

Contact Recreation Water PCLs

Direct Human Contact Recreation Water PCLs

Under TRRP (§350.71(c)(7), §350.75(i)(13) and (14)), surface water PCLs must be established when TCEQ determines that relevant exposure pathways are complete or reasonably anticipated to be complete for a given chemical of concern (COC). Pathways likely to be relevant to surface water include: ingestion of surface water (incidental or as drinking water), dermal contact with surface water, and ingestion of contaminated fish/shellfish from the surface water body. As indicated in TRRP guidance (i.e., *Determining PCLs for Surface Water and Sediment* (RG-366/TRRP-24)), when TSWQS values which consider human exposure to surface water via fish/shellfish ingestion and drinking water ingestion (first column in the HH^{SW}RBEL Table or column “A” of Table 3 in Chapter 307) are used as the^{SW}RBELs, it is generally not necessary to evaluate contact recreation (e.g., swimming) as it is reasonable to assume that concentrations that are protective of drinking water consumption and transfers to fish will also be protective of dermal contact and the incidental ingestion of surface water during recreation. However, when a water body is not classified as a drinking water source, the TSWQS allow surface water quality standards to be set based solely on consideration of uptake of COCs into fish/shellfish and aquatic life criteria and it may be necessary to evaluate contact recreation (i.e., incidental ingestion and dermal contact with surface water) in order to fully comply with the risk assessment requirements under TRRP (see Section 5.1 of TRRP-24 for additional information).

Summary of Recreation Water PCL Development

Individuals using surface water for recreation (e.g., swimming) may be exposed to COCs through the incidental ingestion of surface water and dermal contact. In developing PCLs for recreation water exposure pathways, Tier 1 exposure factors were used when applicable (e.g., exposure duration, body weight). However, certain pathway-specific exposure parameters (e.g., exposure frequency, incidental surface water ingestion rate) are not available in TRRP and were taken from Table 5-1 of TRRP-24. The residential RBEL-4 equations (see Figure 30 TAC §350.74 (a)) were used to evaluate the incidental ingestion of surface water pathway by changing the exposure frequency and the ingestion rate (including calculation of an age-adjusted incidental ingestion rate of 0.126 L-year/kg-day). Dermal exposure to surface water was evaluated using equations and inputs provided by USEPA in *Risk Assessment Guidance for Superfund Volume I: Human Health Evaluation Manual (Part E, Supplemental Guidance for Dermal Risk Assessment), Final Guidance (July 2004)* and errata (www.epa.gov/oswer/riskassessment/ragse/pdf/part_e_final_revision_7-27-06.pdf). TRRP chemical/physical data (i.e., logK_{ow}, molecular weight) were used to calculate skin permeability coefficients (i.e., K_p values). The child exposure scenario was most sensitive for noncarcinogenic hazard, and the age-adjusted scenario was most sensitive for carcinogenic risk. The contact recreation PCL table for surface water will be updated periodically (i.e., every March along with the other PCL and RBEL tables).

Last Update: March 31, 2006

Tier 1 Contact Recreation Water PCLs ¹

Chemical of Concern	CAS				Carcinogenic			Noncarcinogenic		
		Tot RW _{Comb} ² (mg/L)	note ³		Tot RW _{Comb} ² (mg/L)	RW _{Ing} (mg/L)	RW _{Derm} (mg/L)	Tot RW _{Comb} ² (mg/L)	RW _{Ing} (mg/L)	RW _{Derm} (mg/L)
Acenaphthene	83-32-9	2.44E+00	n	---	---	---	2.44E+00	5.62E+01	2.55E+00	
Acenaphthylene	208-96-8	3.26E+00	n	---	---	---	3.26E+00	5.62E+01	3.46E+00	
Acetaldehyde	75-07-0	7.46E+01	n	---	---	---	7.46E+01	9.36E+01	3.67E+02	
Acetone (2-propanone)	67-64-1	7.80E+02	n	---	---	---	7.80E+02	8.42E+02	1.06E+04	
Acetone cyanohydrin	75-86-5	6.93E+01	n	---	---	---	6.93E+01	7.49E+01	9.35E+00	
Acetophenone	98-86-2	5.36E+01	n	---	---	---	5.36E+01	9.36E+01	1.26E+02	
Acetylaminofluorene, 2-	53-96-3	3.43E-03	c	3.43E-03	1.37E-02	4.57E-03	---	---	---	
Acifluorfen, sodium	62476-59-9	1.20E+01	n	---	---	---	1.20E+01	1.22E+01	7.57E+02	
Acridine	260-94-6	3.65E-01	n	---	---	---	3.65E-01	2.81E+00	4.19E-01	
Acrolein	107-02-8	4.26E-01	n	---	---	---	4.26E-01	4.68E-01	4.70E+00	
Acrylamide	79-06-1	1.10E-02	c	1.10E-02	1.16E-02	2.44E-01	1.82E-01	1.87E-01	6.50E+00	
Acrylic acid (propenoic acid)	79-10-7	3.93E+02	n	---	---	---	3.93E+02	4.68E+02	2.47E+03	
Acrylonitrile	107-13-1	7.57E-02	c	7.57E-02	9.63E-02	3.55E-01	8.03E-01	9.36E-01	5.68E+00	
Adipic acid (hexanedioic acid)	124-04-9	4.43E+03	n	---	---	---	4.43E+03	4.68E+03	8.33E+04	
Alachlor	15972-60-8	1.04E-01	c	1.04E-01	6.50E-01	1.24E-01	2.24E+00	9.36E+00	2.95E+00	
Aldicarb	116-06-3	7.44E-01	n	---	---	---	7.44E-01	9.36E-01	3.64E+00	
Aldicarb sulfone	1646-88-4	9.27E-01	n	---	---	---	9.27E-01	9.36E-01	9.97E+01	
Allyl alcohol	107-18-6	4.08E+00	n	---	---	---	4.08E+00	4.68E+00	3.19E+01	
Allyl chloride	107-05-1	3.46E+00	n	---	---	---	3.46E+00	9.36E+00	5.49E+00	
Aluminum	7429-90-5	4.03E+02	n	---	---	---	4.03E+02	9.36E+02	7.09E+02	
Ametryn	834-12-8	2.80E+00	n	---	---	---	2.80E+00	8.42E+00	4.20E+02	
Aminobiphenyl, 4- (1,1-biphenyl-4-amine)	92-67-1	8.95E-04	c	8.95E-04	8.52E-03	1.00E-03	---	---	---	
Amino-2,6-dinitrotoluene, 4-	19406-51-0	5.94E-02	n	1.41E+00	5.20E+00	1.94E+00	5.94E-02	1.56E-01	9.59E-02	
Amino-4,6-dinitrotoluene, 2-	35572-78-2	4.97E-02	n	1.15E+00	5.20E+00	1.48E+00	4.97E-02	1.56E-01	7.29E-02	
Aminopyridine, 4-	504-24-5	1.76E-02	n	---	---	---	1.76E-02	1.87E-02	2.89E-01	
Aniline	62-53-3	4.69E+00	n	5.52E+00	9.12E+00	1.40E+01	4.69E+00	6.55E+00	1.65E+01	
Anthracene	120-12-7	1.07E+01	n	---	---	---	1.07E+01	2.81E+02	1.11E+01	
Anthraquinone, 9,10-	84-65-1	4.42E+00	n	---	---	---	4.42E+00	1.87E+01	5.78E+00	
Antimony	7440-36-0	1.99E-01	n	---	---	---	1.99E-01	3.74E-01	4.25E-01	
Aramite	140-57-8	6.50E-02	c	6.50E-02	2.08E+00	6.71E-02	2.36E+00	4.68E+01	2.49E+00	
Arsenic	7440-38-2	2.85E-02	c	2.85E-02	3.47E-02	1.59E-01	2.48E-01	2.81E-01	2.13E+00	
Atrazine	1912-24-9	5.56E-02	c	5.56E-02	2.34E-01	7.30E-02	1.11E+01	3.28E+01	1.68E+01	
Azinphos-methyl (guthion)	86-50-0	8.64E-01	n	---	---	---	8.64E-01	1.40E+00	2.25E+00	
Barium	7440-39-3	6.49E+01	n	---	---	---	6.49E+01	1.87E+02	9.93E+01	
Bayleton	43121-43-3	1.66E+01	n	---	---	---	1.66E+01	2.81E+01	4.04E+01	
Benfen (benfluralin)	1861-40-1	7.52E+00	n	---	---	---	7.52E+00	2.81E+02	7.73E+00	
Benomyl	17804-35-2	4.13E+01	n	---	---	---	4.13E+01	4.68E+01	3.51E+02	
Benzaldehyde	100-52-7	4.26E+01	n	---	---	---	4.26E+01	9.36E+01	7.81E+01	
Benzene	71-43-2	2.35E-01	c	2.35E-01	9.45E-01	3.13E-01	1.32E+00	3.74E+00	2.04E+00	
Benzenethiol	108-98-5	2.00E-03	n	---	---	---	2.00E-03	9.36E-03	2.54E-03	
Benidine	92-87-5	1.58E-04	c	1.58E-04	2.26E-04	5.26E-04	2.23E+00	2.81E+00	1.08E+01	
Benzoic acid	65-85-0	1.88E+03	n	---	---	---	1.88E+03	3.74E+03	3.78E+03	
Benzoic acid	98-07-7	2.02E-04	c	2.02E-04	4.00E-03	2.12E-04	---	---	---	
Benzyl alcohol	100-51-6	2.10E+02	n	---	---	---	2.10E+02	2.81E+02	8.27E+02	
Benzyl chloride	100-44-7	4.28E-02	c	4.28E-02	3.06E-01	4.98E-02	---	---	---	
Benzyl dichloride	98-87-3	4.63E-02	c	4.63E-02	3.06E-01	5.46E-02	---	---	---	
Beryllium	7440-41-7	9.43E-02	n	---	---	---	9.43E-02	1.87E+00	9.93E-02	
Biphenyl, 1,1-	92-52-4	3.52E+00	n	---	---	---	3.52E+00	4.68E+01	3.80E+00	
Biquinoline, 2,2'	119-91-5	2.70E-01	n	---	---	---	2.70E-01	2.81E+00	2.99E-01	
Bis (2-chloroethoxy) methane	111-91-1	1.23E-02	c	1.23E-02	4.73E-02	1.67E-02	---	---	---	
Bis (2-chloroethyl) ether	111-44-4	2.58E-02	c	2.58E-02	4.73E-02	5.67E-02	---	---	---	
Bis (2-chloroisopropyl) ether	108-60-1	1.81E-01	c	1.81E-01	7.43E-01	2.39E-01	1.30E+01	3.74E+01	1.99E+01	
Bis (2-chloromethyl) ether	542-88-1	1.90E-04	c	1.90E-04	2.36E-04	9.65E-04	---	---	---	
Bismuth	7440-69-9	2.82E+02	n	---	---	---	2.82E+02	4.68E+02	7.09E+02	
Bisphenol A	80-05-7	9.64E+00	n	---	---	---	9.64E+00	4.68E+01	1.21E+01	
Boron	7440-42-8	7.44E+01	n	---	---	---	7.44E+01	8.42E+01	6.38E+02	
Bromobenzene	108-86-1	4.20E+00	n	---	---	---	4.20E+00	1.87E+01	5.42E+00	
Bromo-2-chloroethane, 1-	107-04-0	2.03E+01	n	---	---	---	2.03E+01	3.74E+01	4.45E+01	
Bromodichloromethane	75-27-4	4.77E-01	c	4.77E-01	8.39E-01	1.11E+00	1.28E+01	1.87E+01	4.07E+01	
Bromoform	75-25-2	4.30E+00	c	4.30E+00	6.58E+00	1.24E+01	1.42E+01	1.87E+01	5.82E+01	
Bromomethane (methyl bromide)	74-83-9	9.02E-01	n	---	---	---	9.02E-01	1.31E+00	2.90E+00	
Butanal (butyraldehyde)	123-72-8	4.17E+01	n	---	---	---	4.17E+01	5.62E+01	1.62E+02	
Butanoic acid (butyric acid)	107-92-6	3.38E+02	n	---	---	---	3.38E+02	4.68E+02	1.22E+03	
Butanol, n-	71-36-3	6.99E+01	n	---	---	---	6.99E+01	9.36E+01	2.76E+02	
Butoxy ethanol, 2- (Ethylene glycol monobutyl ether; EGBE)	111-76-2	3.30E+02	n	---	---	---	3.30E+02	4.68E+02	1.11E+03	
Butyl acetate	123-86-4	7.26E+01	n	---	---	---	7.26E+01	1.31E+02	1.63E+02	
Butyl acrylate	141-32-2	3.28E+00	n	---	---	---	3.28E+00	8.42E+00	5.36E+00	
Butyl benzyl phthalate	85-68-7	7.88E+00	n	---	---	---	7.88E+00	1.87E+02	8.23E+00	
Butylate	2008-41-5	4.54E+00	n	---	---	---	4.54E+00	4.68E+01	5.03E+00	
Butylbenzene, n-	104-51-8	1.20E+00	n	---	---	---	1.20E+00	3.74E+01	1.24E+00	
Butylbenzene, sec-	135-98-8	1.58E+00	n	---	---	---	1.58E+00	3.74E+01	1.65E+00	
Butylbenzene, tert-	98-06-6	1.40E+00	n	---	---	---	1.40E+00	3.74E+01	1.45E+00	
Butyl ether, n- (dibutyl ether)	142-96-1	1.28E+01	n	---	---	---	1.28E+01	9.36E+01	1.48E+01	
Cacodylic acid	75-60-5	2.67E+00	n	---	---	---	2.67E+00	2.81E+00	5.62E+01	
Cadmium	7440-43-9	1.49E-01	n	---	---	---	1.49E-01	9.36E-01	1.77E-01	
Caprolactam	105-60-2	4.08E+02	n	---	---	---	4.08E+02	4.68E+02	3.16E+03	
Captan	133-06-2	1.04E+01	c	1.04E+01	1.49E+01	3.51E+01	9.68E+01	1.22E+02	4.74E+02	

Tier 1 Contact Recreation Water PCLs ¹

Chemical of Concern	CAS				Carcinogenic			Noncarcinogenic		
		Tot RW _{Comb} ² (mg/L)	note ³		Tot RW _{Comb} ² (mg/L)	RW _{Ing} (mg/L)	RW _{Derm} (mg/L)	Tot RW _{Comb} ² (mg/L)	RW _{Ing} (mg/L)	RW _{Derm} (mg/L)
Carbaryl	63-25-2	4.57E+01	n	---	---	---	4.57E+01	9.36E+01	8.92E+01	
Carbazole	86-74-8	2.74E-01	c	2.74E-01	2.60E+00	3.06E-01	---	---	---	
Carbofuran	1563-66-2	2.52E+00	n	---	---	---	2.52E+00	4.68E+00	5.46E+00	
Carbon disulfide	75-15-0	3.43E+01	n	---	---	---	3.43E+01	9.36E+01	5.41E+01	
Carbon tetrachloride	56-23-5	1.03E-01	c	1.03E-01	4.00E-01	1.38E-01	2.38E-01	6.55E-01	3.74E-01	
Carbophenothion	786-19-6	4.26E-01	n	---	---	---	4.26E-01	1.22E+01	4.42E-01	
Carboxin	5234-68-4	2.81E+01	n	---	---	---	2.81E+01	9.36E+01	4.01E+01	
Chloral	75-87-6	7.32E+01	n	---	---	---	7.32E+01	9.36E+01	3.35E+02	
Chloral hydrate (1,1-ethanediol, 2,2,2-trichloro-)	302-17-0	8.79E+01	n	---	---	---	8.79E+01	9.36E+01	1.44E+03	
Chloramben (amiben; 3-amino-2,5-dichlorobenzoic acid)	133-90-4	6.27E+00	n	---	---	---	6.27E+00	1.40E+01	1.13E+01	
Chlorfenvinphos	470-90-6	9.58E-02	n	---	---	---	9.58E-02	6.55E-01	1.12E-01	
Chlorine	7782-50-5	5.64E+01	n	---	---	---	5.64E+01	9.36E+01	1.42E+02	
Chloroaniline, p-	106-47-8	2.14E+00	n	---	---	---	2.14E+00	3.74E+00	5.02E+00	
Chlorobenzene	108-90-7	1.58E+00	n	---	---	---	1.58E+00	1.87E+01	1.73E+00	
Chlorobenzilate	510-15-6	1.84E-02	c	1.84E-02	1.93E-01	2.04E-02	2.78E+00	1.87E+01	3.26E+00	
Chlorobromomethane (bromochloromethane)	74-97-5	2.68E+01	n	---	---	---	2.68E+01	3.74E+01	9.37E+01	
Chloroethane (ethyl chloride)	75-00-3	1.75E+02	n	---	---	---	1.75E+02	3.74E+02	3.28E+02	
Chloroethanol, 2-	107-07-3	3.34E+02	n	---	---	---	3.34E+02	3.74E+02	3.09E+03	
Chloroethoxy ethene, 2- (2-chloroethylvinylether)	110-75-8	1.62E-02	c	1.62E-02	4.73E-02	2.48E-02	8.67E-01	1.87E+00	1.61E+00	
Chloroform	67-66-3	2.35E+00	n	---	---	---	2.35E+00	9.36E+00	3.14E+00	
Chlorohexane, 1-	544-10-5	2.68E+00	n	---	---	---	2.68E+00	3.74E+01	2.89E+00	
Chloromethane (methyl chloride)	74-87-3	1.95E+00	c	1.95E+00	4.00E+00	3.80E+00	---	---	---	
Chloro-3-methylphenol, 4-	59-50-7	8.70E-01	n	---	---	---	8.70E-01	4.68E+00	1.07E+00	
Chloronaphthalene, 1- (Chloronaphthalene, alpha-)	90-13-1	3.96E+00	n	---	---	---	3.96E+00	7.49E+01	4.18E+00	
Chloronaphthalene, 2- (chloronaphthalene, beta)	91-58-7	5.48E+00	n	---	---	---	5.48E+00	7.49E+01	5.91E+00	
Chloronitrobenzene, p- (1-chloro-4-nitrobenzene)	100-00-5	7.36E-01	c	7.36E-01	2.89E+00	9.89E-01	---	---	---	
Chlorophenol, 2-	95-57-8	1.93E+00	n	---	---	---	1.93E+00	4.68E+00	3.29E+00	
Chlorophenol, 3-	108-43-0	2.08E+00	n	---	---	---	2.08E+00	4.68E+00	3.74E+00	
Chlorophenol, 4-	106-48-9	2.03E+00	n	---	---	---	2.03E+00	4.68E+00	3.58E+00	
Chloropropane, 2-	75-29-6	8.00E+00	n	---	---	---	8.00E+00	2.81E+01	1.12E+01	
Chloro-2-propanol, 1-	127-00-4	1.42E+01	n	---	---	---	1.42E+01	1.87E+01	5.88E+01	
Chlorothalonil	1897-45-6	6.60E-01	c	6.60E-01	4.73E+00	7.67E-01	2.96E+00	1.40E+01	3.75E+00	
Chlorotoluene, o- (2-chlorotoluene)	95-49-8	2.42E+00	n	---	---	---	2.42E+00	1.87E+01	2.78E+00	
Chlorotoluene, p- (4-chlorotoluene)	106-43-4	2.12E+00	n	---	---	---	2.12E+00	1.87E+01	2.39E+00	
Chlorpyrifos	2921-88-2	1.95E-01	n	---	---	---	1.95E-01	2.81E+00	2.10E-01	
Chromium (III) (total chromium)	16065-83-1/ 7440-47-3	1.26E+02	n	---	---	---	1.26E+02	1.40E+03	1.38E+02	
Chromium (VI)	18540-29-9	2.43E-01	n	---	---	---	2.43E-01	2.81E+00	2.66E-01	
Cobalt	7440-48-4	5.33E+01	n	---	---	---	5.33E+01	5.62E+01	1.06E+03	
Copolymer acrylamide	69418-26-4	1.82E-01	n	---	---	---	1.82E-01	1.87E-01	6.50E+00	
Copper	7440-50-8	3.31E+01	n	---	---	---	3.31E+01	3.74E+01	2.84E+02	
Coumaphos	56-72-4	8.44E-01	n	---	---	---	8.44E-01	6.55E+00	9.69E-01	
Cresol	1319-77-3	1.88E+01	n	---	---	---	1.88E+01	4.68E+01	3.13E+01	
Cresol, m- (3-methylphenol)	108-39-4	1.88E+01	n	---	---	---	1.88E+01	4.68E+01	3.13E+01	
Cresol, o- (2-methylphenol)	95-48-7	1.88E+01	n	---	---	---	1.88E+01	4.68E+01	3.13E+01	
Crotonaldehyde	123-73-9	1.95E-02	c	1.95E-02	2.74E-02	6.73E-02	---	---	---	
Cumene (isopropylbenzene)	98-82-8	8.44E+00	n	---	---	---	8.44E+00	9.36E+01	9.27E+00	
Cyanazine	21725-46-2	4.08E-02	c	4.08E-02	6.19E-02	1.20E-01	1.43E+00	1.87E+00	5.98E+00	
Cyanide	57-12-5	1.65E+01	n	---	---	---	1.65E+01	1.87E+01	1.42E+02	
Cyanogen	460-19-5	3.30E+01	n	---	---	---	3.30E+01	3.74E+01	2.77E+02	
Cycloate	1134-23-2	5.31E+00	n	---	---	---	5.31E+00	5.15E+01	5.92E+00	
Cyclohexane	110-82-7	2.95E+02	n	---	---	---	2.95E+02	4.68E+03	3.15E+02	
Cyclohexanol	108-93-0	3.38E+03	n	---	---	---	3.38E+03	4.68E+03	1.21E+04	
Cyclohexanone	108-94-1	3.33E+03	n	---	---	---	3.33E+03	4.68E+03	1.15E+04	
Cyclotetramethylenetetramine (HMX)	2691-41-0	4.61E+01	n	---	---	---	4.61E+01	4.68E+01	3.16E+03	
Cyclotrimethylenetrinitramine (RDX)	121-82-4	4.08E-01	c	4.08E-01	4.73E-01	2.96E+00	2.56E+00	2.81E+00	2.90E+01	
Cymene (isopropyltoluene)	99-87-6	3.70E+00	n	---	---	---	3.70E+00	9.36E+01	3.85E+00	
Cymoxanil	57966-95-7	1.07E+01	n	---	---	---	1.07E+01	1.22E+01	9.22E+01	
Dacthal (DCPA)	1861-32-1	5.40E-01	n	---	---	---	5.40E-01	9.36E+00	5.73E-01	
Dalapon, sodium salt (2,2-dichloropropanoic acid)	75-99-0	1.82E+01	n	---	---	---	1.82E+01	2.81E+01	5.19E+01	
Demeton	8065-48-3	1.31E-02	n	---	---	---	1.31E-02	3.74E-02	2.01E-02	
Diacetone alcohol (4-hydroxy-4-methyl-2-pentanone)	123-42-2	3.43E+01	n	---	---	---	3.43E+01	3.74E+01	4.04E+02	
Diallate	2303-16-4	5.24E-02	c	5.24E-02	8.52E-01	5.58E-02	---	---	---	
Diazinon	333-41-5	1.32E-01	n	---	---	---	1.32E-01	8.42E-01	1.56E-01	
Dibenzofuran	132-64-9	2.19E-01	n	---	---	---	2.19E-01	3.74E+00	2.32E-01	
Dibenzothiophene	132-65-0	7.47E-02	n	---	---	---	7.47E-02	2.81E+00	7.67E-02	
Dibromochloromethane (chlorodibromomethane)	124-48-1	3.83E-01	c	3.83E-01	6.19E-01	1.00E+00	1.36E+01	1.87E+01	5.00E+01	
Dibromo-3-chloropropane, 1,2-	96-12-8	1.13E-02	c	1.13E-02	3.71E-02	1.62E-02	---	---	---	
Dibromofluoromethane	1868-53-7	1.33E+02	n	---	---	---	1.33E+02	1.87E+02	4.60E+02	
Dicamba	1918-00-9	1.62E-01	n	---	---	---	1.62E-01	2.81E+01	3.84E+01	
Dichlorobenzene, 1,2-	95-50-1	1.13E+01	n	---	---	---	1.13E+01	8.42E+01	1.31E+01	
Dichlorobenzene, 1,3-	541-73-1	3.78E+00	n	---	---	---	3.78E+00	2.81E+01	4.36E+00	
Dichlorobenzene, 1,4-	106-46-7	1.86E-01	c	1.86E-01	2.17E+00	2.04E-01	---	---	---	
Dichlorobenzidine, 3,3'-	91-94-1	2.07E-02	c	2.07E-02	1.16E-01	2.52E-02	---	---	---	
Dichlorobutane, 2,3-	7581-97-7	1.95E+00	n	---	---	---	1.95E+00	9.36E+00	2.46E+00	
Dichlorodifluoromethane	75-71-8	3.76E+01	n	---	---	---	3.76E+01	1.87E+02	4.70E+01	
Dichloroethane, 1,1-	75-34-3	4.58E+01	n	---	---	---	4.58E+01	9.36E+01	8.99E+01	

Last Update: March 31, 2006

Tier 1 Contact Recreation Water PCLs ¹

Chemical of Concern	CAS				Carcinogenic			Noncarcinogenic		
		Tot RW _{Comb} ² (mg/L)	note ³		Tot RW _{Comb} ² (mg/L)	RW _{Ing} (mg/L)	RW _{Derm} (mg/L)	Tot RW _{Comb} ² (mg/L)	RW _{Ing} (mg/L)	RW _{Derm} (mg/L)
Ethyl ether	60-29-7	1.28E+02	n		---	---	---	1.28E+02	1.87E+02	4.02E+02
Ethyl-1-hexanol, 2-	104-76-7	3.31E+01	n		---	---	---	3.31E+01	1.40E+02	4.33E+01
Ethyl-2-hexenal, 2-	645-62-5	3.60E+01	n		---	---	---	3.60E+01	1.40E+02	4.85E+01
Ethylhexyl acrylate, 2-	103-11-7	3.85E-02	c		3.85E-02	1.08E+00	3.99E-02	---	---	---
Ethyl methacrylate	97-63-2	4.42E+01	n		---	---	---	4.42E+01	8.42E+01	9.28E+01
Ethyl methanesulfonate	62-50-0	5.07E-01	c		5.07E-01	5.25E-01	1.43E+01	---	---	---
Ethyl-2-methyl benzene, 1-	611-14-3	1.52E+01	n		---	---	---	1.52E+01	1.87E+02	1.66E+01
Ethyl-4-methyl benzene, 1-	622-96-8	1.43E+01	n		---	---	---	1.43E+01	1.87E+02	1.54E+01
Ethyl tert-butyl ether (2-ethyl-2-ethoxypropane)	637-92-3	4.22E-01	n		---	---	---	4.22E-01	9.36E-01	7.69E-01
Famphur	52-85-7	2.57E-02	n		---	---	---	2.57E-02	2.81E-02	3.00E-01
Fensulfothion	115-90-2	7.02E-01	n		---	---	---	7.02E-01	9.36E-01	2.80E+00
Fenthion	55-38-9	2.27E-02	n		---	---	---	2.27E-02	6.55E-02	3.48E-02
Fluorene	86-73-7	2.11E+00	n		---	---	---	2.11E+00	3.74E+01	2.23E+00
Fluorine (soluble fluoride)	7782-41-4	4.96E+01	n		---	---	---	4.96E+01	5.62E+01	4.25E+02
Fluorochloridone	61213-25-0	2.20E+00	n		---	---	---	2.20E+00	7.02E+00	3.21E+00
Fonofos	944-22-9	1.76E-01	n		---	---	---	1.76E-01	1.87E+00	1.94E-01
Formaldehyde	50-00-0	1.48E+02	n		---	---	---	1.48E+02	1.87E+02	7.04E+02
Formic acid	64-18-6	1.76E+03	n		---	---	---	1.76E+03	1.87E+03	2.90E+04
Furan	110-00-9	5.21E-01	n		---	---	---	5.21E-01	9.36E-01	1.17E+00
Furfural	98-01-1	2.22E+00	n		---	---	---	2.22E+00	2.81E+00	1.06E+01
Glycidylaldehyde	765-34-4	3.46E-01	n		---	---	---	3.46E-01	3.74E-01	4.61E+00
Glyphosate	1071-83-6	8.27E+01	n		---	---	---	8.27E+01	9.36E+01	7.09E+02
Heptachlor epoxide	1024-57-3	2.20E-04	c		2.20E-04	5.71E-03	2.28E-04	7.51E-04	1.22E-02	8.01E-04
Heptanoic acid, n-	111-14-8	8.06E+01	n		---	---	---	8.06E+01	4.68E+02	9.73E+01
Hexachlorobutadiene	87-68-3	6.90E-03	n		1.51E-02	6.67E-01	1.55E-02	6.90E-03	1.87E-01	7.16E-03
Hexachlorocyclohexane, alpha (alpha-BHC)	319-84-6	4.42E-04	c		4.42E-04	8.25E-03	4.67E-04	6.38E-01	7.49E+00	6.98E-01
Hexachlorocyclohexane, beta (beta-BHC)	319-85-7	1.55E-03	c		1.55E-03	2.89E-02	1.64E-03	---	---	---
Hexachlorocyclohexane, delta (delta-BHC)	319-86-8	2.23E-03	c		2.23E-03	2.89E-02	2.42E-03	3.41E-02	2.81E-01	3.88E-02
Hexachlorocyclohexane, gamma (lindane; gamma-BHC)	58-89-9	2.14E-03	c		2.14E-03	4.00E-02	2.26E-03	2.39E-02	2.81E-01	2.62E-02
Hexachlorocyclohexane, techn (technical-BHC)	608-73-1	1.55E-03	c		1.55E-03	2.89E-02	1.64E-03	---	---	---
Hexachlorocyclopentadiene (HCCPD)	77-47-4	2.56E-01	n		---	---	---	2.56E-01	5.62E+00	2.69E-01
Hexachloropropylene	1888-71-7	7.81E-02	n		1.94E-01	3.71E+00	2.05E-01	7.81E-02	9.36E-01	8.52E-02
Hexane, n-	110-54-3	4.79E+00	n		---	---	---	4.79E+00	5.62E+01	5.24E+00
Hexanediol, 1,6-	629-11-8	3.92E+03	n		---	---	---	3.92E+03	4.68E+03	2.40E+04
Hexanoic acid	142-62-1	2.52E+01	n		---	---	---	2.52E+01	5.99E+01	4.36E+01
Hexanone, 2-	591-78-6	3.34E+01	n		---	---	---	3.34E+01	5.62E+01	8.25E+01
Hexazinone	51235-04-2	1.98E+01	n		---	---	---	1.98E+01	3.09E+01	5.51E+01
Hexylene glycol (2-methyl-2,4-pentanediol)	107-41-5	2.53E+02	n		---	---	---	2.53E+02	2.81E+02	2.54E+03
Hydrazine	302-01-2	1.69E-02	c		1.69E-02	1.73E-02	6.40E-01	---	---	---
Indene	95-13-6	3.65E+00	n		---	---	---	3.65E+00	1.87E+01	4.54E+00
Isobutyl alcohol	78-83-1	2.15E+02	n		---	---	---	2.15E+02	2.81E+02	9.24E+02
Isobutyric acid (2-methylpropanoic acid)	79-31-2	3.19E+02	n		---	---	---	3.19E+02	4.68E+02	1.00E+03
Isophorone	78-59-1	1.04E+01	c		1.04E+01	5.47E+01	1.28E+01	5.20E+01	1.87E+02	7.20E+01
Isopropyl acetate	108-21-4	4.59E+01	n		---	---	---	4.59E+01	6.55E+01	1.53E+02
Isopropyl alcohol	67-63-0	1.51E+02	n		---	---	---	1.51E+02	1.87E+02	7.91E+02
Isosafrole	120-58-1	3.64E-02	c		3.64E-02	2.36E-01	4.30E-02	---	---	---
Kelthane (dicofol)	115-32-2	2.33E-01	n		---	---	---	2.33E-01	5.62E+00	2.44E-01
Kepone (chlordecone)	143-50-0	2.32E-04	c		2.32E-04	3.25E-03	2.49E-04	5.25E-02	4.68E-01	5.92E-02
Lithium	7439-93-2	1.65E+01	n		---	---	---	1.65E+01	1.87E+01	1.42E+02
Malathion	121-75-5	1.32E+01	n		---	---	---	1.32E+01	1.87E+01	4.50E+01
Maleic anhydride	108-31-6	5.05E+01	n		---	---	---	5.05E+01	9.36E+01	1.10E+02
Maleic hydrazide	123-33-1	4.60E+02	n		---	---	---	4.60E+02	4.68E+02	2.82E+04
Malononitrile	109-77-3	1.73E-02	n		---	---	---	1.73E-02	1.87E-02	2.37E-01
Mancozeb	8018-01-7	2.45E+01	n		---	---	---	2.45E+01	2.81E+01	1.90E+02
Manganese	7439-96-5	4.09E+01	n		---	---	---	4.09E+01	1.31E+02	5.96E+01
MCPA (4-(chloro-2-methylphenoxy) acetic acid)	94-74-6	7.65E-02	n		---	---	---	7.65E-02	4.68E-01	9.14E-02
MCPP (2-(4-chloro-2-methylphenoxy) propanoic acid)	085-19-0/ 93-65	2.25E-01	n		---	---	---	2.25E-01	9.36E-01	2.95E-01
Mercury	69-97-6/ 7487-9	9.73E-02	n		---	---	---	9.73E-02	2.81E-01	1.49E-01
Methacrylic acid (2-methyl-2-propenoic acid)	79-41-4	4.59E+00	n		---	---	---	4.59E+00	9.36E+00	9.01E+00
Methacrylonitrile	126-98-7	7.08E-02	n		---	---	---	7.08E-02	9.36E-02	2.90E-01
Methanol	67-56-1	4.42E+02	n		---	---	---	4.42E+02	4.68E+02	8.00E+03
Methapyrilene	91-80-5	2.22E-03	c		2.22E-03	1.11E-02	2.77E-03	---	---	---
Methomyl	16752-77-5	2.12E+01	n		---	---	---	2.12E+01	2.34E+01	2.29E+02
Methoxychlor	72-43-5	7.19E-02	n		---	---	---	7.19E-02	4.68E+00	7.30E-02
Methyl acetate (acetic acid, methyl ester)	79-20-9	8.22E+02	n		---	---	---	8.22E+02	9.36E+02	6.78E+03
Methyl acrylate	96-33-3	1.49E+00	n		---	---	---	1.49E+00	1.87E+00	7.41E+00
Methyl amyl ketone (2-heptanone)	110-43-0	1.99E+01	n		---	---	---	1.99E+01	4.68E+01	3.46E+01
Methyl-1-butene, 2-	563-46-2	8.37E+00	n		---	---	---	8.37E+00	5.62E+01	9.83E+00
Methyl-2-butene, 2-	513-35-9	8.88E+00	n		---	---	---	8.88E+00	5.62E+01	1.06E+01
Methyl cyclohexane	108-87-2	1.57E+02	n		---	---	---	1.57E+02	4.68E+03	1.63E+02
Methylene-bis (2-chloroaniline) 4,4'-	101-14-4	5.55E-02	c		5.55E-02	4.00E-01	6.44E-02	1.37E-01	6.55E-01	1.74E-01
Methylene bromide (dibromomethane)	74-95-3	4.30E+00	c		4.30E+00	6.93E+00	1.13E+01	4.10E+01	5.62E+01	1.51E+02
Methylene chloride (dichloromethane)	75-09-2	3.37E+00	c		3.37E+00	6.93E+00	6.55E+00	4.10E+01	5.62E+01	8.73E+01
Methyl ethyl ketone (2-butanone)	78-93-3	4.91E+02	n		---	---	---	4.91E+02	5.62E+02	3.92E+03
Methyl iodide (iodomethane)	74-88-4	8.70E-01	n		---	---	---	8.70E-01	1.31E+00	2.59E+00
Methyl isobutyl ketone (4-methyl-2-pentanone)	108-10-1	5.27E+01	n		---	---	---	5.27E+01	7.49E+01	1.78E+02
Methyl mercury	22967-92-6	8.27E-02	n		---	---	---	8.27E-02	9.36E-02	7.09E-01

Tier 1 Contact Recreation Water PCLs¹

Chemical of Concern	CAS			Carcinogenic			Noncarcinogenic		
		Tot RW _{Comb} ² (mg/L)	note ³	Tot RW _{Comb} ² (mg/L)	RW _{Ing} (mg/L)	RW _{Derm} (mg/L)	Tot RW _{Comb} ² (mg/L)	RW _{Ing} (mg/L)	RW _{Derm} (mg/L)
Methylmercury hydroxide	1184-57-2	9.33E-02	n	---	---	---	9.33E-02	9.36E-02	2.93E+01
Methyl methacrylate	80-62-6	8.75E+02	n	---	---	---	8.75E+02	1.31E+03	2.63E+03
Methyl methanesulfonate	66-27-3	5.08E-01	c	5.08E-01	5.25E-01	1.57E+01	---	---	---
Methylnaphthalene, 1-	90-12-0	4.80E+00	n	---	---	---	4.80E+00	6.55E+01	5.18E+00
Methylnaphthalene, 2-	91-57-6	2.76E-01	n	---	---	---	2.76E-01	3.74E+00	2.98E-01
Methyl-5-nitroaniline, 2- (5-nitro-o-toluidine)	99-55-8	6.65E-01	c	6.65E-01	1.58E+00	1.15E+00	---	---	---
Methyl parathion	298-00-0	1.02E-01	n	---	---	---	1.02E-01	2.34E-01	1.81E-01
Methyl-2-pentenal, 2-	623-36-9	1.04E-02	c	1.04E-02	2.74E-02	1.68E-02	---	---	---
Methyl-1-propanal, 2- (isobutyraldehyde)	78-84-2	2.83E+01	n	---	---	---	2.83E+01	3.74E+01	1.16E+02
Methylpyrrolidone, N-	872-50-4	1.74E+01	n	---	---	---	1.74E+01	1.87E+01	2.53E+02
Methyltetrahydrofuran, 2-	96-47-9	3.98E+00	c	3.98E+00	6.84E+00	9.53E+00	1.30E+02	1.87E+02	4.29E+02
Methyltetrahydropyran, 2-	10141-72-7	3.12E+00	c	3.12E+00	6.84E+00	5.75E+00	1.09E+02	1.87E+02	2.59E+02
Metolachlor	51218-45-2	5.81E+01	n	---	---	---	5.81E+01	1.40E+02	9.92E+01
Metribuzin	21087-64-9	2.23E+01	n	---	---	---	2.23E+01	2.34E+01	4.89E+02
Molinate	2212-67-1	5.00E-01	n	---	---	---	5.00E-01	1.87E+00	6.82E-01
Molybdenum	7439-98-7	3.47E+00	n	---	---	---	3.47E+00	4.68E+00	1.35E+01
Morpholine	110-91-8	4.58E+05	n	---	---	---	4.58E+05	4.68E+05	2.16E+07
MTBE (methyl tert-butyl ether)	1634-04-4	5.47E+00	n	1.33E+01	2.89E+01	2.47E+01	5.47E+00	9.36E+00	1.32E+01
Naled	300-76-5	1.69E+00	n	---	---	---	1.69E+00	1.87E+00	1.76E+01
Naphthalene	91-20-3	2.55E+00	n	---	---	---	2.55E+00	1.87E+01	2.95E+00
Naphthoquinone, 1,4-	130-15-4	4.65E+00	n	---	---	---	4.65E+00	6.55E+00	1.61E+01
Naphthylamine, 1-	134-32-7	5.25E+00	n	---	---	---	5.25E+00	1.87E+01	7.29E+00
Naphthylamine, 2-	91-59-8	4.74E+03	c	4.74E-03	2.89E-02	5.67E-03	---	---	---
Napropamide	15299-99-7	1.30E+01	n	---	---	---	1.30E+01	9.36E+01	1.52E+01
Neopentyl glycol	126-30-7	2.56E+02	n	---	---	---	2.56E+02	2.81E+02	2.90E+03
Nickel	7440-02-0	1.13E+01	n	---	---	---	1.13E+01	1.87E+01	2.84E+01
Nitrate	14797-55-8	1.32E+03	n	---	---	---	1.32E+03	1.50E+03	1.13E+04
Nitrite	14797-65-0	8.27E+01	n	---	---	---	8.27E+01	9.36E+01	7.09E+02
Nitroaniline, 2-	88-74-4	1.36E-01	n	---	---	---	1.36E-01	2.81E-01	2.65E-01
Nitroaniline, 3-	99-09-2	1.77E-01	n	6.97E-01	1.37E+00	1.42E+00	1.77E-01	2.81E-01	4.80E-01
Nitroaniline, 4-	100-01-6	9.66E-01	c	9.66E-01	1.37E+00	3.29E+00	2.24E+00	2.81E+00	1.11E+01
Nitrobenzene	98-95-3	2.48E-01	n	---	---	---	2.48E-01	4.68E-01	5.26E-01
Nitroglycerin	55-63-0	4.30E-02	n	2.00E+00	3.71E+00	4.31E+00	4.30E-02	6.55E-02	1.25E-01
Nitrophenol, 2-	88-75-5	6.86E-01	n	---	---	---	6.86E-01	1.87E+00	1.08E+00
Nitrophenol, 3-	554-84-7	9.46E-01	n	---	---	---	9.46E-01	1.87E+00	1.91E+00
Nitrophenol, 4-	100-02-7	1.12E+00	n	---	---	---	1.12E+00	1.87E+00	2.76E+00
Nitroquinoline-N-oxide, 4-	56-57-5	4.32E-03	c	4.32E-03	5.53E-03	1.96E-02	---	---	---
Nitrosodichloroamine, N-	1116-54-7	1.83E-02	c	1.83E-02	1.86E-02	1.52E+00	---	---	---
Nitrosodiethylamine, N-	55-18-5	2.90E-04	c	2.90E-04	3.47E-04	1.77E-03	---	---	---
Nitrosodimethylamine, N-	62-75-9	9.62E-04	c	9.62E-04	1.02E-03	1.72E-02	---	---	---
Nitrosodi-n-propylamine, N-	621-64-7	1.98E-03	c	1.98E-03	7.43E-03	2.70E-03	---	---	---
Nitrosodiphenylamine, N-	86-30-6	4.21E-01	c	4.21E-01	1.06E+01	4.38E-01	---	---	---
Nitroso-methyl-ethyl-amine, N-	10595-95-6	2.13E-03	c	2.13E-03	2.36E-03	2.20E-02	---	---	---
Nitrosomorpholine, N-	59-89-2	7.67E-03	c	7.67E-03	7.76E-03	6.33E-01	---	---	---
Nitroso-N-ethylurea, N-	759-73-9	3.39E-04	c	3.39E-04	3.71E-04	3.85E-03	---	---	---
Nitrosopiperidine, N-	100-75-4	4.20E-03	c	4.20E-03	5.53E-03	1.75E-02	---	---	---
Nitrosopyrrolidine, N-	930-55-2	2.12E-02	c	2.12E-02	2.48E-02	1.47E-01	---	---	---
Nitrotoluene, m-	99-08-1	3.37E+00	n	---	---	---	3.37E+00	9.36E+00	5.25E+00
Nitrotoluene, o-	88-72-2	3.37E+00	n	---	---	---	3.37E+00	9.36E+00	5.25E+00
Nitrotoluene, p-	99-99-0	3.37E+00	n	---	---	---	3.37E+00	9.36E+00	5.25E+00
Nonanal	124-19-6	1.84E+01	n	---	---	---	1.84E+01	1.87E+02	2.04E+01
Octamethylpyrophosphoramide	152-16-9	1.86E+00	n	---	---	---	1.86E+00	1.87E+00	5.06E+02
Octanone	106-68-3	1.48E+01	n	---	---	---	1.48E+01	5.62E+01	2.00E+01
Oxamyl	23135-22-0	2.33E+01	n	---	---	---	2.33E+01	2.34E+01	5.50E+03
Paraquat	1910-42-5	3.72E+00	n	---	---	---	3.72E+00	4.21E+00	3.19E+01
Parathion (ethyl parathion)	56-38-2	9.69E-01	n	---	---	---	9.69E-01	5.62E+00	1.17E+00
Pebulate	1114-71-2	6.65E+00	n	---	---	---	6.65E+00	4.68E+01	7.75E+00
Pentachloroethane	76-01-7	4.65E-01	c	4.65E-01	2.00E+00	6.07E-01	9.35E+00	2.81E+01	1.40E+01
Pentachloronitrobenzene	82-68-8	3.53E-03	c	3.53E-03	2.00E-01	3.59E-03	8.06E-02	2.81E+00	8.30E-02
Pentachlorophenol	87-86-5	9.92E-03	c	9.92E-03	4.33E-01	1.01E-02	1.04E+00	2.81E+01	1.08E+00
Pentadiene, 1,3-trans-	2004-70-8	1.24E+01	n	---	---	---	1.24E+01	5.62E+01	1.60E+01
Pentaerythritol tetranitrate (PETN)	78-11-5	6.24E+01	n	---	---	---	6.24E+01	3.74E+02	7.48E+01
Pentane	109-66-0	3.67E+01	n	---	---	---	3.67E+01	6.55E+02	3.89E+01
Pentandiol, 1,5-	111-29-5	4.31E+03	n	---	---	---	4.31E+03	4.68E+03	5.40E+04
Pentanone, 2-	107-87-9	2.62E+01	n	---	---	---	2.62E+01	3.74E+01	8.78E+01
Pentyne, 1-	627-19-0	1.31E+01	n	---	---	---	1.31E+01	5.62E+01	1.71E+01
Perchlorate	14797-73-0	3.95E-01	n	---	---	---	3.95E-01	6.55E-01	9.93E-01
Phenacetin	62-44-2	1.55E+01	c	1.55E+01	2.36E+01	4.48E+01	---	---	---
Phenanthrene	85-01-8	1.07E+00	n	---	---	---	1.07E+00	2.81E+01	1.11E+00
Phenanthridine	229-87-8	4.49E-01	n	---	---	---	4.49E-01	2.81E+00	5.34E-01
Phenol	108-95-2	1.60E+02	n	---	---	---	1.60E+02	2.81E+02	3.71E+02
Phenylene diamine, m-	108-45-2	5.42E+00	n	---	---	---	5.42E+00	5.62E+00	1.53E+02
Phenylene diamine, p-	106-50-3	1.72E+02	n	---	---	---	1.72E+02	1.78E+02	4.84E+03
Phenyl mercuric acetate	62-38-4	7.15E-02	n	---	---	---	7.15E-02	7.49E-02	1.57E+00
Phorate	298-02-2	4.29E-02	n	---	---	---	4.29E-02	1.87E-01	5.56E-02
Phosalone	2310-17-0	8.46E-01	n	---	---	---	8.46E-01	1.87E+00	1.55E+00
Phosdrin (mevinphos)	7786-34-7	2.32E-02	n	---	---	---	2.32E-02	2.34E-02	2.66E+00

Tier 1 Contact Recreation Water PCLs ¹

Chemical of Concern	CAS	Carcinogenic			Noncarcinogenic				
		Tot RW _{Comb} ² (mg/L)	note ³	Tot RW _{Comb} ² (mg/L)	RW _{Ing} (mg/L)	RW _{Derm} (mg/L)	Tot RW _{Comb} ² (mg/L)	RW _{Ing} (mg/L)	RW _{Derm} (mg/L)
Phosmet	732-11-6	1.64E+01	n	---	---	---	1.64E+01	1.87E+01	1.32E+02
Phosphine	7803-51-2	1.69E-01	n	---	---	---	1.69E-01	2.81E-01	4.25E-01
Phosphorus, white	7723-14-0	1.13E-02	n	---	---	---	1.13E-02	1.87E-02	2.84E-02
Phthalic anhydride	85-44-9	9.13E+02	n	---	---	---	9.13E+02	1.87E+03	1.78E+03
Picloram	1918-02-1	2.19E+01	n	---	---	---	2.19E+01	6.55E+01	3.30E+01
Picoline, 2- (2-methylpyridine)	109-06-8	5.47E+00	n	---	---	---	5.47E+00	8.42E+00	1.56E+01
Polybrominated biphenyls (PBBs)	67774-32-7	1.11E-04	c	1.11E-04	5.84E-03	1.14E-04	2.03E-04	6.55E-03	2.10E-04
Primene	68955-53-3	3.18E-01	n	---	---	---	3.18E-01	5.62E+00	3.37E-01
Prometon (pramitol)	1610-18-0	4.66E+00	n	---	---	---	4.66E+00	1.40E+01	6.97E+00
Pronamide	23950-58-5	1.22E+01	n	---	---	---	1.22E+01	7.02E+01	1.48E+01
Propanal (propionaldehyde)	123-38-6	6.31E+00	n	---	---	---	6.31E+00	7.49E+00	4.00E+01
Propanil	709-98-8	1.36E+00	n	---	---	---	1.36E+00	4.68E+00	1.92E+00
Propanoic acid (propionic acid)	79-09-4	3.90E+02	n	---	---	---	3.90E+02	4.68E+02	2.32E+03
Propanol, 1-	71-23-8	1.46E+02	n	---	---	---	1.46E+02	1.87E+02	6.59E+02
Propargite	2312-35-8	4.38E+00	n	---	---	---	4.38E+00	1.87E+01	5.72E+00
Propargyl alcohol	107-19-7	1.76E+00	n	---	---	---	1.76E+00	1.87E+00	3.06E+01
Propazine	139-40-2	1.76E-01	c	1.76E-01	1.17E+00	2.07E-01	4.22E+00	1.87E+01	5.45E+00
Propapham	122-42-9	6.23E+00	n	---	---	---	6.23E+00	1.87E+01	9.34E+00
Propionitrile (propane nitrile)	107-12-0	3.25E-01	n	---	---	---	3.25E-01	3.74E-01	2.46E+00
Propyl acetate, n-	109-60-4	5.71E+01	n	---	---	---	5.71E+01	8.42E+01	1.77E+02
Propylbenzene, n-	103-65-1	2.35E+00	n	---	---	---	2.35E+00	3.74E+01	2.50E+00
Propylene glycol	57-55-6	1.83E+04	n	---	---	---	1.83E+04	1.87E+04	8.16E+05
Propylene glycol monomethyl ether	107-98-2	6.29E+02	n	---	---	---	6.29E+02	6.55E+02	1.59E+04
Propylene oxide	75-56-9	1.81E-01	c	1.81E-01	2.17E-01	1.11E+00	---	---	---
Propylene tetramer	6842-15-5	9.36E+01	n	---	---	---	9.36E+01	9.36E+01	---
Pyridine	110-86-1	7.17E-01	n	---	---	---	7.17E-01	9.36E-01	3.07E+00
Quinoline	91-22-5	5.28E-03	c	5.28E-03	1.73E-02	7.59E-03	---	---	---
Ronnel	299-84-3	2.04E+00	n	---	---	---	2.04E+00	4.68E+01	2.13E+00
Safrole	94-59-7	3.16E-02	c	3.16E-02	2.36E-01	3.65E-02	---	---	---
Selenium	7782-49-2	4.13E+00	n	---	---	---	4.13E+00	4.68E+00	3.55E+01
Selenourea	630-10-4	4.68E+00	n	---	---	---	4.68E+00	4.68E+00	---
Silver	7440-22-4	1.57E+00	n	---	---	---	1.57E+00	4.68E+00	2.36E+00
Simazine	122-34-9	1.18E-01	c	1.18E-01	4.33E-01	1.62E-01	1.78E+00	4.68E+00	2.87E+00
Sodium diethyldithiocarbamate	148-18-5	1.93E-01	c	1.93E-01	1.93E-01	---	2.81E+01	2.81E+01	---
Sodium polyacrylate	9003-04-7	3.93E+02	n	---	---	---	3.93E+02	4.68E+02	2.47E+03
Strontium	7440-24-6	3.38E+02	n	---	---	---	3.38E+02	5.62E+02	8.51E+02
Strychnine	57-24-9	2.33E-01	n	---	---	---	2.33E-01	2.81E-01	1.35E+00
Styrene	100-42-5	2.98E+01	n	---	---	---	2.98E+01	1.87E+02	3.55E+01
Sulfolane	126-33-0	1.84E-02	n	---	---	---	1.84E-02	1.87E-02	1.07E+00
Tebuconazole	107534-96-3	2.81E+01	n	---	---	---	2.81E+01	2.81E+01	---
Tebuthiuron	34014-18-1	6.55E+01	n	---	---	---	6.55E+01	6.55E+01	---
Terbufos	13071-79-9	2.15E-03	n	---	---	---	2.15E-03	2.34E-02	2.36E-03
Tert-amyl-methyl ether (TAME)	994-05-8	1.60E+01	n	---	---	---	1.60E+01	3.74E+01	2.79E+01
Tert-butyl alcohol (2-methyl-2-propanol)	75-65-0	6.63E+01	n	---	---	---	6.63E+01	8.42E+01	3.12E+02
Tetrachlorobenzene, 1,2,3,4-	634-66-2	8.15E-03	n	---	---	---	8.15E-03	2.81E-01	8.39E-03
Tetrachlorobenzene, 1,2,3,5-	634-90-2	7.99E-03	n	---	---	---	7.99E-03	2.81E-01	8.22E-03
Tetrachlorobenzene, 1,2,4,5-	95-94-3	9.70E-03	n	---	---	---	9.70E-03	2.81E-01	1.00E-02
Tetrachloroethane, 1,1,1,2-	630-20-6	3.12E-01	c	3.12E-01	2.00E+00	3.70E-01	6.55E+00	2.81E+01	8.55E+00
Tetrachloroethane, 1,1,2,2-	79-34-5	9.38E-02	c	9.38E-02	2.60E-01	1.47E-01	1.80E+01	3.74E+01	3.48E+01
Tetrachloroethylene (perchloroethylene)	127-18-4	1.48E-01	c	1.48E-01	1.00E+00	1.74E-01	2.08E+00	9.36E+00	2.68E+00
Tetrachlorophenol, 2,3,4,5-	4901-51-3	1.35E+00	n	---	---	---	1.35E+00	2.81E+01	1.42E+00
Tetrachlorophenol, 2,3,4,6-	58-90-2	2.13E+00	n	---	---	---	2.13E+00	2.81E+01	2.31E+00
Tetrachlorophenol, 2,3,5,6-	935-95-5	1.17E+00	n	---	---	---	1.17E+00	2.81E+01	1.22E+00
Tetradifon	116-29-0	2.61E+00	n	---	---	---	2.61E+00	1.87E+01	3.04E+00
Tetraethyl dithiopyrophosphate (sulfofep)	3689-24-5	6.95E-02	n	---	---	---	6.95E-02	4.68E-01	8.16E-02
Tetraethyl lead	78-00-2	3.99E-06	n	---	---	---	3.99E-06	9.36E-05	4.17E-06
Tetrahydrofuran	109-99-9	4.84E+00	c	4.84E+00	6.84E+00	1.66E+01	1.50E+02	1.87E+02	7.48E+02
Tetrahydropyran	142-68-7	4.06E+00	c	4.06E+00	6.84E+00	9.97E+00	1.32E+02	1.87E+02	4.49E+02
Thallium and compounds (as thallium chloride)	7791-12-0	6.61E-02	n	---	---	---	6.61E-02	7.49E-02	5.67E-01
Thiofanox	39196-18-4	1.65E-01	n	---	---	---	1.65E-01	2.81E-01	3.99E-01
Thionazin	297-97-2	4.30E-02	n	---	---	---	4.30E-02	6.55E-02	1.25E-01
Thiophanate-methyl	23564-05-8	6.71E+01	n	---	---	---	6.71E+01	7.49E+01	6.44E+02
Thiram	137-26-8	3.58E+00	n	---	---	---	3.58E+00	4.68E+00	1.53E+01
Tin	7440-31-5	2.42E+02	n	---	---	---	2.42E+02	5.62E+02	4.25E+02
Titanium	7440-32-6	8.67E+04	n	---	---	---	8.67E+04	4.68E+05	1.06E+05
Toluene	108-88-3	1.65E+01	n	---	---	---	1.65E+01	7.49E+01	2.11E+01
Toluenediamine, 2,4-	95-80-7	1.45E-02	c	1.45E-02	1.62E-02	1.34E-01	---	---	---
Toluenediamine, 2,6-	823-40-5	1.74E+02	n	---	---	---	1.74E+02	1.87E+02	2.55E+03
Toluidine, o-	95-53-4	9.53E-02	c	9.53E-02	2.17E-01	1.70E-01	---	---	---
Toluidine, p-	106-49-0	1.19E-01	c	1.19E-01	2.74E-01	2.12E-01	---	---	---
TP Silvex, 2,4,5-	93-72-1	1.23E+00	n	---	---	---	1.23E+00	7.49E+00	1.47E+00
Triadimenol	55219-65-3	2.81E+01	n	---	---	---	2.81E+01	2.81E+01	---
Triallate	2303-17-5	7.29E-01	n	---	---	---	7.29E-01	1.22E+01	7.75E-01
TriaminotriNitrobenzene (TATB)	3058-38-6	1.58E+00	c	1.58E+00	1.73E+00	1.77E+01	2.65E+00	2.81E+00	4.73E+01
Tributyltin oxide	56-35-9	1.70E-02	n	---	---	---	1.70E-02	2.81E-01	1.81E-02
Trichlorobenzene, 1,2,3-	87-61-6	1.71E-01	n	---	---	---	1.71E-01	2.81E+00	1.82E-01
Trichlorobenzene, 1,2,4-	120-82-1	6.50E-01	n	---	---	---	6.50E-01	9.36E+00	6.99E-01

Tier 1 Contact Recreation Water PCLs ¹

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		Tot RW _{Comb} ² (mg/L)	note ³		Tot RW _{Comb} ² (mg/L)	RW _{Ing} (mg/L)	RW _{Derm} (mg/L)	Tot RW _{Comb} ² (mg/L)	RW _{Ing} (mg/L)	RW _{Derm} (mg/L)
Trichlorobenzene, 1,3,5-	108-70-3	1.33E-01	n		---	---	---	1.33E-01	2.81E+00	1.40E-01
Trichloroethane, 1,1,1-	71-55-6	4.72E+01	n		---	---	---	4.72E+01	1.87E+02	6.31E+01
Trichloroethane, 1,1,2-	79-00-5	3.25E-01	c		3.25E-01	9.12E-01	5.05E-01	1.79E+00	3.74E+00	3.41E+00
Trichloroethylene	79-01-6	1.01E+00	c		1.01E+00	4.73E+00	1.29E+00	1.74E+00	5.62E+00	2.52E+00
Trichlorofluoromethane	75-69-4	4.33E+01	n		---	---	---	4.33E+01	2.81E+02	5.12E+01
Trichlorophenol, 2,3,4-	15950-66-0	7.79E+00	n		---	---	---	7.79E+00	9.36E+01	8.49E+00
Trichlorophenol, 2,3,5-	933-78-8	9.32E+00	n		---	---	---	9.32E+00	9.36E+01	1.04E+01
Trichlorophenol, 2,3,6-	933-75-5	2.53E+00	n		---	---	---	2.53E+00	9.36E+01	2.60E+00
Trichlorophenol, 2,4,5-	95-95-4	1.40E+01	n		---	---	---	1.40E+01	9.36E+01	1.64E+01
Trichlorophenol, 2,4,6-	88-06-2	4.55E-01	c		4.55E-01	4.73E+00	5.04E-01	---	---	---
Trichlorophenol, 3,4,5-	609-19-8	7.47E+00	n		---	---	---	7.47E+00	9.36E+01	8.12E+00
Trichlorophenoxyacetic acid, 2,4,5-	93-76-5	2.36E+00	n		---	---	---	2.36E+00	9.36E+00	3.16E+00
Trichloropropane, 1,1,2-	598-77-6	1.66E+00	n		---	---	---	1.66E+00	4.68E+00	2.58E+00
Trichloropropane, 1,2,3-	96-18-4	1.71E-03	c		1.71E-03	7.43E-03	2.23E-03	1.86E+00	5.62E+00	2.77E+00
Trichloro-1,2,2-trifluoroethane, 1,1,2-	76-13-1	6.04E+03	n		---	---	---	6.04E+03	2.81E+04	7.69E+03
Triethanolamine	102-71-6	1.87E+02	n		---	---	---	1.87E+02	1.87E+02	3.82E+05
Triethylene glycol	112-27-6	2.79E+03	n		---	---	---	2.79E+03	2.81E+03	3.75E+05
Triethylphosphorothioate, O, O, O-	126-68-1	2.91E-03	n		---	---	---	2.91E-03	7.77E-03	4.66E-03
Trimethylbenzene, 1,2,3-	526-73-8	3.70E+00	n		---	---	---	3.70E+00	4.68E+01	4.02E+00
Trimethylbenzene, 1,2,4-	95-63-6	3.26E+00	n		---	---	---	3.26E+00	4.68E+01	3.50E+00
Trimethylbenzene, 1,3,5-	108-67-8	3.05E+00	n		---	---	---	3.05E+00	4.68E+01	3.26E+00
Trinitrobenzene, 1,3,5-	99-35-4	2.25E+01	n		---	---	---	2.25E+01	2.81E+01	1.14E+02
Trinitrophenylmethylnitramine (tetryl; nitramine)	479-45-8	6.80E+00	n		---	---	---	6.80E+00	9.36E+00	2.48E+01
Trinitrotoluene, 2,4,6-	118-96-7	3.08E-01	n		9.36E-01	1.73E+00	2.03E+00	3.08E-01	4.68E-01	9.04E-01
Uranium (soluble salts)	7440-61-1	2.48E+00	n		---	---	---	2.48E+00	2.81E+00	2.13E+01
Valeric acid (pentanoic acid)	109-52-4	2.72E+02	n		---	---	---	2.72E+02	4.68E+02	6.52E+02
Vanadium	7440-62-2	1.08E+00	n		---	---	---	1.08E+00	6.55E+00	1.29E+00
Vernam	1929-77-7	1.33E-01	n		---	---	---	1.33E-01	9.36E-01	1.55E-01
Vinyl acetate	108-05-4	7.48E+02	n		---	---	---	7.48E+02	9.36E+02	3.72E+03
Vinyl chloride	75-01-4	1.13E-02	c		1.13E-02	3.47E-02	1.68E-02	1.25E+00	2.81E+00	2.24E+00
Vinylcyclohexane	695-12-5	1.46E+01	n		---	---	---	1.46E+01	4.68E+02	1.50E+01
Warfarin	81-81-2	9.62E-02	n		---	---	---	9.62E-02	2.81E-01	1.46E-01
Xylene, m-	108-38-3	2.08E+02	n		---	---	---	2.08E+02	1.87E+03	2.34E+02
Xylene, o-	95-47-6	2.27E+02	n		---	---	---	2.27E+02	1.87E+03	2.59E+02
Xylene, p-	106-42-3	2.16E+02	n		---	---	---	2.16E+02	1.87E+03	2.45E+02
Xylenes	1330-20-7	2.40E+01	n		---	---	---	2.40E+01	1.87E+02	2.75E+01
Zinc	7440-66-6	2.01E+02	n		---	---	---	2.01E+02	2.81E+02	7.09E+02
6 C aliphatics (TPH)	NA	5.62E+01	n		---	---	---	5.62E+01	5.62E+01	---
>6-8 C aliphatics (TPH)	NA	5.62E+01	n		---	---	---	5.62E+01	5.62E+01	---
>8-10 C aliphatics (TPH)	NA	9.36E+01	n		---	---	---	9.36E+01	9.36E+01	---
>10-12 C aliphatics (TPH)	NA	9.36E+01	n		---	---	---	9.36E+01	9.36E+01	---
>12-16 C aliphatics (TPH)	NA	9.36E+01	n		---	---	---	9.36E+01	9.36E+01	---
>16-21 C aliphatics (TPH)	NA	1.87E+03	n		---	---	---	1.87E+03	1.87E+03	---
>16-21 C, >21-35 C aliphatics (TPH) (for transformer mineral oil releases only)	NA	1.50E+03	n		---	---	---	1.50E+03	1.50E+03	---
>7-8 C aromatics (TPH)	NA	9.36E+01	n		---	---	---	9.36E+01	9.36E+01	---
>8-10 C aromatics (TPH)	NA	3.74E+01	n		---	---	---	3.74E+01	3.74E+01	---
>10-12 C aromatics (TPH)	NA	3.74E+01	n		---	---	---	3.74E+01	3.74E+01	---
>12-16 C aromatics (TPH)	NA	3.74E+01	n		---	---	---	3.74E+01	3.74E+01	---
>16-21 C aromatics (TPH)	NA	2.81E+01	n		---	---	---	2.81E+01	2.81E+01	---
>21-35 C aromatics (TPH)	NA	2.81E+01	n		---	---	---	2.81E+01	2.81E+01	---

Footnotes

¹ In accordance with §350.72(b), when establishing Tier 1 PCLs for individual COCs for each of the individual and combined human health exposure pathways, person must evaluate whether the PCLs need to be adjusted to lower concentrations to meet the cumulative carcinogenic risk level and hazard index criteria specified in §350.72(c). For COCs which exhibit both carcinogenic and noncarcinogenic characteristics, they shall be evaluated as both a carcinogen and noncarcinogen when determining whether the PCL established for an individual COC for each of the individual and combined human health exposure pathways needs to be adjusted to a lower concentration to meet the cumulative risk and hazard criteria. The person shall then use the lower of the carcinogenic or noncarcinogenic PCL as the Tier 1 human health PCL. In other words, the Tier 1 PCLs provided in this table for an individual COC should not be used as the final Tier 1 human health PCL for any of the individual or combined exposure pathways in cases where there are more than 10 carcinogenic and/or more than 10 noncarcinogenic COCs within a source medium unless it can be demonstrated that further downward adjustment is not necessary to meet the cumulative risk and hazard criteria.

² Combined includes incidental ingestion and dermal pathway.

³ c = carcinogenic; n = noncarcinogenic