
TOTAL TRIHALOMETHANES (TTHMs)	0.080	mg/L	
HALOACETIC ACIDS (HAA5) Monochloroacetic Acid, Dichloroacetic Acid, Trichloroacetic Acid, Bromoacetic Acid, & Dibromoacetic Acid)	0.060	mg/L	
BROMATE	0.010	mg/L	
CHLORITE	1.0	mg/L	

Disinfectants (MRDLs): Note 2

CHLORINE (as Cl ₂)	4.0	mg/L
CHLORAMINES (as Cl ₂)	4.0	mg/L
CHLORINE DIOXIDE	0.8	mg/L

MRDL = Maximum Residual Disinfectant Level

Radionuclides:

GROSS ALPHA	15	pCi/L
COMBINED RADIUM (226 + 228)	5	pCi/L
BETA PARTICLE & PHOTON ACTIVITY	4	mrem/yr
Gross Alpha MCL excludes Radon and Uranium particle activity. Beta Particle & Photon Activity MCL is for man-made radionuclides.		

Inorganic Chemicals (IOCs):

ANTIMONY	0.006	mg/L	FLUORIDE	2	mg/L
ARSENIC	0.05	mg/L	LEAD	0.005	mg/L
ASBESTOS (Fibers longer than 10µm)	7 million fibers/L		MERCURY	0.002	mg/L
BARIUM	2	mg/L	NICKEL		mg/L
BERYLLIUM	0.004	mg/L	NITRATE (as Nitrogen)	10	mg/L
CADMIUM	0.005	mg/L	NITRITE (as Nitrogen)	1	mg/L
CHROMIUM	0.1	mg/L	NITRATE + NITRITE (as Nitrogen)	10	mg/L
COPPER *	1.0	mg/L	SELENIUM	0.05	mg/L
CYANIDE (free CN)	0.2	mg/L	THALLIUM	0.002	mg/L

* The Lead and Copper Primary MCLs are applicable only to Bottled, Vended, Retail and Bulk Water Hauling Systems

** The Nickel MCL was remanded for further evaluation. Monitoring for Nickel remains in effect.

Microbiological Contaminants: PRESENCE OR ABSENCE OF TOTAL COLIFORMS BASED ON NUMBER OR PERCENTAGE OF TOTAL COLIFORM POSITIVE SAMPLES/MONTH OR FECAL COLIFORM OR E.COLI POSITIVE ROUTINE OR CHECK SAMPLES**Turbidity** 1 NTU (applicable only to unfiltered surface water sources)

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SECONDARY CONTAMINANTS

ALUMINUM	0.2	mg/L	MANGANESE	0.05	mg/L
CHLORIDE	250	mg/L	ODOR	3	T.O.N
COLOR	15	color units	pH *	6.5 - 8.5	
CORROSIVITY		non-corrosive	SILVER	0.1	mg/L
FOAMING AGENTS	0.5	mg/L	SULFATE	250	mg/L
IRON	0.3	mg/L	TOTAL DISSOLVED SOLIDS	500	mg/L
			ZINC	5	mg/L

***The pH MCL represents a "reasonable goal for drinking water quality."

mg/L = milligrams per liter = parts per million; μm = micrometers; T.O.N. = threshold odor number

pCi/L = picocuries per liter (particle activity); mrem/yr = millirems/yr (annual dose equivalent)

Note 1: The effective dates for compliance with the DBPs MCLs (0.080 mg/L TTHM; 0.060 mg/L HAA5; 0.010 mg/L Bromate & 1.0 mg/L Chlorite) :

- ◆ January 1, 2002 for CWSs and NTNCWSs using surface water sources and GUDIs and serving 10,000 or more people
- ◆ January 1, 2004 for CWSs and NTNCWSs using surface water sources and GUDIs and serving less than 10,000 people
- ◆ January 1, 2004 for CWSs and NTNCWSs using groundwater sources

Note 2: The effective dates for compliance with the disinfectant MRDLs (4.0 mg/L Chlorine, 4.0 mg/L Chloramines & 0.8 mg/L Chlorine Dioxide) :

- ◆ January 1, 2002 for CWSs and NTNCWSs using surface water sources and GUDIs and serving 10,000 or more people
- ◆ January 1, 2004 for CWSs and NTNCWSs using surface water sources and GUDIs and serving less than 10,000 people
- ◆ January 1, 2004 for CWSs and NTNCWSs using groundwater sources

The effective dates for compliance with the 0.8 mg/L Chlorine Dioxide MRDL for TWS using Chlorine Dioxide:

- ◆ January 1, 2002 for TNCWSs using surface water sources and GUDIs and serving 10,000 or more people and using Chlorine Dioxide
- ◆ January 1, 2004 for TNCWSs using groundwater sources