



**DRINKING WATER REGULATIONS
AND HEALTH ADVISORIES**

By

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U.S. Environmental Protection Agency
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Monday thru Friday, 8:30 AM to 4:30 PM EST**

April 1990

EPA Region 5 Records Ctr.



232520

LEGEND

Abbreviations column descriptions are:

- NIPDWR - National Interim Primary Drinking Water Regulation. Interim enforceable drinking water regulations first established under the Safe Drinking Water Act that are protective of public health to the extent feasible.
- MCLG - Maximum Contaminant Level Goal. A non-enforceable concentration of a drinking water contaminant that is protective of adverse human health effects and allows an adequate margin of safety.
- MCL - Maximum Contaminant Level. Maximum permissible level of a contaminant in water which is delivered to any user of a public water system.
- RfD - Reference Dose. An estimate of a daily exposure to the human population that is likely to be without appreciable risk of deleterious effects over a lifetime.
- DWEL - Drinking Water Equivalent Level. A lifetime exposure concentration protective of adverse, non-cancer health effects, that assumes all of the exposure to a contaminant is from a drinking water source.

(*) The codes for the Status Reg and Status HA columns are as follows:

- F - final
D - draft
L - listed for regulation
P - proposed (Phase II draft proposal)
I - tentative (Phase V)

Other codes found in the table include the following:

- NA - not applicable
PS - performance standard 0.5 NTU - 1.0 NTU
TT - treatment technique

** - No more than 5% of the samples may be positive. For systems collecting fewer than 40 samples/month, no more than 1 sample may be positive.

*** - guidance

- Large discrepancies between Lifetime and Longer-term HA values may occur because of the Agency's conservative policies, especially with regard to carcinogenicity, relative source contribution, and less than lifetime exposures in chronic toxicity testing. These factors can result in a cumulative UF (uncertainty factor) of 10 to 1000 when calculating a Lifetime HA.

DRINKING WATER STANDARDS AND HEALTH ADVISORIES

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Chemicals	Standards				Status HA*	Health Advisories								Cancer Group
	Status Reg.*	NPDWR (µg/l)	MCLG (µg/l)	MCL (µg/l)		10-kg Child			70-kg Adult					
						One-day µg/l	Ten-day µg/l	Longer- term µg/l	Longer- term µg/l	RII µg/kg/day	DWEL µg/l	Lifetime µg/l	µg/l at 10 ⁻⁴ Cancer Risk	
ORGANICS														
Acenaphthylene	-	-	-	-	-	-	-	-	-	60	-	-	-	-
Acifluorfen	-	-	-	-	F	2000	2000	100	400	13	400	-	100	B2
Acrylamide	P	-	zero	TT	F	1500	300	20	70	0.2	7	-	1	B2
Acrylonitrile	L	-	-	-	B	20	20	1	4	0.1	4	-	7	B1
Adipates (diethylhexyl)	T	-	500	500	-	-	-	-	-	700	20000	500	-	C
Alachlor	P	-	zero	2	F	100	100	-	-	10	400	-	40	B2
Aldicarb	P	-	10	10	F	10	10	10	10	1.3	40	10	-	D
Aldicarb sulfone	P	-	40	40	F	60	60	60	200	6.0	200	40	-	D
Aldicarb sulfoxide	P	-	10	10	F	10	10	10	40	1.3	40	10	-	D
Aldrin	-	-	-	-	B	0.3	0.3	0.3	0.9	0.03	0.9	-	0.2	B2
Ametryn	-	-	-	-	F	9000	9000	900	3000	9	300	60	-	D
Ammonium Sulfamate	-	-	-	-	F	20000	20000	20000	80000	250	8000	2000	-	D
Anthracene (PAH)	L	-	-	-	-	-	-	-	-	300	-	-	-	D
Atrazine	P	-	3	3	F	100	100	50	200	5	200	3	-	C
Baygon	-	-	-	-	F	40	40	40	100	4	100	3	-	C
Bentazon	-	-	-	-	F	300	300	300	900	2.5	90	20	-	D
Benz(a)anthracene (PAH)	T	-	zero	0.1	-	-	-	-	-	-	-	-	-	B2
Benzene	F	-	zero	5	F	200	200	-	-	-	-	-	100	A
Benzo(a)pyrene (PAH)	T	-	zero	0.2	-	-	-	-	-	-	-	-	-	B2*
Benzo(b)fluoranthene (PAH)	T	-	zero	0.2	-	-	-	-	-	-	-	-	-	B2
Benzo(g,h,i)perylene (PAH)	T	-	-	-	-	-	-	-	-	-	-	-	-	D
Benzo(k)fluoranthene (PAH)	T	-	zero	0.2	-	-	-	-	-	-	-	-	-	B2
bis-2-Chloroisopropyl ether	-	-	-	-	F	4000	4000	4000	13000	40	1000	300	-	-
Bromacil	-	-	-	-	F	5000	5000	3000	9000	130	5000	90	-	C
Bromobenzene	-	-	-	-	D	-	-	-	-	-	-	-	-	-
Bromochloroacetonitrile	L	-	-	-	D	-	-	-	-	-	-	-	-	-
Bromochloromethane	-	-	-	-	D	-	-	-	-	-	-	-	-	-
Bromodichloromethane (THM)	L	100	-	-	D	7000	7000	100	700	20	700	-	30	B2
Bromoform (THM)	L	100	-	-	D	15000	15000	100	700	20	700	-	-	B2
Bromomethane	-	-	-	-	F	100	100	100	500	1	50	10	-	D

Chemicals	Standards					Health Advisories								Cancer Group
	Status Reg.*	NIPDWR (µg/l)	MCLG (µg/l)	MCL (µg/l)	Status HA*	10-kg Child			70-kg Adult				µg/l at 10 ⁻⁴ Cancer Risk	
						One-day µg/l	Ten-day µg/l	Longer-term µg/l	Longer-term µg/l	RfD µg/kg/day	DWEL µg/l	Lifetime µg/l		
Butyl benzyl phthalate (BBP)	T	-	-	-	-	-	-	-	-	200	-	-	-	C
Butylate	-	-	-	-	F	2000	2000	1000	4000	50	2000	350	-	D
Butylbenzene n-	-	-	-	-	D	-	-	-	-	-	-	-	-	-
Butylbenzene sec-	-	-	-	-	D	-	-	-	-	-	-	-	-	-
Butylbenzene tert-	-	-	-	-	D	-	-	-	-	-	-	-	-	-
Carbaryl	-	-	-	-	F	1000	1000	1000	1000	100	4000	700	-	D
Carbofuran	P	-	40	40	F	50	50	50	200	5	200	40	-	E
Carbon Tetrachloride	F	-	zero	5	F	4000	200	70	300	0.7	30	-	30	B2
Carboxin	-	-	-	-	F	1000	1000	1000	4000	100	4000	700	-	D
Chloral Hydrate	L	-	-	-	D	7000	1000	200	600	2	60	50	-	D
Chloramben	-	-	-	-	F	3000	3000	200	500	15	500	100	-	D
Chloramine	L	-	-	-	D	-	-	-	-	-	-	-	-	-
Chlorate	L	-	-	-	D	-	-	-	-	-	-	-	-	-
Chlordane	P	-	zero	2	F	60	60	0.5	0.5	0.045	2	-	3	B2
Chlorine	L	-	-	-	D	-	-	-	-	-	-	-	-	-
Chlorine dioxide	L	-	-	-	D	-	-	-	-	-	-	-	-	-
Chlorite	L	-	-	-	D	-	-	-	-	-	-	-	-	-
Chlorodibromomethane (THM)	L	100	-	-	D	7000	7000	100	700	20	700	100	-	C
Chloroethane	L	-	-	-	D	-	-	-	-	-	-	-	-	-
Chloroform (THM)	L	100	-	-	D	-	-	-	-	10	-	-	600	B2
Chloromethane	L	-	-	-	D	-	-	-	-	-	-	-	-	-
Chlorophenol (2,4,6-)	L	-	-	-	D	-	-	-	-	-	-	-	300	B2
Chlorophenol (2,4-)	L	-	-	-	D	30	30	30	100	3	100	20	-	D
Chlorophenol (2-)	L	-	-	-	D	50	50	50	200	5	200	40	-	D
p-Chlorophenyl methyl sulfide/sulfone/sulfoxide	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chloropicrin	L	-	-	-	-	-	-	-	-	-	-	-	-	-
Chlorothalonil	-	-	-	-	F	200	200	200	500	15	500	-	150	B2
Chlorotoluene o-	L	-	-	-	F	2000	2000	2000	7000	20	700	100	-	D
Chlorotoluene p-	L	-	-	-	F	2000	2000	2000	7000	20	700	100	-	D
Chlorpyrifos	-	-	-	-	D	30	30	30	100	3	100	20	-	D

[illegible]

Chemicals	Standards				Health Advisories									Cancer Group
	Status Reg.*	MCLG (µg/l)	MCL (µg/l)	Status HA*	10-kg Child			70-kg Adult					µg/l at 10 ⁻⁴ Cancer Risk	
					One-day µg/l	Ten-day µg/l	Longer-term µg/l	Longer-term µg/l	RfD µg/kg/day	DWEL µg/l	Lifetime µg/l			
Dichloropropene (1,1-)	L	-	-	D	-	-	-	-	-	-	-	-	-	
Dichloropropene (1,3-)	L	-	-	F	30	30	30	100	0.3	10	-	20	B2	
Dieldrin	L	-	-	F	0.5	0.5	0.5	2	0.05	2	-	0.2	B2	
Diethyl phthalate (DEP)	T	-	-	D	-	-	-	-	800	-	-	-	D	
Diethylhexyl phthalate (DEHP)	T	-	zero	D	-	-	-	-	20	-	-	300	B2*	
Diisopropyl methylphosphonate	-	-	-	F	8000	8000	8000	30000	80	3000	600	-	D	
Dimethrin	-	-	-	F	10000	10000	10000	40000	300	10000	2000	-	D	
Dimethyl methylphosphonate	-	-	-	D	-	-	-	-	-	-	-	-	-	
Dimethyl phthalate (DMP)	L	-	-	-	-	-	-	-	-	-	-	-	D	
1,3-Dinitrobenzene	-	-	-	D	-	-	-	-	-	-	-	-	-	
Dinitrotoluene (2,4-)	L	-	-	D	-	-	-	-	-	-	-	-	-	
2,4-/2,6-Dinitrotoluene	-	-	-	D	-	-	-	-	-	-	-	-	-	
Dinoseb	T	-	7	F	300	300	10	40	1	40	7	-	D	
Dioxane p-	-	-	-	F	4000	400	-	-	-	-	-	700	B2	
Diphenamid	-	-	-	F	300	300	300	1000	30	1000	200	-	D	
Diquat	T	-	20	-	-	-	-	-	2.2	-	-	-	D	
Disulfoton	-	-	-	F	10	10	3	9	0.04	1	0.3	-	E	
1,4-Dithiane	-	-	-	-	-	-	-	-	-	-	-	-	-	
Diuron	-	-	-	F	1000	1000	300	900	2	70	10	-	D	
Endothall	T	-	100	F	800	800	200	200	20	700	100	-	D	
Endrin	T	0.2	2	F	20	20	3	10	3	9	2	-	D	
Epichlorohydrin	P	-	zero	F	100	100	70	70	2	70	-	400	B2	
Ethylbenzene	P	-	700	F	30000	3000	1000	3000	100	3000	700	-	D	
Ethylene dibromide (EDB)	P	-	zero	F	8	8	-	-	-	-	-	0.04	B2	
Ethylene glycol	-	-	-	F	20000	6000	6000	20000	2000	40000	7000	-	D	
ETU	L	-	-	F	300	300	100	400	0.03	1	-	20	B2	
Fenamiphos	-	-	-	F	9	9	5	20	0.25	9	2	-	D	
Fluometuron	-	-	-	F	2000	2000	2000	5000	13	400	90	-	D	
Fluorene (PAH)	T	-	-	-	-	-	-	-	40	-	-	-	D	
Fluorotrichloromethane	-	-	-	F	7000	7000	3000	12000	300	10000	2000	-	D	

Chemicals	Standards				Health Advisories									Cancer Group
	Status Reg.*	NPDWR (µg/l)	MCLG (µg/l)	MCL (µg/l)	Status HA*	10-kg Child			70-kg Adult					
						One-day µg/l	Ten-day µg/l	Longer-term µg/l	Longer-term µg/l	RfD µg/kg/day	DWEL µg/l	Lifetime µg/l	µg/l at 10 ⁻⁴ Cancer Risk	
Fog Oil	-	-	-	-	D	-	-	-	-	-	-	-	-	-
Fonofos	-	-	-	-	F	20	20	20	70	2	70	10	-	D
Formaldehyde	-	-	-	-	D	10000	5000	5000	20000	150	5000	1000	-	B1-Inhal
Gasoline	-	-	-	-	D	-	-	-	-	-	-	5(benzene)	-	-
Glyphosate	T	-	700	700	F	20000	20000	1000	1000	100	4000	700	-	D
Heptachlor	P	-	zero	0.4	F	10	10	5	5	0.5	20	-	0.8	B2
Heptachlor epoxide	P	-	zero	0.2	F	10	-	0.1	0.1	0.013	0.4	-	0.4	B2
Hexachlorobenzene	T	-	zero	1	F	50	50	50	200	0.8	30	-	2	B2
Hexachlorobutadiene	-	-	-	-	F	300	300	100	400	2	70	1	50	C
Hexachlorocyclopentadiene	T	-	50	50	-	-	-	-	-	7	200	-	-	D
Hexane (n-)	-	-	-	-	F	10000	4000	4000	10000	-	-	-	-	D
Hexazinone	-	-	-	-	F	3000	3000	3000	9000	30	1000	200	-	D
HMX	-	-	-	-	F	5000	5000	5000	20000	50	2000	400	-	D
Hypochlorite	L	-	-	-	-	-	-	-	-	-	-	-	-	-
Hypochlorous acid	L	-	-	-	-	-	-	-	-	-	-	-	-	-
Indeno(1,2,3-c,d)pyrene (PAH)	T	-	zero	0.4	D	-	-	-	-	-	-	-	-	B2
Isophorone	L	-	-	-	D	15000	15000	15000	15000	200	7000	100	900	C
Isopropyl methylphosphonate	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Isopropylbenzene	-	-	-	-	D	-	-	-	-	-	-	-	-	-
Lindane	P	4	0.2	0.2	F	1000	1000	30	100	0.3	10	0.2	3	C
Malathion	-	-	-	-	D	200	200	200	800	20	800	200	-	D
Maleic hydrazide	-	-	-	-	F	10000	10000	5000	20000	500	20000	4000	-	D
MCPA	-	-	-	-	F	100	100	100	400	1.5	53	11	-	E
Methomyl	-	-	-	-	F	300	300	300	300	25	900	200	-	D
Methoxychlor	P	100	400	400	F	6000	2000	500	2000	50	2000	400	-	D
Methyl ethyl ketone	-	-	-	-	F	80000	8000	3000	9000	25	900	200	-	D
Methyl parathion	-	-	-	-	F	300	300	30	100	0.25	9	2	-	D
Methyl tert butyl ether	L	-	-	-	D	3000	3000	500	2000	5	200	40	-	D
Metolachlor	L	-	-	-	F	2000	2000	2000	5000	150	5000	100	-	C
Metribuzin	L	-	-	-	F	5000	5000	300	900	25	900	200	-	D

Chemicals	Standards				Health Advisories									Cancer Group
	Status Reg.*	NPDWR (µg/l)	MCLG (µg/l)	MCL (µg/l)	Status HA*	10-kg Child			70-kg Adult				µg/l at 10 ⁻⁴ Cancer Risk	
						One-day µg/l	Ten-day µg/l	Longer-term µg/l	Longer-term µg/l	RfD µg/kg/day	DWEL µg/l	Lifetime µg/l		
Monochloroacetic acid	L	-	-	-	D	-	-	-	-	-	-	-	-	-
Monochlorobenzene	P	-	100	100	F	2000	2000	2000	7000	20	700	100	-	D
Naphthalene	-	-	-	-	D	500	500	500	2000	40	1000	300	-	D
Nitrocellulose (non-toxic)	-	-	-	-	F	-	-	-	-	-	-	-	-	-
Nitroguanidine	-	-	-	-	D	10000	10000	10000	40000	100	4000	700	-	D
Oxamyl (Vydate)	T	-	200	200	F	200	200	200	900	25	900	200	-	E
Ozone by-products	L	-	-	-	-	-	-	-	-	-	-	-	-	-
Paraquat	-	-	-	-	F	100	100	50	200	4.5	200	30	-	E
Pentachloroethane	-	-	-	-	D	-	-	-	-	-	-	-	-	-
Pentachlorophenol	P	-	0/2000	.1/200	F	1000	300	300	1000	30	1000	0/200	-	B2/D
Phenanthrene (PAH)	T	-	-	-	-	-	-	-	-	-	-	-	-	-
Phenol	-	-	-	-	D	6000	6000	6000	20000	600	20000	4000	-	D
Picloram	T	-	500	500	F	20000	20000	700	2000	70	2000	500	-	D
Polychlorinated byphenols (PCBs)	P	-	zero	0.5	P	-	-	1	4	-	-	-	0.5	B2
Prometon	-	-	-	-	F	200	200	200	500	15	500	100	-	D
Pronamide	-	-	-	-	F	800	800	800	3000	75	3000	50	-	C
Propachlor	-	-	-	-	F	500	500	100	500	13	500	90	-	D
Propazine	-	-	-	-	F	1000	1000	500	2000	20	700	10	-	C
Propham	-	-	-	-	F	5000	5000	5000	20000	20	600	100	-	D
Propylbenzene n-	-	-	-	-	D	-	-	-	-	-	-	-	-	-
Pyrene (PAH)	T	-	-	-	-	-	-	-	-	30	-	-	-	D
RDX	-	-	-	-	F	100	100	100	400	3	100	2	30	C
Simazine	T	-	1	1	F	500	500	50	200	2	60	1	-	C
Styrene	P	-	zero/100	5/100	F	20000	2000	2000	7000	200	7000	0/100	1	B2/C
2,4,5-T	L	-	-	-	F	800	800	800	1000	10	350	70	-	D
2,3,7,8-TCDD (Dioxin)	T	-	zero	5x10 ⁻⁸ mg/L	F	0.001E-04	1E-05	1E-05	4E-05	1E-06	4E-05	-	2E-05	B2
Tebuthiuron	-	-	-	-	F	3000	3000	700	2000	70	2000	500	-	D
Terbacil	-	-	-	-	F	300	300	300	900	13	400	90	-	E
Terbufos	-	-	-	-	F	5	5	1	5	0.13	5	0.9	-	D
Tetrachloroethane (1,1,1,2-)	L	-	-	-	F	2000	2000	900	3000	30	1000	70	100	C

[illegible]

[illegible]

[illegible]

Key: PS, TT, F, defined as previously stated.

8. Final for systems using surface water; also being considered for regulation under groundwater disinfection rule.

Varies: MCL varies based on analytical method used; sample volume, and number of samples collected per month. Also, two types of MCLs = the monthly average and the "single sample" MCL. Both are based on coliform density.

1 and 5 NTU: These are two MCLs for turbidity. The monthly average MCL is 1 NTU; the two-day consecutive average MCL is 5 NTU.

ADIONUCLIDES

[illegible]

MICROBIOLOGY

	Status	NIPDWR	MCLG	MCL
Cryptosporidium	L	-	-	-
<i>Giardia lamblia</i>	F	-	zero	TT
<i>Legionella</i>	F ^s	-	zero	TT
Standard Plate Count	F ^s	-	NA	TT
Total Coliforms (Current)	F	yes	NA	varies
Total Coliforms (after 12/31/90)	F	-	zero	**
Turbidity (before 1/1/91)	F	yes	NA	1 and 5 NTU
Turbidity (after 12/31/90)	F	-	NA	PS
Viruses	F ^s	-	zero	TT

SECONDARY MAXIMUM CONTAMINANT LEVELS

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Chemicals	Status*	SMCLs (mg/l)
Aluminum	P	0.05 to 0.2
Chloride	F	250
Color	F	15 color units
Copper	F	1
Corrosivity	F	non-corrosive
Dichlorobenzene -o	P	0.01
Dichlorobenzene -p	P	0.005
Ethylbenzene	P	0.03
Fluoride	F	2
Foaming Agents	F	0.5
Hexachlorocyclopentadiene		0.008
Iron	F	0.3
Manganese	F	0.05
Odor	F	3 threshold odor numbers
Pentachlorophenol	P	0.03
pH	F	6.5 - 8.5
Silver	P	0.09
Sulfate	F	250
Toluene	P	0.04
Total Dissolved Solids (TD)	F	500
Xylene	P	0.02
Zinc	F	5

* Status Codes: P - proposed, F - final