## Last Revised: November 8, 2019

| Summary of Updates to the Tables Accompanying the Texas Risk Reduction Program (TRRP) Rule[1] | |
|---|---|
| **Date of Change** | **Change Made** |
| 11/8/2019 | Benzo(j)fluoranthene: SFo and URF revised |
| 11/8/2019 | Bis(2-chloroisopropyl) ether: Name changed to Bis(2-chloro-1-methyl) ether |
| 11/8/2019 | Bromodichloromethane: $^{GW}GW_{Ing}$ PCLs were replaced with the MCL for total trihalomethanes in Table 3, $^{GW}Soil_{Ing}$ PCLs were revised in Tables 1 and 2, and footnote for total trihalomethanes was revised in Tables 1, 2 and 3. |
| 11/8/2019 | Bromoform: $^{GW}GW_{Ing}$ PCLs were replaced with the MCL for total trihalomethanes in Table 3, $^{GW}Soil_{Ing}$ PCLs were revised in Tables 1 and 2, and footnote for total trihalomethanes was revised in Tables 1, 2 and 3. |
| 11/8/2019 | Chloroform: $^{GW}GW_{Ing}$ PCLs were replaced with the MCL for total trihalomethanes in Table 3, $^{GW}Soil_{Ing}$ PCLs were revised in Tables 1 and 2, and footnote for total trihalomethanes was revised in Tables 1, 2 and 3. |
| 11/8/2019 | Cyclotrimethylenetrinitramine (RDX): Class, SFo and RfD revised |
| 11/8/2019 | Dibromochloromethane: $^{GW}GW_{Ing}$ PCLs were replaced with the MCL for total trihalomethanes in Table 3, $^{GW}Soil_{Ing}$ PCLs were revised in Tables 1 and 2, and footnote for total trihalomethanes was revised in Tables 1, 2 and 3. |
| 11/8/2019 | Dichloroethane, 1,2-: RfD revised |
| 11/8/2019 | Diethanolamine: RfC added |
| 11/8/2019 | Dodecylphenol, 4-: Duplicate rows were eliminated |
| 11/8/2019 | Nitrate: $^{GW}Soil_{Ing}$ PCLs removed (see footnote in PCL tables) |
| 11/8/2019 | Nonylphenol, 4-n-: Duplicate rows were eliminated |
| 11/8/2019 | Potassium: CAS revised |
| 11/8/2019 | Toxaphene: RfD added |
| 11/8/2019 | Triethanolamine: RfC added |
| 4/27/2018 | Chlorine: RfC revised |
| 4/27/2018 | Cobalt: URF and RfC revised |
| 4/27/2018 | Ethylene dibromide (dibromoethane, 1,2-): Class, URF and RfC revised |
| 4/27/2018 | Manganese: RfC revised |
| 4/27/2018 | Transformer Mineral Oil: Added back into tables (accidentally left out in previous years) |
| 3/31/2017 | Benz(a)anthracene : Class, SFo and URF revised |
| 3/31/2017 | Benzo-a-pyrene : Class, SFo and URF revised; RfD and RfC added |
| 3/31/2017 | Benzo-b-fluoranthene : Class, SFo and URF revised |
| 3/31/2017 | Benzo-k-fluoranthene : Class, SFo and URF revised |
| 3/31/2017 | Cadmium : Class, URF and RfC revised |
| 3/31/2017 | Chromium (VI) : Class and RfD revised |
| 3/31/2017 | Chrysene : Class, SFo and URF revised |
| 3/31/2017 | Dibenz-a,h-anthracene : Class, SFo and URF revised |
| 3/31/2017 | Dichloroethane, 1,2- : URF and RfC revised |
| 3/31/2017 | Dichloropropane, 1,2- : Class, SFo, and RfD revised and URF added |
| 3/31/2017 | Dimethylformamide, N,N- : NEW |
| 3/31/2017 | Ethanol, 2-amino- : RfC added |
| 3/31/2017 | Ethylene oxide : Class and URF revised |
| 3/31/2017 | Heptane, n- : RfC revised |
| 3/31/2017 | Hexachloropropylene : Sfo and RfD revised, URF removed and RfC added |
| 3/31/2017 | Indeno-1,2,3-cd-pyrene : Class, SFo and URF revised |

## Last Revised: November 8, 2019

| Summary of Updates to the Tables Accompanying the Texas Risk Reduction Program (TRRP) Rule[1] | |
|---|---|
| **Date of Change** | **Change Made** |
| 3/31/2017 | Mercuric chloride : Chemical listing removed from tables. Mercury toxicity factors apply to all inorganic forms of mercury. |
| 3/31/2017 | Nitrate : name revised to Nitrate-N to be consistent with MCLs. Laboratories should report results in nitrate as nitrogen (Nitrate-N). If a laboratory reports the results in nitrate as nitrate (Nitrate-NO3), the conversion is Nitate-N = 0.2259 x Nitrate-NO3. |
| 3/31/2017 | Nitrite : name revised to Nitrite-N to be consistent with MCLs. Laboratories should report results in nitrite as nitrogen (Nitrite-N). If a laboratory reports the results in nitrite as nitrite (Nitrate-NO2), the conversion is Nitite-N = 0.3045 x Nitrite-NO2. |
| 3/31/2017 | Pentane : RfD revised |
| 3/31/2017 | Phenol, 4-tert-butyl- : RfD revised |
| 3/31/2017 | Thallium and compounds : name revised to Thallium and RfD revised |
| 3/31/2017 | Triaminotrinitrobenzene (TATB) : SFo removed |
| 3/31/2017 | Trichloro-1,2,2-trifluoroethane, 1,1,2- : RfC revised |
| 3/31/2017 | Trimethylbenzene, 1,2,3- : RfD and RfC revised |
| 3/31/2017 | Trimethylbenzene, 1,2,4- : RfD and RfC revised |
| 3/31/2017 | Trimethylbenzene, 1,3,5- : RfD and RfC revised |
| 3/4/2016 | Asbestos, removed from all tables: URF removed in 2011. Contact your TCEQ project manager if asbestos may be a chemical of concern. |
| 3/4/2016 | Chlordane, gamma : name revised to Chlordane, trans- (gamma chlordane) |
| 3/4/2016 | Dimethyl-2-nitrobenzene, 1,3- : NEW |
| 3/4/2016 | Dimethyl-3-nitrobenzene, 1,2- : NEW |
| 3/4/2016 | Dimethyl-4-nitrobenzene, 1,2- : NEW |
| 3/4/2016 | Dimethyl-5-nitrobenzene, 1,3- : NEW |
| 3/4/2016 | Ethoxy ethanol, 2- : Henry's Law Constant revised |
| 3/4/2016 | Perfluorooctanoic sulfonic acid (1-Octanesulfonic acid, heptadecafluoro-1-) : RfC revised |
| 3/4/2016 | Perfluoropentanoic acid (Pentanoic acid, nonafluoro-) : RfD revised |
| 3/4/2016 | Perfluorohexanoic acid (Hexanoic acid, undecafluoro-) : RfD revised |
| 3/4/2016 | Perfluorododecanoic acid (Dodecanoic acid, tricosafluoro-) : RfC revised |
| 3/4/2016 | Perfluorodecanoic acid (Decanoic acid, nonadecafluoro-) : RfC revised |
| 3/4/2016 | Perfluorohexane sulfonic acid (1-Hexanesulfonic acid, triddecafluoro-) : RfD and RfC revised |
| 3/4/2016 | Perfluorobutyric acid (Butanoic acid, heptafluoro-) : RfC revised |
| 3/4/2016 | Perfluorobutane sulfonic acid (1-Butanesulfonic acid, nonafluoro-) : RfC revised |
| 12/16/2015 | Ammonia: Class and RfC revised |
| 12/16/2015 | Chromium (VI): URF and RfC revised |
| 12/16/2015 | Dicyclopentadiene: Class and RfD revised and RfC was removed |
| 12/16/2015 | Ethyl acrylate: RfD and RfC added |
| 12/16/2015 | Isopropyl alcohol: RfD revised and RfC added |
| 12/16/2015 | Methyl-5-nitroaniline, 2- (5-nitro-o-toluidine): Chemical removed from PCL Tables because Sfo removed in 2014 and the chemical has no other toxicity factors |
| 12/16/2015 | Perfloro Acids (All): RfDs revised |
| 12/16/2015 | Phenol: Class revised and RfC added |
| 12/16/2015 | Triethylene glycol: Class and RfD revised |
| 12/16/2015 | Tungsten (as sodium tungstate dihydride): NEW |
| 11/12/2014 | Aluminum and Silver: Correction for error in Comm/Ind Groundwater PCL |
| 11/12/2014 | Arsenic: calculation error |
| 11/12/2014 | Cadmium: calculation error |

## Last Revised: November 8, 2019

| Summary of Updates to the Tables Accompanying the Texas Risk Reduction Program (TRRP) Rule[1] | |
|---|---|
| **Date of Change** | **Change Made** |
| 11/12/2014 | Dimethylaminoazobenzene, p: calculation error |
| 11/12/2014 | Perfluoro Acids (All): calculation error |
| 9/10/2014 | Acenaphthene: Class revised |
| 9/10/2014 | Acetone cyanohydrin: Class revised |
| 9/10/2014 | Acrolein: RfC revised |
| 9/10/2014 | Arsenic: URF updated |
| 9/10/2014 | Biphenyl, 1,1: Class revised |
| 9/10/2014 | Biphenyl, 1,1: RfD revised |
| 9/10/2014 | Butanal (butyraldehyde): RfC added |
| 9/10/2014 | Butene, 1: RfC revised |
| 9/10/2014 | Butene, cis-2: RfC revised |
| 9/10/2014 | Butene, trans-2: RfC revised |
| 9/10/2014 | Butyl acetate: RfC revised |
| 9/10/2014 | Butylbenzene, sec-: Class revised |
| 9/10/2014 | Butylbenzene, tert-: Class revised |
| 9/10/2014 | Cadmium: RfC added |
| 9/10/2014 | Chloroethanol, 2- :Class and RfD revised |
| 9/10/2014 | Chloromethane (methyl chloride): RfD added |
| 9/10/2014 | Chloromethane: Class revised |
| 9/10/2014 | Cobalt: RfD revised |
| 9/10/2014 | Copper: RfD revised |
| 9/10/2014 | Desethylatrazine: NEW |
| 9/10/2014 | Dibenzothiophene: Class and RfD revised |
| 9/10/2014 | Dichlorobenzene, 1,4- RfC revised |
| 9/10/2014 | Dinitrotoluene, 2,6- RfD reference revised |
| 9/10/2014 | Di-n-octyl phthalate: Class and RfD revised |
| 9/10/2014 | Dioxane, 1,4: RfC revised; URF added |
| 9/10/2014 | Ethoxy ethanol, 2: RfD revised |
| 9/10/2014 | Ethyl acetate: Class and RfD revised; RfC added |
| 9/10/2014 | Fenuron: NEW |
| 9/10/2014 | Fluoranthene: Class revised |
| 9/10/2014 | Isobutylene (2-methyl-1-propene): RfD added |
| 9/10/2014 | Manganese: RfC revised |
| 9/10/2014 | Methacrylonitrile: Class and RfD revised; RfC added |
| 9/10/2014 | Methanol: RfD revised |
| 9/10/2014 | Methoxyethanol, 2: RfD revised |
| 9/10/2014 | Methyl acrylate: Class revised; RfC added |
| 9/10/2014 | Methyl cyclohexane: Class revised |
| 9/10/2014 | Methyl-5-nitroaniline, 2- (5-nitro-o-toluidine): SFo removed |
| 9/10/2014 | Methylene chloride (dichloromethane): SFo and RfD revised |
| 9/10/2014 | Perfluorobutane sulfonic acid (1-Butanesulfonic acid, nonafluoro-): NEW |
| 9/10/2014 | Perfluorobutyric acid (Butanoic acid, heptafluoro-): NEW |
| 9/10/2014 | Perfluorodecane sulfonic acid (1-Decanesulfonic acid, heneicosafluoro-): NEW |
| 9/10/2014 | Perfluorodecanoic acid (Decanoic acid, nonadecafluoro-):NEW |

## Last Revised: November 8, 2019

| Summary of Updates to the Tables Accompanying the Texas Risk Reduction Program (TRRP) Rule[1] | |
|---|---|
| **Date of Change** | **Change Made** |
| 9/10/2014 | Perfluorododecanoic acid (Dodecanoic acid, tricosafluoro-): NEW |
| 9/10/2014 | Perfluoroheptanoic acid (Heptanoic acid, tridecafluoro-): NEW |
| 9/10/2014 | Perfluorohexane sulfonic acid (1-Hexanesulfonic acid, triddecafluoro-): NEW |
| 9/10/2014 | Perfluorohexanoic acid (Hexanoic acid, undecafluoro-): NEW |
| 9/10/2014 | Perfluorononanoic acid (Nonanoic acid, heptadecafluoro-): NEW |
| 9/10/2014 | Perfluorooctane sulfonamide (1-Octanesulfonamide, hetpadecafluoro-): NEW |
| 9/10/2014 | Perfluorooctanoic acid (Octanoic acid, pentadecafluoro-): NEW |
| 9/10/2014 | Perfluorooctanoic sulfonic acid (1-Octanesulfonic acid, heptadecafluoro-1-): NEW |
| 9/10/2014 | Perfluoropentanoic acid (Pentanoic acid, nonafluoro-): NEW |
| 9/10/2014 | Perfluorotetradecanoic acid (Tetradecanoic acid, heptacosafluoro-): NEW |
| 9/10/2014 | Perfluorotridecanoic acid (Tridecanoic acid, pentacosafluoro-): NEW |
| 9/10/2014 | Perfluoroundecanoic acid (Undecanoic acid, uncosafluoro-): NEW |
| 9/10/2014 | Phenothiazine: RfD revised |
| 9/10/2014 | Prometryn: NEW |
| 9/10/2014 | Tetrachloroethylene: RfD revised |
| 9/10/2014 | Toluidine, o: Class and SFo revised |
| 9/10/2014 | Toluidine, p: Class and SFo revised |
| 9/10/2014 | Trinitrophenylmethylnitramine (tetryl; nitramine): RfD revised |
| 9/10/2014 | Uranium (soluble salts): RfC revised |
| 6/29/2012 | Benzenethiol: RfD revised |
| 6/29/2012 | Chloro-1,3-butadiene, 2-:Class, URF, and RfC revised |
| 6/29/2012 | Diisopropyl ether (2,2'-oxybis-propane): RfC revised |
| 6/29/2012 | Dioxins/furans, polychlorinated; (reported as 2,3,7,8-TCDD TEQ): RfD was revised by USEPA; however, the TRRP rule sets the critical PCL at all 3 tiers for dioxin in soil [30 TAC 350.76(e)(3)] so the PCLs did not change. |
| 6/29/2012 | Ethyl-2-methyl benzene, 1-: RfD revised |
| 6/29/2012 | Ethyl-4-methyl benzene: RfD revised |
| 6/29/2012 | Hexachloroethane: Class, Sfo, RfD, URF, and RfC revised |
| 6/29/2012 | Methoxyethanol, 2-: RfD revised |
| 6/29/2012 | Methyl-5-nitroaniline, 2- (5-nitro-o-toluidine): Class and Sfo revised |
| 6/29/2012 | Methylene chloride (dichloromethane): Class, Sfo, RfD, URF, and RfC revised |
| 6/29/2012 | Nickel and compounds: Class, URF, and RfC revised |
| 6/29/2012 | Pentane: RfC revised |
| 6/29/2012 | Phenothiazine: RfD revised |
| 6/29/2012 | Sulfolane: RfD revised |
| 6/29/2012 | Tetrachloroethylene: Class, Sfo, and RfD revised |
| 6/29/2012 | Tetrahydrofuran: Class, RfD, and RfC revised |
| 6/29/2012 | Trichloroethane, 1,1,1: Class and RfC revised |
| 6/29/2012 | Trichloroethylene: Class, Sfo, RfD, URF, and RfC revised |
| 6/29/2012 | Vanadium: RfD and RfC revised |
| 6/29/2012 | Added: Cyclohexene, 4-ethenyl-(aka 4-vinylcyclohexene); Isopentane; Cyclopentane; Methylstyrene, alpha-; Morpholine, 4-butyl |
| 5/24/2011 | Asbestos : URF (Unit Risk Factors) and soil PCLs removed. Contact your TCEQ Project Manager if asbestos may be a chemical of concern. |
| 5/24/2011 | Glyphosate : chemical/physical properties revised. Ionizing Koc data under review. Contact your TCEQ Project Manager if glyphosate may be a chemical of concern. |

## Last Revised: November 8, 2019

| Summary of Updates to the Tables Accompanying the Texas Risk Reduction Program (TRRP) Rule[1] | |
|---|---|
| **Date of Change** | **Change Made** |
| 5/24/2011 | TCDD, 2,3,7,8: (dioxin) : named revised to Dioxins/furans, polychlorinated; (reported as 2,3,7,8:TCDD TEQ) |
| 5/24/2011 | See list on next sheet for additional toxicity factors changes. For questions on toxicity factors, contact the Toxicology Section at 877-992-8370. |
| 5/24/2011 | Added: Leptophos, Ethanol, 2-(methylamino)-, Hexene, cis-2-, Pentadiene, cis-1,3-, Cyclopentene, Pentene, 2. |
| 3/31/2010 | Acrylamide : Sfo, RfD, URF and RfC revised |
| 3/31/2010 | Benzyl alcohol : RfD revised |
| 3/31/2010 | Bromobenzene : RfD and RfC revised |
| 3/31/2010 | Butanol, 2-: RfD and RfC revised |
| 3/31/2010 | Chromium (III) : RfC revised |
| 3/31/2010 | Chromium (Total) : RfC revised |
| 3/31/2010 | Diethylene glycol monobutyl ether : RfD and RfC revised |
| 3/31/2010 | Fluorine : RfC revised |
| 3/31/2010 | Hexanone, 2-: RfD and RfC revised |
| 3/31/2010 | Hydrazine : RfC revised |
| 3/31/2010 | Hydroquinone : Sfo revised |
| 3/31/2010 | Kepone (chlordecone) : Sfo and RfD revised |
| 3/31/2010 | Pentane : RfC revised |
| 3/31/2010 | Titanium : RfD revised |
| 3/31/2010 | Trichlorobenzene, 1,2,4- : Sfo and RfC revised |
| 3/31/2010 | Trichloropropane, 1,2,3- : Sfo, RfD, and RfC revised |
| 3/31/2010 | Vanadium : RfD revised |
| 3/31/2010 | Added : Hexanedinitrile |
| 3/25/2009 | Allyl Alcohol : RfC revised. |
| 3/25/2009 | Benzyl chloride: RfD and RfC revised. |
| 3/25/2009 | Bromobenzene: RfD and RfC revised. |
| 3/25/2009 | Butadiene, 1,3- : URF and RfC revised. |
| 3/25/2009 | Butyl benzyl phthalate : SFo revised. |
| 3/25/2009 | Chloroaniline, p- : SFo revised. |
| 3/25/2009 | Chloronitrobenzene, p- (1-chloro-4-nitrobenzene) : SFo revised. |
| 3/25/2009 | Cobalt : RfD and RfC revised. |
| 3/25/2009 | Dibromo-3-chloropropane, 1,2-: URF revised. |
| 3/25/2009 | Dichloro-2-butene, 1,4-:URF revised. |
| 3/25/2009 | Dichloro-2-butene, trans-1,4- :URF revised. |
| 3/25/2009 | Dichlorobenzene, 1,4- : RfC revised. |
| 3/25/2009 | Dichloroethane, 1,2-: RfD revised. |
| 3/25/2009 | Dimethylbenzidine, 3,3'-: SFo revised. |
| 3/25/2009 | Dinitrobenzene, 1,3- (dinitrobenzene, 2,4- ) : RfD revised. |
| 3/25/2009 | Formaldehyde : URF and RfC revised. |
| 3/25/2009 | Formic acid : RfC revised. |
| 3/25/2009 | Hydroquinone: SFo and RfD revised. |
| 3/25/2009 | Isobutylene : RfC revised. |
| 3/25/2009 | Lithium : RfD revised. |
| 3/25/2009 | Methylene-bis (2-chloroaniline) 4,4'- : SFo revised. |

## Last Revised: November 8, 2019

| Summary of Updates to the Tables Accompanying the Texas Risk Reduction Program (TRRP) Rule[1] | |
|---|---|
| **Date of Change** | **Change Made** |
| 3/25/2009 | Methylnaphthalene, 1- : SFo revised. |
| 3/25/2009 | Nitroanaline, 4- :SFo, RfD, and RfC revised. |
| 3/25/2009 | Nitrobenzene : RfD, URF, and RfC revised. |
| 3/25/2009 | Nitrosodimethylamine, N-: RfC revised. |
| 3/25/2009 | Nitrotoluene, o- (2-nitrotoluene) : SFo and RfD revised. |
| 3/25/2009 | Propanal (propionaldehyde) : RfC revised. |
| 3/25/2009 | Propylene glycol : RfD revised. |
| 3/25/2009 | Styrene : RfC revised. |
| 3/25/2009 | Tetrachloroethane, 1,1,2,2- : RfD revised. |
| 3/25/2009 | Tetrachloroethylene (PCE) : URF and RfC revised. |
| 3/25/2009 | Toluene : RfC revised. |
| 3/25/2009 | Toluenediamine, 2,6-: RfD revised. |
| 3/25/2009 | Trichloroethylene : SFo, URF and RfC revised. |
| 3/25/2009 | Trimethylbenzene, 1,2,4-: RfD revised. |
| 3/25/2009 | Vinyl Chloride : URF and RfC revised. |
| 3/25/2009 | Xylenes, Xylene, m-, Xylene, o-, and Xylene, p- : RfC revised. |
| 3/25/2009 | Chemicals added this year: Hexene, 1-, Diisopropylbenzene, p- |
| 4/23/2008 | Trichloroethane, 1,1,1- :RfC and RfD revised. |
| 4/23/2008 | Benzene : RfC and URF revised. |
| 4/23/2008 | Butoxy ethanol, 2- : RfC revised. |
| 4/23/2008 | Dichloroethylene, 1,1- : RfC revised. |
| 4/23/2008 | Hexane, n- : RfC revised. |
| 4/23/2008 | Methyl amyl ketone (2:heptanone) : RfC revised. |
| 4/23/2008 | Aluminum : RfD revised. |
| 4/23/2008 | Bis (2-chloroethoxy) methane : RfD revised. |
| 4/23/2008 | Chlorotoluene, p- (4-chlorotoluene) : RfD revised. |
| 4/23/2008 | Dicyclopentadiene : RfC and RfD revised. |
| 4/23/2008 | Dinitro-2-methylphenol, 4,6- (dinitro-o-cresol, 4, 6-) : RfD revised. |
| 4/23/2008 | Hexachlorobutadiene : RfD revised. |
| 4/23/2008 | Malononitrile : RfD revised. |
| 4/23/2008 | Nitroglycerin : RfD and SFo revised. |
| 4/23/2008 | Nitrosodimethylamine, N-:RfD revised. |
| 4/23/2008 | Nitrotoluene, p- : RfD and SFo revised. |
| 4/23/2008 | Trichlorophenol, 2,4,6- : RfD revised. |
| 4/23/2008 | Chloronitrobenzene, p- (1-chloro-4-nitrobenzene) : RfC revised. |
| 4/23/2008 | Dichloroethylene, trans-1,2 :RfC revised. |
| 4/23/2008 | Diisopropyl ether (2,2'-oxybis-propane) : RfC revised. |
| 4/23/2008 | Trimethylbenzene, 1,2,4- : RfC revised. |
| 4/23/2008 | Dibromo-3-chloropropane, 1,2- : SFo revised. |
| 4/23/2008 | Pentachloroethane : SFo revised. |
| 4/23/2008 | Chemicals added this year : Phosphorotrithioic acid, S,S,s-tributyl ester; Biphenyl, 1,1'-, 2-phenoxy-; Hexanediamine, 1,6-; Ethanol, 2-(2-aminoethoxy)- |
| 3/30/2007 | Acetone cyanohydrin : RfD and RfC revised. |
| 3/30/2007 | Adipic acid (hexanedioic acid) : RfD revised. |

## Last Revised: November 8, 2019

| Summary of Updates to the Tables Accompanying the Texas Risk Reduction Program (TRRP) Rule[1] | |
|---|---|
| **Date of Change** | **Change Made** |
| 3/30/2007 | Aluminum : RfD revised. |
| 3/30/2007 | Benzyl alcohol : RfD revised. |
| 3/30/2007 | Bromobenzene : RfC revised. |
| 3/30/2007 | Cacodylic acid : RfD revised. |
| 3/30/2007 | Chlorobenzene : RfC revised. |
| 3/30/2007 | Chloroform : RfC revised. |
| 3/30/2007 | Chloronitrobenzene, p- (1-chloro-4-nitrobenzene) : Sfo revised and RfD added. |
| 3/30/2007 | Cobalt : RfD and RfC revised and URF added. |
| 3/30/2007 | Dibromo-3-chloropropane, 1,2- : RfD added. |
| 3/30/2007 | Dichloroethane, 1,1- : RfD revised. |
| 3/30/2007 | Dichloropropane, 1,3- : RfD revised. |
| 3/30/2007 | Diethylene glycol monobutyl ether : RfD revised. |
| 3/30/2007 | Diisopropyl ether (2,2'-oxybis-propane) : RfC revised. |
| 3/30/2007 | Dimethylbenzidine, 3,3': Sfo revised. |
| 3/30/2007 | Dinitrobenzene, 1,4- : RfD revised. |
| 3/30/2007 | Dinitro-2-methylphenol, 4,6- (dinitro-o-cresol, 4, 6-) : RfD revised. |
| 3/30/2007 | Di:n:octyl phthalate : RfD revised. |
| 3/30/2007 | Epichlorohydrin : RfD revised. |
| 3/30/2007 | Ethylenediamine : RfD revised. |
| 3/30/2007 | Formic acid : RfC revised. |
| 3/30/2007 | Hexane, n- : RfD and RfC revised. |
| 3/30/2007 | Hexanoic acid : RfD revised. |
| 3/30/2007 | Hydroquinone : Sfo added. |
| 3/30/2007 | Kepone (chlordecone) : Sfo and RfD revised. |
| 3/30/2007 | Malononitrile : RfD revised. |
| 3/30/2007 | Methylene-bis (2-chloroaniline) 4,4'- : RfD revised. |
| 3/30/2007 | Nitroaniline, 2 : RfD and RfC revised. |
| 3/30/2007 | Nitroaniline, 3- :Sfo revised. |
| 3/30/2007 | Nitroaniline, 4- :Sfo and RfC revised. |
| 3/30/2007 | Nitrosodimethylamine, N-: RfD added. |
| 3/30/2007 | Nitrosodiphenylamine, N- :RfD added. |
| 3/30/2007 | Nitrotoluene, m- :RfD revised. |
| 3/30/2007 | Nitrotoluene, o- :Sfo added. |
| 3/30/2007 | Nitrotoluene, p- : Sfo added. |
| 3/30/2007 | Propylene glycol : RfD and RfC revised. |
| 3/30/2007 | Tetrachloroethane, 1,1,2,2- : RfD revised. |
| 3/30/2007 | Trichlorobenzene, 1,2,4- : RfC revised. |
| 3/30/2007 | Trichloroethane, 1,1,1- : RfC revised. |
| 3/30/2007 | Trinitrophenylmethylnitramine (tetryl; nitramine) : RfD revised. |
| 3/30/2007 | Xylene, m- :RfC revised. |
| 3/30/2007 | Xylene, o- :RfC revised. |
| 3/30/2007 | Xylene, p- :RfC revised. |
| 3/30/2007 | >8-10 C aliphatics (TPH) : RfC revised. |
| 3/30/2007 | >10-12 C aliphatics (TPH) : RfC revised. |

## Last Revised: November 8, 2019

| Summary of Updates to the Tables Accompanying the Texas Risk Reduction Program (TRRP) Rule[1] | |
|---|---|
| **Date of Change** | **Change Made** |
| 3/30/2007 | >12-16 C aliphatics (TPH) : RfC revised. |
| 3/30/2007 | Chemicals added this year : 1,2-benzenedicarboxylic acid, disodecyl ester, Butyl methacrylate, Ethanol, 2-amino-, ethanol, 2-(2-ethoxyethoxy)-, Nonene, 1-n,- tetraoxadodecane, 2,5,8,11- |
| 3/31/2006 | Barium : RfD was revised. |
| 3/31/2006 | Benzene : RfD corrected. |
| 3/31/2006 | Di-n-octyl phthalate : RfC was revised. |
| 3/31/2006 | Ethylene dibromide : URF was revised. |
| 3/31/2006 | Hexane : RfC was revised. |
| 3/31/2006 | Hexanoic acid : RfD revised. |
| 3/31/2006 | Nonyphenol : RfD revised. |
| 3/31/2006 | Tert-amyl-methyl-ether (TAME) : RfC was revised. |
| 3/31/2006 | Toluene : RfD and RfC were revised. |
| 3/31/2006 | Chemicals added this year : Hydrocaproic acid, 6-, Monocrotophos, Nonylphenol ethoxylate, Prothiofos, Sodium hypochlorite, Sulprofos, Tert-amyl-ethyl ether (TAEE), Tetrachlorvinphose (Stirophos), Tetraethyl pyrophosphate (TEPP) |
| 3/21/2005 | Boron : Carcingenic classification and RfD were revised. |
| 3/21/2005 | Cobalt : RfC was revised. |
| 3/21/2005 | Dioxane, 1,4-: RfD was revised. |
| 3/21/2005 | Ethylene dibromide : Sfo, and URF were revised. RfD and RfC were added. |
| 3/21/2005 | Perchlorate : RfD was revised. |
| 3/21/2005 | Chemicals added this year : Acetate, 2-ethoxyethanol, Acetate, isoamyl, Acetate, isobutyl, Acetate, sec-butyl, Benzenedicarbonitrile, 1,3-, Benzo-j-fluoranthene, Benzophenone, Benzoyl peroxide, Bromacil, Butadiene, 2-methyl-1,3- (isoprene), Butane, 2,3-dimethyl-, Butanol, 2-, Butanol, 2-methyl-2-, Butene, 1-, Butene, cis-2-, Butene, trans-2-, Cyclopentane, methyl-, Dibenzo(a,e)pyrene, Dibenzo(a,h)pyrene, Dibenzo(a,i)pyrene, Dichlormid, Dichlorofluoromethane, Dipropylene glycol, Hexanal, 2-ethyl-, Hydroquinone, Isoamyl alcohol, Isodecanol, Pentane, 2-methyl-, Pentane, 3-methyl-, Pentanol, 1-, Pentanol, 4-methyl-2-, Phenol, 4-tert-butyl-, Phenothiazine, and Tetraethylene glycol. |
| 3/31/2004 | Acetone : RfD was revised. |
| 3/31/2004 | Acrolein : RfD and carcinogenic classifcation were revised. |
| 3/31/2004 | Adipic acid : RfD was revised; RfC was removed; RS-ESL was added. |
| 3/31/2004 | Benzene : RfD and RfC were revised. |
| 3/31/2004 | Cyclohexane : RfC was revised. |
| 3/31/2004 | Diisopropyl ether : RS-ESL was revised. |
| 3/31/2004 | Disodium Iminodiacetate : RfD was revised. |
| 3/31/2004 | Mercury: Much higher PCLs may be obtained using a pH-dependent Kd based on site-specific information (see Figure:30 TAC §350.73(e)(1)(C)). |
| 3/31/2004 | Methyl Ethyl Ketone : RfC was revised. |
| 3/31/2004 | Methyl isobutyl ketone : RfC was added (previously used a RS-ESL). |
| 3/31/2004 | MTBE : reference for toxicity factors was revised. |
| 3/31/2004 | Nickel : RfC was revised. |
| 3/27/2003 | Table containing $K_{oc}$ values for ionizing organic COCs as a function of pH was added. |
| 3/27/2003 | Adipic acid : RfD was revised; RfC was added; RS-ESL was removed. |
| 3/27/2003 | Aminobiphenyl, 4- :SFo was revised; RfD and URF were removed. |
| 3/27/2003 | Ammonium sulfate entry was changed to ammonium salts. |
| 3/27/2003 | Aniline : RfD was added. |

## Last Revised: November 8, 2019

| Summary of Updates to the Tables Accompanying the Texas Risk Reduction Program (TRRP) Rule[1] | |
|---|---|
| **Date of Change** | **Change Made** |
| 3/27/2003 | Arsenic : refer to TRRP website for November 12, 2002 memorandum regarding implementation of new MCL. |
| 3/27/2003 | Bis (2-chloroethoxy) methane : SFo and URF were revised. |
| 3/27/2003 | Boron : RfC was added. |
| 3/27/2003 | Bromobenzene : reference for RfD was revised; RfC was revised. |
| 3/27/2003 | Bromodichloromethane : MCL was removed; note was added regarding MCL for total trihalomethanes |
| 3/27/2003 | Bromoform : MCL was removed; note was added regarding MCL for total trihalomethanes |
| 3/27/2003 | Butadiene, 1,3: URF and carcinogenic classification were revised; RfC was added (previously used a RS:ESL). |
| 3/27/2003 | Butyric acid : RfD was revised; RfC was added; RS-ESL was removed. |
| 3/27/2003 | Chloral hydrate : references for carcinogenic classification and RfD were revised. |
| 3/27/2003 | Chloroform : MCL was removed; note was added regarding MCL for total trihalomethanes |
| 3/27/2003 | Cyclohexane : RS-ESL was revised. |
| 3/27/2003 | Cyclohexanol : RS-ESL was revised. |
| 3/27/2003 | Dibenz-a,h-acridine : carcinogenic classification was revised. |
| 3/27/2003 | Dibromochloromethane : MCL was removed; note was added regarding MCL for total trihalomethanes |
| 3/27/2003 | Dichlorobenzene, 1,2: RfC was revised. |
| 3/27/2003 | Dichloroethylene, 1,1: SFo and URF were removed; RfD was revised; RfC was added. |
| 3/27/2003 | Diethylhexyl adipate : MCL was added. |
| 3/27/2003 | Hexanoic acid : RfD and RfC were revised. |
| 3/27/2003 | Kepone : carcinogenic classification was revised. |
| 3/27/2003 | Lithium : RfD was revised. |
| 3/27/2003 | Mercury : CAS number for mercuric chloride was added to entry. |
| 3/27/2003 | MTBE : URF was revised. |
| 3/27/2003 | Nitroglycerin : SFo was added. |
| 3/27/2003 | Nitrosopiperidine, N: carcinogenic classification was revised. |
| 3/27/2003 | Perylene : RfD was revised. |
| 3/27/2003 | Phenol : RfD was revised. |
| 3/27/2003 | Picloram : reference for RfD was revised. |
| 3/27/2003 | Safarole : carcinogenic classification was revised. |
| 3/27/2003 | Tetrachloroethylene : reference for carcinogenic classification was revised. |
| 3/27/2003 | Toluenediamine, 2,6: LogKoc was revised. |
| 3/27/2003 | Trichloroethylene : reference for carcinogenic classification was revised. |
| 3/27/2003 | Uranium : MCL was revised. |
| 3/27/2003 | Valeric acid : RfD and RfC were revised. |
| 3/27/2003 | Xylenes : RfD was revised; RfC was added (previously used a RS:ESL). |
| 3/28/2002 | References for some tox values were revised. |
| 3/28/2002 | Arsenic : MCL was revised. Note that this change is significant enough for the executive director to require use of the new arsenic MCL, even if the SIN or RAP has already been submitted. |
| 3/28/2002 | Nitrophenol, 3: RS-ESL was revised. |
| 3/28/2002 | Triaminotrinitrobenzene - H_unitless was corrected to reflect a value. |

## Last Revised: November 8, 2019

**Summary of Updates to the Tables Accompanying the Texas Risk Reduction Program (TRRP) Rule[1]**

| Date of Change | Change Made |
|---|---|
| 12/19/2001 | **Note: As discussed in the guidance document Toxicity Factors and Chemical/Physical Parameters (RG-366/TRRP-19), updates to the tables to reflect changes in toxicity factors or chemical/physical data will now be made annually in March. Exceptions to this schedule include a change that has been of such a magnitude that the PCLs previously developed for a COC would not be adequately protective of human health and the environment. |
| 12/19/2001 | Several compounds were added to the tables which are not of human health concern but for which other criteria may apply. These are noted in the tables and an additional information table is referenced. |
| 12/19/2001 | Ammonia : taste and odor value for groundwater was added to the secondary MCL column. |
| 12/19/2001 | Benzaldehyde : RS-ESL was revised. |
| 12/19/2001 | Bis (2-chloroethoxy) methane : chemical/physical parameters were added. |
| 12/19/2001 | Chlordane, gamma : chemical/physical parameters were added. |
| 12/19/2001 | Chloroform : SFo was removed. |
| 12/19/2001 | Chloromethane : RfC and carcinogenic classification were revised. |
| 12/19/2001 | Cyclohexane : RS-ESL was revised. |
| 12/19/2001 | Diethylene glycol monobutyl ether : RfC was revised. |
| 12/19/2001 | Hexachlorocyclopentadiene : RfD, RfC, and carcinogenic classification were revised. |
| 12/19/2001 | Methyl acetate : RfD was revised. |
| 12/19/2001 | Methyl cyclohexane : RfC was revised. |
| 12/19/2001 | Perchlorate : RfD was revised. Note that this change is significant enough for the executive director to require use of the new perchlorate RfD, even if the SIN or RAP has already been submitted. |
| 12/19/2001 | Quinoline : Carcinogenic classification and SFo were revised. |
| 12/19/2001 | Triaminotrinitrobenzene : chemical/physical parameters were revised. |
| 3/15/2001 | **Note: Updates to the tables will be made approximately once every six months. Exceptions to the six month schedule include a change that has been of such a magnitude that the PCLs previously developed for a contaminant would not be adequately protective of human health and the environment. |
| 3/15/2001 | Please note that several COCs were added to the tables. New COCs added since the last publication of the tables are identified in the chemical/physical properties table and the ABS.d/ABS.gi table. |
| 3/15/2001 | Based on conversations with ATSDR, it was determined that the MRL list provided on ATSDR's website (http://www.atsdr.cdc.gov/mrls.html) lists official, more up-to-date MRLs than the May 23, 1996 FR version which were previously used for the tables. Many of the toxicity factors additions and revisions noted below were due to transitioning to this new source for MRL values. |
| 3/15/2001 | The reference to the 1995 MADEP document was removed and replaced by TNRCC-derived values. This only affected the RfD for one noncarcinogenic PAH (2-methylnaphthalene), which is noted below. |
| 3/15/2001 | Acetaldehyde : RfD was added. |
| 3/15/2001 | Benzene : SFo was revised. |
| 3/15/2001 | Cadmium : ABS.d was changed to 0.001; RfC was removed. |
| 3/15/2001 | Chloral : RfD was revised. |
| 3/15/2001 | Chlordane : CAS number was corrected. |
| 3/15/2001 | Chlorobenzene : RfC was added. |
| 3/15/2001 | Chloromethane : RfC was revised. |
| 3/15/2001 | Chlorotoluene, o: LogKoc and Dair were added to match Figure: 30 TAC §350.73(e) of the TRRP rule; Dwat was also added. |
| 3/15/2001 | Cyanide : Henry's Law Constant was added. |
| 3/15/2001 | Dibenzofuran : chemical/physical parameters were revised. |

## Last Revised: November 8, 2019

| Summary of Updates to the Tables Accompanying the Texas Risk Reduction Program (TRRP) Rule[1] | |
|---|---|
| **Date of Change** | **Change Made** |
| 3/15/2001 | Dichlorobenzene, 1,3: chemical/physical parameters were corrected to match Figure: 30 TAC §350.73(e) of the TRRP rule. |
| 3/15/2001 | Dichloroethane, 1,2: RfC was revised. |
| 3/15/2001 | Dichloropropene, 1,3- (mixed isomers) : RfD, SFo, and URF were revised. |
| 3/15/2001 | Dimethylphthalate : chemical/physical parameters were corrected to match Figure: 30 TAC §350.73(e) of the TRRP rule. |
| 3/15/2001 | Dinitro-2-methylphenol, 4,6- chemical/physical parameters were revised. |
| 3/15/2001 | Endothall : Dair and Dwat were added. |
| 3/15/2001 | Endrin : Dair and Dwat were added. |
| 3/15/2001 | Ethion : Dair and Dwat were added. |
| 3/15/2001 | Ethyl-2-methyl benzene, 1- and ethyl-4-methyl benzene, 1- MCLs were removed (had previously used toluene's MCL). |
| 3/15/2001 | Formaldehyde : RfC was added (previously used a RS-ESL). |
| 3/15/2001 | Hexachlorocyclohexane, alpha : RfD was added. |
| 3/15/2001 | Hexanone, 2: chemical/physical parameters were added. |
| 3/15/2001 | Kepone : SFo and URF were added. |
| 3/15/2001 | Mercury : a second entry was added to include Kds (and PCLs) at two different soil pHs; LogKd was revised to match Figure: 30 TAC §350.73(e) of the TRRP rule. |
| 3/15/2001 | Methylnaphthalene, 1: RfD was revised. |
| 3/15/2001 | Methylnaphthalene, 2: RfD was revised. |
| 3/15/2001 | MTBE : SFo was revised. |
| 3/15/2001 | Naled : Dair value was added. |
| 3/15/2001 | Nickel : RfC was added. |
| 3/15/2001 | Nitrate : LogKoc and Henry's Law Constant were added. |
| 3/15/2001 | Nitroaniline, 3- and nitroaniline, 4: chemical/physical parmaters were revised. |
| 3/15/2001 | Nitrophenol, 2- and nitrophenol, 4: RS-ESLs were added; chemical/physical parameters were revised. |
| 3/15/2001 | t (exposure interval) was corrected to match Figure: 30 TAC §350.75(b)(1) of the TRRP rule (value changed slightly). |
| 3/15/2001 | Tetrachloroethane, 1,1,2,2: RfD was revised. |
| 3/15/2001 | Tetraethyl lead was removed as a COC for the vegetable ingestion pathway (was previously considered to be a metal). |
| 3/15/2001 | Tetrahydrofuran : chemical/physical parameters were revised. |
| 3/15/2001 | Thallium : LogKd was added. |
| 3/15/2001 | Toluenediamine, 2,6: LogKoc was added. |
| 3/15/2001 | Trimethylbenzene, 1,2,3: MCL was removed (had previously used toluene's MCL). |
| 3/15/2001 | Uranium : RfC was added. |
| 3/15/2001 | Vinyl chloride : SFo, RfD, URF, and RfC were revised. |
| 9/16/1999 | Original TRRP tables available. |

**Footnote**

**1** As discussed in TRRP §350.73(a) and in the accompanying guidance document entitled Toxicity Factors and Chemical/Physical Parameters (RG-366/TRRP-19), persons are required to use the most current toxicity factors as of the date of submittal of the Self-Implementation Notice (SIN) or the Response Action Plan (RAP). The TCEQ provides toxicity factors on the agency's website as a convenience to users of the tables. However, since the tables are typically updated on an annual basis, it is the person's responsibility to ensure that they are using the most current toxicity factors according to the heirarchy described in §350.73(a). TCEQ project managers will verify that toxicity factors are current at the time of submittal of the SIN or RAP. Note that if the executive director determines during the review of the Response Action Completion Report (RACR) that a change in a toxicity factor since the submittal of the SIN or RAP has been of such a magnitude that the PCLs previously developed for a COC would clearly not be protective of human health and the environment, the adequacy of the response action must be reevaluated.

## Last Revised: November 8, 2019

| Summary of Updates to the Tables Accompanying the Texas Risk Reduction Program (TRRP) Rule[1] | |
|---|---|
| **Date of Change** | **Change Made** |
| This table contains a list of all edits and additions to the TRRP PCL tables from 1999-November 8, 2019 | |
| end of worksheet | |

# Table 1
## Tier 1 Residential Soil PCLs[1]

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | 0.5 acre source area | | | | | | | | | | | 30 acre source area | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | $^{Tot}Soil_{Comb}$[2] (mg/kg) | note[3] | $^{GW}Soil_{Ing}$ (mg/kg) | note[3] | $^{GW}Soil_{Class\ 3}$ (mg/kg) | note[3] | $^{Air}Soil_{Inh\text{-}V}$[4] (mg/kg) | note[3] | $^{Air}GW\text{-}Soil_{Inh\text{-}V}$ (mg/kg) | note[3] | $^{GW}$Soil for Secondary MCL (mg/kg) | $^{Tot}Soil_{Comb}$[2] (mg/kg) | note[3] | $^{GW}Soil_{Ing}$ (mg/kg) | note[3] | $^{GW}Soil_{Class\ 3}$ (mg/kg) | note[3] | $^{Air}Soil_{Inh\text{-}V}$[4] (mg/kg) | note[3] | $^{Air}GW\text{-}Soil_{Inh\text{-}V}$ (mg/kg) | note[3] | $^{GW}$Soil for Secondary MCL (mg/kg) |
| Acenaphthene | 83-32-9 | 3.0E+03 | n | 2.4E+02 | n | 2.4E+04 | n >S | – | – | – | – | – | 3.0E+03 | n | 1.2E+02 | n | 1.2E+04 | n >S | – | – | – | – | – |
| Acenaphthylene | 208-96-8 | 3.8E+03 | n | 4.1E+02 | n | 4.1E+04 | n >S | – | – | – | – | – | 3.8E+03 | n | 2.0E+02 | n | 2.0E+04 | n >S | – | – | – | – | – |
| Acetaldehyde | 75-07-0 | 1.4E+02 | n | 5.0E+00 | n | 5.0E+02 | n | 1.4E+02 | n | 4.8E+03 | n | – | 7.3E+01 | n | 2.5E+00 | n | 2.5E+02 | n | 7.4E+01 | n | 3.1E+02 | n | – |
| Acetate, 2-ethoxyethanol | 111-15-9 | 3.5E+03 | n | 5.3E+00 | n | 5.3E+02 | n | 6.0E+03 | n | 9.8E+05 | n >S | – | 2.3E+03 | n | 2.7E+00 | n | 2.7E+02 | n | 3.1E+03 | n | 6.3E+04 | n | – |
| Acetate, isoamyl | 123-92-2 | 5.9E+03 | n | 8.7E+00 | n | 8.7E+02 | n | – | – | – | – | – | 5.9E+03 | n | 4.4E+00 | n | 4.4E+02 | n | – | – | – | – | – |
| Acetate, isobutyl | 110-19-0 | 3.9E+03 | n | 3.7E+00 | n | 3.7E+02 | n | – | – | – | – | – | 3.9E+03 | n | 1.8E+00 | n | 1.8E+02 | n | – | – | – | – | – |
| Acetate, sec-butyl | 105-46-4 | 3.9E+03 | n | 4.0E+00 | n | 4.0E+02 | n | – | – | – | – | – | 3.9E+03 | n | 2.0E+00 | n | 2.0E+02 | n | – | – | – | – | – |
| Acetic acid* | 64-19-7 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – |
| Acetone (2-propanone) | 67-64-1 | 6.6E+04 | n | 4.3E+01 | n | 4.3E+03 | n | 6.0E+05 | n | 1.0E+06 | n >S | – | 5.9E+04 | n | 2.1E+01 | n | 2.1E+03 | n | 3.1E+05 | n | 9.7E+05 | n >S | – |
| Acetone cyanohydrin | 75-86-5 | 1.9E+02 | n | 1.4E-01 | n | 1.4E+01 | n | 4.3E+03 | n | 6.6E+05 | n | – | 1.8E+02 | n | 7.1E-02 | n | 7.1E+00 | n | 2.2E+03 | n | 4.3E+04 | n | – |
| Acetonitrile | 75-05-8 | 8.7E+02 | n | 1.5E+00 | n | 1.5E+02 | n | 1.3E+03 | n | 6.2E+04 | n | – | 5.3E+02 | n | 7.6E-01 | n | 7.6E+01 | n | 6.7E+02 | n | 4.0E+03 | n | – |
| Acetophenone | 98-86-2 | 6.7E+03 | n | 8.2E+00 | n | 8.2E+02 | n | – | – | – | – | – | 6.7E+03 | n | 4.1E+00 | n | 4.1E+02 | n | – | – | – | – | – |
| Acetylaminofluorene, 2- | 53-96-3 | 1.2E+00 | c | 4.5E-03 | c | 4.5E-01 | c | 1.9E+01 | c | 1.2E+04 | c >S | – | 1.1E+00 | c | 2.3E-03 | c | 2.3E-01 | c | 9.5E+00 | c | 9.9E+02 | c >S | – |
| Acifluorfen, sodium | 62476-59-9 | 8.7E+02 | n | 2.0E+00 | n | 2.0E+02 | n | – | – | – | – | – | 8.7E+02 | n | 1.0E+00 | n | 1.0E+02 | n | – | – | – | – | – |
| Acridine | 260-94-6 | 2.0E+02 | n | 7.5E+00 | n | 7.5E+02 | n | – | – | – | – | – | 2.0E+02 | n | 3.8E+00 | n | 3.8E+02 | n | – | – | – | – | – |
| Acrolein | 107-02-8 | 3.2E+01 | n | 2.4E-02 | n | 2.4E+00 | n | 1.5E+02 | n | 1.8E+04 | n | – | 2.7E+01 | n | 1.2E-02 | n | 1.2E+00 | n | 7.8E+01 | n | 1.2E+03 | n | – |
| Acrylamide | 79-06-1 | 7.0E+00 | c | 3.5E-03 | c | 3.5E-01 | c | 2.8E+01 | c | 7.2E+03 | c | – | 5.7E+00 | c | 1.8E-03 | c | 1.8E-01 | c | 1.4E+01 | c | 4.8E+02 | c | – |
| Acrylic acid | 79-10-7 | 1.2E+02 | n | 2.4E+01 | n | 2.4E+03 | n | 1.2E+02 | n | 3.0E+04 | n | – | 6.2E+01 | n | 1.2E+01 | n | 1.2E+03 | n | 6.2E+01 | n | 1.9E+03 | n | – |
| Acrylonitrile | 107-13-1 | 3.6E+00 | c | 3.3E-03 | c | 3.3E-01 | c | 5.3E+00 | c | 1.1E+02 | c | – | 2.2E+00 | c | 1.7E-03 | c | 1.7E-01 | c | 2.7E+00 | c | 7.4E+00 | c | – |
| Adipic acid (hexanedioic acid) | 124-04-9 | 1.3E+05 | n | 9.4E+01 | n | 9.4E+03 | n | – | – | – | – | – | 1.3E+05 | n | 4.7E+01 | n | 4.7E+03 | n | – | – | – | – | – |
| Alachlor | 15972-60-8 | 5.9E+01 | c | 1.9E-02 | m | 1.9E+00 | m | – | – | – | – | – | 5.9E+01 | c | 9.5E-03 | m | 9.5E-01 | m | – | – | – | – | – |
| Aldicarb | 116-06-3 | 6.7E+01 | n | 1.8E-02 | m | 1.8E+00 | m | – | – | – | – | – | 6.7E+01 | n | 8.9E-03 | m | 8.9E-01 | m | – | – | – | – | – |
| Aldicarb sulfone | 1646-88-4 | 6.7E+01 | n | 1.4E-02 | m | 1.4E+00 | m | – | – | – | – | – | 6.7E+01 | n | 6.9E-03 | m | 6.9E-01 | m | – | – | – | – | – |
| Aldrin | 309-00-2 | 5.0E-02 | c | 1.0E-01 | c | 1.0E+01 | c | 8.3E+00 | c | 8.5E+03 | c >S | – | 5.0E-02 | c | 5.1E-02 | c | 5.1E+00 | c | 4.3E+00 | c | 5.5E+02 | c >S | – |
| Allyl alcohol | 107-18-6 | 5.6E+00 | n | 2.5E-01 | n | 2.5E+01 | n | 5.7E+00 | n | 6.1E+02 | n | – | 2.9E+00 | n | 1.3E-01 | n | 1.3E+01 | n | 2.9E+00 | n | 3.9E+01 | n | – |
| Allyl chloride | 107-05-1 | 1.5E+01 | n | 1.0E+00 | n | 1.0E+02 | n | 1.5E+01 | n | 3.8E+01 | n | – | 7.8E+00 | n | 5.1E-01 | n | 5.1E+01 | n | 7.9E+00 | n | 2.5E+00 | n | – |
| Aluminum | 7429-90-5 | 6.5E+04 | n | 1.7E+05 | n >S | 1.0E+06 | n >S | – | – | – | – | 1400 | 6.4E+04 | n | 8.6E+04 | n >S | 1.0E+06 | n >S | – | – | – | – | 710 |
| Ametryn | 834-12-8 | 6.0E+02 | n | 7.2E+00 | n | 7.2E+02 | n | – | – | – | – | – | 6.0E+02 | n | 3.6E+00 | n | 3.6E+02 | n | – | – | – | – | – |
| Amino-2,6-dinitrotoluene, 4- | 19406-51-0 | 1.1E+01 | n | 6.7E-02 | n | 6.7E+00 | n | – | – | – | – | – | 1.1E+01 | n | 3.3E-02 | n | 3.3E+00 | n | – | – | – | – | – |
| Amino-4,6-dinitrotoluene, 2- | 35572-78-2 | 1.1E+01 | n | 9.9E-02 | n | 9.9E+00 | n | – | – | – | – | – | 1.1E+01 | n | 5.0E-02 | n | 5.0E+00 | n | – | – | – | – | – |
| Aminobiphenyl, 4- (1,1-biphenyl-4-amine) | 92-67-1 | 7.7E-01 | c | 1.1E-02 | c | 1.1E+00 | c | – | – | – | – | – | 7.7E-01 | c | 5.4E-03 | c | 5.4E-01 | c | – | – | – | – | – |
| Aminopyridine, 4- | 504-24-5 | 1.3E+00 | n | 9.5E-04 | n | 9.5E-02 | n | – | – | – | – | – | 1.3E+00 | n | 4.7E-04 | n | 4.7E-02 | n | – | – | – | – | – |
| Ammonia | 7664-41-7 | 4.9E+03 | n | – | – | – | – | 4.9E+03 | n | 1.8E+04 | n | 3.1 | 2.5E+03 | n | – | – | – | – | 2.5E+03 | n | 1.2E+03 | n | 1.6 |
| Ammonium polyphosphate* | 6833-79-9 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – |
| Ammonium salts* | AMMONIUM | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – |
| Aniline | 62-53-3 | 1.0E+02 | n | 3.7E-01 | c | 3.7E+01 | c | 1.3E+02 | n | 2.5E+04 | n | – | 5.9E+01 | n | 1.8E-01 | c | 1.8E+01 | c | 6.7E+01 | n | 1.6E+03 | n | – |
| Anthracene | 120-12-7 | 1.8E+04 | n | 6.9E+03 | n >S | 6.9E+05 | n >S | – | – | – | – | – | 1.8E+04 | n | 3.4E+03 | n >S | 3.4E+05 | n >S | – | – | – | – | – |
| Anthraquinone, 9,10- | 84-65-1 | 1.2E+02 | c | 1.1E+00 | c | 1.1E+02 | c >S | – | – | – | – | – | 1.2E+02 | c | 5.7E-01 | c | 5.7E+01 | c >S | – | – | – | – | – |
| Antimony | 7440-36-0 | 1.5E+01 | n | 5.4E+00 | m >S | 5.4E+02 | m >S | – | – | – | – | – | 1.5E+01 | n | 2.7E+00 | m >S | 2.7E+02 | m >S | – | – | – | – | – |
| Aramite | 140-57-8 | 1.1E+02 | c | – | – | – | – | – | – | – | – | – | 1.1E+02 | c | – | – | – | – | – | – | – | – | – |
| Arsenic | 7440-38-2 | 2.4E+01 | n | 5.0E+00 | m >S | 5.0E+02 | m >S | – | – | – | – | – | 2.4E+01 | n | 2.5E+00 | m >S | 2.5E+02 | m >S | – | – | – | – | – |
| Arsine | 7784-42-1 | 7.7E-01 | n | – | – | – | – | 7.7E-01 | n | – | – | – | 3.9E-01 | n | – | – | – | – | 3.9E-01 | n | – | – | – |
| Atrazine | 1912-24-9 | 2.1E+01 | c | 2.5E-02 | m | 2.5E+00 | m | – | – | – | – | – | 2.1E+01 | c | 1.2E-02 | m | 1.2E+00 | m | – | – | – | – | – |
| Azinphos-methyl (guthion) | 86-50-0 | 1.0E+02 | n | 4.4E-01 | n | 4.4E+01 | n >S | – | – | – | – | – | 1.0E+02 | n | 2.2E-01 | n | 2.2E+01 | n >S | – | – | – | – | – |
| Azobenzene | 103-33-3 | 3.7E+01 | c | 1.8E+01 | c | 1.8E+03 | c | 1.4E+03 | c | 1.0E+06 | c >S | – | 3.6E+01 | c | 8.8E+00 | c | 8.8E+02 | c | 7.1E+02 | c | 9.4E+04 | c >S | – |
| Barium | 7440-39-3 | 8.1E+03 | n | 4.4E+02 | m >S | 4.4E+04 | m >S | – | – | – | – | – | 8.1E+03 | n | 2.2E+02 | m >S | 2.2E+04 | m >S | – | – | – | – | – |
| Bayleton | 43121-43-3 | 2.0E+03 | n | 7.4E+00 | n | 7.4E+02 | n >S | – | – | – | – | – | 2.0E+03 | n | 3.7E+00 | n | 3.7E+02 | n >S | – | – | – | – | – |
| Benefin (benfluralin) | 1861-40-1 | 1.9E+04 | n | 4.9E+04 | n >S | 1.0E+06 | n >S | – | – | – | – | – | 1.9E+04 | n | 2.4E+04 | n >S | 1.0E+06 | n >S | – | – | – | – | – |
| Benomyl | 17804-35-2 | 3.3E+03 | n | 3.1E+00 | n | 3.1E+02 | n >S | – | – | – | – | – | 3.3E+03 | n | 1.5E+00 | n | 1.5E+02 | n >S | – | – | – | – | – |

**Table 1**
**Tier 1 Residential Soil PCLs[1]**

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | 0.5 acre source area | | | | | | | | | | | 30 acre source area | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | $^{Tot}Soil_{Comb}$[2] (mg/kg) | note[3] | $^{GW}Soil_{Ing}$ (mg/kg) | note[3] | $^{GW}Soil_{Class\ 3}$ (mg/kg) | note[3] | $^{Air}Soil_{Inh\text{-}V}$[4] (mg/kg) | note[3] | $^{Air}GW\text{-}Soil_{Inh\text{-}V}$ (mg/kg) | note[3] | $^{GW}$Soil for Secondary MCL (mg/kg) | $^{Tot}Soil_{Comb}$[2] (mg/kg) | note[3] | $^{GW}Soil_{Ing}$ (mg/kg) | note[3] | $^{GW}Soil_{Class\ 3}$ (mg/kg) | note[3] | $^{Air}Soil_{Inh\text{-}V}$[4] (mg/kg) | note[3] | $^{Air}GW\text{-}Soil_{Inh\text{-}V}$ (mg/kg) | note[3] | $^{GW}$Soil for Secondary MCL (mg/kg) |
| Benz-a-anthracene | 56-55-3 | 4.1E+01 | c | 1.3E+02 | c | 1.3E+04 | c >S | 5.5E+03 | c | 1.0E+06 | c >S | – | 4.1E+01 | c | 6.5E+01 | c | 6.5E+03 | c >S | 2.8E+03 | c | 1.0E+06 | c >S | – |
| Benzaldehyde | 100-52-7 | 8.2E+03 | n | 1.1E+01 | n | 1.1E+03 | n | – | – | – | – | – | 8.2E+03 | n | 5.3E+00 | n | 5.3E+02 | n | – | – | – | – | – |
| Benzene | 71-43-2 | 1.2E+02 | c | 2.6E-02 | m | 2.6E+00 | m | 1.6E+02 | c | 9.2E+02 | c | – | 6.9E+01 | c | 1.3E-02 | m | 1.3E+00 | m | 8.4E+01 | c | 6.0E+01 | c | – |
| Benzenedicarbonitrile, 1,3- | 626-17-5 | 4.0E+02 | n | 3.3E-01 | n | 3.3E+01 | n | – | – | – | – | – | 4.0E+02 | n | 1.6E-01 | n | 1.6E+01 | n | – | – | – | – | – |
| Benzenedicarboxylic acid, 1,2-disodecyl ester | 26761-40-0 | 2.7E+03 | n | 1.0E+06 | n >S | 1.0E+06 | n >S | 1.0E+06 | n | 1.0E+06 | n >S | – | 2.6E+03 | n | 1.0E+06 | n >S | 1.0E+06 | n >S | 1.0E+06 | n | 1.0E+06 | n >S | – |
| Benzenethiol | 108-98-5 | 8.2E+01 | n | 6.8E-02 | n | 6.8E+00 | n | – | – | – | – | – | 8.2E+01 | n | 3.4E-02 | n | 3.4E+00 | n | – | – | – | – | – |
| Benzidine | 92-87-5 | 1.5E-02 | c | 1.1E-05 | c | 1.1E-03 | c | 6.3E-02 | c | 1.4E+01 | c | – | 1.3E-02 | c | 5.5E-06 | c | 5.5E-04 | c | 3.2E-02 | c | 1.2E+00 | c | – |
| Benzo-a-pyrene | 50-32-8 | 4.1E+00 | c | 7.6E+00 | m | 7.6E+02 | m >S | 6.4E+01 | n | 1.0E+06 | n >S | – | 4.1E+00 | c | 3.8E+00 | m | 3.8E+02 | m >S | 3.3E+01 | n | 7.2E+04 | n >S | – |
| Benzo-b-fluoranthene | 205-99-2 | 4.2E+01 | c | 4.4E+02 | c >S | 4.4E+04 | c >S | 9.0E+03 | c | 1.0E+06 | c >S | – | 4.1E+01 | c | 2.2E+02 | c >S | 2.2E+04 | c >S | 4.6E+03 | c | 1.0E+06 | c >S | – |
| Benzo-e-pyrene | 192-97-2 | 1.8E+03 | n | 1.1E+05 | n >S | 1.0E+06 | n >S | – | – | – | – | – | 1.8E+03 | n | 5.7E+04 | n >S | 1.0E+06 | n >S | – | – | – | – | – |
| Benzo-g,h,i-perylene | 191-24-2 | 1.8E+03 | n | 4.6E+04 | n >S | 1.0E+06 | n >S | – | – | – | – | – | 1.8E+03 | n | 2.3E+04 | n >S | 1.0E+06 | n >S | – | – | – | – | – |
| Benzoic acid | 65-85-0 | 2.7E+05 | n | 1.9E+02 | n | 1.9E+04 | n >S | – | – | – | – | – | 2.7E+05 | n | 9.5E+01 | n | 9.5E+03 | n >S | – | – | – | – | – |
| Benzo-j-fluoranthene | 205-82-3 | 3.9E+01 | c | 1.9E+02 | c >S | 1.9E+04 | c >S | 4.7E+03 | c | 1.0E+06 | c >S | – | 3.9E+01 | c | 9.6E+01 | c >S | 9.6E+03 | c >S | 2.4E+03 | c | 1.0E+06 | c >S | – |
| Benzo-k-fluoranthene | 207-08-9 | 4.2E+02 | c | 4.5E+03 | c >S | 4.5E+05 | c >S | 2.2E+05 | c | 1.0E+06 | c >S | – | 4.2E+02 | c | 2.2E+03 | c >S | 2.2E+05 | c >S | 1.1E+05 | c | 1.0E+06 | c >S | – |
| Benzophenone | 119-61-9 | 4.5E+02 | n | 1.7E+01 | n | 1.7E+03 | n | – | – | – | – | – | 4.5E+02 | n | 8.5E+00 | n | 8.5E+02 | n | – | – | – | – | – |
| Benzotrichloride | 98-07-7 | 3.6E-01 | c | 4.2E-03 | c | 4.2E-01 | c | – | – | – | – | – | 3.6E-01 | c | 2.1E-03 | c | 2.1E-01 | c | – | – | – | – | – |
| Benzoyl peroxide | 94-36-0 | 3.3E+03 | n | 5.4E+01 | n | 5.4E+03 | n >S | – | – | – | – | – | 3.3E+03 | n | 2.7E+01 | n | 2.7E+03 | n >S | – | – | – | – | – |
| Benzyl alcohol | 100-51-6 | 6.7E+03 | n | 5.9E+00 | n | 5.9E+02 | n | – | – | – | – | – | 6.7E+03 | n | 2.9E+00 | n | 2.9E+02 | n | – | – | – | – | – |
| Benzyl chloride | 100-44-7 | 2.6E+01 | n | 5.0E-02 | c | 5.0E+00 | c | 3.1E+01 | n | 9.3E+02 | n | – | 1.4E+01 | n | 2.5E-02 | c | 2.5E+00 | c | 1.6E+01 | n | 6.0E+01 | n | – |
| Benzyl dichloride | 98-87-3 | 2.8E+01 | c | 6.3E-02 | c | 6.3E+00 | c | 5.5E+01 | n | 2.3E+03 | n | – | 2.3E+01 | n | 3.2E-02 | c | 3.2E+00 | c | 2.8E+01 | n | 1.5E+02 | n | – |
| Beryllium | 7440-41-7 | 3.8E+01 | n | 1.8E+00 | m >S | 1.8E+02 | m >S | – | – | – | – | – | 3.8E+01 | n | 9.2E-01 | m >S | 9.2E+01 | m >S | – | – | – | – | – |
| Biphenyl, 1,1- | 92-52-4 | 1.2E+04 | n | 2.5E+03 | n >S | 2.5E+05 | n >S | – | – | – | – | – | 1.2E+04 | n | 1.3E+03 | n >S | 1.3E+05 | n >S | – | – | – | – | – |
| Biphenyl, 1,1'-, 2-phenoxy- | 6738-04-1 | 3.2E+03 | n | 7.5E+04 | n >S | 1.0E+06 | n >S | – | – | – | – | – | 3.2E+03 | n | 3.7E+04 | n >S | 1.0E+06 | n >S | – | – | – | – | – |
| Biquinoline, 2,2'- | 119-91-5 | 1.8E+02 | n | 2.7E+01 | n | 2.7E+03 | n >S | – | – | – | – | – | 1.8E+02 | n | 1.3E+01 | n | 1.3E+03 | n >S | – | – | – | – | – |
| Bis (2-chloroethoxy) methane | 111-91-1 | 3.1E+00 | c | 1.2E-02 | c | 1.2E+00 | c | 1.1E+01 | c | 1.1E+03 | c | – | 2.5E+00 | c | 5.9E-03 | c | 5.9E-01 | c | 5.8E+00 | c | 7.4E+01 | c | – |
| Bis (2-chloroethyl) ether | 111-44-4 | 2.2E+00 | c | 2.1E-03 | c | 2.1E-01 | c | 3.6E+00 | c | 2.4E+02 | c | – | 1.4E+00 | c | 1.1E-03 | c | 1.1E-01 | c | 1.8E+00 | c | 1.5E+01 | c | – |
| Bis (2-chloro-1-methyl) ether | 108-60-1 | 5.1E+01 | c | 1.9E-01 | c | 1.9E+01 | c | 2.1E+02 | c | 1.3E+04 | c | – | 4.1E+01 | c | 9.5E-02 | c | 9.5E+00 | c | 1.1E+02 | c | 8.2E+02 | c | – |
| Bis (2-chloromethyl) ether | 542-88-1 | 4.8E-03 | c | 8.2E-06 | c | 8.2E-04 | c | 5.8E-03 | c | 1.7E-01 | c | – | 2.7E-03 | c | 4.1E-06 | c | 4.1E-04 | c | 3.0E-03 | c | 1.1E-02 | c | – |
| Bis (2-ethyl-hexyl) phthalate | 117-81-7 | 4.3E+01 | c | 1.6E+02 | m | 1.6E+04 | m >S | – | – | – | – | – | 4.3E+01 | c | 8.2E+01 | m | 8.2E+03 | m >S | – | – | – | – | – |
| Bismuth | 7440-69-9 | 3.7E+04 | n | – | – | – | – | – | – | – | – | – | 3.7E+04 | n | – | – | – | – | – | – | – | – | – |
| Bisphenol A | 80-05-7 | 3.3E+03 | n | 2.9E+01 | n | 2.9E+03 | n | – | – | – | – | – | 3.3E+03 | n | 1.5E+01 | n | 1.5E+03 | n | – | – | – | – | – |
| Boron | 7440-42-8 | 1.6E+04 | n | – | – | – | – | – | – | – | – | – | 1.6E+04 | n | – | – | – | – | – | – | – | – | – |
| Bromacil | 314-40-9 | 6.7E+03 | n | 1.7E+01 | n | 1.7E+03 | n | – | – | – | – | – | 6.7E+03 | n | 8.6E+00 | n | 8.6E+02 | n | – | – | – | – | – |
| Bromo-2-chloroethane, 1- | 107-04-0 | 3.3E+03 | n | 3.5E+00 | n | 3.5E+02 | n | – | – | – | – | – | 3.3E+03 | n | 1.7E+00 | n | 1.7E+02 | n | – | – | – | – | – |
| Bromobenzene | 108-86-1 | 3.9E+02 | n | 2.3E+00 | n | 2.3E+02 | n | 9.7E+02 | n | 2.7E+04 | n >S | – | 2.8E+02 | n | 1.2E+00 | n | 1.2E+02 | n | 5.0E+02 | n | 1.7E+03 | n | – |
| Bromodichloromethane[8] | 75-27-4 | 9.8E+01 | c | 3.6E-01 | m | 3.6E+01 | m | – | – | – | – | – | 9.8E+01 | c | 1.8E-01 | m | 1.8E+01 | m | – | – | – | – | – |
| Bromoform[8] | 75-25-2 | 4.0E+02 | c | 4.4E-01 | m | 4.4E+01 | m | 8.4E+02 | c | 2.8E+04 | c >S | – | 2.8E+02 | c | 2.2E-01 | m | 2.2E+01 | m | 4.3E+02 | c | 1.8E+03 | c | – |
| Bromomethane | 74-83-9 | 4.6E+01 | n | 1.3E-01 | n | 1.3E+01 | n | 7.7E+01 | n | 1.8E+02 | n | – | 2.9E+01 | n | 6.5E-02 | n | 6.5E+00 | n | 3.9E+01 | n | 1.1E+01 | n | – |
| Bromophenyl phenylether, 4- | 101-55-3 | 2.8E-01 | c | 3.5E-01 | c | 3.5E+01 | c | 9.8E+00 | c | 9.2E+03 | c >S | – | 2.7E-01 | c | 1.8E-01 | c | 1.8E+01 | c | 5.0E+00 | c | 5.9E+02 | c | – |
| Butadiene, 1,3- | 106-99-0 | 5.1E+02 | n | – | – | – | – | 5.1E+02 | n | 5.0E+02 | n | – | 2.6E+02 | n | – | – | – | – | 2.6E+02 | n | 3.2E+01 | n | – |
| Butadiene, 2-methyl-1,3- (isoprene) | 78-79-5 | 4.8E+03 | n | 1.1E+01 | n | 1.1E+03 | n | 2.8E+05 | n | 6.2E+05 | n >S | – | 4.7E+03 | n | 5.5E+00 | n | 5.5E+02 | n | 1.4E+05 | n | 4.0E+04 | n >S | – |
| Butanal (butyraldehyde) | 123-72-8 | 1.2E+03 | n | 3.2E+00 | n | 3.2E+02 | n | 1.5E+03 | n | 4.3E+04 | n | – | 6.8E+02 | n | 1.6E+00 | n | 1.6E+02 | n | 7.9E+02 | n | 2.8E+03 | n | – |
| Butane, 2,3-dimethyl- | 79-29-8 | 4.8E+03 | n | 2.8E+02 | n | 2.8E+04 | n >S | 2.8E+05 | n | 4.6E+05 | n >S | – | 4.7E+03 | n | 1.4E+02 | n | 1.4E+04 | n >S | 1.4E+05 | n | 3.0E+04 | n >S | – |
| Butanoic acid (butyric acid) | 107-92-6 | 1.3E+02 | n | 2.3E+01 | n | 2.3E+03 | n | 1.3E+02 | n | 3.6E+04 | n | – | 6.6E+01 | n | 1.2E+01 | n | 1.2E+03 | n | 6.6E+01 | n | 2.4E+03 | n | – |
| Butanol, 2- | 78-92-2 | 1.5E+05 | n | 1.0E+02 | n | 1.0E+04 | n | 1.0E+06 | n | 1.0E+06 | n >S | – | 1.3E+05 | n | 5.2E+01 | n | 5.2E+03 | n | 7.2E+05 | n | 1.0E+06 | n >S | – |
| Butanol, 2-methyl-1- | 137-32-6 | 8.2E+02 | n | 6.0E-01 | n | 6.0E+01 | n | – | – | – | – | – | 8.2E+02 | n | 3.0E-01 | n | 3.0E+01 | n | – | – | – | – | – |
| Butanol, 2-methyl-2- | 75-85-4 | 8.2E+02 | n | 5.9E-01 | n | 5.9E+01 | n | – | – | – | – | – | 8.2E+02 | n | 2.9E-01 | n | 2.9E+01 | n | – | – | – | – | – |
| Butanol, n- | 71-36-3 | 8.2E+03 | n | 5.3E+00 | n | 5.3E+02 | n | – | – | – | – | – | 8.2E+03 | n | 2.6E+00 | n | 2.6E+02 | n | – | – | – | – | – |
| Butene, 1- | 106-98-9 | 4.6E+03 | n | 4.4E+01 | n | 4.4E+03 | n | 8.1E+04 | n | 8.8E+04 | n >S | – | 4.4E+03 | n | 2.2E+01 | n | 2.2E+03 | n | 4.2E+04 | n | 5.7E+03 | n >S | – |

**Table 1**
**Tier 1 Residential Soil PCLs[1]**

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | 0.5 acre source area | | | | | | | | | | | 30 acre source area | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | $^{Tot}Soil_{Comb}$[2] (mg/kg) | note[3] | $^{GW}Soil_{Ing}$ (mg/kg) | note[3] | $^{GW}Soil_{Class\ 3}$ (mg/kg) | note[3] | $^{Air}Soil_{Inh\text{-}V}$[4] (mg/kg) | note[3] | $^{Air}GW\text{-}Soil_{Inh\text{-}V}$ (mg/kg) | note[3] | $^{GW}$Soil for Secondary MCL (mg/kg) | $^{Tot}Soil_{Comb}$[2] (mg/kg) | note[3] | $^{GW}Soil_{Ing}$ (mg/kg) | note[3] | $^{GW}Soil_{Class\ 3}$ (mg/kg) | note[3] | $^{Air}Soil_{Inh\text{-}V}$[4] (mg/kg) | note[3] | $^{Air}GW\text{-}Soil_{Inh\text{-}V}$ (mg/kg) | note[3] | $^{GW}$Soil for Secondary MCL (mg/kg) |
| Butene, cis-2- | 590-18-1 | 4.1E+03 | n | 3.2E+01 | n | 3.2E+03 | n | 2.5E+04 | n | 2.8E+04 | n >S | – | 3.5E+03 | n | 1.6E+01 | n | 1.6E+03 | n | 1.3E+04 | n | 1.8E+03 | n | – |
| Butene, trans-2- | 624-64-6 | 4.1E+03 | n | 3.2E+01 | n | 3.2E+03 | n | 2.5E+04 | n | 2.8E+04 | n >S | – | 3.5E+03 | n | 1.6E+01 | n | 1.6E+03 | n | 1.3E+04 | n | 1.8E+03 | n | – |
| Butoxy ethanol, 2- (Ethylene glycol monobutyl ether; EGBE) | 111-76-2 | 6.5E+03 | n | 5.9E+00 | n | 5.9E+02 | n | 2.9E+05 | n | 1.0E+06 | n >S | – | 6.4E+03 | n | 2.9E+00 | n | 2.9E+02 | n | 1.5E+05 | n | 1.0E+06 | n >S | – |
| Butyl acetate | 123-86-4 | 1.0E+04 | n | 1.0E+01 | n | 1.0E+03 | n | 8.4E+04 | n | 1.0E+06 | n >S | – | 9.1E+03 | n | 5.1E+00 | n | 5.1E+02 | n | 4.3E+04 | n | 1.4E+05 | n >S | – |
| Butyl acrylate | 141-32-2 | 7.4E+02 | n | 1.0E+00 | n | 1.0E+02 | n | – | – | – | – | – | 7.4E+02 | n | 5.2E-01 | n | 5.2E+01 | n | – | – | – | – | – |
| Butyl benzyl phthalate | 85-68-7 | 1.6E+03 | c | 2.6E+02 | c | 2.6E+04 | c >S | – | – | – | – | – | 1.6E+03 | c | 1.3E+02 | c | 1.3E+04 | c >S | – | – | – | – | – |
| Butyl ether, n- (dibutyl ether) | 142-96-1 | 8.2E+03 | n | 4.3E+01 | n | 4.3E+03 | n | – | – | – | – | – | 8.2E+03 | n | 2.2E+01 | n | 2.2E+03 | n | – | – | – | – | – |
| Butyl methacrylate | 97-88-1 | 3.4E+03 | n | 2.6E+01 | n | 2.6E+03 | n | – | – | – | – | – | 3.4E+03 | n | 1.3E+01 | n | 1.3E+03 | n | – | – | – | – | – |
| Butylate | 2008-41-5 | 3.3E+03 | n | 8.5E+00 | n | 8.5E+02 | n >S | – | – | – | – | – | 3.3E+03 | n | 4.3E+00 | n | 4.3E+02 | n >S | – | – | – | – | – |
| Butylbenzene, n- | 104-51-8 | 3.3E+03 | n | 1.5E+02 | n | 1.5E+04 | n >S | – | – | – | – | – | 3.3E+03 | n | 7.6E+01 | n | 7.6E+03 | n >S | – | – | – | – | – |
| Butylbenzene, sec- | 135-98-8 | 3.3E+03 | n | 8.5E+01 | n | 8.5E+03 | n >S | – | – | – | – | – | 3.3E+03 | n | 4.2E+01 | n | 4.2E+03 | n >S | – | – | – | – | – |
| Butylbenzene, tert- | 98-06-6 | 3.3E+03 | n | 1.0E+02 | n | 1.0E+04 | n >S | – | – | – | – | – | 3.3E+03 | n | 5.0E+01 | n | 5.0E+03 | n >S | – | – | – | – | – |
| Cacodylic acid | 75-60-5 | 2.0E+02 | n | 1.5E-01 | n | 1.5E+01 | n | – | – | – | – | – | 2.0E+02 | n | 7.4E-02 | n | 7.4E+00 | n | – | – | – | – | – |
| Cadmium | 7440-43-9 | 5.2E+01 | n | 1.5E+00 | m >S | 1.5E+02 | m >S | – | – | – | – | – | 5.1E+01 | n | 7.5E-01 | m >S | 7.5E+01 | m >S | – | – | – | – | – |
| Calcium* | 7440-70-2 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – |
| Caprolactam | 105-60-2 | 3.3E+04 | n | 4.7E+01 | n | 4.7E+03 | n | – | – | – | – | – | 3.3E+04 | n | 2.3E+01 | n | 2.3E+03 | n | – | – | – | – | – |
| Captan | 133-06-2 | 1.3E+03 | c | 6.7E+01 | c | 6.7E+03 | c >S | – | – | – | – | – | 1.3E+03 | c | 3.4E+01 | c | 3.4E+03 | c >S | – | – | – | – | – |
| Carbaryl | 63-25-2 | 6.7E+03 | n | 2.8E+01 | n | 2.8E+03 | n >S | – | – | – | – | – | 6.7E+03 | n | 1.4E+01 | n | 1.4E+03 | n >S | – | – | – | – | – |
| Carbazole | 86-74-8 | 2.3E+02 | c | 4.6E+00 | c | 4.6E+02 | c >S | – | – | – | – | – | 2.3E+02 | c | 2.3E+00 | c | 2.3E+02 | c >S | – | – | – | – | – |
| Carbofuran | 1563-66-2 | 3.3E+02 | n | 1.2E-01 | m | 1.2E+01 | m | – | – | – | – | – | 3.3E+02 | n | 6.2E-02 | m | 6.2E+00 | m | – | – | – | – | – |
| Carbon disulfide | 75-15-0 | 4.6E+03 | n | 1.4E+01 | n | 1.4E+03 | n | 1.1E+04 | n | 2.7E+04 | n >S | – | 3.3E+03 | n | 6.8E+00 | n | 6.8E+02 | n | 5.5E+03 | n | 1.7E+03 | n | – |
| Carbon tetrachloride | 56-23-5 | 3.5E+01 | c | 6.2E-02 | m | 6.2E+00 | m | 6.0E+01 | c | 2.4E+02 | c | – | 2.3E+01 | c | 3.1E-02 | m | 3.1E+00 | m | 3.1E+01 | c | 1.6E+01 | c | – |
| Carbophenothion | 786-19-6 | 8.2E+02 | n | 1.5E+03 | n | 1.5E+05 | n >S | – | – | – | – | – | 8.2E+02 | n | 7.4E+02 | n | 7.4E+04 | n >S | – | – | – | – | – |
| Carbosulfan | 55285-14-8 | 4.3E+02 | n | 2.5E+02 | n | 2.5E+04 | n >S | – | – | – | – | – | 4.3E+02 | n | 1.3E+02 | n | 1.3E+04 | n >S | – | – | – | – | – |
| Carboxin | 5234-68-4 | 6.7E+03 | n | 8.7E+01 | n | 8.7E+03 | n >S | – | – | – | – | – | 6.7E+03 | n | 4.4E+01 | n | 4.4E+03 | n >S | – | – | – | – | – |
| Chloral | 75-87-6 | 8.2E+03 | n | 5.3E+00 | n | 5.3E+02 | n | – | – | – | – | – | 8.2E+03 | n | 2.7E+00 | n | 2.7E+02 | n | – | – | – | – | – |
| Chloral hydrate (1,1-ethanediol, 2,2,2-trichloro-) | 302-17-0 | 6.7E+03 | n | 5.2E+00 | n | 5.2E+02 | n | – | – | – | – | – | 6.7E+03 | n | 2.6E+00 | n | 2.6E+02 | n | – | – | – | – | – |
| Chloramben (amiben; 3-amino-2,5-dichlorobenzoic acid) | 133-90-4 | 1.0E+03 | n | 3.8E+00 | n | 3.8E+02 | n | – | – | – | – | – | 1.0E+03 | n | 1.9E+00 | n | 1.9E+02 | n | – | – | – | – | – |
| Chlordane (technical) | 12789-03-6 | 6.0E+00 | c | 9.6E+00 | m | 9.6E+02 | m >S | 1.2E+03 | c | 1.0E+06 | c >S | – | 5.9E+00 | c | 4.8E+00 | m | 4.8E+02 | m >S | 6.4E+02 | c | 2.4E+05 | c >S | – |
| Chlordane, cis- (alpha chlordane) | 5103-71-9 | 1.3E+01 | c | 7.4E+02 | c | 7.4E+04 | c >S | 4.1E+03 | c | 1.0E+06 | c >S | – | 1.3E+01 | c | 3.7E+02 | c | 3.7E+04 | c >S | 2.1E+03 | c | 1.0E+06 | c >S | – |
| Chlordane, trans- (gamma chordane) | 5103-74-2 | 7.4E+00 | c | 4.1E+01 | c | 4.1E+03 | c >S | 9.7E+02 | c | 1.0E+06 | c >S | – | 7.3E+00 | c | 2.1E+01 | c | 2.1E+03 | c >S | 5.0E+02 | c | 1.6E+05 | c >S | – |
| Chlorfenvinphos | 470-90-6 | 1.4E+01 | n | 9.1E-01 | n | 9.1E+01 | n | 3.1E+01 | n | – | – | – | 9.6E+00 | n | 4.6E-01 | n | 4.6E+01 | n | 1.6E+01 | n | – | – | – |
| Chloride* | 16887-00-6 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – |
| Chlorine | 7782-50-5 | 1.3E+02 | n | – | – | – | – | 1.3E+02 | n | – | – | – | 6.8E+01 | n | – | – | – | – | 6.9E+01 | n | – | – | – |
| Chloro-1,3-butadiene, 2- | 126-99-8 | 1.2E+00 | c | – | – | – | – | 1.2E+00 | c | 2.6E+00 | c | – | 6.1E-01 | c | – | – | – | – | 6.1E-01 | c | 1.7E-01 | c | – |
| Chloro-2-propanol, 1- | 127-00-4 | 1.6E+03 | n | 1.1E+00 | n | 1.1E+02 | n | – | – | – | – | – | 1.6E+03 | n | 5.3E-01 | n | 5.3E+01 | n | – | – | – | – | – |
| Chloro-3-methylphenol, 4- | 59-50-7 | 3.3E+02 | n | 4.5E+00 | n | 4.5E+02 | n | – | – | – | – | – | 3.3E+02 | n | 2.3E+00 | n | 2.3E+02 | n | – | – | – | – | – |
| Chloroaniline, p- | 106-47-8 | 2.3E+01 | c | 2.1E-02 | c | 2.1E+00 | c | – | – | – | – | – | 2.3E+01 | c | 1.0E-02 | c | 1.0E+00 | c | – | – | – | – | – |
| Chlorobenzene | 108-90-7 | 5.2E+02 | n | 1.1E+00 | m | 1.1E+02 | m | 7.7E+02 | n | 1.3E+04 | n >S | – | 3.2E+02 | n | 5.5E-01 | m | 5.5E+01 | m | 3.9E+02 | n | 8.2E+02 | n | – |
| Chlorobenzilate | 510-15-6 | 1.7E+01 | c | 1.1E-01 | c | 1.1E+01 | c | 3.5E+02 | c | 2.4E+05 | c >S | – | 1.6E+01 | c | 5.7E-02 | c | 5.7E+00 | c | 1.8E+02 | c | 1.5E+04 | c >S | – |
| Chlorobromomethane (bromochloromethane) | 74-97-5 | 3.3E+03 | n | 3.0E+00 | n | 3.0E+02 | n | – | – | – | – | – | 3.3E+03 | n | 1.5E+00 | n | 1.5E+02 | n | – | – | – | – | – |
| Chlorodifluoromethane | 75-45-6 | 7.7E+05 | n | – | – | – | – | 7.7E+05 | n | 8.9E+05 | n >S | – | 3.9E+05 | n | – | – | – | – | 3.9E+05 | n | 5.8E+04 | n >S | – |
| Chloroethane (ethyl chloride) | 75-00-3 | 2.7E+04 | n | 3.1E+01 | n | 3.1E+03 | n | 1.5E+05 | n | 3.7E+05 | n >S | – | 2.3E+04 | n | 1.5E+01 | n | 1.5E+03 | n | 7.9E+04 | n | 2.4E+04 | n | – |
| Chloroethanol, 2- | 107-07-3 | 1.6E+03 | n | 9.7E-01 | n | 9.7E+01 | n | – | – | – | – | – | 1.6E+03 | n | 4.9E-01 | n | 4.9E+01 | n | – | – | – | – | – |
| Chloroethoxy ethene, 2- (2-chloroethylvinylether) | 110-75-8 | 4.5E+00 | n | 2.9E-03 | c | 2.9E-01 | c | 4.6E+00 | n | 6.8E+01 | n | – | 2.3E+00 | n | 1.4E-03 | c | 1.4E-01 | c | 2.4E+00 | n | 4.4E+00 | n | – |
| Chloroform[8] | 67-66-3 | 1.6E+01 | c | 3.3E-01 | m | 3.3E+01 | m | 1.6E+01 | c | 8.3E+01 | c | – | 8.0E+00 | c | 1.7E-01 | m | 1.7E+01 | m | 8.0E+00 | c | 5.4E+00 | c | – |
| Chlorohexane, 1- | 544-10-5 | 2.7E+03 | n | 3.9E+01 | n | 3.9E+03 | n >S | 1.5E+04 | n | 2.9E+05 | n >S | – | 2.3E+03 | n | 2.0E+01 | n | 2.0E+03 | n >S | 7.9E+03 | n | 1.9E+04 | n >S | – |
| Chloromethane (methyl chloride) | 74-87-3 | 1.4E+02 | c | 4.1E-01 | c | 4.1E+01 | c | 2.0E+02 | c | 2.1E+02 | c | – | 8.4E+01 | c | 2.0E-01 | c | 2.0E+01 | c | 1.0E+02 | c | 1.4E+01 | c | – |
| Chloronaphthalene, 1- (Chloronaphthalene, alpha-) | 90-13-1 | 4.6E+03 | n | 7.4E+02 | n | 7.4E+04 | n >S | – | – | – | – | – | 4.6E+03 | n | 3.7E+02 | n | 3.7E+04 | n >S | – | – | – | – | – |

**Table 1**
**Tier 1 Residential Soil PCLs[1]**

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | 0.5 acre source area | | | | | | | | | | | 30 acre source area | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | $^{Tot}Soil_{Comb}$[2] (mg/kg) | note[3] | $^{GW}Soil_{Ing}$ (mg/kg) | note[3] | $^{GW}Soil_{Class\ 3}$ (mg/kg) | note[3] | $^{Air}Soil_{Inh\text{-}V}$[4] (mg/kg) | note[3] | $^{Air}GW\text{-}Soil_{Inh\text{-}V}$ (mg/kg) | note[3] | $^{GW}$Soil for Secondary MCL (mg/kg) | $^{Tot}Soil_{Comb}$[2] (mg/kg) | note[3] | $^{GW}Soil_{Ing}$ (mg/kg) | note[3] | $^{GW}Soil_{Class\ 3}$ (mg/kg) | note[3] | $^{Air}Soil_{Inh\text{-}V}$[4] (mg/kg) | note[3] | $^{Air}GW\text{-}Soil_{Inh\text{-}V}$ (mg/kg) | note[3] | $^{GW}$Soil for Secondary MCL (mg/kg) |
| Chloronaphthalene, 2- (chloronaphthalene, beta) | 91-58-7 | 5.0E+03 | n | 6.7E+02 | n | 6.7E+04 | n >S | – | – | – | – | – | 5.0E+03 | n | 3.3E+02 | n | 3.3E+04 | n >S | – | – | – | – | – |
| Chloronitrobenzene, p- (1-chloro-4-nitrobenzene) | 100-00-5 | 3.2E+01 | n | 1.5E-01 | n | 1.5E+01 | n | 6.3E+01 | n | 4.8E+03 | n >S | – | 2.2E+01 | n | 7.6E-02 | n | 7.6E+00 | n | 3.2E+01 | n | 3.1E+02 | n | – |
| Chlorophenol, 2- | 95-57-8 | 4.1E+02 | n | 1.6E+00 | n | 1.6E+02 | n | – | – | – | – | – | 4.1E+02 | n | 8.2E-01 | n | 8.2E+01 | n | – | – | – | – | – |
| Chlorophenol, 3- | 108-43-0 | 3.3E+02 | n | 7.8E-01 | n | 7.8E+01 | n | – | – | – | – | – | 3.3E+02 | n | 3.9E-01 | n | 3.9E+01 | n | – | – | – | – | – |
| Chlorophenol, 4- | 106-48-9 | 3.3E+02 | n | 8.4E-01 | n | 8.4E+01 | n | – | – | – | – | – | 3.3E+02 | n | 4.2E-01 | n | 4.2E+01 | n | – | – | – | – | – |
| Chlorophenyl phenylether, 4- | 7005-72-3 | 1.6E-01 | c | 3.2E-02 | c | 3.2E+00 | c | 2.5E+00 | c | 6.5E+02 | c | – | 1.5E-01 | c | 1.6E-02 | c | 1.6E+00 | c | 1.3E+00 | c | 4.2E+01 | c | – |
| Chloropropane, 2- | 75-29-6 | 9.4E+02 | n | 5.4E+00 | n | 5.4E+02 | n | 1.5E+03 | n | 3.5E+03 | n | – | 6.0E+02 | n | 2.7E+00 | n | 2.7E+02 | n | 7.9E+02 | n | 2.2E+02 | n | – |
| Chlorothalonil | 1897-45-6 | 4.3E+02 | c | 8.1E+00 | c | 8.1E+02 | c | – | – | – | – | – | 4.3E+02 | c | 4.1E+00 | c | 4.1E+02 | c | – | – | – | – | – |
| Chlorotoluene, o- (2-chlorotoluene) | 95-49-8 | 1.2E+03 | n | 9.1E+00 | n | 9.1E+02 | n | 1.3E+04 | n | 4.4E+05 | n >S | – | 1.1E+03 | n | 4.5E+00 | n | 4.5E+02 | n | 6.8E+03 | n | 2.8E+04 | n >S | – |
| Chlorotoluene, p- (4-chlorotoluene) | 106-43-4 | 1.6E+03 | n | 1.1E+01 | n | 1.1E+03 | n | – | – | – | – | – | 1.6E+03 | n | 5.4E+00 | n | 5.4E+02 | n | – | – | – | – | – |
| Chlorpyrifos | 2921-88-2 | 1.3E+02 | n | 1.5E+01 | n | 1.5E+03 | n >S | – | – | – | – | – | 1.3E+02 | n | 7.4E+00 | n | 7.4E+02 | n >S | – | – | – | – | – |
| Chromium (III) | 16065-83-1 | 3.3E+04 | n | 2.4E+03 | m >S | 2.4E+05 | m >S | – | – | – | – | – | 2.7E+04 | n | 1.2E+03 | m >S | 1.2E+05 | m >S | – | – | – | – | – |
| Chromium (total) | 7440-47-3 | 3.3E+04 | n | 2.4E+03 | m >S | 2.4E+05 | m >S | – | – | – | – | – | 2.7E+04 | n | 1.2E+03 | m >S | 1.2E+05 | m >S | – | – | – | – | – |
| Chromium (VI) | 18540-29-9 | 1.2E+02 | n | 2.8E+01 | m >S | 2.8E+03 | m >S | – | – | – | – | – | 1.2E+02 | n | 1.4E+01 | m >S | 1.4E+03 | m >S | – | – | – | – | – |
| Chrysene | 218-01-9 | 4.1E+03 | c | 1.1E+04 | c >S | 1.0E+06 | c >S | 8.7E+05 | c | 1.0E+06 | c >S | – | 4.1E+03 | c | 5.6E+03 | c >S | 5.6E+05 | c >S | 4.5E+05 | c | 1.0E+06 | c >S | – |
| Cobalt | 7440-48-4 | 6.8E+02 | n | 2.2E+02 | n >S | 2.2E+04 | n >S | – | – | – | – | – | 6.8E+02 | n | 1.1E+02 | n >S | 1.1E+04 | n >S | – | – | – | – | – |
| Copolymer acrylamide | 69418-26-4 | 1.3E+01 | n | 9.4E-03 | n | 9.4E-01 | n | – | – | – | – | – | 1.3E+01 | n | 4.7E-03 | n | 4.7E-01 | n | – | – | – | – | – |
| Copper | 7440-50-8 | 1.3E+03 | n | 1.0E+03 | e >S | 1.0E+05 | e >S | – | – | – | – | 800 | 1.3E+03 | n | 5.2E+02 | e >S | 5.2E+04 | e >S | – | – | – | – | 400 |
| Coronene | 191-07-1 | 1.3E+02 | n | 5.6E+04 | n >S | 1.0E+06 | n >S | – | – | – | – | – | 1.3E+02 | n | 2.8E+04 | n >S | 1.0E+06 | n >S | – | – | – | – | – |
| Coumaphos | 56-72-4 | 4.3E+02 | n | 1.1E+02 | n | 1.1E+04 | n >S | – | – | – | – | – | 4.3E+02 | n | 5.5E+01 | n | 5.5E+03 | n >S | – | – | – | – | – |
| Cresol | 1319-77-3 | 3.3E+03 | n | 6.6E+00 | n | 6.6E+02 | n | – | – | – | – | – | 3.3E+03 | n | 3.3E+00 | n | 3.3E+02 | n | – | – | – | – | – |
| Cresol, m- (3-methylphenol) | 108-39-4 | 3.3E+03 | n | 6.6E+00 | n | 6.6E+02 | n | – | – | – | – | – | 3.3E+03 | n | 3.3E+00 | n | 3.3E+02 | n | – | – | – | – | – |
| Cresol, o- (2-methylphenol) | 95-48-7 | 3.3E+03 | n | 7.1E+00 | n | 7.1E+02 | n | – | – | – | – | – | 3.3E+03 | n | 3.6E+00 | n | 3.6E+02 | n | – | – | – | – | – |
| Cresol, p- (4-methylphenol) | 106-44-5 | 3.3E+02 | n | 6.3E-01 | n | 6.3E+01 | n | – | – | – | – | – | 3.3E+02 | n | 3.2E-01 | n | 3.2E+01 | n | – | – | – | – | – |
| Crotonaldehyde | 123-73-9 | 3.2E+00 | c | 9.5E-04 | c | 9.5E-02 | c | – | – | – | – | – | 3.2E+00 | c | 4.8E-04 | c | 4.8E-02 | c | – | – | – | – | – |
| Cumene (isopropylbenzene) | 98-82-8 | 4.3E+03 | n | 3.5E+02 | n | 3.5E+04 | n >S | 9.2E+03 | n | 6.2E+05 | n >S | – | 3.0E+03 | n | 1.7E+02 | n | 1.7E+04 | n >S | 4.8E+03 | n | 4.0E+04 | n >S | – |
| Cyanazine | 21725-46-2 | 5.6E+00 | c | 4.2E-03 | c | 4.2E-01 | c | – | – | – | – | – | 5.6E+00 | c | 2.1E-03 | c | 2.1E-01 | c | – | – | – | – | – |
| Cyanide | 57-12-5 | 4.5E+01 | n | 4.0E+01 | m | 4.0E+03 | m | 7.2E+02 | n | – | – | – | 4.3E+01 | n | 2.0E+01 | m | 2.0E+03 | m | 3.7E+02 | n | – | – | – |
| Cyanogen | 460-19-5 | 1.1E+01 | n | 6.1E-02 | n | 6.1E+00 | n | 1.2E+01 | n | 1.8E+01 | n | – | 5.9E+00 | n | 3.0E-02 | n | 3.0E+00 | n | 6.3E+00 | n | 1.2E+00 | n | – |
| Cycloate | 1134-23-2 | 3.7E+03 | n | 1.5E+02 | n | 1.5E+04 | n >S | – | – | – | – | – | 3.7E+03 | n | 7.6E+01 | n | 7.6E+03 | n >S | – | – | – | – | – |
| Cyclohexane | 110-82-7 | 7.5E+04 | n | 5.9E+03 | n >S | 5.9E+05 | n >S | 9.2E+04 | n | 2.9E+05 | n >S | – | 4.2E+04 | n | 2.9E+03 | n >S | 2.9E+05 | n >S | 4.7E+04 | n | 1.8E+04 | n >S | – |
| Cyclohexanol | 108-93-0 | 3.3E+05 | n | 2.9E+02 | n >S | 2.9E+04 | n >S | – | – | – | – | – | 3.3E+05 | n | 1.5E+02 | n >S | 1.5E+04 | n >S | – | – | – | – | – |
| Cyclohexanone | 108-94-1 | 3.2E+04 | n | 2.6E+02 | n | 2.6E+04 | n | 3.5E+04 | n | 1.0E+06 | n >S | – | 1.7E+04 | n | 1.3E+02 | n | 1.3E+04 | n | 1.8E+04 | n | 1.9E+05 | n >S | – |
| Cyclohexene, 1-methanol-3- | 1679-51-2 | 1.3E+03 | n | 3.8E+00 | n | 3.8E+02 | n | – | – | – | – | – | 1.3E+03 | n | 1.9E+00 | n | 1.9E+02 | n | – | – | – | – | – |
| Cyclohexene, 4-vinyl-1- | 100-40-3 | 1.3E+03 | n | 3.1E+01 | n | 3.1E+03 | n >S | 5.1E+03 | n | 6.2E+04 | n >S | – | 1.1E+03 | n | 1.5E+01 | n | 1.5E+03 | n >S | 2.6E+03 | n | 4.0E+03 | n >S | – |
| Cyclopentane | 287-92-3 | 4.8E+03 | n | 2.8E+01 | n | 2.8E+03 | n | 3.7E+05 | n | 7.0E+05 | n >S | – | 4.8E+03 | n | 1.4E+01 | n | 1.4E+03 | n | 1.9E+05 | n | 4.6E+04 | n >S | – |
| Cyclopentane, methyl- | 96-37-7 | 5.3E+03 | n | 1.4E+02 | n | 1.4E+04 | n >S | 1.5E+04 | n | 3.8E+04 | n >S | – | 4.0E+03 | n | 6.8E+01 | n | 6.8E+03 | n >S | 7.9E+03 | n | 2.5E+03 | n >S | – |
| Cyclopentene | 142-29-0 | 4.1E+05 | n | 1.1E+03 | n | 1.1E+05 | n >S | – | – | – | – | – | 4.1E+05 | n | 5.3E+02 | n | 5.3E+04 | n >S | – | – | – | – | – |
| Cyclotetramethylenetetranitramine (HMX) | 2691-41-0 | 1.6E+03 | n | 2.3E+00 | n | 2.3E+02 | n | – | – | – | – | – | 1.6E+03 | n | 1.2E+00 | n | 1.2E+02 | n | – | – | – | – | – |
| Cyclotrimethylenetrinitramine (RDX) | 121-82-4 | 5.9E+01 | c | 5.1E-02 | c | 5.1E+00 | c | – | – | – | – | – | 5.9E+01 | c | 2.5E-02 | c | 2.5E+00 | c | – | – | – | – | – |
| Cymene (isopropyltoluene) | 99-87-6 | 8.2E+03 | n | 2.3E+02 | n | 2.3E+04 | n >S | – | – | – | – | – | 8.2E+03 | n | 1.2E+02 | n | 1.2E+04 | n >S | – | – | – | – | – |
| Cymoxanil | 57966-95-7 | 8.7E+02 | n | 6.1E-01 | n | 6.1E+01 | n | – | – | – | – | – | 8.7E+02 | n | 3.0E-01 | n | 3.0E+01 | n | – | – | – | – | – |
| Dacthal (DCPA) | 1861-32-1 | 6.2E+02 | n | 4.5E+02 | n >S | 4.5E+04 | n >S | – | – | – | – | – | 6.2E+02 | n | 2.3E+02 | n >S | 2.3E+04 | n >S | – | – | – | – | – |
| Dalapon, sodium salt (2,2-dichloropropanoic acid) | 75-99-0 | 2.0E+03 | n | 5.8E-01 | m | 5.8E+01 | m | – | – | – | – | – | 2.0E+03 | n | 2.9E-01 | m | 2.9E+01 | m | – | – | – | – | – |
| DDD | 72-54-8 | 1.4E+01 | c | 1.3E+01 | c | 1.3E+03 | c >S | – | – | – | – | – | 1.4E+01 | c | 6.5E+00 | c | 6.5E+02 | c >S | – | – | – | – | – |
| DDE | 72-55-9 | 1.0E+01 | c | 1.2E+01 | c | 1.2E+03 | c >S | – | – | – | – | – | 1.0E+01 | c | 5.9E+00 | c | 5.9E+02 | c >S | – | – | – | – | – |
| DDT | 50-29-3 | 5.4E+00 | c | 1.5E+01 | c | 1.5E+03 | c >S | 1.2E+03 | c | 1.0E+06 | c >S | – | 5.4E+00 | c | 7.4E+00 | c | 7.4E+02 | c >S | 6.2E+02 | c | 2.2E+05 | c >S | – |
| Demeton | 8065-48-3 | 2.7E+00 | n | 1.2E-02 | n | 1.2E+00 | n | – | – | – | – | – | 2.7E+00 | n | 6.2E-03 | n | 6.2E-01 | n | – | – | – | – | – |
| Desethylatrazine | 6190-65-4 | 2.3E+03 | n | 4.0E+00 | n | 4.0E+02 | n | – | – | – | – | – | 2.3E+03 | n | 2.0E+00 | n | 2.0E+02 | n | – | – | – | – | – |

**Table 1**
**Tier 1 Residential Soil PCLs[1]**

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | 0.5 acre source area | | | | | | | | | | | 30 acre source area | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | $^{Tot}Soil_{Comb}$[2] (mg/kg) | note[3] | $^{GW}Soil_{Ing}$ (mg/kg) | note[3] | $^{GW}Soil_{Class\ 3}$ (mg/kg) | note[3] | $^{Air}Soil_{Inh\text{-}V}$[4] (mg/kg) | note[3] | $^{Air}GW\text{-}Soil_{Inh\text{-}V}$ (mg/kg) | note[3] | $^{GW}$Soil for Secondary MCL (mg/kg) | $^{Tot}Soil_{Comb}$[2] (mg/kg) | note[3] | $^{GW}Soil_{Ing}$ (mg/kg) | note[3] | $^{GW}Soil_{Class\ 3}$ (mg/kg) | note[3] | $^{Air}Soil_{Inh\text{-}V}$[4] (mg/kg) | note[3] | $^{Air}GW\text{-}Soil_{Inh\text{-}V}$ (mg/kg) | note[3] | $^{GW}$Soil for Secondary MCL (mg/kg) |
| Diacetone alcohol (4-hydroxy-4-methyl-2-pentanone) | 123-42-2 | 2.7E+03 | n | 1.9E+00 | n | 1.9E+02 | n | – | – | – | – | – | 2.7E+03 | n | 9.7E-01 | n | 9.7E+01 | n | – | – | – | – | – |
| Diallate | 2303-16-4 | 3.8E+01 | c | 1.2E+00 | c | 1.2E+02 | c | – | – | – | – | – | 3.8E+01 | c | 5.8E-01 | c | 5.8E+01 | c | – | – | – | – | – |
| Diazinon | 333-41-5 | 3.1E+01 | n | 1.6E-01 | n | 1.6E+01 | n | 6.5E+01 | n | 2.9E+04 | n >S | – | 2.1E+01 | n | 7.9E-02 | n | 7.9E+00 | n | 3.3E+01 | n | 1.9E+03 | n >S | – |
| Dibenz(a,h)acridine | 226-36-8 | 3.7E+00 | c | 5.8E+01 | c >S | 5.8E+03 | c >S | 1.5E+04 | c | 1.0E+06 | c >S | – | 3.7E+00 | c | 2.9E+01 | c >S | 2.9E+03 | c >S | 7.9E+03 | c | 1.0E+06 | c >S | – |
| Dibenz(a,j)acridine | 224-42-0 | 5.8E+00 | c | 1.1E+02 | c >S | 1.1E+04 | c >S | 2.1E+04 | c | 1.0E+06 | c >S | – | 5.8E+00 | c | 5.6E+01 | c >S | 5.6E+03 | c >S | 1.1E+04 | c | 1.0E+06 | c >S | – |
| Dibenz-a,h-anthracene | 53-70-3 | 4.0E+00 | c | 1.5E+01 | m4 | 1.5E+03 | m >S | 2.9E+03 | c | 1.0E+06 | c >S | – | 4.0E+00 | c | 7.6E+00 | m4 | 7.6E+02 | m >S | 1.5E+03 | c | 1.0E+06 | c >S | – |
| Dibenzo(a,e)pyrene | 192-65-4 | 6.1E-01 | c | 1.3E+02 | c >S | 1.3E+04 | c >S | 7.2E+03 | c | 1.0E+06 | c >S | – | 6.1E-01 | c | 6.5E+01 | c >S | 6.5E+03 | c >S | 3.7E+03 | c | 1.0E+06 | c >S | – |
| Dibenzo(a,h)pyrene | 189-64-0 | 6.1E-02 | c | 1.2E+01 | c | 1.2E+03 | c >S | 7.0E+02 | c | 1.0E+06 | c >S | – | 6.1E-02 | c | 6.0E+00 | c | 6.0E+02 | c >S | 3.6E+02 | c | 1.0E+06 | c >S | – |
| Dibenzo(a,i)pyrene | 189-55-9 | 6.1E-02 | c | 1.2E+01 | c | 1.2E+03 | c >S | 7.0E+02 | c | 1.0E+06 | c >S | – | 6.1E-02 | c | 6.0E+00 | c | 6.0E+02 | c >S | 3.6E+02 | c | 1.0E+06 | c >S | – |
| Dibenzofuran | 132-64-9 | 2.7E+02 | n | 3.3E+01 | n | 3.3E+03 | n >S | – | – | – | – | – | 2.7E+02 | n | 1.7E+01 | n | 1.7E+03 | n >S | – | – | – | – | – |
| Dibenzothiophene | 132-65-0 | 4.4E+02 | n | 3.4E+02 | n >S | 3.4E+04 | n >S | – | – | – | – | – | 4.4E+02 | n | 1.7E+02 | n >S | 1.7E+04 | n >S | – | – | – | – | – |
| Dibromo-3-chloropropane, 1,2- | 96-12-8 | 1.5E-01 | c | 1.7E-03 | m | 1.7E-01 | m | 1.6E-01 | c | 5.4E+00 | c | – | 8.0E-02 | c | 8.7E-04 | m | 8.7E-02 | m | 8.1E-02 | c | 3.5E-01 | c | – |
| Dibromochloromethane (chlorodibromomethane)[8] | 124-48-1 | 7.2E+01 | c | 3.6E-01 | m | 3.6E+01 | m | – | – | – | – | – | 7.2E+01 | c | 1.8E-01 | m | 1.8E+01 | m | – | – | – | – | – |
| Dibromofluoromethane | 1868-53-7 | 1.6E+04 | n | 1.6E+01 | n | 1.6E+03 | n | – | – | – | – | – | 1.6E+04 | n | 7.8E+00 | n | 7.8E+02 | n | – | – | – | – | – |
| Dicamba | 1918-00-9 | 2.0E+03 | n | 1.5E+00 | n | 1.5E+02 | n | – | – | – | – | – | 2.0E+03 | n | 7.3E-01 | n | 7.3E+01 | n | – | – | – | – | – |
| Dichlormid | 37764-25-3 | 1.7E+03 | n | 2.6E+00 | n | 2.6E+02 | n | – | – | – | – | – | 1.7E+03 | n | 1.3E+00 | n | 1.3E+02 | n | – | – | – | – | – |
| Dichloro-2-butene, 1,4- | 764-41-0 | 2.0E-01 | c | – | – | – | – | 2.0E-01 | c | 6.2E+00 | c | – | 1.0E-01 | c | – | – | – | – | 1.0E-01 | c | 4.0E-01 | c | – |
| Dichloro-2-butene, 1,4- trans | 110-57-6 | 2.0E-01 | c | – | – | – | – | 2.0E-01 | c | 6.6E+00 | c | – | 1.1E-01 | c | – | – | – | – | 1.1E-01 | c | 4.3E-01 | c | – |
| Dichlorobenzene, 1,2- | 95-50-1 | 7.2E+02 | n | 1.8E+01 | m | 1.8E+03 | m | 8.0E+02 | n | 3.5E+04 | n >S | – | 3.9E+02 | n | 8.9E+00 | m | 8.9E+02 | m | 4.1E+02 | n | 2.2E+03 | n | – |
| Dichlorobenzene, 1,3- | 541-73-1 | 1.2E+02 | n | 6.7E+00 | n | 6.7E+02 | n | 1.2E+02 | n | 1.7E+03 | n >S | – | 6.2E+01 | n | 3.4E+00 | n | 3.4E+02 | n | 6.3E+01 | n | 1.1E+02 | n | – |
| Dichlorobenzene, 1,4- | 106-46-7 | 2.5E+02 | c | 2.1E+00 | m | 2.1E+02 | m | 1.2E+04 | n | 4.8E+05 | n >S | – | 2.5E+02 | c | 1.1E+00 | m | 1.1E+02 | m | 6.1E+03 | n | 3.1E+04 | n >S | – |
| Dichlorobenzidine, 3,3- | 91-94-1 | 1.0E+01 | c | 6.3E-02 | c | 6.3E+00 | c | – | – | – | – | – | 1.0E+01 | c | 3.1E-02 | c | 3.1E+00 | c | – | – | – | – | – |
| Dichlorobutane, 2,3- | 7581-97-7 | 9.5E+01 | n | 2.6E+00 | n | 2.6E+02 | n | 1.1E+02 | n | 1.5E+03 | n | – | 5.2E+01 | n | 1.3E+00 | n | 1.3E+02 | n | 5.5E+01 | n | 9.9E+01 | n | – |
| Dichlorodifluoromethane | 75-71-8 | 1.4E+03 | n | 2.4E+02 | n | 2.4E+04 | n >S | 1.5E+03 | n | 2.9E+03 | n | – | 7.5E+02 | n | 1.2E+02 | n | 1.2E+04 | n >S | 7.9E+02 | n | 1.9E+02 | n | – |
| Dichloroethane, 1,1- | 75-34-3 | 1.1E+04 | n | 1.8E+01 | n | 1.8E+03 | n | 3.7E+04 | n | 1.6E+05 | n >S | – | 8.8E+03 | n | 9.2E+00 | n | 9.2E+02 | n | 1.9E+04 | n | 1.1E+04 | n >S | – |
| Dichloroethane, 1,2- | 107-06-2 | 4.1E+01 | c | 1.4E-02 | m | 1.4E+00 | m | 1.1E+02 | c | 6.9E+02 | c | – | 3.0E+01 | c | 6.9E-03 | m | 6.9E-01 | m | 5.4E+01 | c | 4.5E+01 | c | – |
| Dichloroethylene, 1,1- | 75-35-4 | 2.3E+03 | n | 5.0E-02 | m | 5.0E+00 | m | 5.2E+03 | n | 1.2E+04 | n | – | 1.6E+03 | n | 2.5E-02 | m | 2.5E+00 | m | 2.7E+03 | n | 7.7E+02 | n | – |
| Dichloroethylene, cis-1,2- | 156-59-2 | 1.4E+02 | n | 2.5E-01 | m | 2.5E+01 | m | 9.2E+02 | n | 4.4E+03 | n | – | 1.2E+02 | n | 1.2E-01 | m | 1.2E+01 | m | 4.7E+02 | n | 2.8E+02 | n | – |
| Dichloroethylene, trans-1,2 | 156-60-5 | 5.9E+02 | n | 4.9E-01 | m | 4.9E+01 | m | 9.2E+02 | n | 3.8E+03 | n | – | 3.7E+02 | n | 2.5E-01 | m | 2.5E+01 | m | 4.7E+02 | n | 2.4E+02 | n | – |
| Dichlorofluoromethane | 75-43-4 | 1.6E+04 | n | 1.4E+01 | n | 1.4E+03 | n | – | – | – | – | – | 1.6E+04 | n | 7.1E+00 | n | 7.1E+02 | n | – | – | – | – | – |
| Dichlorophenol, 2,3- | 576-24-9 | 2.0E+02 | n | 5.4E-01 | n | 5.4E+01 | n | – | – | – | – | – | 2.0E+02 | n | 2.7E-01 | n | 2.7E+01 | n | – | – | – | – | – |
| Dichlorophenol, 2,4- | 120-83-2 | 2.0E+02 | n | 3.5E-01 | n | 3.5E+01 | n | – | – | – | – | – | 2.0E+02 | n | 1.8E-01 | n | 1.8E+01 | n | – | – | – | – | – |
| Dichlorophenol, 2,5- | 583-78-8 | 2.0E+02 | n | 5.0E-01 | n | 5.0E+01 | n | – | – | – | – | – | 2.0E+02 | n | 2.5E-01 | n | 2.5E+01 | n | – | – | – | – | – |
| Dichlorophenol, 2,6- | 87-65-0 | 6.7E+01 | n | 6.9E-02 | n | 6.9E+00 | n | – | – | – | – | – | 6.7E+01 | n | 3.4E-02 | n | 3.4E+00 | n | – | – | – | – | – |
| Dichlorophenol, 3,4- | 95-77-2 | 2.0E+02 | n | 2.0E+00 | n | 2.0E+02 | n | – | – | – | – | – | 2.0E+02 | n | 1.0E+00 | n | 1.0E+02 | n | – | – | – | – | – |
| Dichlorophenol, 3,5- | 591-35-5 | 2.0E+02 | n | 1.3E+00 | n | 1.3E+02 | n | – | – | – | – | – | 2.0E+02 | n | 6.6E-01 | n | 6.6E+01 | n | – | – | – | – | – |
| Dichlorophenoxy, 2,4- butyric acid, 4- (2,4-DB) | 94-82-6 | 5.3E+02 | n | 3.9E-01 | n | 3.9E+01 | n | – | – | – | – | – | 5.3E+02 | n | 1.9E-01 | n | 1.9E+01 | n | – | – | – | – | – |
| Dichlorophenoxyacetic acid, 2,4- (2,4-D) | 94-75-7 | 7.3E+02 | n | 2.6E+00 | m | 2.6E+02 | m | – | – | – | – | – | 7.3E+02 | n | 1.3E+00 | m | 1.3E+02 | m | – | – | – | – | – |
| Dichloroprop (2-(2,4-dichlorophenoxy) propanoic acid) | 120-36-5 | 6.7E+02 | n | 4.7E-01 | n | 4.7E+01 | n | – | – | – | – | – | 6.7E+02 | n | 2.3E-01 | n | 2.3E+01 | n | – | – | – | – | – |
| Dichloropropane, 1,2- | 78-87-5 | 6.1E+01 | n | 2.3E-02 | m | 2.3E+00 | m | 6.1E+01 | n | 5.3E+02 | n | – | 3.1E+01 | n | 1.1E-02 | m | 1.1E+00 | m | 3.2E+01 | n | 3.4E+01 | n | – |
| Dichloropropane, 1,3- | 142-28-9 | 3.6E+01 | c | 6.4E-02 | c | 6.4E+00 | c | 9.0E+01 | c | 1.8E+03 | c | – | 2.6E+01 | c | 3.2E-02 | c | 3.2E+00 | c | 4.6E+01 | c | 1.2E+02 | c | – |
| Dichloropropane, 2,2- | 594-20-7 | 6.1E+01 | n | 1.2E-01 | c | 1.2E+01 | c | 6.1E+01 | n | 5.1E+02 | n | – | 3.1E+01 | n | 6.0E-02 | c | 6.0E+00 | c | 3.2E+01 | n | 3.3E+01 | n | – |
| Dichloropropanol, 2,3- | 616-23-9 | 2.0E+02 | n | 2.4E-01 | n | 2.4E+01 | n | – | – | – | – | – | 2.0E+02 | n | 1.2E-01 | n | 1.2E+01 | n | – | – | – | – | – |
| Dichloropropene, 1,1- | 563-58-6 | 3.6E+01 | c | 1.3E-01 | c | 1.3E+01 | c | 9.0E+01 | c | 2.8E+02 | c | – | 2.6E+01 | c | 6.7E-02 | c | 6.7E+00 | c | 4.6E+01 | c | 1.8E+01 | c | – |
| Dichloropropene, 1,3- (mixed isomers) | 542-75-6 | 3.6E+01 | c | 3.9E-02 | c | 3.9E+00 | c | 9.0E+01 | c | 7.7E+02 | c | – | 2.6E+01 | c | 2.0E-02 | c | 2.0E+00 | c | 4.6E+01 | c | 5.0E+01 | c | – |
| Dichloropropene, cis 1,3- | 10061-01-5 | 8.0E+00 | n | 6.6E-03 | c | 6.6E-01 | c | 3.1E+02 | n | 2.7E+03 | n | – | 7.8E+00 | n | 3.3E-03 | c | 3.3E-01 | c | 1.6E+02 | n | 1.8E+02 | n | – |
| Dichloropropene, trans 1,3- | 10061-02-6 | 3.6E+01 | c | 3.6E-02 | c | 3.6E+00 | c | 9.0E+01 | c | 7.5E+02 | c | – | 2.6E+01 | c | 1.8E-02 | c | 1.8E+00 | c | 4.6E+01 | c | 4.8E+01 | c | – |
| Dichlorvos | 62-73-7 | 1.6E+01 | c | 4.9E+05 | c | 1.0E+06 | c | 1.0E+06 | n | 1.0E+06 | n | – | 1.6E+01 | c | 2.4E+05 | c | 1.0E+06 | c | 6.2E+05 | n | 1.0E+06 | n | – |
| Dicrotophos (bidrin) | 141-66-2 | 6.7E+00 | n | 4.7E-03 | n | 4.7E-01 | n | – | – | – | – | – | 6.7E+00 | n | 2.3E-03 | n | 2.3E-01 | n | – | – | – | – | – |

**Table 1**
**Tier 1 Residential Soil PCLs[1]**

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | 0.5 acre source area | | | | | | | | | | | 30 acre source area | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | $^{Tot}Soil_{Comb}$[2] (mg/kg) | note[3] | $^{GW}Soil_{Ing}$ (mg/kg) | note[3] | $^{GW}Soil_{Class\ 3}$ (mg/kg) | note[3] | $^{Air}Soil_{Inh\text{-}V}$[4] (mg/kg) | note[3] | $^{Air}GW\text{-}Soil_{Inh\text{-}V}$ (mg/kg) | note[3] | $^{GW}$Soil for Secondary MCL (mg/kg) | $^{Tot}Soil_{Comb}$[2] (mg/kg) | note[3] | $^{GW}Soil_{Ing}$ (mg/kg) | note[3] | $^{GW}Soil_{Class\ 3}$ (mg/kg) | note[3] | $^{Air}Soil_{Inh\text{-}V}$[4] (mg/kg) | note[3] | $^{Air}GW\text{-}Soil_{Inh\text{-}V}$ (mg/kg) | note[3] | $^{GW}$Soil for Secondary MCL (mg/kg) |
| Dicyclopentadiene | 77-73-6 | 6.6E+03 | n | – | – | – | – | – | – | – | – | – | 6.6E+03 | n | – | – | – | – | – | – | – | – | – |
| Dieldrin | 60-57-1 | 1.5E-01 | c | 4.9E-02 | c | 4.9E+00 | c | 3.2E+01 | c | 1.1E+05 | c >S | – | 1.5E-01 | c | 2.4E-02 | c | 2.4E+00 | c | 1.6E+01 | c | 7.0E+03 | c >S | – |
| Diethanolamine | 111-42-2 | 3.3E+01 | n | 2.3E-02 | n | 2.3E+00 | n | 3.5E+03 | n | 1.0E+06 | n | – | 3.3E+01 | n | 1.2E-02 | n | 1.2E+00 | n | 1.8E+03 | n | 9.6E+05 | n | – |
| Diethyldithiocarbamate, sodium salt | 148-18-5 | 2.2E+01 | c | – | – | – | – | – | – | – | – | – | 2.2E+01 | c | – | – | – | – | – | – | – | – | – |
| Diethyl phthalate | 84-66-2 | 5.3E+04 | n | 1.6E+02 | n | 1.6E+04 | n >S | – | – | – | – | – | 5.3E+04 | n | 7.8E+01 | n | 7.8E+03 | n >S | – | – | – | – | – |
| Diethylene glycol | 111-46-6 | 1.3E+05 | n | 9.4E+01 | n | 9.4E+03 | n | – | – | – | – | – | 1.3E+05 | n | 4.7E+01 | n | 4.7E+03 | n | – | – | – | – | – |
| Diethylene glycol monobutyl ether | 112-34-5 | 2.0E+01 | n | 1.6E+00 | n | 1.6E+02 | n | 2.0E+01 | n | 6.9E+03 | n | – | 1.0E+01 | n | 7.8E-01 | n | 7.8E+01 | n | 1.0E+01 | n | 4.4E+02 | n | – |
| Diethylhexyl adipate | 103-23-1 | 3.9E+03 | c | 6.1E+03 | m >S | 6.1E+05 | m >S | – | – | – | – | – | 3.9E+03 | c | 3.0E+03 | m >S | 3.0E+05 | m >S | – | – | – | – | – |
| Diethylstilbestrol | 56-53-1 | 7.1E-04 | c | 5.8E-04 | c | 5.8E-02 | c | – | – | – | – | – | 7.1E-04 | c | 2.9E-04 | c | 2.9E-02 | c | – | – | – | – | – |
| Diisobutylene (trimethyl-1-pentene, 2,4,4-) | 107-39-1 | 1.9E+03 | n | 6.1E+02 | n | 6.1E+04 | n >S | 3.1E+03 | n | 9.5E+03 | n >S | – | 1.2E+03 | n | 3.0E+02 | n | 3.0E+04 | n >S | 1.6E+03 | n | 6.1E+02 | n | – |
| Diisopropylbenzene, p- | 100-18-5 | 6.7E+02 | n | 9.5E+01 | n | 9.5E+03 | n >S | – | – | – | – | – | 6.7E+02 | n | 4.7E+01 | n | 4.7E+03 | n >S | – | – | – | – | – |
| Diisopropyl ether (2,2'-oxybis-propane) | 108-20-3 | 4.6E+03 | n | 1.2E+01 | n | 1.2E+03 | n | 1.1E+04 | n | 9.6E+04 | n >S | – | 3.3E+03 | n | 6.0E+00 | n | 6.0E+02 | n | 5.5E+03 | n | 6.2E+03 | n | – |
| Dimethenamid | 87674-68-8 | 1.0E+03 | n | 1.0E+00 | n | 1.0E+02 | n | – | – | – | – | – | 1.0E+03 | n | 5.2E-01 | n | 5.2E+01 | n | – | – | – | – | – |
| Dimethoate | 60-51-5 | 1.3E+01 | n | 1.0E-02 | n | 1.0E+00 | n | – | – | – | – | – | 1.3E+01 | n | 5.1E-03 | n | 5.1E-01 | n | – | – | – | – | – |
| Dimethoxybenzidine, 3,3'- | 119-90-4 | 3.4E+02 | c | 2.8E-01 | c | 2.8E+01 | c | – | – | – | – | – | 3.4E+02 | c | 1.4E-01 | c | 1.4E+01 | c | – | – | – | – | – |
| Dimethyl-2-nitrobenzene, 1,3- | 81-20-9 | 1.3E+02 | n | 2.2E+00 | n | 2.2E+02 | n | 2.8E+03 | n | 4.9E+05 | n >S | – | 1.2E+02 | n | 1.1E+00 | n | 1.1E+02 | n | 1.4E+03 | n | 3.2E+04 | n >S | – |
| Dimethyl-3-nitrobenzene, 1,2- | 83-41-0 | 1.3E+02 | n | 1.4E+00 | n | 1.4E+02 | n | 2.4E+03 | n | 3.9E+05 | n >S | – | 1.2E+02 | n | 7.1E-01 | n | 7.1E+01 | n | 1.2E+03 | n | 2.5E+04 | n >S | – |
| Dimethyl-4-nitrobenzene, 1-2- | 99-51-4 | 1.3E+02 | n | 1.4E+00 | n | 1.4E+02 | n | 2.5E+03 | n | 4.2E+05 | n >S | – | 1.2E+02 | n | 7.0E-01 | n | 7.0E+01 | n | 1.3E+03 | n | 2.7E+04 | n >S | – |
| Dimethyl-5-nitrobenzene, 1,3- | 99-12-7 | 1.3E+02 | n | 1.6E+00 | n | 1.6E+02 | n | 2.2E+03 | n | 3.2E+05 | n >S | – | 1.2E+02 | n | 8.2E-01 | n | 8.2E+01 | n | 1.1E+03 | n | 2.1E+04 | n >S | – |
| Dimethylphenethylamine, alpha, alpha- | 122-09-8 | 1.3E+02 | n | 3.8E-01 | n | 3.8E+01 | n | – | – | – | – | – | 1.3E+02 | n | 1.9E-01 | n | 1.9E+01 | n | – | – | – | – | – |
| Dimethyl phenol, 2,4- | 105-67-9 | 1.3E+03 | n | 3.2E+00 | n | 3.2E+02 | n | – | – | – | – | – | 1.3E+03 | n | 1.6E+00 | n | 1.6E+02 | n | – | – | – | – | – |
| Dimethylaminoazobenzene, p- | 60-11-7 | 6.4E-01 | n | 1.1E+00 | n | 1.1E+02 | n | – | – | – | – | – | 6.4E-01 | n | 5.6E-01 | n | 5.6E+01 | n | – | – | – | – | – |
| Dimethylbenz-a-anthracene, 7,12- | 57-97-6 | 1.7E-02 | c | 1.2E+00 | c | 1.2E+02 | c | 1.4E+02 | c | 1.0E+06 | c >S | – | 1.7E-02 | c | 6.2E-01 | c | 6.2E+01 | c | 7.3E+01 | c | 7.3E+05 | c >S | – |
| Dimethylbenzidine, 3,3'- | 119-93-7 | 4.3E-01 | c | 8.2E-04 | c | 8.2E-02 | c | – | – | – | – | – | 4.3E-01 | c | 4.1E-04 | c | 4.1E-02 | c | – | – | – | – | – |
| Dimethylformamide, N,N- | 68-12-2 | 2.3E+03 | n | 4.7E+00 | n | 4.7E+02 | n | 3.2E+03 | n | 7.2E+05 | n | – | 1.4E+03 | n | 2.4E+00 | n | 2.4E+02 | n | 1.6E+03 | n | 4.7E+04 | n | – |
| Dimethylnaphthalene, 1,3- | 575-41-7 | 2.3E+03 | n | 7.9E+02 | n | 7.9E+04 | n >S | – | – | – | – | – | 2.3E+03 | n | 3.9E+02 | n | 3.9E+04 | n >S | – | – | – | – | – |
| Dimethylphthalate | 131-11-3 | 5.3E+04 | n | 6.2E+01 | n | 6.2E+03 | n | – | – | – | – | – | 5.3E+04 | n | 3.1E+01 | n | 3.1E+03 | n | – | – | – | – | – |
| Di-n-butyl phthalate | 84-74-2 | 6.2E+03 | n | 3.3E+03 | n | 3.3E+05 | n >S | – | – | – | – | – | 6.2E+03 | n | 1.7E+03 | n | 1.7E+05 | n >S | – | – | – | – | – |
| Dinitro-2-methylphenol, 4,6- (dinitro-o-cresol, 4, 6-) | 534-52-1 | 6.7E+00 | n | 4.7E-03 | n | 4.7E-01 | n | – | – | – | – | – | 6.7E+00 | n | 2.3E-03 | n | 2.3E-01 | n | – | – | – | – | – |
| Dinitrobenzene, 1,3- (dinitrobenzene, 2,4-) | 99-65-0 | 6.7E+00 | n | 7.6E-03 | n | 7.6E-01 | n | – | – | – | – | – | 6.7E+00 | n | 3.8E-03 | n | 3.8E-01 | n | – | – | – | – | – |
| Dinitrobenzene, 1,4- | 100-25-4 | 6.7E+00 | n | 7.2E-03 | n | 7.2E-01 | n | – | – | – | – | – | 6.7E+00 | n | 3.6E-03 | n | 3.6E-01 | n | – | – | – | – | – |
| Dinitrophenol, 2,4- | 51-28-5 | 1.3E+02 | n | 9.4E-02 | n | 9.4E+00 | n | – | – | – | – | – | 1.3E+02 | n | 4.7E-02 | n | 4.7E+00 | n | – | – | – | – | – |
| Dinitrophenol, 2,5- | 329-71-5 | 1.3E+02 | n | 9.6E-02 | n | 9.6E+00 | n | – | – | – | – | – | 1.3E+02 | n | 4.8E-02 | n | 4.8E+00 | n | – | – | – | – | – |
| Dinitrotoluene, 2,4- | 121-14-2 | 6.9E+00 | c | 5.3E-03 | c | 5.3E-01 | c | – | – | – | – | – | 6.9E+00 | c | 2.7E-03 | c | 2.7E-01 | c | – | – | – | – | – |
| Dinitrotoluene, 2,6- | 606-20-2 | 6.9E+00 | c | 4.8E-03 | c | 4.8E-01 | c | – | – | – | – | – | 6.9E+00 | c | 2.4E-03 | c | 2.4E-01 | c | – | – | – | – | – |
| Di-n-octyl phthalate | 117-84-0 | 6.4E+02 | n | 8.1E+05 | n >S | 1.0E+06 | n >S | – | – | – | – | – | 6.4E+02 | n | 4.1E+05 | n >S | 1.0E+06 | n >S | – | – | – | – | – |
| Dinoseb | 88-85-7 | 6.7E+01 | n | 3.5E-01 | m | 3.5E+01 | m | – | – | – | – | – | 6.7E+01 | n | 1.8E-01 | m | 1.8E+01 | m | – | – | – | – | – |
| Dioxane 1,4- | 123-91-1 | 4.5E+01 | c | 1.8E-02 | c | 1.8E+00 | c | 1.8E+02 | c | 1.5E+04 | c | – | 3.7E+01 | c | 8.8E-03 | c | 8.8E-01 | c | 9.3E+01 | c | 9.7E+02 | c | – |
| Dioxin (as 2,3,7,8-TCDD toxicity equivalent quotients (TEQs)) | 1746-01-6 | 1.0E-03 | e | 1.7E-02 | m | 1.7E+00 | m | – | – | – | – | – | 1.0E-03 | e | 8.5E-03 | m | 8.5E-01 | m | – | – | – | – | – |
| Diphenyl ether | 101-84-8 | 3.8E+02 | n | 9.2E+01 | n | 9.2E+03 | n >S | – | – | – | – | – | 3.8E+02 | n | 4.6E+01 | n | 4.6E+03 | n >S | – | – | – | – | – |
| Diphenylamine | 122-39-4 | 1.7E+03 | n | 9.6E+00 | n | 9.6E+02 | n | – | – | – | – | – | 1.7E+03 | n | 4.8E+00 | n | 4.8E+02 | n | – | – | – | – | – |
| Diphenylhydrazine, 1,2- | 122-66-7 | 5.6E+00 | c | 3.2E-02 | c | 3.2E+00 | c | 1.4E+02 | c | 1.1E+05 | c >S | – | 5.4E+00 | c | 1.6E-02 | c | 1.6E+00 | c | 7.2E+01 | c | 7.0E+03 | c | – |
| Dipropylene glycol | 110-98-5 | 8.0E+03 | n | 5.7E+00 | n | 5.7E+02 | n | – | – | – | – | – | 8.0E+03 | n | 2.8E+00 | n | 2.8E+02 | n | – | – | – | – | – |
| Diquat | 85-00-7 | 1.5E+02 | n | 2.0E-01 | m | 2.0E+01 | m | – | – | – | – | – | 1.5E+02 | n | 1.0E-01 | m | 1.0E+01 | m | – | – | – | – | – |
| Disodium iminodiacetate (iminodiacetic acid, disodium salt) | 142-73-4 | 6.7E+02 | n | 4.7E-01 | n | 4.7E+01 | n | – | – | – | – | – | 6.7E+02 | n | 2.3E-01 | n | 2.3E+01 | n | – | – | – | – | – |
| Disulfoton | 298-04-4 | 2.7E+00 | n | 3.5E-01 | n | 3.5E+01 | n | – | – | – | – | – | 2.7E+00 | n | 1.8E-01 | n | 1.8E+01 | n | – | – | – | – | – |
| Diuron | 330-54-1 | 1.3E+02 | n | 9.3E-01 | n | 9.3E+01 | n | – | – | – | – | – | 1.3E+02 | n | 4.6E-01 | n | 4.6E+01 | n | – | – | – | – | – |
| Dodecylphenol, 4- | 104-43-8 | 3.3E+03 | n | 1.0E+06 | n >S | 1.0E+06 | n >S | – | – | – | – | – | 3.3E+03 | n | 1.0E+06 | n >S | 1.0E+06 | n >S | – | – | – | – | – |
| Endosulfan | 115-29-7 | 4.0E+02 | n | 4.6E+00 | n | 4.6E+02 | n >S | – | – | – | – | – | 4.0E+02 | n | 2.3E+00 | n | 2.3E+02 | n >S | – | – | – | – | – |

**Table 1**
**Tier 1 Residential Soil PCLs[1]**

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | 0.5 acre source area | | | | | | | | | | | 30 acre source area | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | $^{Tot}Soil_{Comb}$[2] (mg/kg) | note[3] | $^{GW}Soil_{Ing}$ (mg/kg) | note[3] | $^{GW}Soil_{Class\ 3}$ (mg/kg) | note[3] | $^{Air}Soil_{Inh\text{-}V}$[4] (mg/kg) | note[3] | $^{Air}GW\text{-}Soil_{Inh\text{-}V}$ (mg/kg) | note[3] | $^{GW}$Soil for Secondary MCL (mg/kg) | $^{Tot}Soil_{Comb}$[2] (mg/kg) | note[3] | $^{GW}Soil_{Ing}$ (mg/kg) | note[3] | $^{GW}Soil_{Class\ 3}$ (mg/kg) | note[3] | $^{Air}Soil_{Inh\text{-}V}$[4] (mg/kg) | note[3] | $^{Air}GW\text{-}Soil_{Inh\text{-}V}$ (mg/kg) | note[3] | $^{GW}$Soil for Secondary MCL (mg/kg) |
| Endosulfan I | 959-98-8 | 9.1E+01 | n | 3.1E+01 | n | 3.1E+03 | n >S | – | – | – | – | – | 9.1E+01 | n | 1.5E+01 | n | 1.5E+03 | n >S | – | – | – | – | – |
| Endosulfan II | 33213-65-9 | 2.7E+02 | n | 9.2E+01 | n | 9.2E+03 | n >S | – | – | – | – | – | 2.7E+02 | n | 4.6E+01 | n | 4.6E+03 | n >S | – | – | – | – | – |
| Endosulfan sulfate | 1031-07-8 | 3.8E+02 | n | 4.7E+03 | n >S | 4.7E+05 | n >S | – | – | – | – | – | 3.8E+02 | n | 2.3E+03 | n >S | 2.3E+05 | n >S | – | – | – | – | – |
| Endothall | 145-73-3 | 1.3E+03 | n | 5.3E-01 | m | 5.3E+01 | m | – | – | – | – | – | 1.3E+03 | n | 2.7E-01 | m | 2.7E+01 | m | – | – | – | – | – |
| Endrin | 72-20-8 | 9.0E+00 | n | 7.5E-01 | m | 7.5E+01 | m | – | – | – | – | – | 9.0E+00 | n | 3.8E-01 | m | 3.8E+01 | m | – | – | – | – | – |
| Endrin aldehyde | 7421-93-4 | 1.9E+01 | n | 6.3E+02 | n | 6.3E+04 | n >S | – | – | – | – | – | 1.9E+01 | n | 3.1E+02 | n | 3.1E+04 | n >S | – | – | – | – | – |
| Endrin ketone | 53494-70-5 | 1.9E+01 | n | 5.1E+01 | n | 5.1E+03 | n | – | – | – | – | – | 1.9E+01 | n | 2.5E+01 | n | 2.5E+03 | n | – | – | – | – | – |
| Epichlorohydrin | 106-89-8 | 2.5E+01 | n | 1.8E-01 | c | 1.8E+01 | c | 2.6E+01 | n | 1.4E+03 | n | – | 1.3E+01 | n | 9.2E-02 | c | 9.2E+00 | c | 1.4E+01 | n | 9.1E+01 | n | – |
| EPN (o-ethyl o-(4-nitrophenyl)phenylphosphonothioate) | 2104-64-5 | 6.7E-01 | n | 5.5E-02 | n | 5.5E+00 | n | – | – | – | – | – | 6.7E-01 | n | 2.7E-02 | n | 2.7E+00 | n | – | – | – | – | – |
| Esfenvalerate | 66230-04-4 | 7.4E+01 | n | 1.2E+02 | n >S | 1.2E+04 | n >S | – | – | – | – | – | 7.4E+01 | n | 6.2E+01 | n >S | 6.2E+03 | n >S | – | – | – | – | – |
| Ethalfluralin (sonolan) | 55283-68-6 | 4.7E+01 | c | 2.5E+01 | c | 2.5E+03 | c | – | – | – | – | – | 4.7E+01 | c | 1.2E+01 | c | 1.2E+03 | c | – | – | – | – | – |
| Ethanol | 64-17-5 | 1.0E+06 | n | 1.6E+03 | n | 1.6E+05 | n | – | – | – | – | – | 1.0E+06 | n | 7.9E+02 | n | 7.9E+04 | n | – | – | – | – | – |
| Ethanol, 2-amino- | 141-43-5 | 1.1E+02 | n | 8.0E-02 | n | 8.0E+00 | n | 2.9E+03 | n | 8.1E+05 | n | – | 1.1E+02 | n | 4.0E-02 | n | 4.0E+00 | n | 1.5E+03 | n | 5.3E+04 | n | – |
| Ethanol, 2-(2-aminoethoxy)- | 929-06-6 | 3.3E+01 | n | 2.3E-02 | n | 2.3E+00 | n | – | – | – | – | – | 3.3E+01 | n | 1.2E-02 | n | 1.2E+00 | n | – | – | – | – | – |
| Ethanol, 2-(2-ethoxyethoxy)- | 111-90-0 | 1.3E+05 | n | 1.6E+02 | n | 1.6E+04 | n | – | – | – | – | – | 1.3E+05 | n | 8.2E+01 | n | 8.2E+03 | n | – | – | – | – | – |
| Ethanol, 2-(methylamino)- | 109-83-1 | 9.1E+02 | n | 7.5E-01 | n | 7.5E+01 | n | 6.4E+03 | n | 1.0E+06 | n | – | 8.1E+02 | n | 3.8E-01 | n | 3.8E+01 | n | 3.3E+03 | n | 1.3E+05 | n | – |
| Ethion | 563-12-2 | 2.7E+01 | n | 7.6E+00 | n | 7.6E+02 | n >S | – | – | – | – | – | 2.7E+01 | n | 3.8E+00 | n | 3.8E+02 | n >S | – | – | – | – | – |
| Ethoprop | 13194-48-4 | 6.7E+00 | n | 1.2E-01 | n | 1.2E+01 | n | – | – | – | – | – | 6.7E+00 | n | 6.2E-02 | n | 6.2E+00 | n | – | – | – | – | – |
| Ethoxy ethanol, 2- | 110-80-5 | 5.7E+03 | n | 4.3E+00 | n | 4.3E+02 | n >S | 2.5E+04 | n | 1.0E+06 | n >S | – | 4.7E+03 | n | 2.1E+00 | n | 2.1E+02 | n >S | 1.3E+04 | n | 4.2E+05 | n >S | – |
| Ethyl acetate | 141-78-6 | 3.5E+03 | n | 4.7E+01 | n | 4.7E+03 | n | 3.7E+03 | n | 1.1E+05 | n | – | 1.8E+03 | n | 2.4E+01 | n | 2.4E+03 | n | 1.9E+03 | n | 7.3E+03 | n | – |
| Ethyl acrylate | 140-88-5 | 1.3E+02 | c | 1.2E-01 | c | 1.2E+01 | c | 2.4E+02 | n | 6.8E+03 | n | – | 9.6E+01 | n | 5.9E-02 | c | 5.9E+00 | c | 1.2E+02 | n | 4.4E+02 | n | – |
| Ethyl benzene | 100-41-4 | 6.4E+03 | n | 7.6E+00 | m | 7.6E+02 | m | 2.9E+04 | n | 3.2E+05 | n >S | – | 5.3E+03 | n | 3.8E+00 | m | 3.8E+02 | m | 1.5E+04 | n | 2.1E+04 | n >S | – |
| Ethyl dipropylthiocarbamate, S- | 759-94-4 | 1.7E+03 | n | 7.0E+00 | n | 7.0E+02 | n | – | – | – | – | – | 1.7E+03 | n | 3.5E+00 | n | 3.5E+02 | n | – | – | – | – | – |
| Ethyl ether | 60-29-7 | 1.6E+04 | n | 1.1E+01 | n | 1.1E+03 | n | – | – | – | – | – | 1.6E+04 | n | 5.6E+00 | n | 5.6E+02 | n | – | – | – | – | – |
| Ethyl methacrylate | 97-63-2 | 3.6E+03 | n | 7.5E+00 | n | 7.5E+02 | n | 7.1E+03 | n | 1.9E+05 | n >S | – | 2.4E+03 | n | 3.8E+00 | n | 3.8E+02 | n | 3.6E+03 | n | 1.3E+04 | n | – |
| Ethyl methanesulfonate | 62-50-0 | 3.4E+01 | c | 1.8E-02 | c | 1.8E+00 | c | 1.2E+02 | c | 3.6E+04 | c | – | 2.7E+01 | c | 8.9E-03 | c | 8.9E-01 | c | 6.1E+01 | c | 2.3E+03 | c | – |
| Ethyl tert-butyl ether (2-ethyl-2-ethoxypropane) | 637-92-3 | 8.0E+01 | n | 8.9E-02 | n | 8.9E+00 | n | 4.6E+03 | n | 4.0E+04 | n >S | – | 7.9E+01 | n | 4.5E-02 | n | 4.5E+00 | n | 2.4E+03 | n | 2.6E+03 | n | – |
| Ethyl-1-hexanol, 2- | 104-76-7 | 1.0E+04 | n | 7.6E+01 | n | 7.6E+03 | n | – | – | – | – | – | 1.0E+04 | n | 3.8E+01 | n | 3.8E+03 | n | – | – | – | – | – |
| Ethyl-2-hexenal, 2- | 645-62-5 | 1.2E+04 | n | 2.8E+01 | n | 2.8E+03 | n | – | – | – | – | – | 1.2E+04 | n | 1.4E+01 | n | 1.4E+03 | n | – | – | – | – | – |
| Ethyl-2-methyl benzene, 1- | 611-14-3 | 2.8E+03 | n | 5.6E+01 | n | 5.6E+03 | n >S | 8.4E+03 | n | 4.2E+05 | n >S | – | 2.1E+03 | n | 2.8E+01 | n | 2.8E+03 | n >S | 4.3E+03 | n | 2.7E+04 | n >S | – |
| Ethyl-4-methyl benzene, 1- | 622-96-8 | 2.6E+03 | n | 6.0E+01 | n | 6.0E+03 | n >S | 7.2E+03 | n | 3.4E+05 | n >S | – | 1.9E+03 | n | 3.0E+01 | n | 3.0E+03 | n >S | 3.7E+03 | n | 2.2E+04 | n >S | – |
| Ethylene* | 74-85-1 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – |
| Ethylene dibromide (dibromoethane, 1,2- ) | 106-93-4 | 2.5E+00 | c | 2.1E-04 | m | 2.1E-02 | m | 1.3E+01 | c | 3.1E+02 | c | – | 2.1E+00 | c | 1.0E-04 | m | 1.0E-02 | m | 6.8E+00 | c | 2.0E+01 | c | – |
| Ethylene glycol | 107-21-1 | 1.3E+05 | n | 9.4E+01 | n | 9.4E+03 | n | – | – | – | – | – | 1.3E+05 | n | 4.7E+01 | n | 4.7E+03 | n | – | – | – | – | – |
| Ethylene oxide | 75-21-8 | 2.6E+00 | c | 1.8E-03 | c | 1.8E-01 | c | 4.7E+00 | c | 1.1E+02 | c | – | 1.7E+00 | c | 9.0E-04 | c | 9.0E-02 | c | 2.4E+00 | c | 7.2E+00 | c | – |
| Ethylene thiourea | 96-45-7 | 5.3E+00 | n | 3.8E-03 | n | 3.8E-01 | n | – | – | – | – | – | 5.3E+00 | n | 1.9E-03 | n | 1.9E-01 | n | – | – | – | – | – |
| Ethylenediamine | 107-15-3 | 7.4E+03 | n | 4.6E+00 | n | 4.6E+02 | n | – | – | – | – | – | 7.4E+03 | n | 2.3E+00 | n | 2.3E+02 | n | – | – | – | – | – |
| Ethylenimine | 151-56-4 | 5.5E-02 | c | 2.8E-05 | c | 2.8E-03 | c | 1.3E-01 | c | 2.8E+01 | c | – | 3.9E-02 | c | 1.4E-05 | c | 1.4E-03 | c | 6.8E-02 | c | 1.8E+00 | c | – |
| Ethylhexyl acrylate, 2- | 103-11-7 | 9.8E+01 | c | 7.7E+00 | c | 7.7E+02 | c | – | – | – | – | – | 9.8E+01 | c | 3.8E+00 | c | 3.8E+02 | c | – | – | – | – | – |
| Famphur | 52-85-7 | 2.0E+00 | n | 1.8E-03 | n | 1.8E-01 | n | – | – | – | – | – | 2.0E+00 | n | 9.1E-04 | n | 9.1E-02 | n | – | – | – | – | – |
| Fensulfothion | 115-90-2 | 6.7E+01 | n | 3.5E-01 | n | 3.5E+01 | n | – | – | – | – | – | 6.7E+01 | n | 1.8E-01 | n | 1.8E+01 | n | – | – | – | – | – |
| Fenthion | 55-38-9 | 4.7E+00 | n | 7.9E-02 | n | 7.9E+00 | n | – | – | – | – | – | 4.7E+00 | n | 3.9E-02 | n | 3.9E+00 | n | – | – | – | – | – |
| Fenuron | 101-42-8 | 4.7E+03 | n | 4.6E+00 | n | 4.6E+02 | n | – | – | – | – | – | 4.7E+03 | n | 2.3E+00 | n | 2.3E+02 | n | – | – | – | – | – |
| Fluoranthene | 206-44-0 | 2.3E+03 | n | 1.9E+03 | n >S | 1.9E+05 | n >S | – | – | – | – | – | 2.3E+03 | n | 9.6E+02 | n >S | 9.6E+04 | n >S | – | – | – | – | – |
| Fluorene | 86-73-7 | 2.3E+03 | n | 3.0E+02 | n | 3.0E+04 | n >S | – | – | – | – | – | 2.3E+03 | n | 1.5E+02 | n | 1.5E+04 | n >S | – | – | – | – | – |
| Fluorine (soluble fluoride) | 7782-41-4 | 4.8E+03 | n | – | – | – | – | – | – | – | – | – | 4.8E+03 | n | – | – | – | – | – | – | – | – | – |
| Fluorochloridone | 61213-25-0 | 5.0E+02 | n | 4.0E+00 | n | 4.0E+02 | n | – | – | – | – | – | 5.0E+02 | n | 2.0E+00 | n | 2.0E+02 | n | – | – | – | – | – |
| Fonofos | 944-22-9 | 1.3E+02 | n | 7.1E+00 | n | 7.1E+02 | n | – | – | – | – | – | 1.3E+02 | n | 3.6E+00 | n | 3.6E+02 | n | – | – | – | – | – |
| Formaldehyde | 50-00-0 | 9.3E+02 | n | 9.8E+00 | n | 9.8E+02 | n | 9.9E+02 | n | 1.7E+05 | n | – | 4.9E+02 | n | 4.9E+00 | n | 4.9E+02 | n | 5.1E+02 | n | 1.1E+04 | n | – |

**Table 1**
**Tier 1 Residential Soil PCLs[1]**

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | 0.5 acre source area | | | | | | | | | | | 30 acre source area | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | $^{Tot}Soil_{Comb}$[2] (mg/kg) | note[3] | $^{GW}Soil_{Ing}$ (mg/kg) | note[3] | $^{GW}Soil_{Class\ 3}$ (mg/kg) | note[3] | $^{Air}Soil_{Inh\text{-}V}$[4] (mg/kg) | note[3] | $^{Air}GW\text{-}Soil_{Inh\text{-}V}$ (mg/kg) | note[3] | $^{GW}$Soil for Secondary MCL (mg/kg) | $^{Tot}Soil_{Comb}$[2] (mg/kg) | note[3] | $^{GW}Soil_{Ing}$ (mg/kg) | note[3] | $^{GW}Soil_{Class\ 3}$ (mg/kg) | note[3] | $^{Air}Soil_{Inh\text{-}V}$[4] (mg/kg) | note[3] | $^{Air}GW\text{-}Soil_{Inh\text{-}V}$ (mg/kg) | note[3] | $^{GW}$Soil for Secondary MCL (mg/kg) |
| Formic acid | 64-18-6 | 2.1E+02 | n | 4.2E+01 | n | 4.2E+03 | n | 2.1E+02 | n | 3.4E+04 | n | – | 1.1E+02 | n | 2.1E+01 | n | 2.1E+03 | n | 1.1E+02 | n | 2.2E+03 | n | – |
| Furan | 110-00-9 | 8.2E+01 | n | 8.1E-02 | n | 8.1E+00 | n | – | – | – | – | – | 8.2E+01 | n | 4.1E-02 | n | 4.1E+00 | n | – | – | – | – | – |
| Furfural | 98-01-1 | 2.5E+02 | n | 1.5E-01 | n | 1.5E+01 | n | – | – | – | – | – | 2.5E+02 | n | 7.4E-02 | n | 7.4E+00 | n | – | – | – | – | – |
| Glycidylaldehyde | 765-34-4 | 2.7E+01 | n | 2.2E-02 | n | 2.2E+00 | n | 1.5E+02 | n | 3.3E+04 | n | – | 2.3E+01 | n | 1.1E-02 | n | 1.1E+00 | n | 7.7E+01 | n | 2.1E+03 | n | – |
| Glyphosate | 1071-83-6 | 6.7E+03 | n | 2.9E+01 | m | 2.9E+03 | m | – | – | – | – | – | 6.7E+03 | n | 1.5E+01 | m | 1.5E+03 | m | – | – | – | – | – |
| Heptachlor | 76-44-8 | 1.3E-01 | c | 1.9E-01 | m | 1.9E+01 | m | 9.1E+00 | c | 3.0E+03 | c >S | – | 1.3E-01 | c | 9.4E-02 | m | 9.4E+00 | m | 4.7E+00 | c | 1.9E+02 | c >S | – |
| Heptachlor epoxide | 1024-57-3 | 2.4E-01 | c | 5.8E-02 | m | 5.8E+00 | m | 2.4E+01 | c | 3.5E+04 | c >S | – | 2.4E-01 | c | 2.9E-02 | m | 2.9E+00 | m | 1.2E+01 | c | 2.2E+03 | c >S | – |
| Heptane, n- | 142-82-5 | 4.7E+03 | n | 7.2E+02 | n | 7.2E+04 | n >S | 1.4E+05 | n | 4.2E+05 | n >S | – | 4.6E+03 | n | 3.6E+02 | n | 3.6E+04 | n >S | 7.1E+04 | n | 2.7E+04 | n >S | – |
| Heptanoic acid, n- | 111-14-8 | 1.2E+02 | n | 2.4E+01 | n | 2.4E+03 | n | 1.2E+02 | n | 3.2E+04 | n >S | – | 6.3E+01 | n | 1.2E+01 | n | 1.2E+03 | n | 6.3E+01 | n | 2.1E+03 | n >S | – |
| Hexachlorobenzene | 118-74-1 | 1.1E+00 | c | 1.1E+00 | m | 1.1E+02 | m >S | 1.9E+01 | c | 6.4E+03 | c >S | – | 1.0E+00 | c | 5.6E-01 | m | 5.6E+01 | m >S | 9.8E+00 | c | 4.2E+02 | c >S | – |
| Hexachlorobutadiene | 87-68-3 | 2.0E+01 | c | 3.3E+00 | c | 3.3E+02 | c | 2.9E+01 | c | 2.5E+03 | c >S | – | 1.2E+01 | c | 1.6E+00 | c | 1.6E+02 | c | 1.5E+01 | c | 1.6E+02 | c | – |
| Hexachlorocyclohexane, alpha (alpha-BHC) | 319-84-6 | 2.6E-01 | c | 7.9E-03 | c | 7.9E-01 | c | 1.4E+01 | c | 8.4E+03 | c >S | – | 2.5E-01 | c | 4.0E-03 | c | 4.0E-01 | c | 7.2E+00 | c | 5.4E+02 | c >S | – |
| Hexachlorocyclohexane, beta (beta-BHC) | 319-85-7 | 9.3E-01 | c | 2.9E-02 | c | 2.9E+00 | c | 7.2E+01 | c | 6.6E+04 | c >S | – | 9.2E-01 | c | 1.4E-02 | c | 1.4E+00 | c | 3.7E+01 | c | 4.2E+03 | c >S | – |
| Hexachlorocyclohexane, delta (delta-BHC) | 319-86-8 | 2.9E+00 | c | 1.7E-01 | c | 1.7E+01 | c | 1.0E+02 | c | 1.2E+05 | c >S | – | 2.9E+00 | c | 8.7E-02 | c | 8.7E+00 | c | 5.2E+01 | c | 8.0E+03 | c >S | – |
| Hexachlorocyclohexane, gamma (lindane; gamma-BHC) | 58-89-9 | 1.1E+00 | c | 9.2E-03 | m | 9.2E-01 | m | – | – | – | – | – | 1.1E+00 | c | 4.6E-03 | m | 4.6E-01 | m | – | – | – | – | – |
| Hexachlorocyclohexane, techn (technical-BHC) | 608-73-1 | 1.3E+00 | c | 5.0E-02 | c | 5.0E+00 | c | 8.9E+01 | c | 9.7E+04 | c >S | – | 1.3E+00 | c | 2.5E-02 | c | 2.5E+00 | c | 4.6E+01 | c | 6.3E+03 | c >S | – |
| Hexachlorocyclopentadiene | 77-47-4 | 1.4E+01 | n | 1.9E+01 | m | 1.9E+03 | m >S | 1.4E+01 | n | 2.1E+03 | n >S | – | 7.2E+00 | n | 9.6E+00 | m | 9.6E+02 | m >S | 7.3E+00 | n | 1.4E+02 | n | – |
| Hexachloroethane | 67-72-1 | 4.6E+01 | n | 1.3E+00 | n | 1.3E+02 | n | 5.0E+03 | n | 5.5E+05 | n >S | – | 4.6E+01 | n | 6.4E-01 | n | 6.4E+01 | n | 2.5E+03 | n | 3.6E+04 | n >S | – |
| Hexachlorophene | 70-30-4 | 2.0E+01 | n | 5.9E+03 | n >S | 5.9E+05 | n >S | – | – | – | – | – | 2.0E+01 | n | 2.9E+03 | n >S | 2.9E+05 | n >S | – | – | – | – | – |
| Hexachloropropylene | 1888-71-7 | 4.6E+01 | n | 7.3E+00 | n | 7.3E+02 | n | 5.1E+03 | n | 9.2E+05 | n >S | – | 4.6E+01 | n | 3.7E+00 | n | 3.7E+02 | n | 2.6E+03 | n | 5.9E+04 | n >S | – |
| Hexanal, 2-ethyl- | 123-05-7 | 1.0E+04 | n | 2.6E+01 | n | 2.6E+03 | n | – | – | – | – | – | 1.0E+04 | n | 1.3E+01 | n | 1.3E+03 | n | – | – | – | – | – |
| Hexane, n- | 110-54-3 | 3.3E+03 | n | 2.0E+02 | n | 2.0E+04 | n >S | 1.0E+04 | n | 5.3E+03 | n >S | – | 2.5E+03 | n | 1.0E+02 | n | 1.0E+04 | n >S | 5.3E+03 | n | 3.4E+02 | n | – |
| Hexanediamine, 1,6- | 124-09-4 | 3.3E+02 | n | 2.5E-01 | n | 2.5E+01 | n | – | – | – | – | – | 3.3E+02 | n | 1.2E-01 | n | 1.2E+01 | n | – | – | – | – | – |
| Hexanedinitrile | 111-69-3 | 8.5E+01 | n | 6.8E-02 | n | 6.8E+00 | n | 9.8E+02 | n | 3.2E+05 | n | – | 7.9E+01 | n | 3.4E-02 | n | 3.4E+00 | n | 5.1E+02 | n | 2.1E+04 | n | – |
| Hexanediol, 1,6- | 629-11-8 | 3.0E+05 | n | 2.6E+02 | n | 2.6E+04 | n | 1.0E+06 | n | 1.0E+06 | n >S | – | 2.8E+05 | n | 1.3E+02 | n | 1.3E+04 | n | 1.0E+06 | n | 1.0E+06 | n >S | – |
| Hexanoic acid | 142-62-1 | 1.3E+02 | n | 3.0E+00 | n | 3.0E+02 | n | 1.4E+02 | n | 4.0E+04 | n >S | – | 6.9E+01 | n | 1.5E+00 | n | 1.5E+02 | n | 7.0E+01 | n | 2.6E+03 | n | – |
| Hexanone, 2- | 591-78-6 | 2.7E+02 | n | 3.2E-01 | n | 3.2E+01 | n | 8.3E+02 | n | 3.0E+04 | n | – | 2.1E+02 | n | 1.6E-01 | n | 1.6E+01 | n | 4.2E+02 | n | 2.0E+03 | n | – |
| Hexazinone | 51235-04-2 | 2.2E+03 | n | 2.7E+00 | n | 2.7E+02 | n | – | – | – | – | – | 2.2E+03 | n | 1.4E+00 | n | 1.4E+02 | n | – | – | – | – | – |
| Hexene, 1- | 592-41-6 | 1.6E+03 | n | 7.4E+02 | n | 7.4E+04 | n >S | 1.7E+03 | n | 3.1E+03 | n >S | – | 8.4E+02 | n | 3.7E+02 | n | 3.7E+04 | n >S | 8.7E+02 | n | 2.0E+02 | n | – |
| Hexene, cis-2- | 7688-21-3 | 1.6E+03 | n | 6.2E+02 | n | 6.2E+04 | n >S | 1.7E+03 | n | 3.7E+03 | n >S | – | 8.4E+02 | n | 3.1E+02 | n | 3.1E+04 | n >S | 8.7E+02 | n | 2.4E+02 | n | – |
| Hexylene glycol (2-methyl-2,4-pentanediol) | 107-41-5 | 2.0E+04 | n | 1.5E+01 | n | 1.5E+03 | n | – | – | – | – | – | 2.0E+04 | n | 7.4E+00 | n | 7.4E+02 | n | – | – | – | – | – |
| Hydrazine | 302-01-2 | 3.8E-01 | c | 5.8E-04 | c | 5.8E-02 | c | 4.6E-01 | c | 9.8E+01 | c | – | 2.1E-01 | c | 2.9E-04 | c | 2.9E-02 | c | 2.4E-01 | c | 6.4E+00 | c | – |
| Hydrocaproic acid, 6- (6-hydroxyhexanoic acid) | 1191-25-9 | 1.6E+02 | n | 3.0E+00 | n | 3.0E+02 | n | 1.6E+02 | n | 5.6E+04 | n >S | – | 8.1E+01 | n | 1.5E+00 | n | 1.5E+02 | n | 8.3E+01 | n | 4.1E+03 | n | – |
| Hydrogen chloride (hydrochloric acid)* | 7647-01-0 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – |
| Hydroquinone | 123-31-9 | 7.8E+01 | c | 3.1E-02 | c | 3.1E+00 | c | – | – | – | – | – | 7.8E+01 | c | 1.6E-02 | c | 1.6E+00 | c | – | – | – | – | – |
| Indene | 95-13-6 | 1.0E+02 | n | 7.1E+00 | n | 7.1E+02 | n | 1.1E+02 | n | 4.0E+03 | n | – | 5.6E+01 | n | 3.6E+00 | n | 3.6E+02 | n | 5.8E+01 | n | 2.6E+02 | n | – |
| Indeno-1,2,3-cd-pyrene | 193-39-5 | 4.2E+01 | c | 1.3E+03 | c >S | 1.3E+05 | c >S | 3.7E+04 | c | 1.0E+06 | c >S | – | 4.2E+01 | c | 6.3E+02 | c >S | 6.3E+04 | c >S | 1.9E+04 | c | 1.0E+06 | c >S | – |
| Iron* | 7439-89-6 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – |
| Isoamyl alcohol | 123-51-3 | 4.1E+02 | n | 3.2E-01 | n | 3.2E+01 | n | – | – | – | – | – | 4.1E+02 | n | 1.6E-01 | n | 1.6E+01 | n | – | – | – | – | – |
| Isobutyl alcohol | 78-83-1 | 2.5E+04 | n | 1.6E+01 | n | 1.6E+03 | n | – | – | – | – | – | 2.5E+04 | n | 7.9E+00 | n | 7.9E+02 | n | – | – | – | – | – |
| Isobutylene (2-methyl-1-propene) | 115-11-7 | 3.0E+02 | n | 2.7E+00 | n | 2.7E+02 | n | 1.0E+06 | n | 1.0E+06 | n >S | – | 3.0E+02 | n | 1.4E+00 | n | 1.4E+02 | n | 8.7E+05 | n | 1.2E+05 | n >S | – |
| Isobutyric acid (2-methylpropanoic acid) | 79-31-2 | 3.3E+04 | n | 2.3E+01 | n | 2.3E+03 | n | – | – | – | – | – | 3.3E+04 | n | 1.2E+01 | n | 1.2E+03 | n | – | – | – | – | – |
| Isodecanol | 25339-17-7 | 7.1E+01 | n | 3.0E+00 | n | 3.0E+02 | n | – | – | – | – | – | 7.1E+01 | n | 1.5E+00 | n | 1.5E+02 | n | – | – | – | – | – |
| Isodrin | 465-73-6 | 2.7E-02 | c | 1.5E+00 | c | 1.5E+02 | c | 1.7E+00 | c | 9.4E+03 | c >S | – | 2.7E-02 | c | 7.4E-01 | c | 7.4E+01 | c | 9.0E-01 | c | 6.1E+02 | c | – |
| Isopentane | 78-78-4 | 4.8E+03 | n | 2.7E+02 | n | 2.7E+04 | n >S | 3.7E+05 | n | 4.5E+05 | n >S | – | 4.8E+03 | n | 1.3E+02 | n | 1.3E+04 | n >S | 1.9E+05 | n | 2.9E+04 | n >S | – |
| Isophorone | 78-59-1 | 4.9E+03 | c | 3.0E+00 | c | 3.0E+02 | c | – | – | – | – | – | 4.9E+03 | c | 1.5E+00 | c | 1.5E+02 | c | – | – | – | – | – |
| Isopropyl acetate | 108-21-4 | 5.7E+03 | n | 4.0E+00 | n | 4.0E+02 | n | – | – | – | – | – | 5.7E+03 | n | 2.0E+00 | n | 2.0E+02 | n | – | – | – | – | – |
| Isopropyl alcohol | 67-63-0 | 9.1E+03 | n | 1.0E+02 | n | 1.0E+04 | n | 9.7E+03 | n | 8.7E+05 | n >S | – | 4.8E+03 | n | 5.0E+01 | n | 5.0E+03 | n | 5.0E+03 | n | 5.6E+04 | n | – |
| Isosafrole | 120-58-1 | 1.7E+01 | c | 1.3E-01 | c | 1.3E+01 | c | 9.1E+01 | c | 1.3E+04 | c >S | – | 1.5E+01 | c | 6.5E-02 | c | 6.5E+00 | c | 4.7E+01 | c | 8.6E+02 | c | – |

**Table 1**
**Tier 1 Residential Soil PCLs[1]**

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | 0.5 acre source area | | | | | | | | | | | 30 acre source area | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | $^{Tot}Soil_{Comb}$[2] (mg/kg) | note[3] | $^{GW}Soil_{Ing}$ (mg/kg) | note[3] | $^{GW}Soil_{Class\ 3}$ (mg/kg) | note[3] | $^{Air}Soil_{Inh\text{-}V}$[4] (mg/kg) | note[3] | $^{Air}GW\text{-}Soil_{Inh\text{-}V}$ (mg/kg) | note[3] | $^{GW}$Soil for Secondary MCL (mg/kg) | $^{Tot}Soil_{Comb}$[2] (mg/kg) | note[3] | $^{GW}Soil_{Ing}$ (mg/kg) | note[3] | $^{GW}Soil_{Class\ 3}$ (mg/kg) | note[3] | $^{Air}Soil_{Inh\text{-}V}$[4] (mg/kg) | note[3] | $^{Air}GW\text{-}Soil_{Inh\text{-}V}$ (mg/kg) | note[3] | $^{GW}$Soil for Secondary MCL (mg/kg) |
| Kelthane (dicofol) | 115-32-2 | 2.7E+02 | n | 7.4E+01 | n | 7.4E+03 | n >S | – | – | – | – | – | 2.7E+02 | n | 3.7E+01 | n | 3.7E+03 | n >S | – | – | – | – | – |
| Kepone (chlordecone) | 143-50-0 | 3.6E-01 | c | 9.9E-02 | c | 9.9E+00 | c | 4.9E+01 | c | 2.5E+05 | c >S | – | 3.5E-01 | c | 4.9E-02 | c | 4.9E+00 | c | 2.5E+01 | c | 1.6E+04 | c >S | – |
| Lead (inorganic) | 7439-92-1 | 5.0E+02 | e | 3.0E+00 | e >S | 3.0E+02 | e >S | – | – | – | – | – | 5.0E+02 | e | 1.5E+00 | e >S | 1.5E+02 | e >S | – | – | – | – | – |
| Leptophos | 21609-90-5 | 1.6E-01 | n | 6.4E-01 | n | 6.4E+01 | n >S | 3.3E+01 | n | 3.4E+05 | n >S | – | 1.6E-01 | n | 3.2E-01 | n | 3.2E+01 | n >S | 1.7E+01 | n | 2.2E+04 | n >S | – |
| Limonene, d-* | 5989-27-5 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – |
| Lithium | 7439-93-2 | 1.3E+02 | n | – | – | – | – | – | – | – | – | – | 1.3E+02 | n | – | – | – | – | – | – | – | – | – |
| Magnesium* | 7439-95-4 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – |
| Malathion | 121-75-5 | 1.7E+02 | n | 6.6E+00 | n | 6.6E+02 | n | 2.0E+02 | n | 1.2E+05 | n >S | – | 9.6E+01 | n | 3.3E+00 | n | 3.3E+02 | n | 1.0E+02 | n | 8.0E+03 | n >S | – |
| Maleic anhydride | 108-31-6 | 6.7E+03 | n | 7.2E+00 | n | 7.2E+02 | n | – | – | – | – | – | 6.7E+03 | n | 3.6E+00 | n | 3.6E+02 | n | – | – | – | – | – |
| Maleic hydrazide | 123-33-1 | 3.3E+04 | n | 3.6E+01 | n | 3.6E+03 | n | – | – | – | – | – | 3.3E+04 | n | 1.8E+01 | n | 1.8E+03 | n | – | – | – | – | – |
| Malononitrile | 109-77-3 | 6.7E+00 | n | 5.2E-03 | n | 5.2E-01 | n | – | – | – | – | – | 6.7E+00 | n | 2.6E-03 | n | 2.6E-01 | n | – | – | – | – | – |
| Mancozeb | 8018-01-7 | 2.0E+03 | n | 1.8E+00 | n | 1.8E+02 | n >S | – | – | – | – | – | 2.0E+03 | n | 9.0E-01 | n | 9.0E+01 | n >S | – | – | – | – | – |
| Manganese | 7439-96-5 | 3.9E+03 | n | 1.2E+03 | n >S | 1.2E+05 | n >S | – | – | – | – | 50 | 3.9E+03 | n | 5.8E+02 | n >S | 5.8E+04 | n >S | – | – | – | – | 25 |
| MCPA (4-(chloro-2-methylphenoxy) acetic acid) | 94-74-6 | 3.3E+01 | n | 2.3E-02 | n | 2.3E+00 | n | – | – | – | – | – | 3.3E+01 | n | 1.2E-02 | n | 1.2E+00 | n | – | – | – | – | – |
| MCPP (2-(4-chloro-2-methylphenoxy) propanoic acid) | 93-65-2 | 6.7E+01 | n | 4.7E-02 | n | 4.7E+00 | n | – | – | – | – | – | 6.7E+01 | n | 2.3E-02 | n | 2.3E+00 | n | – | – | – | – | – |
| Mercury (pH = 4.9)[5] | 7439-97-6 | 3.6E+00 | n | 7.8E-03 | m | 7.8E-01 | m >S | 4.6E+00 | n | 2.8E+01 | n >S | – | 2.1E+00 | n | 3.9E-03 | m | 3.9E-01 | m >S | 2.4E+00 | n | 1.8E+00 | n >S | – |
| Mercury (pH=6.8)[5] | 7439-97-6A | 8.3E+00 | n | 2.1E+00 | m | 2.1E+02 | m >S | 1.6E+01 | n | 7.6E+03 | n >S | – | 5.5E+00 | n | 1.0E+00 | m | 1.0E+02 | m >S | 8.0E+00 | n | 4.9E+02 | n >S | – |
| Merphos | 150-50-5 | 2.0E+00 | n | 6.5E+00 | n | 6.5E+02 | n >S | – | – | – | – | – | 2.0E+00 | n | 3.2E+00 | n | 3.2E+02 | n >S | – | – | – | – | – |
| Methacrylic acid (2-methyl-2-propenoic acid) | 79-41-4 | 8.2E+02 | n | 4.7E-01 | n | 4.7E+01 | n | – | – | – | – | – | 8.2E+02 | n | 2.3E-01 | n | 2.3E+01 | n | – | – | – | – | – |
| Methacrylonitrile | 126-98-7 | 5.1E+02 | n | 2.5E+00 | n | 2.5E+02 | n | 5.8E+02 | n | 2.3E+04 | n | – | 2.8E+02 | n | 1.3E+00 | n | 1.3E+02 | n | 3.0E+02 | n | 1.5E+03 | n | – |
| Methanol | 67-56-1 | 1.1E+05 | n | 9.4E+01 | n | 9.4E+03 | n | 3.3E+05 | n | 1.0E+06 | n >S | – | 8.3E+04 | n | 4.7E+01 | n | 4.7E+03 | n | 1.7E+05 | n | 9.6E+05 | n >S | – |
| Methapyrilene | 91-80-5 | 1.0E+00 | c | 5.3E-04 | c | 5.3E-02 | c | – | – | – | – | – | 1.0E+00 | c | 2.6E-04 | c | 2.6E-02 | c | – | – | – | – | – |
| Methomyl | 16752-77-5 | 1.7E+03 | n | 5.1E+00 | n | 5.1E+02 | n | – | – | – | – | – | 1.7E+03 | n | 2.5E+00 | n | 2.5E+02 | n | – | – | – | – | – |
| Methoxychlor | 72-43-5 | 2.7E+02 | n | 1.2E+02 | m | 1.2E+04 | m >S | – | – | – | – | – | 2.7E+02 | n | 6.2E+01 | m | 6.2E+03 | m >S | – | – | – | – | – |
| Methoxyethanol, 2- | 109-86-4 | 2.7E+02 | n | 3.6E+00 | n | 3.6E+02 | n >S | 3.1E+02 | n | 4.5E+02 | n >S | – | 1.5E+02 | n | 1.8E+00 | n | 1.8E+02 | n >S | 1.6E+02 | n | 2.9E+01 | n | – |
| Methyl acetate (acetic acid, methyl ester) | 79-20-9 | 8.2E+04 | n | 4.9E+01 | n | 4.9E+03 | n | – | – | – | – | – | 8.2E+04 | n | 2.4E+01 | n | 2.4E+03 | n | – | – | – | – | – |
| Methyl acrylate | 96-33-3 | 1.1E+02 | n | 1.0E-01 | n | 1.0E+01 | n | 3.1E+02 | n | 5.7E+03 | n | – | 8.0E+01 | n | 5.2E-02 | n | 5.2E+00 | n | 1.6E+02 | n | 3.7E+02 | n | – |
| Methyl amyl ketone (2-heptanone) | 110-43-0 | 3.9E+03 | n | 4.7E+00 | n | 4.7E+02 | n | 1.1E+05 | n | 1.0E+06 | n >S | – | 3.8E+03 | n | 2.4E+00 | n | 2.4E+02 | n | 5.7E+04 | n | 2.8E+05 | n >S | – |
| Methyl chrysene, 1- | 3351-28-8 | 5.8E+02 | c | 2.2E+04 | c >S | 1.0E+06 | c >S | 1.0E+06 | c | 1.0E+06 | c >S | – | 5.8E+02 | c | 1.1E+04 | c >S | 1.0E+06 | c >S | 1.0E+06 | c | 1.0E+06 | c >S | – |
| Methyl chrysene, 2- | 3351-32-4 | 5.8E+02 | c | 2.2E+04 | c >S | 1.0E+06 | c >S | 1.0E+06 | c | 1.0E+06 | c >S | – | 5.8E+02 | c | 1.1E+04 | c >S | 1.0E+06 | c >S | 1.0E+06 | c | 1.0E+06 | c >S | – |
| Methyl chrysene, 6- | 1705-85-7 | 5.7E+01 | c | 1.8E+03 | c >S | 1.8E+05 | c >S | 2.3E+05 | c | 1.0E+06 | c >S | – | 5.7E+01 | c | 8.8E+02 | c >S | 8.8E+04 | c >S | 1.2E+05 | c | 1.0E+06 | c >S | – |
| Methyl cyclohexane | 108-87-2 | 4.1E+04 | n | 1.6E+04 | n >S | 1.0E+06 | n >S | 4.6E+04 | n | 1.8E+05 | n >S | – | 2.2E+04 | n | 7.8E+03 | n >S | 7.8E+05 | n >S | 2.4E+04 | n | 1.2E+04 | n >S | – |
| Methyl ethyl ketone (2-butanone) | 78-93-3 | 4.0E+04 | n | 2.9E+01 | n | 2.9E+03 | n | 2.0E+05 | n | 1.0E+06 | n >S | – | 3.3E+04 | n | 1.5E+01 | n | 1.5E+03 | n | 1.0E+05 | n | 6.2E+05 | n >S | – |
| Methyl iodide (iodomethane) | 74-88-4 | 1.1E+02 | n | 1.1E-01 | n | 1.1E+01 | n | – | – | – | – | – | 1.1E+02 | n | 5.7E-02 | n | 5.7E+00 | n | – | – | – | – | – |
| Methyl isobutyl ketone (4-methyl-2-pentanone) | 108-10-1 | 5.9E+03 | n | 4.9E+00 | n | 4.9E+02 | n | 5.8E+04 | n | 1.0E+06 | n >S | – | 5.4E+03 | n | 2.5E+00 | n | 2.5E+02 | n | 3.0E+04 | n | 1.1E+05 | n >S | – |
| Methyl mercury | 22967-92-6 | 8.0E+00 | n | – | – | – | – | – | – | – | – | – | 8.0E+00 | n | – | – | – | – | – | – | – | – | – |
| Methyl methacrylate | 80-62-6 | 9.8E+03 | n | 9.8E+01 | n | 9.8E+03 | n | 1.1E+04 | n | 2.3E+05 | n >S | – | 5.3E+03 | n | 4.9E+01 | n | 4.9E+03 | n | 5.5E+03 | n | 1.5E+04 | n | – |
| Methyl methanesulfonate | 66-27-3 | 3.3E+01 | c | 1.8E-02 | c | 1.8E+00 | c | 1.1E+02 | c | 3.2E+04 | c | – | 2.6E+01 | c | 8.9E-03 | c | 8.9E-01 | c | 5.7E+01 | c | 2.1E+03 | c | – |
| Methyl parathion | 298-00-0 | 1.7E+01 | n | 1.7E-01 | n | 1.7E+01 | n | – | – | – | – | – | 1.7E+01 | n | 8.5E-02 | n | 8.5E+00 | n | – | – | – | – | – |
| Methyl-1-butene, 2- | 563-46-2 | 4.8E+03 | n | 6.5E+01 | n | 6.5E+03 | n >S | 2.8E+05 | n | 3.4E+05 | n >S | – | 4.7E+03 | n | 3.2E+01 | n | 3.2E+03 | n >S | 1.4E+05 | n | 2.2E+04 | n >S | – |
| Methyl-1-propanal, 2- (isobutyraldehyde) | 78-84-2 | 3.3E+03 | n | 2.1E+00 | n | 2.1E+02 | n | – | – | – | – | – | 3.3E+03 | n | 1.0E+00 | n | 1.0E+02 | n | – | – | – | – | – |
| Methyl-2-butene, 2- | 513-35-9 | 4.8E+03 | n | 3.9E+01 | n | 3.9E+03 | n | 2.8E+05 | n | 4.0E+05 | n >S | – | 4.7E+03 | n | 1.9E+01 | n | 1.9E+03 | n | 1.4E+05 | n | 2.6E+04 | n >S | – |
| Methyl-2-pentenal, 2- | 623-36-9 | 3.2E+00 | c | 1.5E-03 | c | 1.5E-01 | c | – | – | – | – | – | 3.2E+00 | c | 7.3E-04 | c | 7.3E-02 | c | – | – | – | – | – |
| Methylcholanthrene, 3- | 56-49-5 | 1.9E-01 | c | 1.5E+01 | c | 1.5E+03 | c >S | 1.8E+03 | c | 1.0E+06 | c >S | – | 1.9E-01 | c | 7.6E+00 | c | 7.6E+02 | c >S | 9.0E+02 | c | 1.0E+06 | c >S | – |
| Methylene bromide (dibromomethane) | 74-95-3 | 8.1E+01 | n | 1.1E+00 | c | 1.1E+02 | c | 8.2E+01 | n | 2.2E+03 | n | – | 4.2E+01 | n | 5.6E-01 | c | 5.6E+01 | c | 4.2E+01 | n | 1.4E+02 | n | – |
| Methylene chloride (dichloromethane) | 75-09-2 | 1.6E+03 | n | 1.3E-02 | m | 1.3E+00 | m | 1.3E+04 | c | 5.6E+04 | c >S | – | 1.5E+03 | n | 6.5E-03 | m | 6.5E-01 | m | 6.6E+03 | c | 3.6E+03 | c | – |
| Methylene-bis (2-chloroaniline) 4,4'- | 101-14-4 | 4.6E+01 | c | 2.9E+00 | c | 2.9E+02 | c | 2.7E+03 | c | 1.0E+06 | c >S | – | 4.5E+01 | c | 1.4E+00 | c | 1.4E+02 | c | 1.4E+03 | c | 4.1E+05 | c >S | – |
| Methylmecury hydroxide | 1184-57-2 | 6.7E+00 | n | 4.8E-03 | n | 4.8E-01 | n | – | – | – | – | – | 6.7E+00 | n | 2.4E-03 | n | 2.4E-01 | n | – | – | – | – | – |
| Methylnaphthalene, 1- | 90-12-0 | 1.5E+02 | c | 2.9E+00 | c | 2.9E+02 | c | – | – | – | – | – | 1.5E+02 | c | 1.5E+00 | c | 1.5E+02 | c | – | – | – | – | – |

**Table 1**
**Tier 1 Residential Soil PCLs[1]**

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | 0.5 acre source area | | | | | | | | | | | 30 acre source area | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | $^{Tot}Soil_{Comb}$[2] (mg/kg) | note[3] | $^{GW}Soil_{Ing}$ (mg/kg) | note[3] | $^{GW}Soil_{Class\ 3}$ (mg/kg) | note[3] | $^{Air}Soil_{Inh\text{-}V}$[4] (mg/kg) | note[3] | $^{Air}GW\text{-}Soil_{Inh\text{-}V}$ (mg/kg) | note[3] | $^{GW}$Soil for Secondary MCL (mg/kg) | $^{Tot}Soil_{Comb}$[2] (mg/kg) | note[3] | $^{GW}Soil_{Ing}$ (mg/kg) | note[3] | $^{GW}Soil_{Class\ 3}$ (mg/kg) | note[3] | $^{Air}Soil_{Inh\text{-}V}$[4] (mg/kg) | note[3] | $^{Air}GW\text{-}Soil_{Inh\text{-}V}$ (mg/kg) | note[3] | $^{GW}$Soil for Secondary MCL (mg/kg) |
| Methylnaphthalene, 2- | 91-57-6 | 2.5E+02 | n | 1.7E+01 | n | 1.7E+03 | n | – | – | – | – | – | 2.5E+02 | n | 8.5E+00 | n | 8.5E+02 | n | – | – | – | – | – |
| Methylpyrrolidone, N- | 872-50-4 | 1.3E+03 | n | 9.6E-01 | n | 9.6E+01 | n | – | – | – | – | – | 1.3E+03 | n | 4.8E-01 | n | 4.8E+01 | n | – | – | – | – | – |
| Methylstyrene, alpha- | 98-83-9 | 2.8E+02 | n | 6.5E+00 | n | 6.5E+02 | n | 4.8E+02 | n | 2.1E+04 | n >S | – | 1.8E+02 | n | 3.3E+00 | n | 3.3E+02 | n | 2.5E+02 | n | 1.4E+03 | n >S | – |
| Methyltetrahydrofuran, 2- | 96-47-9 | 1.5E+02 | c | 2.7E-01 | c | 2.7E+01 | c | 1.9E+02 | c | 4.2E+03 | c | – | 8.6E+01 | c | 1.4E-01 | c | 1.4E+01 | c | 9.7E+01 | c | 2.7E+02 | c | – |
| Methyltetrahydropyran, 2- | 10141-72-7 | 1.7E+02 | c | 3.3E-01 | c | 3.3E+01 | c | 2.2E+02 | c | 5.7E+03 | c | – | 9.8E+01 | c | 1.6E-01 | c | 1.6E+01 | c | 1.1E+02 | c | 3.7E+02 | c | – |
| Metolachlor | 51218-45-2 | 1.0E+04 | n | 1.1E+02 | n | 1.1E+04 | n | – | – | – | – | – | 1.0E+04 | n | 5.5E+01 | n | 5.5E+03 | n | – | – | – | – | – |
| Metribuzin | 21087-64-9 | 1.7E+03 | n | 1.2E+00 | n | 1.2E+02 | n | – | – | – | – | – | 1.7E+03 | n | 6.1E-01 | n | 6.1E+01 | n | – | – | – | – | – |
| Mirex | 2385-85-5 | 1.3E+01 | n | 4.5E+03 | n >S | 4.5E+05 | n >S | – | – | – | – | – | 1.3E+01 | n | 2.2E+03 | n >S | 2.2E+05 | n >S | – | – | – | – | – |
| Molinate | 2212-67-1 | 1.3E+02 | n | 1.9E-01 | n | 1.9E+01 | n | – | – | – | – | – | 1.3E+02 | n | 9.6E-02 | n | 9.6E+00 | n | – | – | – | – | – |
| Molybdenum | 7439-98-7 | 1.6E+02 | n | 4.9E+01 | n >S | 4.9E+03 | n >S | – | – | – | – | – | 1.6E+02 | n | 2.5E+01 | n >S | 2.5E+03 | n >S | – | – | – | – | – |
| Monocrotophos | 2157-98-4 | 4.0E+01 | n | 2.9E-02 | n | 2.9E+00 | n | – | – | – | – | – | 4.0E+01 | n | 1.5E-02 | n | 1.5E+00 | n | – | – | – | – | – |
| Morpholine | 110-91-8 | 1.0E+06 | n | 2.4E+04 | n | 1.0E+06 | n | – | – | – | – | – | 1.0E+06 | n | 1.2E+04 | n | 9.8E+05 | n | – | – | – | – | – |
| Morpholine, N-butyl- | 1005-67-0 | 1.5E+02 | n | 2.3E-01 | n | 2.3E+01 | n | – | – | – | – | – | 1.5E+02 | n | 1.2E-01 | n | 1.2E+01 | n | – | – | – | – | – |
| MTBE (methyl tert-butyl ether)[6] | 1634-04-4 | 8.0E+02 | n | 6.2E-01 | n | 6.2E+01 | n | 1.4E+03 | c | 1.0E+04 | c | 0.038 | 5.9E+02 | c | 3.1E-01 | n | 3.1E+01 | n | 7.1E+02 | c | 6.6E+02 | c | 0.019 |
| Naled | 300-76-5 | 1.3E+02 | n | 3.5E-01 | n | 3.5E+01 | n >S | – | – | – | – | – | 1.3E+02 | n | 1.8E-01 | n | 1.8E+01 | n >S | – | – | – | – | – |
| Naphthalene | 91-20-3 | 2.2E+02 | n | 3.1E+01 | n | 3.1E+03 | n >S | 2.7E+02 | n | 2.0E+04 | n >S | – | 1.2E+02 | n | 1.6E+01 | n | 1.6E+03 | n >S | 1.4E+02 | n | 1.3E+03 | n >S | – |
| Naphthoquinone, 1,4- | 130-15-4 | 4.7E+02 | n | 4.6E-01 | n | 4.6E+01 | n | – | – | – | – | – | 4.7E+02 | n | 2.3E-01 | n | 2.3E+01 | n | – | – | – | – | – |
| Naphthylamine, 1- | 134-32-7 | 1.3E+03 | n | 9.4E+00 | n | 9.4E+02 | n | – | – | – | – | – | 1.3E+03 | n | 4.7E+00 | n | 4.7E+02 | n | – | – | – | – | – |
| Naphthylamine, 2- | 91-59-8 | 2.6E+00 | c | 1.3E-02 | c | 1.3E+00 | c | – | – | – | – | – | 2.6E+00 | c | 6.4E-03 | c | 6.4E-01 | c | – | – | – | – | – |
| Napropamide | 15299-99-7 | 6.7E+03 | n | 5.5E+02 | n | 5.5E+04 | n >S | – | – | – | – | – | 6.7E+03 | n | 2.7E+02 | n | 2.7E+04 | n >S | – | – | – | – | – |
| Neopentyl glycol | 126-30-7 | 2.0E+04 | n | 1.5E+01 | n | 1.5E+03 | n | – | – | – | – | – | 2.0E+04 | n | 7.3E+00 | n | 7.3E+02 | n | – | – | – | – | – |
| Nickel and compounds | 7440-02-0 | 8.4E+02 | n | 1.6E+02 | n >S | 1.6E+04 | n >S | – | – | – | – | – | 8.4E+02 | n | 7.9E+01 | n >S | 7.9E+03 | n >S | – | – | – | – | – |
| Nitrate-N[7] | 14797-55-8 | 1.3E+05 | n | – | – | – | – | – | – | – | – | – | 1.3E+05 | n | – | – | – | – | – | – | – | – | – |
| Nitrite-N[7, 9] | 14797-65-0 | 8.0E+03 | n | – | – | – | – | – | – | – | – | – | 8.0E+03 | n | – | – | – | – | – | – | – | – | – |
| Nitroaniline, 2- | 88-74-4 | 1.4E+01 | n | 2.2E-02 | n | 2.2E+00 | n | 4.8E+01 | n | 1.2E+04 | n >S | – | 1.1E+01 | n | 1.1E-02 | n | 1.1E+00 | n | 2.4E+01 | n | 7.7E+02 | n | – |
| Nitroaniline, 3- | 99-09-2 | 1.5E+01 | n | 2.6E-02 | n | 2.6E+00 | n | 6.0E+01 | n | 1.7E+04 | n >S | – | 1.2E+01 | n | 1.3E-02 | n | 1.3E+00 | n | 3.1E+01 | n | 1.1E+03 | n >S | – |
| Nitroaniline, 4- | 100-01-6 | 2.2E+02 | n | 1.1E-01 | c | 1.1E+01 | c | 1.2E+03 | n | 3.4E+05 | n >S | – | 1.9E+02 | n | 5.4E-02 | c | 5.4E+00 | c | 6.2E+02 | n | 2.2E+04 | n >S | – |
| Nitrobenzene | 98-95-3 | 6.6E+01 | c | 3.5E-01 | n | 3.5E+01 | n | 6.6E+01 | c | 5.2E+03 | c | – | 3.4E+01 | c | 1.8E-01 | n | 1.8E+01 | n | 3.4E+01 | c | 3.4E+02 | c | – |
| Nitroglycerin | 55-63-0 | 6.7E+00 | n | 1.4E-02 | n | 1.4E+00 | n | – | – | – | – | – | 6.7E+00 | n | 6.9E-03 | n | 6.9E-01 | n | – | – | – | – | – |
| Nitrophenol, 2- | 88-75-5 | 1.3E+02 | n | 1.3E-01 | n | 1.3E+01 | n | – | – | – | – | – | 1.3E+02 | n | 6.7E-02 | n | 6.7E+00 | n | – | – | – | – | – |
| Nitrophenol, 3- | 554-84-7 | 1.3E+02 | n | 2.3E-01 | n | 2.3E+01 | n | – | – | – | – | – | 1.3E+02 | n | 1.1E-01 | n | 1.1E+01 | n | – | – | – | – | – |
| Nitrophenol, 4- | 100-02-7 | 1.3E+02 | n | 1.0E-01 | n | 1.0E+01 | n | – | – | – | – | – | 1.3E+02 | n | 5.0E-02 | n | 5.0E+00 | n | – | – | – | – | – |
| Nitropropane, 2- | 79-46-9 | 1.3E-01 | c | 7.1E-03 | n | 7.1E-01 | n | 1.3E-01 | c | 3.6E+00 | c | – | 6.8E-02 | c | 3.5E-03 | n | 3.5E-01 | n | 6.8E-02 | c | 2.3E-01 | c | – |
| Nitroquinoline-N-oxide, 4- | 56-57-5 | 4.0E-01 | c | 2.3E-04 | c | 2.3E-02 | c | 1.9E+00 | c | 2.7E+04 | c | – | 3.3E-01 | c | 1.2E-04 | c | 1.2E-02 | c | 9.7E-01 | c | 1.3E+04 | c | – |
| Nitrosodiethanolamine | 1116-54-7 | 1.7E+00 | c | 6.6E-04 | c | 6.6E-02 | c | – | – | – | – | – | 1.7E+00 | c | 3.3E-04 | c | 3.3E-02 | c | – | – | – | – | – |
| Nitrosodiethylamine, n- | 55-18-5 | 2.5E-02 | c | 1.2E-05 | c | 1.2E-03 | c | 6.6E-02 | c | 1.5E+01 | c | – | 1.8E-02 | c | 6.2E-06 | c | 6.2E-04 | c | 3.4E-02 | c | 9.7E-01 | c | – |
| Nitrosodimethylamine, n- | 62-75-9 | 7.4E-02 | c | 3.7E-05 | c | 3.7E-03 | c | 2.0E-01 | c | 4.2E+01 | c | – | 5.5E-02 | c | 1.8E-05 | c | 1.8E-03 | c | 1.0E-01 | c | 2.7E+00 | c | – |
| Nitrosodi-n-butylamine, n- | 924-16-3 | 4.7E-01 | c | 1.9E-03 | c | 1.9E-01 | c | 1.0E+00 | c | 5.2E+01 | c | – | 3.3E-01 | c | 9.4E-04 | c | 9.4E-02 | c | 5.3E-01 | c | 3.4E+00 | c | – |
| Nitrosodi-n-propylamine, n- | 621-64-7 | 4.0E-01 | c | 3.5E-04 | c | 3.5E-02 | c | – | – | – | – | – | 4.0E-01 | c | 1.8E-04 | c | 1.8E-02 | c | – | – | – | – | – |
| Nitrosodiphenylamine | 86-30-6 | 5.7E+02 | c | 2.8E+00 | c | 2.8E+02 | c | – | – | – | – | – | 5.7E+02 | c | 1.4E+00 | c | 1.4E+02 | c | – | – | – | – | – |
| Nitroso-methyl-ethyl-amine, n- | 10595-95-6 | 2.8E-01 | c | 1.1E-04 | c | 1.1E-02 | c | – | – | – | – | – | 2.8E-01 | c | 5.7E-05 | c | 5.7E-03 | c | – | – | – | – | – |
| Nitrosomorpholine, N- | 59-89-2 | 5.0E-01 | c | 2.6E-04 | c | 2.6E-02 | c | 1.7E+00 | c | 5.2E+02 | c | – | 3.9E-01 | c | 1.3E-04 | c | 1.3E-02 | c | 8.8E-01 | c | 3.4E+01 | c | – |
| Nitroso-n-ethylurea, n- | 759-73-9 | 3.4E-02 | c | 2.1E-05 | c | 2.1E-03 | c | – | – | – | – | – | 3.4E-02 | c | 1.0E-05 | c | 1.0E-03 | c | – | – | – | – | – |
| Nitrosopiperidine, N- | 100-75-4 | 3.6E-01 | c | 2.1E-04 | c | 2.1E-02 | c | 1.3E+00 | c | 3.5E+02 | c | – | 2.9E-01 | c | 1.0E-04 | c | 1.0E-02 | c | 6.9E-01 | c | 2.3E+01 | c | – |
| Nitrosopyrrolidine, n- | 930-55-2 | 1.6E+00 | c | 8.4E-04 | c | 8.4E-02 | c | 5.8E+00 | c | 1.9E+03 | c | – | 1.3E+00 | c | 4.2E-04 | c | 4.2E-02 | c | 3.0E+00 | c | 1.2E+02 | c | – |
| Nitrotoluene, m- | 99-08-1 | 6.7E+02 | n | 1.8E+00 | n | 1.8E+02 | n | – | – | – | – | – | 6.7E+02 | n | 9.2E-01 | n | 9.2E+01 | n | – | – | – | – | – |
| Nitrotoluene, o- | 88-72-2 | 2.1E+01 | c | 3.1E-02 | c | 3.1E+00 | c | – | – | – | – | – | 2.1E+01 | c | 1.6E-02 | c | 1.6E+00 | c | – | – | – | – | – |
| Nitrotoluene, p- | 99-99-0 | 2.7E+02 | n | 4.3E-01 | c | 4.3E+01 | c | – | – | – | – | – | 2.7E+02 | n | 2.2E-01 | c | 2.2E+01 | c | – | – | – | – | – |
| Nonachlor, cis- | 5103-73-1 | 5.6E+00 | c | 1.3E+01 | c | 1.3E+03 | c >S | 1.2E+03 | c | 1.0E+06 | c >S | – | 5.6E+00 | c | 6.3E+00 | c | 6.3E+02 | c >S | 6.4E+02 | c | 2.4E+05 | c >S | – |

**Table 1**
**Tier 1 Residential Soil PCLs[1]**

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | 0.5 acre source area | | | | | | | | | | | 30 acre source area | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | $^{Tot}Soil_{Comb}$[2] (mg/kg) | note[3] | $^{GW}Soil_{Ing}$ (mg/kg) | note[3] | $^{GW}Soil_{Class\ 3}$ (mg/kg) | note[3] | $^{Air}Soil_{Inh\text{-}V}$[4] (mg/kg) | note[3] | $^{Air}GW\text{-}Soil_{Inh\text{-}V}$ (mg/kg) | note[3] | $^{GW}$Soil for Secondary MCL (mg/kg) | $^{Tot}Soil_{Comb}$[2] (mg/kg) | note[3] | $^{GW}Soil_{Ing}$ (mg/kg) | note[3] | $^{GW}Soil_{Class\ 3}$ (mg/kg) | note[3] | $^{Air}Soil_{Inh\text{-}V}$[4] (mg/kg) | note[3] | $^{Air}GW\text{-}Soil_{Inh\text{-}V}$ (mg/kg) | note[3] | $^{GW}$Soil for Secondary MCL (mg/kg) |
| Nonachlor, trans- | 39765-80-5 | 5.6E+00 | c | 1.3E+01 | c | 1.3E+03 | c >S | 1.2E+03 | c | 1.0E+06 | c >S | – | 5.6E+00 | c | 6.3E+00 | c | 6.3E+02 | c >S | 6.4E+02 | c | 2.4E+05 | c >S | – |
| Nonanal | 124-19-6 | 1.3E+04 | n | 1.5E+02 | n | 1.5E+04 | n >S | – | – | – | – | – | 1.3E+04 | n | 7.4E+01 | n | 7.4E+03 | n >S | – | – | – | – | – |
| Nonene, 1-n | 124-11-8 | 8.2E+03 | n | 3.3E+03 | n >S | 3.3E+05 | n >S | – | – | – | – | – | 8.2E+03 | n | 1.6E+03 | n >S | 1.6E+05 | n >S | – | – | – | – | – |
| Nonylphenol, 4-n- | 104-40-5 | 6.5E+03 | n | 3.0E+05 | n >S | 1.0E+06 | n >S | – | – | – | – | – | 6.5E+03 | n | 1.5E+05 | n >S | 1.0E+06 | n >S | – | – | – | – | – |
| Nonylphenol ethoxylate | 9016-45-9 | 6.5E+03 | n | 7.5E+05 | n >S | 1.0E+06 | n >S | – | – | – | – | – | 6.5E+03 | n | 3.7E+05 | n >S | 1.0E+06 | n >S | – | – | – | – | – |
| Octamethylpyrophosphoramide | 152-16-9 | 1.3E+02 | n | 9.4E-02 | n | 9.4E+00 | n | – | – | – | – | – | 1.3E+02 | n | 4.7E-02 | n | 4.7E+00 | n | – | – | – | – | – |
| Octanone | 106-68-3 | 4.9E+03 | n | 1.1E+01 | n | 1.1E+03 | n | 9.0E+05 | n | 1.0E+06 | n >S | – | 4.9E+03 | n | 5.5E+00 | n | 5.5E+02 | n | 4.6E+05 | n | 1.0E+06 | n >S | – |
| Oxamyl | 23135-22-0 | 1.7E+03 | n | 4.2E-01 | m | 4.2E+01 | m | – | – | – | – | – | 1.7E+03 | n | 2.1E-01 | m | 2.1E+01 | m | – | – | – | – | – |
| Oxychlordane | 27304-13-8 | 5.6E+00 | c | 1.3E+01 | c | 1.3E+03 | c >S | 1.2E+03 | c | 1.0E+06 | c >S | – | 5.6E+00 | c | 6.3E+00 | c | 6.3E+02 | c >S | 6.4E+02 | c | 2.4E+05 | c >S | – |
| Paraquat | 1910-42-5 | 3.0E+02 | n | 2.1E-01 | n | 2.1E+01 | n | – | – | – | – | – | 3.0E+02 | n | 1.1E-01 | n | 1.1E+01 | n | – | – | – | – | – |
| Parathion (ethyl parathion) | 56-38-2 | 4.0E+02 | n | 3.3E+01 | n | 3.3E+03 | n >S | – | – | – | – | – | 4.0E+02 | n | 1.7E+01 | n | 1.7E+03 | n >S | – | – | – | – | – |
| Pebulate | 1114-71-2 | 3.3E+03 | n | 2.3E+01 | n | 2.3E+03 | n >S | – | – | – | – | – | 3.3E+03 | n | 1.2E+01 | n | 1.2E+03 | n >S | – | – | – | – | – |
| Pendimethalin | 40487-42-1 | 2.5E+03 | n | 7.5E+03 | n >S | 7.5E+05 | n >S | – | – | – | – | – | 2.5E+03 | n | 3.7E+03 | n >S | 3.7E+05 | n >S | – | – | – | – | – |
| Pentachlorobenzene | 608-93-5 | 5.3E+01 | n | 2.5E+01 | n | 2.5E+03 | n >S | – | – | – | – | – | 5.3E+01 | n | 1.2E+01 | n | 1.2E+03 | n >S | – | – | – | – | – |
| Pentachloroethane | 76-01-7 | 3.9E+01 | c | 9.7E-02 | c | 9.7E+00 | c | 9.4E+01 | c | 2.8E+03 | c | – | 2.8E+01 | c | 4.8E-02 | c | 4.8E+00 | c | 4.8E+01 | c | 1.8E+02 | c | – |
| Pentachloronitrobenzene | 82-68-8 | 1.0E+01 | c | 1.8E+00 | c | 1.8E+02 | c >S | – | – | – | – | – | 1.0E+01 | c | 9.2E-01 | c | 9.2E+01 | c >S | – | – | – | – | – |
| Pentachlorophenol | 87-86-5 | 7.3E-01 | c | 1.8E-02 | m | 1.8E+00 | m | – | – | – | – | – | 7.3E-01 | c | 9.2E-03 | m | 9.2E-01 | m | – | – | – | – | – |
| Pentadiene, 1,3-cis- | 1574-41-0 | 4.8E+03 | n | 1.9E+01 | n | 1.9E+03 | n | 2.8E+05 | n | 5.5E+05 | n >S | – | 4.7E+03 | n | 9.4E+00 | n | 9.4E+02 | n | 1.4E+05 | n | 3.6E+04 | n >S | – |
| Pentadiene, 1,3-trans- | 2004-70-8 | 4.8E+03 | n | 1.3E+01 | n | 1.3E+03 | n | 2.8E+05 | n | 6.7E+05 | n >S | – | 4.7E+03 | n | 6.5E+00 | n | 6.5E+02 | n | 1.4E+05 | n | 4.3E+04 | n >S | – |
| Pentaerythritol tetranitrate (PETN) | 78-11-5 | 1.3E+02 | n | 1.2E+01 | n | 1.2E+03 | n | – | – | – | – | – | 1.3E+02 | n | 6.2E+00 | n | 6.2E+02 | n | – | – | – | – | – |
| Pentane | 109-66-0 | 4.8E+03 | n | 3.5E+02 | n | 3.5E+04 | n >S | 3.7E+05 | n | 8.1E+04 | n >S | – | 4.8E+03 | n | 1.7E+02 | n | 1.7E+04 | n >S | 1.9E+05 | n | 5.2E+03 | n >S | – |
| Pentane, 2-methyl- | 107-83-5 | 4.8E+03 | n | 3.8E+02 | n | 3.8E+04 | n >S | 2.8E+05 | n | 4.5E+05 | n >S | – | 4.7E+03 | n | 1.9E+02 | n | 1.9E+04 | n >S | 1.4E+05 | n | 2.9E+04 | n >S | – |
| Pentane, 3-methyl- | 96-14-0 | 4.8E+03 | n | 3.1E+02 | n | 3.1E+04 | n >S | 2.8E+05 | n | 4.7E+05 | n >S | – | 4.7E+03 | n | 1.6E+02 | n | 1.6E+04 | n >S | 1.4E+05 | n | 3.1E+04 | n >S | – |
| Pentanediol, 1,5- | 111-29-5 | 3.0E+05 | n | 2.4E+02 | n | 2.4E+04 | n | 1.0E+06 | n | 1.0E+06 | n >S | – | 2.7E+05 | n | 1.2E+02 | n | 1.2E+04 | n | 1.0E+06 | n | 9.9E+05 | n >S | – |
| Pentanol, 1- | 71-41-0 | 2.7E+03 | n | 2.3E+00 | n | 2.3E+02 | n | – | – | – | – | – | 2.7E+03 | n | 1.1E+00 | n | 1.1E+02 | n | – | – | – | – | – |
| Pentanol, 4-methyl-2- | 108-11-2 | 2.1E+03 | n | 1.8E+00 | n | 1.8E+02 | n | – | – | – | – | – | 2.1E+03 | n | 8.8E-01 | n | 8.8E+01 | n | – | – | – | – | – |
| Pentanone, 2- | 107-87-9 | 3.3E+03 | n | 2.2E+00 | n | 2.2E+02 | n | – | – | – | – | – | 3.3E+03 | n | 1.1E+00 | n | 1.1E+02 | n | – | – | – | – | – |
| Pentene, 2- | 109-68-2 | 4.8E+03 | n | 4.7E+01 | n | 4.7E+03 | n | 2.8E+05 | n | 4.5E+05 | n >S | – | 4.7E+03 | n | 2.3E+01 | n | 2.3E+03 | n | 1.4E+05 | n | 2.9E+04 | n >S | – |
| Pentyne, 1- | 627-19-0 | 4.8E+03 | n | 1.3E+01 | n | 1.3E+03 | n | 2.8E+05 | n | 6.2E+05 | n >S | – | 4.7E+03 | n | 6.3E+00 | n | 6.3E+02 | n | 1.4E+05 | n | 4.0E+04 | n >S | – |
| Perchlorate | 14797-73-0 | 5.1E+01 | n | 1.4E-01 | n | 1.4E+01 | n | – | – | – | – | – | 5.1E+01 | n | 7.0E-02 | n | 7.0E+00 | n | – | – | – | – | – |
| Perfluorooctanoic sulfonic acid (1-Octanesulfonic acid, heptadecafluoro-1-) | 1763-23-1 | 1.5E+00 | n | 5.0E-02 | n | 5.0E+00 | n | 1.5E+02 | n | 1.6E+05 | n >S | – | 1.5E+00 | n | 2.5E-02 | n | 2.5E+00 | n | 8.0E+01 | n | 1.1E+04 | n | – |
| Perfluoroundecanoic acid (Undecanoic acid, uncosafluoro-) | 2058-94-8 | 8.0E-01 | n | 1.8E-02 | n | 1.8E+00 | n | – | – | – | – | – | 8.0E-01 | n | 9.2E-03 | n | 9.2E-01 | n | – | – | – | – | – |
| Perfluoropentanoic acid (Pentanoic acid, nonafluoro-) | 2706-90-3 | 2.5E-01 | n | 3.2E-04 | n | 3.2E-02 | n | – | – | – | – | – | 2.5E-01 | n | 1.6E-04 | n | 1.6E-02 | n | – | – | – | – | – |
| Perfluorohexanoic acid (Hexanoic acid, undecafluoro-) | 307-24-4 | 2.5E-01 | n | 4.8E-04 | n | 4.8E-02 | n | – | – | – | – | – | 2.5E-01 | n | 2.4E-04 | n | 2.4E-02 | n | – | – | – | – | – |
| Perfluorododecanoic acid (Dodecanoic acid, tricosafluoro-) | 307-55-1 | 7.9E-01 | n | 3.4E-02 | n | 3.4E+00 | n | 6.9E+01 | n | 6.4E+04 | n >S | – | 7.8E-01 | n | 1.7E-02 | n | 1.7E+00 | n | 3.6E+01 | n | 4.1E+03 | n >S | – |
| Perfluorooctanoic acid (Octanoic acid, pentadecafluoro-) | 335-67-1 | 6.0E-01 | n | 3.0E-03 | n | 3.0E-01 | n | 2.4E+00 | n | 9.1E+02 | n | – | 4.9E-01 | n | 1.5E-03 | n | 1.5E-01 | n | 1.2E+00 | n | 5.9E+01 | n | – |
| Perfluorodecanoic acid (Decanoic acid, nonadecafluoro-) | 335-76-2 | 9.9E-01 | n | 2.2E-02 | n | 2.2E+00 | n | 8.6E+01 | n | 7.8E+04 | n >S | – | 9.8E-01 | n | 1.1E-02 | n | 1.1E+00 | n | 4.4E+01 | n | 5.0E+03 | n >S | – |
| Perfluorodecane sulfonic acid (1-Decanesulfonic acid, heneicosafluoro-) | 335-77-3 | 8.0E-01 | n | 4.0E-02 | n | 4.0E+00 | n | – | – | – | – | – | 8.0E-01 | n | 2.0E-02 | n | 2.0E+00 | n | – | – | – | – | – |
| Perfluorohexane sulfonic acid (1-Hexanesulfonic acid, tridecafluoro-) | 355-46-4 | 2.5E-01 | n | 2.0E-03 | n | 2.0E-01 | n | 1.1E+01 | n | 6.3E+03 | n | – | 2.4E-01 | n | 1.0E-03 | n | 1.0E-01 | n | 5.8E+00 | n | 6.2E+02 | n | – |
| Perfluorobutyric acid (Butanoic acid, heptafluoro-) | 375-22-4 | 1.8E+02 | n | 2.0E-01 | n | 2.0E+01 | n | 2.0E+03 | n | 1.0E+06 | n >S | – | 1.6E+02 | n | 9.8E-02 | n | 9.8E+00 | n | 1.0E+03 | n | 9.8E+05 | n | – |
| Perfluorobutane sulfonic acid (1-Butanesulfonic acid, nonafluoro-) | 375-73-5 | 8.6E+01 | n | 1.1E-01 | n | 1.1E+01 | n | 1.1E+03 | n | 1.0E+06 | n >S | – | 8.0E+01 | n | 5.3E-02 | n | 5.3E+00 | n | 5.8E+02 | n | 7.2E+05 | n >S | – |
| Perfluoroheptanoic acid (Heptanoic acid, tridecafluoro-) | 375-85-9 | 1.5E+00 | n | 4.6E-03 | n | 4.6E-01 | n | – | – | – | – | – | 1.5E+00 | n | 2.3E-03 | n | 2.3E-01 | n | – | – | – | – | – |
| Perfluorononanoic acid (Nonanoic acid, heptadecafluoro-) | 375-95-1 | 7.6E-01 | n | 3.1E-03 | n | 3.1E-01 | n | 1.7E+01 | n | 6.8E+03 | n >S | – | 7.3E-01 | n | 1.5E-03 | n | 1.5E-01 | n | 8.9E+00 | n | 4.4E+02 | n >S | – |
| Perfluorotetradecanoic acid (Tetradecanoic acid, heptacosafluoro-) | 376-06-7 | 5.1E-01 | n | 1.1E-01 | n | 1.1E+01 | n >S | – | – | – | – | – | 5.1E-01 | n | 5.6E-02 | n | 5.6E+00 | n >S | – | – | – | – | – |
| Perfluorotridecanoic acid (Tridecanoic acid, pentacosafluoro-) | 72629-94-8 | 6.1E-01 | n | 6.1E-02 | n | 6.1E+00 | n >S | – | – | – | – | – | 6.1E-01 | n | 3.0E-02 | n | 3.0E+00 | n >S | – | – | – | – | – |
| Perfluorooctane sulfonamide (1-Octanesulfonamide, hetpadecafluoro-) | 754-91-6 | 5.8E-02 | n | 9.2E-01 | n | 9.2E+01 | n | 6.3E-02 | n | 1.7E-01 | n | – | 3.1E-02 | n | 4.6E-01 | n | 4.6E+01 | n | 3.2E-02 | n | 1.1E-02 | n | – |
| Perylene | 198-55-0 | 1.3E+03 | n | 7.6E+04 | n >S | 1.0E+06 | n >S | – | – | – | – | – | 1.3E+03 | n | 3.8E+04 | n >S | 1.0E+06 | n >S | – | – | – | – | – |

**Table 1**
**Tier 1 Residential Soil PCLs[1]**

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | 0.5 acre source area | | | | | | | | | | | 30 acre source area | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | $^{Tot}Soil_{Comb}$[2] (mg/kg) | note[3] | $^{GW}Soil_{Ing}$ (mg/kg) | note[3] | $^{GW}Soil_{Class\ 3}$ (mg/kg) | note[3] | $^{Air}Soil_{Inh\text{-}V}$[4] (mg/kg) | note[3] | $^{Air}GW\text{-}Soil_{Inh\text{-}V}$ (mg/kg) | note[3] | $^{GW}$Soil for Secondary MCL (mg/kg) | $^{Tot}Soil_{Comb}$[2] (mg/kg) | note[3] | $^{GW}Soil_{Ing}$ (mg/kg) | note[3] | $^{GW}Soil_{Class\ 3}$ (mg/kg) | note[3] | $^{Air}Soil_{Inh\text{-}V}$[4] (mg/kg) | note[3] | $^{Air}GW\text{-}Soil_{Inh\text{-}V}$ (mg/kg) | note[3] | $^{GW}$Soil for Secondary MCL (mg/kg) |
| Phenacetin | 62-44-2 | 1.8E+03 | c | 1.2E+00 | c | 1.2E+02 | c | 1.1E+04 | c | 1.0E+06 | c >S | – | 1.5E+03 | c | 6.2E-01 | c | 6.2E+01 | c | 5.6E+03 | c | 2.3E+05 | c >S | – |
| Phenanthrene | 85-01-8 | 1.7E+03 | n | 4.2E+02 | n | 4.2E+04 | n >S | – | – | – | – | – | 1.7E+03 | n | 2.1E+02 | n | 2.1E+04 | n >S | – | – | – | – | – |
| Phenanthridine | 229-87-8 | 2.0E+02 | n | 5.3E+00 | n | 5.3E+02 | n | – | – | – | – | – | 2.0E+02 | n | 2.6E+00 | n | 2.6E+02 | n | – | – | – | – | – |
| Phenol | 108-95-2 | 1.8E+03 | n | 1.9E+01 | n | 1.9E+03 | n | 1.9E+03 | n | 4.2E+05 | n >S | – | 9.5E+02 | n | 9.6E+00 | n | 9.6E+02 | n | 1.0E+03 | n | 2.7E+04 | n | – |
| Phenol, 4-tert-butyl- | 98-54-4 | 8.0E+03 | n | 1.1E+02 | n | 1.1E+04 | n >S | – | – | – | – | – | 8.0E+03 | n | 5.4E+01 | n | 5.4E+03 | n >S | – | – | – | – | – |
| Phenothiazine | 92-84-2 | 6.3E+01 | n | 8.0E+00 | n >S | 8.0E+02 | n >S | – | – | – | – | – | 6.3E+01 | n | 4.0E+00 | n >S | 4.0E+02 | n >S | – | – | – | – | – |
| Phenyl mercuric acetate | 62-38-4 | 5.3E+00 | n | 1.6E-02 | n | 1.6E+00 | n | – | – | – | – | – | 5.3E+00 | n | 8.1E-03 | n | 8.1E-01 | n | – | – | – | – | – |
| Phenylene diamine, m- | 108-45-2 | 4.0E+02 | n | 2.9E-01 | n | 2.9E+01 | n | – | – | – | – | – | 4.0E+02 | n | 1.4E-01 | n | 1.4E+01 | n | – | – | – | – | – |
| Phenylene diamine, p- | 106-50-3 | 1.3E+04 | n | 9.1E+00 | n | 9.1E+02 | n | – | – | – | – | – | 1.3E+04 | n | 4.6E+00 | n | 4.6E+02 | n | – | – | – | – | – |
| Phorate | 298-02-2 | 1.3E+01 | n | 1.1E+00 | n | 1.1E+02 | n | – | – | – | – | – | 1.3E+01 | n | 5.4E-01 | n | 5.4E+01 | n | – | – | – | – | – |
| Phosalone | 2310-17-0 | 1.3E+02 | n | 2.3E+00 | n | 2.3E+02 | n | – | – | – | – | – | 1.3E+02 | n | 1.2E+00 | n | 1.2E+02 | n | – | – | – | – | – |
| Phosdrin (mevinphos) | 7786-34-7 | 1.7E+00 | n | 1.2E-03 | n | 1.2E-01 | n | – | – | – | – | – | 1.7E+00 | n | 5.9E-04 | n | 5.9E-02 | n | – | – | – | – | – |
| Phosmet | 732-11-6 | 1.3E+03 | n | 4.1E+00 | n | 4.1E+02 | n | – | – | – | – | – | 1.3E+03 | n | 2.0E+00 | n | 2.0E+02 | n | – | – | – | – | – |
| Phosphine | 7803-51-2 | 3.8E+00 | n | – | – | – | – | 4.6E+00 | n | – | – | – | 2.1E+00 | n | – | – | – | – | 2.4E+00 | n | – | – | – |
| Phosphorotrithioic acid, S,S,S-tributyl ester | 78-48-8 | 5.2E+01 | c | 4.3E+02 | c >S | 4.3E+04 | c >S | – | – | – | – | – | 5.2E+01 | c | 2.2E+02 | c >S | 2.2E+04 | c >S | – | – | – | – | – |
| Phosphorus, total* | 7723-14-0 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – |
| Phosphorus, white | 7723-14-0 | 1.5E+00 | n | 2.3E-02 | n | 2.3E+00 | n | – | – | – | – | – | 1.5E+00 | n | 1.1E-02 | n | 1.1E+00 | n | – | – | – | – | – |
| Phthalic anhydride | 85-44-9 | 3.6E+04 | n | 2.5E+02 | n | 2.5E+04 | n | 5.0E+04 | n | 1.0E+06 | n >S | – | 2.1E+04 | n | 1.2E+02 | n | 1.2E+04 | n | 2.6E+04 | n | 1.0E+06 | n >S | – |
| Picloram | 1918-02-1 | 4.7E+03 | n | 9.8E-01 | m | 9.8E+01 | m | – | – | – | – | – | 4.7E+03 | n | 4.9E-01 | m | 4.9E+01 | m | – | – | – | – | – |
| Picoline, 2- (2-methylpyridine) | 109-06-8 | 7.4E+02 | n | 5.6E-01 | n | 5.6E+01 | n | – | – | – | – | – | 7.4E+02 | n | 2.8E-01 | n | 2.8E+01 | n | – | – | – | – | – |
| Polybrominated biphenyls (PBBs) | 67774-32-7 | 9.7E-03 | c | 9.0E-03 | c | 9.0E-01 | c | – | – | – | – | – | 9.7E-03 | c | 4.5E-03 | c | 4.5E-01 | c | – | – | – | – | – |
| Polychlorinated biphenyls (PCBs) | 1336-36-3 | 1.1E+00 | n | 1.1E+01 | m | 1.1E+03 | m | 5.4E+01 | c | 6.2E+04 | c >S | – | 1.1E+00 | n | 5.3E+00 | m | 5.3E+02 | m | 2.8E+01 | c | 4.0E+03 | c >S | – |
| Potassium* | 7440-09-7 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – |
| Primene | 68955-53-3 | 3.6E+02 | n | 5.4E+01 | n | 5.4E+03 | n | – | – | – | – | – | 3.6E+02 | n | 2.7E+01 | n | 2.7E+03 | n | – | – | – | – | – |
| Prometon (pramitol) | 1610-18-0 | 1.0E+03 | n | 9.6E+00 | n | 9.6E+02 | n | – | – | – | – | – | 1.0E+03 | n | 4.8E+00 | n | 4.8E+02 | n | – | – | – | – | – |
| Prometryn | 7287-19-6 | 2.7E+03 | n | 9.8E+01 | n | 9.8E+03 | n >S | – | – | – | – | – | 2.7E+03 | n | 4.9E+01 | n | 4.9E+03 | n >S | – | – | – | – | – |
| Pronamide | 23950-58-5 | 5.0E+03 | n | 1.8E+01 | n | 1.8E+03 | n >S | – | – | – | – | – | 5.0E+03 | n | 9.1E+00 | n | 9.1E+02 | n >S | – | – | – | – | – |
| Propanal (propionaldehyde) | 123-38-6 | 1.0E+02 | n | 3.9E-01 | n | 3.9E+01 | n | 1.2E+02 | n | 3.3E+03 | n | – | 5.8E+01 | n | 2.0E-01 | n | 2.0E+01 | n | 6.3E+01 | n | 2.1E+02 | n | – |
| Propane, 1-bromo- | 106-94-5 | 2.9E+03 | n | 3.4E+00 | n | 3.4E+02 | n | – | – | – | – | – | 2.9E+03 | n | 1.7E+00 | n | 1.7E+02 | n | – | – | – | – | – |
| Propanil | 709-98-8 | 3.3E+02 | n | 4.7E+00 | n | 4.7E+02 | n | – | – | – | – | – | 3.3E+02 | n | 2.3E+00 | n | 2.3E+02 | n | – | – | – | – | – |
| Propanoic acid (propionic acid) | 79-09-4 | 4.1E+04 | n | 2.3E+01 | n | 2.3E+03 | n | – | – | – | – | – | 4.1E+04 | n | 1.2E+01 | n | 1.2E+03 | n | – | – | – | – | – |
| Propanol, 1- | 71-23-8 | 1.6E+04 | n | 1.0E+01 | n | 1.0E+03 | n | – | – | – | – | – | 1.6E+04 | n | 5.0E+00 | n | 5.0E+02 | n | – | – | – | – | – |
| Propargite | 2312-35-8 | 1.3E+03 | n | 1.1E+02 | n | 1.1E+04 | n >S | – | – | – | – | – | 1.3E+03 | n | 5.5E+01 | n | 5.5E+03 | n >S | – | – | – | – | – |
| Propargyl alcohol | 107-19-7 | 1.6E+02 | n | 1.0E-01 | n | 1.0E+01 | n | – | – | – | – | – | 1.6E+02 | n | 5.2E-02 | n | 5.2E+00 | n | – | – | – | – | – |
| Propazine | 139-40-2 | 1.1E+02 | c | 9.5E-01 | c | 9.5E+01 | c | – | – | – | – | – | 1.1E+02 | c | 4.7E-01 | c | 4.7E+01 | c | – | – | – | – | – |
| Propham | 122-42-9 | 1.3E+03 | n | 1.9E+00 | n | 1.9E+02 | n | – | – | – | – | – | 1.3E+03 | n | 9.7E-01 | n | 9.7E+01 | n | – | – | – | – | – |
| Propionitrile (propane nitrile) | 107-12-0 | 3.3E+01 | n | 1.9E-02 | n | 1.9E+00 | n | – | – | – | – | – | 3.3E+01 | n | 9.7E-03 | n | 9.7E-01 | n | – | – | – | – | – |
| Propyl acetate, n- | 109-60-4 | 7.4E+03 | n | 5.3E+00 | n | 5.3E+02 | n | – | – | – | – | – | 7.4E+03 | n | 2.7E+00 | n | 2.7E+02 | n | – | – | – | – | – |
| Propylbenzene, n- | 103-65-1 | 2.2E+03 | n | 4.5E+01 | n | 4.5E+03 | n >S | 6.3E+03 | n | 2.8E+05 | n >S | – | 1.6E+03 | n | 2.2E+01 | n | 2.2E+03 | n >S | 3.3E+03 | n | 1.8E+04 | n >S | – |
| Propylene glycol | 57-55-6 | 3.7E+02 | n | 9.4E+02 | n | 9.4E+04 | n | 3.7E+02 | n | 9.6E+04 | n | – | 1.9E+02 | n | 4.7E+02 | n | 4.7E+04 | n | 1.9E+02 | n | 6.2E+03 | n | – |
| Propylene glycol monomethyl ether | 107-98-2 | 4.6E+04 | n | 3.3E+01 | n | 3.3E+03 | n | 2.3E+05 | n | 1.0E+06 | n >S | – | 3.9E+04 | n | 1.7E+01 | n | 1.7E+03 | n | 1.2E+05 | n | 9.7E+05 | n >S | – |
| Propylene oxide | 75-56-9 | 2.0E+01 | c | 7.5E-03 | c | 7.5E-01 | c | 9.7E+01 | c | 3.1E+03 | c | – | 1.7E+01 | c | 3.8E-03 | c | 3.8E-01 | c | 5.0E+01 | c | 2.0E+02 | c | – |
| Propylene tetramer | 6842-15-5 | 4.6E+03 | n | 2.5E+04 | n >S | 1.0E+06 | n >S | 1.5E+04 | n | 4.6E+05 | n >S | – | 3.6E+03 | n | 1.3E+04 | n >S | 1.0E+06 | n >S | 7.9E+03 | n | 2.9E+04 | n >S | – |
| Prothiofos (Tokuthion) | 34643-46-4 | 6.6E+00 | n | 2.4E+03 | n | 2.4E+05 | n >S | – | – | – | – | – | 6.6E+00 | n | 1.2E+03 | n | 1.2E+05 | n >S | – | – | – | – | – |
| Pyrene | 129-00-0 | 1.7E+03 | n | 1.1E+03 | n >S | 1.1E+05 | n >S | – | – | – | – | – | 1.7E+03 | n | 5.6E+02 | n >S | 5.6E+04 | n >S | – | – | – | – | – |
| Pyridine | 110-86-1 | 8.2E+01 | n | 6.9E-02 | n | 6.9E+00 | n | – | – | – | – | – | 8.2E+01 | n | 3.5E-02 | n | 3.5E+00 | n | – | – | – | – | – |
| Quinoline | 91-22-5 | 1.6E+00 | c | 7.5E-03 | c | 7.5E-01 | c | – | – | – | – | – | 1.6E+00 | c | 3.8E-03 | c | 3.8E-01 | c | – | – | – | – | – |
| Ronnel | 299-84-3 | 2.3E+03 | n | 4.2E+02 | n | 4.2E+04 | n >S | – | – | – | – | – | 2.3E+03 | n | 2.1E+02 | n | 2.1E+04 | n >S | – | – | – | – | – |
| Safrole | 94-59-7 | 1.6E+01 | c | 1.6E-01 | c | 1.6E+01 | c | 6.7E+01 | c | 7.5E+03 | c >S | – | 1.3E+01 | c | 8.2E-02 | c | 8.2E+00 | c | 3.4E+01 | c | 4.8E+02 | c | – |

**Table 1**
**Tier 1 Residential Soil PCLs[1]**

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | 0.5 acre source area | | | | | | | | | | | 30 acre source area | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | $^{Tot}Soil_{Comb}$[2] (mg/kg) | note[3] | $^{GW}Soil_{Ing}$ (mg/kg) | note[3] | $^{GW}Soil_{Class\ 3}$ (mg/kg) | note[3] | $^{Air}Soil_{Inh\text{-}V}$[4] (mg/kg) | note[3] | $^{Air}GW\text{-}Soil_{Inh\text{-}V}$ (mg/kg) | note[3] | $^{GW}$Soil for Secondary MCL (mg/kg) | $^{Tot}Soil_{Comb}$[2] (mg/kg) | note[3] | $^{GW}Soil_{Ing}$ (mg/kg) | note[3] | $^{GW}Soil_{Class\ 3}$ (mg/kg) | note[3] | $^{Air}Soil_{Inh\text{-}V}$[4] (mg/kg) | note[3] | $^{Air}GW\text{-}Soil_{Inh\text{-}V}$ (mg/kg) | note[3] | $^{GW}$Soil for Secondary MCL (mg/kg) |
| Selenium | 7782-49-2 | 3.1E+02 | n | 2.3E+00 | m >S | 2.3E+02 | m >S | – | – | – | – | – | 3.1E+02 | n | 1.1E+00 | m >S | 1.1E+02 | m >S | – | – | – | – | – |
| Selenourea | 630-10-4 | 4.1E+02 | n | – | – | – | – | – | – | – | – | – | 4.1E+02 | n | – | – | – | – | – | – | – | – | – |
| Silver | 7440-22-4 | 9.7E+01 | n | 4.8E-01 | n >S | 4.8E+01 | n >S | – | – | – | – | 0.39 | 9.7E+01 | n | 2.4E-01 | n >S | 2.4E+01 | n >S | – | – | – | – | 0.2 |
| Simazine | 122-34-9 | 3.9E+01 | c | 5.5E-02 | m | 5.5E+00 | m | – | – | – | – | – | 3.9E+01 | c | 2.8E-02 | m | 2.8E+00 | m | – | – | – | – | – |
| Sodium* | 7440-23-5 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – |
| Sodium hypochlorite | 7681-52-9 | 1.5E+04 | n | – | – | – | – | – | – | – | – | – | 1.4E+04 | n | – | – | – | – | – | – | – | – | – |
| Sodium polyacrylate | 9003-04-7 | 1.2E+02 | n | 2.4E+01 | n | 2.4E+03 | n | 1.2E+02 | n | 3.0E+04 | n | – | 6.2E+01 | n | 1.2E+01 | n | 1.2E+03 | n | 6.2E+01 | n | 1.9E+03 | n | – |
| Strontium | 7440-24-6 | 4.4E+04 | n | 6.1E+02 | n | 6.1E+04 | n | – | – | – | – | – | 4.4E+04 | n | 3.1E+02 | n | 3.1E+04 | n | – | – | – | – | – |
| Strychnine | 57-24-9 | 2.0E+01 | n | 3.7E-02 | n | 3.7E+00 | n | – | – | – | – | – | 2.0E+01 | n | 1.9E-02 | n | 1.9E+00 | n | – | – | – | – | – |
| Styrene | 100-42-5 | 6.7E+03 | n | 3.3E+00 | m | 3.3E+02 | m | 1.1E+04 | n | 4.9E+05 | n >S | – | 4.3E+03 | n | 1.6E+00 | m | 1.6E+02 | m | 5.8E+03 | n | 3.2E+04 | n >S | – |
| Sulfate* | 14808-79-8 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – |
| Sulfide* | 18496-25-8 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – |
| Sulfolane | 126-33-0 | 4.3E+02 | n | 6.1E-01 | n | 6.1E+01 | n | 8.6E+02 | n | 2.5E+05 | n >S | – | 2.9E+02 | n | 3.1E-01 | n | 3.1E+01 | n | 4.4E+02 | n | 1.6E+04 | n >S | – |
| Sulfur* | 7704-34-9 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – |
| Sulprofos (Bolstar) | 35400-43-2 | 2.0E+02 | n | 7.5E+03 | n >S | 7.5E+05 | n >S | – | – | – | – | – | 2.0E+02 | n | 3.8E+03 | n >S | 3.8E+05 | n >S | – | – | – | – | – |
| Tebuconazole | 107534-96-3 | 2.0E+03 | n | 3.1E+01 | n | 3.1E+03 | n >S | – | – | – | – | – | 2.0E+03 | n | 1.6E+01 | n | 1.6E+03 | n >S | – | – | – | – | – |
| Tebuthiuron | 34014-18-1 | 4.7E+03 | n | 5.4E+00 | n | 5.4E+02 | n | – | – | – | – | – | 4.7E+03 | n | 2.7E+00 | n | 2.7E+02 | n | – | – | – | – | – |
| Terbufos | 13071-79-9 | 1.7E+00 | n | 3.4E-01 | n | 3.4E+01 | n | – | – | – | – | – | 1.7E+00 | n | 1.7E-01 | n | 1.7E+01 | n | – | – | – | – | – |
| Tert-amyl ethyl ether (TAEE) | 919-94-8 | 3.3E+03 | n | 9.5E+00 | n | 9.5E+02 | n | – | – | – | – | – | 3.3E+03 | n | 4.7E+00 | n | 4.7E+02 | n | – | – | – | – | – |
| Tert-amyl-methyl ether (TAME) | 994-05-8 | 3.3E+03 | n | 3.8E+00 | n | 3.8E+02 | n | – | – | – | – | – | 3.3E+03 | n | 1.9E+00 | n | 1.9E+02 | n | – | – | – | – | – |
| Tert-butyl alcohol (2-methyl-2-propanol) | 75-65-0 | 7.4E+03 | n | 4.6E+00 | n | 4.6E+02 | n | – | – | – | – | – | 7.4E+03 | n | 2.3E+00 | n | 2.3E+02 | n | – | – | – | – | – |
| Tetrachlorobenzene, 1,2,3,4- | 634-66-2 | 2.0E+01 | n | 1.2E+01 | n | 1.2E+03 | n | – | – | – | – | – | 2.0E+01 | n | 6.0E+00 | n | 6.0E+02 | n | – | – | – | – | – |
| Tetrachlorobenzene, 1,2,3,5- | 634-90-2 | 1.3E+01 | n | 1.9E+00 | n | 1.9E+02 | n | – | – | – | – | – | 1.3E+01 | n | 9.4E-01 | n | 9.4E+01 | n | – | – | – | – | – |
| Tetrachlorobenzene, 1,2,4,5- | 95-94-3 | 2.0E+01 | n | 4.8E-01 | n | 4.8E+01 | n >S | – | – | – | – | – | 2.0E+01 | n | 2.4E-01 | n | 2.4E+01 | n >S | – | – | – | – | – |
| Tetrachloroethane, 1,1,1,2- | 630-20-6 | 6.5E+01 | c | 1.4E+00 | c | 1.4E+02 | c | 9.1E+01 | c | 4.5E+03 | c | – | 3.9E+01 | c | 7.1E-01 | c | 7.1E+01 | c | 4.7E+01 | c | 2.9E+02 | c | – |
| Tetrachloroethane, 1,1,2,2- | 79-34-5 | 3.0E+01 | c | 2.3E-02 | c | 2.3E+00 | c | – | – | – | – | – | 3.0E+01 | c | 1.2E-02 | c | 1.2E+00 | c | – | – | – | – | – |
| Tetrachloroethylene | 127-18-4 | 7.1E+02 | c | 5.0E-02 | m | 5.0E+00 | m | 9.4E+02 | c | 5.0E+03 | c >S | – | 4.2E+02 | c | 2.5E-02 | m | 2.5E+00 | m | 4.8E+02 | c | 3.2E+02 | c | – |
| Tetrachlorophenol, 2,3,4,5- | 4901-51-3 | 4.0E+02 | n | 1.5E+01 | n | 1.5E+03 | n | – | – | – | – | – | 4.0E+02 | n | 7.4E+00 | n | 7.4E+02 | n | – | – | – | – | – |
| Tetrachlorophenol, 2,3,4,6- | 58-90-2 | 1.8E+02 | n | 4.5E+00 | n | 4.5E+02 | n | – | – | – | – | – | 1.8E+02 | n | 2.2E+00 | n | 2.2E+02 | n | – | – | – | – | – |
| Tetrachlorophenol, 2,3,5,6- | 935-95-5 | 2.3E+01 | n | 2.2E+00 | n | 2.2E+02 | n >S | – | – | – | – | – | 2.3E+01 | n | 1.1E+00 | n | 1.1E+02 | n >S | – | – | – | – | – |
| Tetrachlorvinphos (Stirophos) | 22248-79-9 | 2.6E+03 | n | 2.4E+03 | n | 2.4E+05 | n >S | – | – | – | – | – | 2.6E+03 | n | 1.2E+03 | n | 1.2E+05 | n >S | – | – | – | – | – |
| Tetradifon | 116-29-0 | 1.0E+03 | n | 8.7E+01 | n | 8.7E+03 | n >S | – | – | – | – | – | 1.0E+03 | n | 4.4E+01 | n | 4.4E+03 | n >S | – | – | – | – | – |
| Tetraethyl dithiopyrophosphate (sulfotep) | 3689-24-5 | 3.3E+01 | n | 3.9E-01 | n | 3.9E+01 | n | – | – | – | – | – | 3.3E+01 | n | 1.9E-01 | n | 1.9E+01 | n | – | – | – | – | – |
| Tetraethyl lead | 78-00-2 | 6.7E-03 | n | 5.0E-04 | n | 5.0E-02 | n | – | – | – | – | – | 6.7E-03 | n | 2.5E-04 | n | 2.5E-02 | n | – | – | – | – | – |
| Tetraethyl pyrophosphate (TEPP) | 107-49-3 | 7.3E-01 | n | 9.3E-03 | n | 9.3E-01 | n | – | – | – | – | – | 7.3E-01 | n | 4.6E-03 | n | 4.6E-01 | n | – | – | – | – | – |
| Tetraethylene glycol | 112-60-7 | 2.2E+04 | n | 1.6E+01 | n | 1.6E+03 | n | – | – | – | – | – | 2.2E+04 | n | 7.8E+00 | n | 7.8E+02 | n | – | – | – | – | – |
| Tetrahydrofuran | 109-99-9 | 1.5E+02 | c | 2.5E-01 | c | 2.5E+01 | c | 1.9E+02 | c | 4.6E+03 | c | – | 8.6E+01 | c | 1.2E-01 | c | 1.2E+01 | c | 9.7E+01 | c | 3.0E+02 | c | – |
| Tetrahydropyran | 142-68-7 | 1.6E+02 | c | 2.7E-01 | c | 2.7E+01 | c | 2.0E+02 | c | 5.9E+03 | c | – | 9.2E+01 | c | 1.4E-01 | c | 1.4E+01 | c | 1.0E+02 | c | 3.8E+02 | c | – |
| Tetraoxadodecane, 2,5,8,11- | 112-49-2 | 1.7E+03 | n | 1.7E+00 | n | 1.7E+02 | n | – | – | – | – | – | 1.7E+03 | n | 8.6E-01 | n | 8.6E+01 | n | – | – | – | – | – |
| Thallium | 7440-28-0 | 5.3E+00 | n | 1.7E+00 | m | 1.7E+02 | m | – | – | – | – | – | 5.3E+00 | n | 8.7E-01 | m | 8.7E+01 | m | – | – | – | – | – |
| Thiofanox | 39196-18-4 | 2.0E+01 | n | 3.1E-02 | n | 3.1E+00 | n | – | – | – | – | – | 2.0E+01 | n | 1.6E-02 | n | 1.6E+00 | n | – | – | – | – | – |
| Thionazin | 297-97-2 | 4.7E+00 | n | 1.1E-02 | n | 1.1E+00 | n | – | – | – | – | – | 4.7E+00 | n | 5.5E-03 | n | 5.5E-01 | n | – | – | – | – | – |
| Thiophanate-methyl | 23564-05-8 | 5.3E+03 | n | 4.5E+00 | n | 4.5E+02 | n >S | – | – | – | – | – | 5.3E+03 | n | 2.2E+00 | n | 2.2E+02 | n >S | – | – | – | – | – |
| Thiram | 137-26-8 | 3.3E+02 | n | 3.5E+00 | n | 3.5E+02 | n | – | – | – | – | – | 3.3E+02 | n | 1.8E+00 | n | 1.8E+02 | n | – | – | – | – | – |
| Tin | 7440-31-5 | 3.5E+04 | n | 3.7E+04 | n >S | 1.0E+06 | n >S | – | – | – | – | – | 3.5E+04 | n | 1.8E+04 | n >S | 1.0E+06 | n >S | – | – | – | – | – |
| Titanium | 7440-32-6 | 2.2E+05 | n | – | – | – | – | – | – | – | – | – | 2.2E+05 | n | – | – | – | – | – | – | – | – | – |
| Toluene | 108-88-3 | 5.9E+03 | n | 8.2E+00 | m | 8.2E+02 | m | 6.3E+04 | n | 5.2E+05 | n >S | – | 5.4E+03 | n | 4.1E+00 | m | 4.1E+02 | m | 3.2E+04 | n | 3.4E+04 | n >S | – |
| Toluene diisocyanate, 2,4/2,6- | 26471-62-5 | 1.5E+02 | n | – | – | – | – | 1.5E+02 | n | 1.7E+05 | n | – | 7.5E+01 | n | – | – | – | – | 7.5E+01 | n | 1.1E+04 | n | – |
| Toluenediamine, 2,4- | 95-80-7 | 1.5E+00 | c | 1.5E-02 | c | 1.5E+00 | c | – | – | – | – | – | 1.5E+00 | c | 7.6E-03 | c | 7.6E-01 | c | – | – | – | – | – |

**Table 1**
**Tier 1 Residential Soil PCLs[1]**

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | 0.5 acre source area | | | | | | | | | | | 30 acre source area | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | $^{Tot}Soil_{Comb}$[2] (mg/kg) | note[3] | $^{GW}Soil_{Ing}$ (mg/kg) | note[3] | $^{GW}Soil_{Class\ 3}$ (mg/kg) | note[3] | $^{Air}Soil_{Inh\text{-}V}$[4] (mg/kg) | note[3] | $^{Air}GW\text{-}Soil_{Inh\text{-}V}$ (mg/kg) | note[3] | $^{GW}$Soil for Secondary MCL (mg/kg) | $^{Tot}Soil_{Comb}$[2] (mg/kg) | note[3] | $^{GW}Soil_{Ing}$ (mg/kg) | note[3] | $^{GW}Soil_{Class\ 3}$ (mg/kg) | note[3] | $^{Air}Soil_{Inh\text{-}V}$[4] (mg/kg) | note[3] | $^{Air}GW\text{-}Soil_{Inh\text{-}V}$ (mg/kg) | note[3] | $^{GW}$Soil for Secondary MCL (mg/kg) |
| Toluenediamine, 2,6- | 823-40-5 | 2.0E+03 | n | 1.4E+00 | n | 1.4E+02 | n | – | – | – | – | – | 2.0E+03 | n | 7.2E-01 | n | 7.2E+01 | n | – | – | – | – | – |
| Toluidine, o- | 95-53-4 | 4.7E+01 | c | 5.8E-01 | c | 5.8E+01 | c | 1.4E+02 | c | 2.7E+04 | c | – | 3.5E+01 | c | 2.9E-01 | c | 2.9E+01 | c | 7.1E+01 | c | 1.7E+03 | c | – |
| Toluidine, p- | 106-49-0 | 7.1E+01 | c | 8.9E-02 | c | 8.9E+00 | c | – | – | – | – | – | 7.1E+01 | c | 4.4E-02 | c | 4.4E+00 | c | – | – | – | – | – |
| Toxaphene | 8001-35-2 | 1.2E+00 | c | 1.2E+01 | m | 1.2E+03 | m | 9.6E+02 | c | 1.0E+06 | c >S | – | 1.2E+00 | c | 5.8E+00 | m | 5.8E+02 | m | 4.9E+02 | c | 4.4E+05 | c >S | – |
| TPH, TX1005, C6-C12 | TPH-1005-1 | 1.6E+03 | n | 6.5E+01 | n | 6.5E+03 | n >S | 3.1E+03 | n | 1.2E+05 | n >S | – | 1.1E+03 | n | 3.3E+01 | n | 3.3E+03 | n >S | 1.6E+03 | n | 7.6E+03 | n >S | – |
| TPH, TX1005, >C12-C28 | TPH-1005-2 | 2.3E+03 | n | 2.0E+02 | n | 2.0E+04 | n >S | 1.5E+04 | n | 1.0E+06 | n >S | – | 2.0E+03 | n | 9.9E+01 | n | 9.9E+03 | n >S | 7.8E+03 | n | 9.8E+04 | n >S | – |
| TPH, TX1005, >C12-C35 | TPH-1005-3 | 2.3E+03 | n | 2.0E+02 | n | 2.0E+04 | n >S | 1.5E+04 | n | 1.0E+06 | n >S | – | 2.0E+03 | n | 9.9E+01 | n | 9.9E+03 | n >S | 7.8E+03 | n | 9.8E+04 | n >S | – |
| TPH, TX1005, >C28-C35 | TPH-1005-4 | 2.3E+03 | n | 2.0E+02 | n | 2.0E+04 | n >S | 1.5E+04 | n | 1.0E+06 | n >S | – | 2.0E+03 | n | 9.9E+01 | n | 9.9E+03 | n >S | 7.8E+03 | n | 9.8E+04 | n >S | – |
| TP Silvex, 2,4,5- | 93-72-1 | 5.3E+02 | n | 5.3E+00 | m | 5.3E+02 | m | – | – | – | – | – | 5.3E+02 | n | 2.6E+00 | m | 2.6E+02 | m | – | – | – | – | – |
| Triademenol | 55219-65-3 | 2.0E+03 | n | 8.4E+00 | n | 8.4E+02 | n | – | – | – | – | – | 2.0E+03 | n | 4.2E+00 | n | 4.2E+02 | n | – | – | – | – | – |
| Triallate | 2303-17-5 | 3.2E+02 | n | 1.9E+01 | n | 1.9E+03 | n >S | – | – | – | – | – | 3.2E+02 | n | 9.5E+00 | n | 9.5E+02 | n >S | – | – | – | – | – |
| Triaminotrinitrobenzene (TATB) | 3058-38-6 | 2.0E+02 | n | 1.5E-01 | n | 1.5E+01 | n | – | – | – | – | – | 2.0E+02 | n | 7.7E-02 | n | 7.7E+00 | n | – | – | – | – | – |
| Tributyltin oxide | 56-35-9 | 2.0E+01 | n | – | – | – | – | – | – | – | – | – | 2.0E+01 | n | – | – | – | – | – | – | – | – | – |
| Trichloro-1,2,2-trifluoroethane, 1,1,2- | 76-13-1 | 7.4E+04 | n | 8.0E+04 | n >S | 1.0E+06 | n >S | 7.7E+04 | n | 1.7E+05 | n >S | – | 3.9E+04 | n | 4.0E+04 | n >S | 1.0E+06 | n >S | 3.9E+04 | n | 1.1E+04 | n | – |
| Trichlorobenzene, 1,2,3- | 87-61-6 | 1.2E+02 | n | 2.6E+01 | n | 2.6E+03 | n | 3.0E+02 | n | 4.8E+04 | n >S | – | 8.7E+01 | n | 1.3E+01 | n | 1.3E+03 | n | 1.6E+02 | n | 3.1E+03 | n >S | – |
| Trichlorobenzene, 1,2,4- | 120-82-1 | 1.2E+02 | n | 4.8E+00 | m | 4.8E+02 | m | 1.5E+02 | n | 1.1E+04 | n >S | – | 7.0E+01 | n | 2.4E+00 | m | 2.4E+02 | m | 7.8E+01 | n | 6.9E+02 | n | – |
| Trichlorobenzene, 1,3,5- | 108-70-3 | 7.8E+01 | n | 7.5E+00 | n | 7.5E+02 | n | 1.3E+02 | n | 1.0E+04 | n >S | – | 4.9E+01 | n | 3.7E+00 | n | 3.7E+02 | n | 6.5E+01 | n | 6.7E+02 | n | – |
| Trichloroethane, 1,1,1- | 71-55-6 | 5.3E+04 | n | 1.6E+00 | m | 1.6E+02 | m | 7.8E+04 | n | 3.3E+05 | n >S | – | 3.2E+04 | n | 8.1E-01 | m | 8.1E+01 | m | 4.0E+04 | n | 2.1E+04 | n >S | – |
| Trichloroethane, 1,1,2- | 79-00-5 | 1.8E+01 | c | 2.0E-02 | m | 2.0E+00 | m | 2.2E+01 | c | 3.2E+02 | c | – | 1.0E+01 | c | 1.0E-02 | m | 1.0E+00 | m | 1.2E+01 | c | 2.1E+01 | c | – |
| Trichloroethylene | 79-01-6 | 1.8E+01 | n | 3.4E-02 | m | 3.4E+00 | m | 3.1E+01 | n | 1.6E+02 | n | – | 1.1E+01 | n | 1.7E-02 | m | 1.7E+00 | m | 1.6E+01 | n | 1.0E+01 | n | – |
| Trichlorofluoromethane | 75-69-4 | 2.5E+04 | n | 1.3E+02 | n | 1.3E+04 | n | – | – | – | – | – | 2.5E+04 | n | 6.4E+01 | n | 6.4E+03 | n | – | – | – | – | – |
| Trichloronate | 327-98-0 | 1.4E+02 | n | 1.2E+02 | n | 1.2E+04 | n >S | – | – | – | – | – | 1.4E+02 | n | 6.2E+01 | n | 6.2E+03 | n >S | – | – | – | – | – |
| Trichlorophenol, 2,3,4- | 15950-66-0 | 6.7E+03 | n | 5.9E+01 | n | 5.9E+03 | n | – | – | – | – | – | 6.7E+03 | n | 3.0E+01 | n | 3.0E+03 | n | – | – | – | – | – |
| Trichlorophenol, 2,3,5- | 933-78-8 | 6.7E+03 | n | 2.8E+01 | n | 2.8E+03 | n | – | – | – | – | – | 6.7E+03 | n | 1.4E+01 | n | 1.4E+03 | n | – | – | – | – | – |
| Trichlorophenol, 2,3,6- | 933-75-5 | 5.3E+02 | n | 2.9E+01 | n | 2.9E+03 | n >S | – | – | – | – | – | 5.3E+02 | n | 1.4E+01 | n | 1.4E+03 | n >S | – | – | – | – | – |
| Trichlorophenol, 2,4,5- | 95-95-4 | 6.7E+03 | n | 3.4E+01 | n | 3.4E+03 | n | – | – | – | – | – | 6.7E+03 | n | 1.7E+01 | n | 1.7E+03 | n | – | – | – | – | – |
| Trichlorophenol, 2,4,6- | 88-06-2 | 6.7E+01 | n | 1.7E-01 | n | 1.7E+01 | n | 2.0E+03 | c | 3.5E+05 | c >S | – | 6.7E+01 | n | 8.7E-02 | n | 8.7E+00 | n | 1.0E+03 | c | 2.3E+04 | c >S | – |
| Trichlorophenol, 3,4,5- | 609-19-8 | 6.7E+03 | n | 3.3E+02 | n | 3.3E+04 | n | – | – | – | – | – | 6.7E+03 | n | 1.6E+02 | n | 1.6E+04 | n | – | – | – | – | – |
| Trichlorophenoxyacetic acid, 2,4,5- | 93-76-5 | 6.7E+02 | n | 9.9E-01 | n | 9.9E+01 | n | – | – | – | – | – | 6.7E+02 | n | 4.9E-01 | n | 4.9E+01 | n | – | – | – | – | – |
| Trichloropropane, 1,1,2- | 598-77-6 | 4.6E+00 | n | 1.5E+00 | n | 1.5E+02 | n | 4.6E+00 | n | 3.2E+01 | n | – | 2.4E+00 | n | 7.3E-01 | n | 7.3E+01 | n | 2.4E+00 | n | 2.1E+00 | n | – |
| Trichloropropane, 1,2,3- | 96-18-4 | 2.0E-01 | c | 5.3E-04 | c | 5.3E-02 | c | 1.4E+01 | n | 5.7E+02 | n | – | 2.0E-01 | c | 2.7E-04 | c | 2.7E-02 | c | 7.2E+00 | n | 3.7E+01 | n | – |
| Triethanolamine | 102-71-6 | 3.0E+03 | n | 9.4E+00 | n | 9.4E+02 | n | 3.9E+03 | n | 1.0E+06 | n | – | 1.7E+03 | n | 4.7E+00 | n | 4.7E+02 | n | 2.0E+03 | n | 9.6E+05 | n | – |
| Triethylamine | 121-44-8 | 1.1E+02 | n | – | – | – | – | 1.1E+02 | n | 1.6E+03 | n | – | 5.5E+01 | n | – | – | – | – | 5.5E+01 | n | 1.0E+02 | n | – |
| Triethylene glycol | 112-27-6 | 1.3E+05 | n | 9.4E+01 | n | 9.4E+03 | n | – | – | – | – | – | 1.3E+05 | n | 4.7E+01 | n | 4.7E+03 | n | – | – | – | – | – |
| Triethylphosphorothioate, O, O, O- | 126-68-1 | 5.5E-01 | n | 4.4E-03 | n | 4.4E-01 | n | – | – | – | – | – | 5.5E-01 | n | 2.2E-03 | n | 2.2E-01 | n | – | – | – | – | – |
| Trifluralin | 1582-09-8 | 2.7E+02 | c | 6.5E+01 | c | 6.5E+03 | c >S | – | – | – | – | – | 2.7E+02 | c | 3.3E+01 | c | 3.3E+03 | c >S | – | – | – | – | – |
| Trimethylamine | 75-50-3 | 1.5E+02 | n | – | – | – | – | 1.5E+02 | n | 4.4E+03 | n | – | 7.6E+01 | n | – | – | – | – | 7.6E+01 | n | 2.8E+02 | n | – |
| Trimethylbenzene, 1,2,3- | 526-73-8 | 1.6E+03 | n | 2.1E+01 | n | 2.1E+03 | n >S | 3.6E+03 | n | 1.5E+05 | n >S | – | 1.1E+03 | n | 1.1E+01 | n | 1.1E+03 | n >S | 1.9E+03 | n | 9.4E+03 | n >S | – |
| Trimethylbenzene, 1,2,4- | 95-63-6 | 1.6E+03 | n | 3.3E+01 | n | 3.3E+03 | n >S | 4.0E+03 | n | 1.9E+05 | n >S | – | 1.2E+03 | n | 1.6E+01 | n | 1.6E+03 | n >S | 2.1E+03 | n | 1.3E+04 | n >S | – |
| Trimethylbenzene, 1,3,5- | 108-67-8 | 1.5E+03 | n | 3.6E+01 | n | 3.6E+03 | n >S | 3.5E+03 | n | 1.6E+05 | n >S | – | 1.1E+03 | n | 1.8E+01 | n | 1.8E+03 | n >S | 1.8E+03 | n | 1.1E+04 | n >S | – |
| Trinitrobenzene, 1,3,5- | 99-35-4 | 2.0E+03 | n | 1.8E+00 | n | 1.8E+02 | n | – | – | – | – | – | 2.0E+03 | n | 9.1E-01 | n | 9.1E+01 | n | – | – | – | – | – |
| Trinitrophenylmethylnitramine (tetryl; nitramine) | 479-45-8 | 1.5E+02 | n | 5.5E-01 | n | 5.5E+01 | n | – | – | – | – | – | 1.5E+02 | n | 2.8E-01 | n | 2.8E+01 | n | – | – | – | – | – |
| Trinitrotoluene, 2,4,6- | 118-96-7 | 3.3E+01 | n | 1.7E-01 | n | 1.7E+01 | n | – | – | – | – | – | 3.3E+01 | n | 8.6E-02 | n | 8.6E+00 | n | – | – | – | – | – |
| Tungsten (as sodium tungstate dihydride) | 7440-33-7 | 7.3E+01 | n | 8.1E+01 | n | 8.1E+03 | n | – | – | – | – | – | 7.3E+01 | n | 4.1E+01 | n | 4.1E+03 | n | – | – | – | – | – |
| Uranium (soluble salts) | 7440-61-1 | 2.2E+02 | n | 1.8E+03 | m >S | 1.8E+05 | m >S | – | – | – | – | – | 2.2E+02 | n | 8.9E+02 | m >S | 8.9E+04 | m >S | – | – | – | – | – |
| Valeric acid (pentanoic acid) | 109-52-4 | 1.3E+02 | n | 2.3E+01 | n >S | 2.3E+03 | n >S | 1.3E+02 | n | 3.8E+04 | n >S | – | 6.8E+01 | n | 1.2E+01 | n >S | 1.2E+03 | n >S | 6.8E+01 | n | 2.5E+03 | n >S | – |
| Vanadium | 7440-62-2 | 7.6E+01 | n | 8.8E+02 | n >S | 8.8E+04 | n >S | – | – | – | – | – | 7.5E+01 | n | 4.4E+02 | n >S | 4.4E+04 | n >S | – | – | – | – | – |
| Vernam | 1929-77-7 | 6.7E+01 | n | 2.7E+00 | n | 2.7E+02 | n | – | – | – | – | – | 6.7E+01 | n | 1.4E+00 | n | 1.4E+02 | n | – | – | – | – | – |
| Vinyl acetate | 108-05-4 | 3.0E+03 | n | 5.3E+01 | n | 5.3E+03 | n | 3.1E+03 | n | 3.1E+04 | n | – | 1.5E+03 | n | 2.7E+01 | n | 2.7E+03 | n | 1.6E+03 | n | 2.0E+03 | n | – |

# Table 1
# Tier 1 Residential Soil PCLs[1]

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | 0.5 acre source area | | | | | | | | | | | 30 acre source area | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | $^{Tot}Soil_{Comb}$[2] (mg/kg) | note[3] | $^{GW}Soil_{Ing}$ (mg/kg) | note[3] | $^{GW}Soil_{Class\ 3}$ (mg/kg) | note[3] | $^{Air}Soil_{Inh\text{-}V}$[4] (mg/kg) | note[3] | $^{Air}GW\text{-}Soil_{Inh\text{-}V}$ (mg/kg) | note[3] | $^{GW}$Soil for Secondary MCL (mg/kg) | $^{Tot}Soil_{Comb}$[2] (mg/kg) | note[3] | $^{GW}Soil_{Ing}$ (mg/kg) | note[3] | $^{GW}Soil_{Class\ 3}$ (mg/kg) | note[3] | $^{Air}Soil_{Inh\text{-}V}$[4] (mg/kg) | note[3] | $^{Air}GW\text{-}Soil_{Inh\text{-}V}$ (mg/kg) | note[3] | $^{GW}$Soil for Secondary MCL (mg/kg) |
| Vinyl chloride | 75-01-4 | 3.7E+00 | c | 2.2E-02 | m | 2.2E+00 | m | 4.3E+01 | c | 4.2E+01 | c | – | 3.4E+00 | c | 1.1E-02 | m | 1.1E+00 | m | 2.2E+01 | c | 2.7E+00 | c | – |
| Vinylcyclohexane | 695-12-5 | 4.1E+04 | n | 1.4E+03 | n >S | 1.4E+05 | n >S | – | – | – | – | – | 4.1E+04 | n | 7.1E+02 | n >S | 7.1E+04 | n >S | – | – | – | – | – |
| Warfarin | 81-81-2 | 2.0E+01 | n | 2.8E-01 | n | 2.8E+01 | n | – | – | – | – | – | 2.0E+01 | n | 1.4E-01 | n | 1.4E+01 | n | – | – | – | – | – |
| Xylene, m- | 108-38-3 | 8.9E+03 | n | 1.1E+02 | m | 1.1E+04 | m >S | 9.4E+03 | n | 1.1E+05 | n >S | – | 4.7E+03 | n | 5.3E+01 | m | 5.3E+03 | m >S | 4.8E+03 | n | 7.2E+03 | n >S | – |
| Xylene, o- | 95-47-6 | 4.8E+04 | n | 7.1E+01 | m | 7.1E+03 | m >S | 6.8E+04 | n | 1.0E+06 | n >S | – | 2.9E+04 | n | 3.5E+01 | m | 3.5E+03 | m >S | 3.5E+04 | n | 3.5E+05 | n >S | – |
| Xylene, p- | 106-42-3 | 8.9E+03 | n | 1.5E+02 | m | 1.5E+04 | m >S | 9.4E+03 | n | 1.4E+05 | n >S | – | 4.7E+03 | n | 7.5E+01 | m | 7.5E+03 | m >S | 4.8E+03 | n | 9.1E+03 | n >S | – |
| Xylenes | 1330-20-7 | 6.0E+03 | n | 1.2E+02 | m | 1.2E+04 | m >S | 9.4E+03 | n | 1.3E+05 | n >S | – | 3.7E+03 | n | 6.1E+01 | m | 6.1E+03 | m >S | 4.8E+03 | n | 8.1E+03 | n >S | – |
| Zinc | 7440-66-6 | 9.9E+03 | n | 2.4E+03 | n >S | 2.4E+05 | n >S | – | – | – | – | 1600 | 9.9E+03 | n | 1.2E+03 | n >S | 1.2E+05 | n >S | – | – | – | – | 800 |
| 6 C aliphatics (TPH) (>53% n-hexane content) | NA | 3.3E+03 | n | 1.7E+02 | n | 1.7E+04 | n >S | 1.0E+04 | n | 1.2E+04 | n >S | – | 2.5E+03 | n | 8.6E+01 | n | 8.6E+03 | n >S | 5.3E+03 | n | 8.1E+02 | n | – |
| 6 C aliphatics (TPH) (<53% n-hexane content) | NA | 4.8E+03 | n | 1.7E+02 | n | 1.7E+04 | n >S | 2.8E+05 | n | 3.4E+05 | n >S | – | 4.8E+03 | n | 8.6E+01 | n | 8.6E+03 | n >S | 1.5E+05 | n | 2.2E+04 | n >S | – |
| >6-8 C aliphatics (TPH) (>53% n-hexane content) | NA | 3.3E+03 | n | 4.2E+02 | n | 4.2E+04 | n >S | 1.0E+04 | n | 2.0E+04 | n >S | – | 2.5E+03 | n | 2.1E+02 | n | 2.1E+04 | n >S | 5.3E+03 | n | 1.3E+03 | n >S | – |
| >6-8 C aliphatics (TPH) (<53% n-hexane content) | NA | 4.8E+03 | n | 4.2E+02 | n | 4.2E+04 | n >S | 2.8E+05 | n | 5.6E+05 | n >S | – | 4.8E+03 | n | 2.1E+02 | n | 2.1E+04 | n >S | 1.5E+05 | n | 3.6E+04 | n >S | – |
| >8-10 C aliphatics (TPH) | NA | 4.0E+03 | n | 3.6E+03 | n >S | 3.6E+05 | n >S | 7.7E+03 | n | 4.8E+04 | n >S | – | 2.7E+03 | n | 1.8E+03 | n >S | 1.8E+05 | n >S | 3.9E+03 | n | 3.1E+03 | n >S | – |
| >10-12 C aliphatics (TPH) | NA | 3.6E+03 | n | 2.5E+04 | n >S | 1.0E+06 | n >S | 7.7E+03 | n | 2.3E+05 | n >S | – | 2.5E+03 | n | 1.3E+04 | n >S | 1.0E+06 | n >S | 3.9E+03 | n | 1.5E+04 | n >S | – |
| >12-16 C aliphatics (TPH) | NA | 4.3E+03 | n | 4.9E+05 | n >S | 1.0E+06 | n >S | 1.2E+04 | n | 1.0E+06 | n >S | – | 3.2E+03 | n | 2.5E+05 | n >S | 1.0E+06 | n >S | 6.2E+03 | n | 6.6E+04 | n >S | – |
| >16-21 C aliphatics (TPH) | NA | 1.3E+05 | n | 1.0E+06 | n >S | 1.0E+06 | n >S | – | – | – | – | – | 1.3E+05 | n | 1.0E+06 | n >S | 1.0E+06 | n >S | – | – | – | – | – |
| >16-21 C aliphatics (TPH) (for transformer mineral oil releases only) | NA | 1.1E+05 | n | 1.0E+06 | n >S | 1.0E+06 | n >S | – | – | – | – | – | 1.1E+05 | n | 1.0E+06 | n >S | 1.0E+06 | n >S | – | – | – | – | – |
| >21-35 C aliphatics (TPH) | NA | 1.3E+05 | n | 1.0E+06 | n >S | 1.0E+06 | n >S | – | – | – | – | – | 1.3E+05 | n | 1.0E+06 | n >S | 1.0E+06 | n >S | – | – | – | – | – |
| >21-35 C aliphatics (TPH) (for transformer mineral oil releases only) | NA | 1.1E+05 | n | 1.0E+06 | n >S | 1.0E+06 | n >S | – | – | – | – | – | 1.1E+05 | n | 1.0E+06 | n >S | 1.0E+06 | n >S | – | – | – | – | – |
| >7-8 C aromatics (TPH) | NA | 6.4E+03 | n | 2.0E+01 | n | 2.0E+03 | n | 2.9E+04 | n | 2.4E+05 | n >S | – | 5.3E+03 | n | 1.0E+01 | n | 1.0E+03 | n | 1.5E+04 | n | 1.6E+04 | n >S | – |
| >8-10 C aromatics (TPH) | NA | 1.6E+03 | n | 6.5E+01 | n | 6.5E+03 | n >S | 3.1E+03 | n | 1.2E+05 | n >S | – | 1.1E+03 | n | 3.3E+01 | n | 3.3E+03 | n >S | 1.6E+03 | n | 7.6E+03 | n >S | – |
| >10-12 C aromatics (TPH) | NA | 1.9E+03 | n | 1.0E+02 | n | 1.0E+04 | n >S | 6.6E+03 | n | 4.4E+05 | n >S | – | 1.5E+03 | n | 5.0E+01 | n | 5.0E+03 | n >S | 3.4E+03 | n | 2.8E+04 | n >S | – |
| >12-16 C aromatics (TPH) | NA | 2.3E+03 | n | 2.0E+02 | n | 2.0E+04 | n >S | 1.5E+04 | n | 1.0E+06 | n >S | – | 2.0E+03 | n | 9.9E+01 | n | 9.9E+03 | n >S | 7.8E+03 | n | 9.8E+04 | n >S | – |
| >16-21 C aromatics (TPH) | NA | 2.0E+03 | n | 4.7E+02 | n >S | 4.7E+04 | n >S | – | – | – | – | – | 2.0E+03 | n | 2.3E+02 | n >S | 2.3E+04 | n >S | – | – | – | – | – |
| >21-35 C aromatics (TPH) | NA | 2.0E+03 | n | 3.7E+03 | n >S | 3.7E+05 | n >S | – | – | – | – | – | 2.0E+03 | n | 1.8E+03 | n >S | 1.8E+05 | n >S | – | – | – | – | – |
| Transformer Mineral Oil | NA | 2.6E+04 | n | 2.5E+05 | n | 1.0E+06 | n | 8.4E+04 | n | 1.0E+06 | n | – | 2.0E+04 | n | 1.3E+05 | n | 1.0E+06 | n | 4.3E+04 | n | 6.1E+05 | n | – |

**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, the 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 inhalation; ingestion; dermal; vegetable consumption pathways

**3** c = carcinogenic; n = noncarcinogenic; m = primary MCL-based; e = EPA Action Level-based; > S = solubility limit exceeded during calculation

**4** For subsurface soils only

**5** Site-specific PCLs for mercury may vary based on the pH-dependent Kd value (see Figure:30 TAC §350.73(f)(1)(C)).

**6** Persons must use the value provided in the "$^{GW}$Soil for Secondary MCL" column of this table as the $^{GW}Soil_{PCL}$ for MTBE if the conditions described in §350.74(f)(3) exist.

**7** Please see the note on nitrate/nitrite in the "List of Updates" spreadsheet for March 31, 2017.

**8** This chemical is one of four chemicals that make up total trihalomethanes (TTHMs). USEPA has established an MCL for TTHMs of 0.08 mg/L. Each individual chemical that contributes to TTHMs must meet the 0.08 mg/L based $^{GW}Soil_{Ing}$ PCL, and the person must ensure that the total soil concentrations for all four will not impact groundwater above the $^{GW}GW_{Ing}$ based MCL.

**9** Nitrate, nitrite, and ammonia are inorganic anions that are mobile in most environmental situations, quickly partitioning from soil to groundwater. Due to these partitioning characteristics it is difficult to calculate a reliable soil-water partition coefficient (Kd) and Henry's law constant (H') for these compounds. The Kd and H' are parameters that are required to calculate the $^{GW}Soil_{Ing}$ PCL in accordance with 30 TAC 350.75(b)(1) using the Tier 1 $^{GW}Soil_{Ing}$ PCL equation.

***** These compounds are not necessarily of concern from a human health standpoint, therefore calculation of human health-based values is not required. However, aesthetics and ecological criteria would still apply. See table entitled "Compounds for which Calculation of a Human Health PCL is Not Required" available on the TCEQ website at http://www.tceq.state.tx.us/remediation/trrp/trrp.html.

NA=Not applicable

All values capped at 1.0E+06

This table shows the Residiential Soil Protective Concentration Levels for both 0.5 acre and 30 acre source areas

end of worksheet

## Table 2
## Tier 1 Commercial/Industrial Soil PCLs[1]

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | 0.5 acre source area | | | | | | | | | | | 30 acre source area | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | $^{Tot}Soil_{Comb}$[2] (mg/kg) | note[3] | $^{GW}Soil_{Ing}$ (mg/kg) | note[3] | $^{GW}Soil_{Class\ 3}$ (mg/kg) | note[3] | $^{Air}Soil_{Inh\text{-}V}$[4] (mg/kg) | note[3] | $^{Air}GW\text{-}Soil_{Inh\text{-}V}$ (mg/kg) | note[3] | $^{GW}$Soil for Secondary MCL (mg/kg) | $^{Tot}Soil_{Comb}$[2] (mg/kg) | note[3] | $^{GW}Soil_{Ing}$ (mg/kg) | note[3] | $^{GW}Soil_{Class\ 3}$ (mg/kg) | note[3] | $^{Air}Soil_{Inh\text{-}V}$[4] (mg/kg) | note[3] | $^{Air}GW\text{-}Soil_{Inh\text{-}V}$ (mg/kg) | note[3] | $^{GW}$Soil for Secondary MCL (mg/kg) |
| Acenaphthene | 83-32-9 | 3.7E+04 | n | 7.1E+02 | n >S | 7.1E+04 | n >S | – | – | – | – | – | 3.7E+04 | n | 3.5E+02 | n >S | 3.5E+04 | n >S | – | – | – | – | _ |
| Acenaphthylene | 208-96-8 | 3.7E+04 | n | 1.2E+03 | n >S | 1.2E+05 | n >S | – | – | – | – | – | 3.7E+04 | n | 6.1E+02 | n >S | 6.1E+04 | n >S | – | – | – | – | _ |
| Acetaldehyde | 75-07-0 | 2.0E+02 | n | 1.5E+01 | n | 1.5E+03 | n | 2.0E+02 | n | 6.7E+03 | n | – | 1.0E+02 | n | 7.4E+00 | n | 7.4E+02 | n | 1.0E+02 | n | 4.3E+02 | n | _ |
| Acetate, 2-ethoxyethanol | 111-15-9 | 7.8E+03 | n | 1.6E+01 | n | 1.6E+03 | n | 8.4E+03 | n | 1.0E+06 | n >S | – | 4.2E+03 | n | 8.0E+00 | n | 8.0E+02 | n | 4.3E+03 | n | 8.9E+04 | n | _ |
| Acetate, isoamyl | 123-92-2 | 7.4E+04 | n | 2.6E+01 | n | 2.6E+03 | n | – | – | – | – | – | 7.4E+04 | n | 1.3E+01 | n | 1.3E+03 | n | – | – | – | – | _ |
| Acetate, isobutyl | 110-19-0 | 4.9E+04 | n | 1.1E+01 | n | 1.1E+03 | n | – | – | – | – | – | 4.9E+04 | n | 5.5E+00 | n | 5.5E+02 | n | – | – | – | – | _ |
| Acetate, sec-butyl | 105-46-4 | 4.9E+04 | n | 1.2E+01 | n | 1.2E+03 | n | – | – | – | – | – | 4.9E+04 | n | 5.9E+00 | n | 5.9E+02 | n | – | – | – | – | _ |
| Acetic acid* | 64-19-7 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | _ |
| Acetone (2-propanone) | 67-64-1 | 4.4E+05 | n | 1.3E+02 | n | 1.3E+04 | n | 8.4E+05 | n | 1.0E+06 | n >S | – | 2.9E+05 | n | 6.4E+01 | n | 6.4E+03 | n | 4.3E+05 | n | 9.7E+05 | n >S | _ |
| Acetone cyanohydrin | 75-86-5 | 1.5E+03 | n | 4.3E-01 | n | 4.3E+01 | n | 6.1E+03 | n | 9.3E+05 | n | – | 1.2E+03 | n | 2.1E-01 | n | 2.1E+01 | n | 3.1E+03 | n | 6.0E+04 | n | _ |
| Acetonitrile | 75-05-8 | 1.7E+03 | n | 4.5E+00 | n | 4.5E+02 | n | 1.8E+03 | n | 8.7E+04 | n | – | 9.1E+02 | n | 2.3E+00 | n | 2.3E+02 | n | 9.4E+02 | n | 5.6E+03 | n | _ |
| Acetophenone | 98-86-2 | 6.8E+04 | n | 2.5E+01 | n | 2.5E+03 | n | – | – | – | – | – | 6.8E+04 | n | 1.2E+01 | n | 1.2E+03 | n | – | – | – | – | _ |
| Acetylaminofluorene, 2- | 53-96-3 | 4.3E+00 | c | 1.0E-02 | c | 1.0E+00 | c | 3.1E+01 | c | 2.0E+04 | c >S | – | 3.8E+00 | c | 5.1E-03 | c | 5.1E-01 | c | 1.6E+01 | c | 1.7E+03 | c >S | _ |
| Acifluorfen, sodium | 62476-59-9 | 8.9E+03 | n | 6.1E+00 | n | 6.1E+02 | n | – | – | – | – | – | 8.9E+03 | n | 3.1E+00 | n | 3.1E+02 | n | – | – | – | – | _ |
| Acridine | 260-94-6 | 2.0E+03 | n | 2.3E+01 | n | 2.3E+03 | n | – | – | – | – | – | 2.0E+03 | n | 1.1E+01 | n | 1.1E+03 | n | – | – | – | – | _ |
| Acrolein | 107-02-8 | 1.5E+02 | n | 7.1E-02 | n | 7.1E+00 | n | 2.1E+02 | n | 2.6E+04 | n | – | 9.0E+01 | n | 3.5E-02 | n | 3.5E+00 | n | 1.1E+02 | n | 1.7E+03 | n | _ |
| Acrylamide | 79-06-1 | 2.1E+01 | c | 7.9E-03 | c | 7.9E-01 | c | 4.7E+01 | c | 1.2E+04 | c | – | 1.5E+01 | c | 3.9E-03 | c | 3.9E-01 | c | 2.4E+01 | c | 8.1E+02 | c | _ |
| Acrylic acid | 79-10-7 | 1.7E+02 | n | 7.2E+01 | n | 7.2E+03 | n | 1.7E+02 | n | 4.1E+04 | n | – | 8.7E+01 | n | 3.6E+01 | n | 3.6E+03 | n | 8.7E+01 | n | 2.7E+03 | n | _ |
| Acrylonitrile | 107-13-1 | 7.6E+00 | c | 7.5E-03 | c | 7.5E-01 | c | 8.8E+00 | c | 1.9E+02 | c | – | 4.2E+00 | c | 3.7E-03 | c | 3.7E-01 | c | 4.6E+00 | c | 1.2E+01 | c | _ |
| Adipic acid (hexanedioic acid) | 124-04-9 | 1.0E+06 | n | 2.8E+02 | n | 2.8E+04 | n | – | – | – | – | – | 1.0E+06 | n | 1.4E+02 | n | 1.4E+04 | n | – | – | – | – | _ |
| Alachlor | 15972-60-8 | 2.4E+02 | c | 1.9E-02 | m | 1.9E+00 | m | – | – | – | – | – | 2.4E+02 | c | 9.5E-03 | m | 9.5E-01 | m | – | – | – | – | _ |
| Aldicarb | 116-06-3 | 6.8E+02 | n | 1.8E-02 | m | 1.8E+00 | m | – | – | – | – | – | 6.8E+02 | n | 8.9E-03 | m | 8.9E-01 | m | – | – | – | – | _ |
| Aldicarb sulfone | 1646-88-4 | 6.8E+02 | n | 1.4E-02 | m | 1.4E+00 | m | – | – | – | – | – | 6.8E+02 | n | 6.9E-03 | m | 6.9E-01 | m | – | – | – | – | _ |
| Aldrin | 309-00-2 | 1.0E+00 | c | 2.3E-01 | c | 2.3E+01 | c | 1.4E+01 | c | 1.4E+04 | c >S | – | 9.7E-01 | c | 1.2E-01 | c | 1.2E+01 | c | 7.2E+00 | c | 9.2E+02 | c >S | _ |
| Allyl alcohol | 107-18-6 | 8.0E+00 | n | 7.5E-01 | n | 7.5E+01 | n | 8.0E+00 | n | 8.5E+02 | n | – | 4.1E+00 | n | 3.7E-01 | n | 3.7E+01 | n | 4.1E+00 | n | 5.5E+01 | n | _ |
| Allyl chloride | 107-05-1 | 2.1E+01 | n | 3.0E+00 | n | 3.0E+02 | n | 2.1E+01 | n | 5.3E+01 | n | – | 1.1E+01 | n | 1.5E+00 | n | 1.5E+02 | n | 1.1E+01 | n | 3.4E+00 | n | _ |
| Aluminum | 7429-90-5 | 6.2E+05 | n | 5.2E+05 | n >S | 1.0E+06 | n >S | – | – | – | – | 1400 | 5.7E+05 | n | 2.6E+05 | n >S | 1.0E+06 | n >S | – | – | – | – | 710 |
| Ametryn | 834-12-8 | 6.1E+03 | n | 2.1E+01 | n | 2.1E+03 | n | – | – | – | – | – | 6.1E+03 | n | 1.1E+01 | n | 1.1E+03 | n | – | – | – | – | _ |
| Amino-2,6-dinitrotoluene, 4- | 19406-51-0 | 1.1E+02 | n | 2.0E-01 | n | 2.0E+01 | n | – | – | – | – | – | 1.1E+02 | n | 1.0E-01 | n | 1.0E+01 | n | – | – | – | – | _ |
| Amino-4,6-dinitrotoluene, 2- | 35572-78-2 | 1.1E+02 | n | 3.0E-01 | n | 3.0E+01 | n | – | – | – | – | – | 1.1E+02 | n | 1.5E-01 | n | 1.5E+01 | n | – | – | – | – | _ |
| Aminobiphenyl, 4- (1,1-biphenyl-4-amine) | 92-67-1 | 3.1E+00 | c | 2.4E-02 | c | 2.4E+00 | c | – | – | – | – | – | 3.1E+00 | c | 1.2E-02 | c | 1.2E+00 | c | – | – | – | – | _ |
| Aminopyridine, 4- | 504-24-5 | 1.4E+01 | n | 2.8E-03 | n | 2.8E-01 | n | – | – | – | – | – | 1.4E+01 | n | 1.4E-03 | n | 1.4E-01 | n | – | – | – | – | _ |
| Ammonia | 7664-41-7 | 6.9E+03 | n | – | – | – | – | 6.9E+03 | n | 2.5E+04 | n | 3.1 | 3.5E+03 | n | – | – | – | – | 3.5E+03 | n | 1.6E+03 | n | 1.6 |
| Ammonium polyphosphate* | 6833-79-9 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | _ |
| Ammonium salts* | AMMONIUM | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | _ |
| Aniline | 62-53-3 | 1.8E+02 | n | 8.2E-01 | c | 8.2E+01 | c | 1.8E+02 | n | 3.6E+04 | n | – | 9.3E+01 | n | 4.1E-01 | c | 4.1E+01 | c | 9.4E+01 | n | 2.3E+03 | n | _ |
| Anthracene | 120-12-7 | 1.9E+05 | n | 2.1E+04 | n >S | 1.0E+06 | n >S | – | – | – | – | – | 1.9E+05 | n | 1.0E+04 | n >S | 1.0E+06 | n >S | – | – | – | – | _ |
| Anthraquinone, 9,10- | 84-65-1 | 4.9E+02 | c | 2.5E+00 | c | 2.5E+02 | c >S | – | – | – | – | – | 4.9E+02 | c | 1.3E+00 | c | 1.3E+02 | c >S | – | – | – | – | _ |
| Antimony | 7440-36-0 | 3.1E+02 | n | 5.4E+00 | m >S | 5.4E+02 | m >S | – | – | – | – | – | 3.1E+02 | n | 2.7E+00 | m >S | 2.7E+02 | m >S | – | – | – | – | _ |
| Aramite | 140-57-8 | 7.6E+02 | c | – | – | – | – | – | – | – | – | – | 7.6E+02 | c | – | – | – | – | – | – | – | – | _ |
| Arsenic | 7440-38-2 | 2.0E+02 | c | 5.0E+00 | m >S | 5.0E+02 | m >S | – | – | – | – | – | 2.0E+02 | c | 2.5E+00 | m >S | 2.5E+02 | m >S | – | – | – | – | _ |
| Arsine | 7784-42-1 | 1.1E+00 | n | – | – | – | – | 1.1E+00 | n | – | – | – | 5.5E-01 | n | – | – | – | – | 5.5E-01 | n | – | – | _ |
| Atrazine | 1912-24-9 | 8.6E+01 | c | 2.5E-02 | m | 2.5E+00 | m | – | – | – | – | – | 8.6E+01 | c | 1.2E-02 | m | 1.2E+00 | m | – | – | – | – | _ |
| Azinphos-methyl (guthion) | 86-50-0 | 1.0E+03 | n | 1.3E+00 | n >S | 1.3E+02 | n >S | – | – | – | – | – | 1.0E+03 | n | 6.6E-01 | n >S | 6.6E+01 | n >S | – | – | – | – | _ |
| Azobenzene | 103-33-3 | 1.6E+02 | c | 4.0E+01 | c | 4.0E+03 | c >S | 2.3E+03 | c | 1.0E+06 | c >S | – | 1.5E+02 | c | 2.0E+01 | c | 2.0E+03 | c >S | 1.2E+03 | c | 1.6E+05 | c >S | _ |
| Barium | 7440-39-3 | 1.2E+05 | n | 4.4E+02 | m >S | 4.4E+04 | m >S | – | – | – | – | – | 1.2E+05 | n | 2.2E+02 | m >S | 2.2E+04 | m >S | – | – | – | – | _ |
| Bayleton | 43121-43-3 | 2.0E+04 | n | 2.2E+01 | n | 2.2E+03 | n >S | – | – | – | – | – | 2.0E+04 | n | 1.1E+01 | n | 1.1E+03 | n >S | – | – | – | – | _ |
| Benefin (benfluralin) | 1861-40-1 | 2.0E+05 | n | 1.5E+05 | n >S | 1.0E+06 | n >S | – | – | – | – | – | 2.0E+05 | n | 7.3E+04 | n >S | 1.0E+06 | n >S | – | – | – | – | _ |

## Table 2
## Tier 1 Commercial/Industrial Soil PCLs[1]

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | 0.5 acre source area | | | | | | | | | | | 30 acre source area | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | $^{Tot}Soil_{Comb}$[2] (mg/kg) | note[3] | $^{GW}Soil_{Ing}$ (mg/kg) | note[3] | $^{GW}Soil_{Class\ 3}$ (mg/kg) | note[3] | $^{Air}Soil_{Inh\text{-}V}$[4] (mg/kg) | note[3] | $^{Air}GW\text{-}Soil_{Inh\text{-}V}$ (mg/kg) | note[3] | $^{GW}$Soil for Secondary MCL (mg/kg) | $^{Tot}Soil_{Comb}$[2] (mg/kg) | note[3] | $^{GW}Soil_{Ing}$ (mg/kg) | note[3] | $^{GW}Soil_{Class\ 3}$ (mg/kg) | note[3] | $^{Air}Soil_{Inh\text{-}V}$[4] (mg/kg) | note[3] | $^{Air}GW\text{-}Soil_{Inh\text{-}V}$ (mg/kg) | note[3] | $^{GW}$Soil for Secondary MCL (mg/kg) |
| Benomyl | 17804-35-2 | 3.4E+04 | n | 9.1E+00 | n >S | 9.1E+02 | n >S | – | – | – | – | – | 3.4E+04 | n | 4.6E+00 | n >S | 4.6E+02 | n >S | – | – | – | – | _ |
| Benz-a-anthracene | 56-55-3 | 1.7E+02 | c | 2.9E+02 | c >S | 2.9E+04 | c >S | 9.2E+03 | c | 1.0E+06 | c >S | – | 1.7E+02 | c | 1.5E+02 | c >S | 1.5E+04 | c >S | 4.7E+03 | c | 1.0E+06 | c >S | _ |
| Benzaldehyde | 100-52-7 | 1.0E+05 | n | 3.1E+01 | n | 3.1E+03 | n | – | – | – | – | – | 1.0E+05 | n | 1.6E+01 | n | 1.6E+03 | n | – | – | – | – | _ |
| Benzene | 71-43-2 | 2.4E+02 | c | 2.6E-02 | m | 2.6E+00 | m | 2.7E+02 | c | 1.6E+03 | c | – | 1.3E+02 | c | 1.3E-02 | m | 1.3E+00 | m | 1.4E+02 | c | 1.0E+02 | c | _ |
| Benzenedicarbonitrile, 1,3- | 626-17-5 | 4.1E+03 | n | 9.7E-01 | n | 9.7E+01 | n | – | – | – | – | – | 4.1E+03 | n | 4.9E-01 | n | 4.9E+01 | n | – | – | – | – | _ |
| Benzenedicarboxylic acid, 1,2-disodecyl ester | 26761-40-0 | 2.7E+04 | n | 1.0E+06 | n >S | 1.0E+06 | n >S | 1.0E+06 | n | 1.0E+06 | n >S | – | 2.7E+04 | n | 1.0E+06 | n >S | 1.0E+06 | n >S | 1.0E+06 | n | 1.0E+06 | n >S | _ |
| Benzenethiol | 108-98-5 | 1.0E+03 | n | 2.0E-01 | n | 2.0E+01 | n | – | – | – | – | – | 1.0E+03 | n | 1.0E-01 | n | 1.0E+01 | n | – | – | – | – | _ |
| Benzidine | 92-87-5 | 4.7E-02 | c | 2.4E-05 | c | 2.4E-03 | c | 1.1E-01 | c | 2.3E+01 | c | – | 3.3E-02 | c | 1.2E-05 | c | 1.2E-03 | c | 5.4E-02 | c | 1.9E+00 | c | _ |
| Benzo-a-pyrene | 50-32-8 | 1.7E+01 | c | 7.6E+00 | m | 7.6E+02 | m >S | 8.9E+01 | n | 1.0E+06 | n >S | – | 1.7E+01 | c | 3.8E+00 | m | 3.8E+02 | m >S | 4.6E+01 | n | 1.0E+05 | n >S | _ |
| Benzo-b-fluoranthene | 205-99-2 | 1.7E+02 | c | 9.8E+02 | c >S | 9.8E+04 | c >S | 1.5E+04 | c | 1.0E+06 | c >S | – | 1.7E+02 | c | 4.9E+02 | c >S | 4.9E+04 | c >S | 7.8E+03 | c | 1.0E+06 | c >S | _ |
| Benzo-e-pyrene | 192-97-2 | 1.9E+04 | n | 3.4E+05 | n >S | 1.0E+06 | n >S | – | – | – | – | – | 1.9E+04 | n | 1.7E+05 | n >S | 1.0E+06 | n >S | – | – | – | – | _ |
| Benzo-g,h,i-perylene | 191-24-2 | 1.9E+04 | n | 1.4E+05 | n >S | 1.0E+06 | n >S | – | – | – | – | – | 1.9E+04 | n | 6.9E+04 | n >S | 1.0E+06 | n >S | – | – | – | – | _ |
| Benzoic acid | 65-85-0 | 1.0E+06 | n | 5.7E+02 | n | 5.7E+04 | n >S | – | – | – | – | – | 1.0E+06 | n | 2.8E+02 | n | 2.8E+04 | n >S | – | – | – | – | _ |
| Benzo-j-fluoranthene | 205-82-3 | 1.7E+02 | c | 4.3E+02 | c >S | 4.3E+04 | c >S | 7.9E+03 | c | 1.0E+06 | c >S | – | 1.7E+02 | c | 2.1E+02 | c >S | 2.1E+04 | c >S | 4.1E+03 | c | 1.0E+06 | c >S | _ |
| Benzo-k-fluoranthene | 207-08-9 | 1.7E+03 | c | 1.0E+04 | c >S | 1.0E+06 | c >S | 3.8E+05 | c | 1.0E+06 | c >S | – | 1.7E+03 | c | 5.0E+03 | c >S | 5.0E+05 | c >S | 1.9E+05 | c | 1.0E+06 | c >S | _ |
| Benzophenone | 119-61-9 | 4.6E+03 | n | 5.1E+01 | n | 5.1E+03 | n >S | – | – | – | – | – | 4.6E+03 | n | 2.5E+01 | n | 2.5E+03 | n >S | – | – | – | – | _ |
| Benzotrichloride | 98-07-7 | 1.5E+00 | c | 9.5E-03 | c | 9.5E-01 | c | – | – | – | – | – | 1.5E+00 | c | 4.7E-03 | c | 4.7E-01 | c | – | – | – | – | _ |
| Benzoyl peroxide | 94-36-0 | 3.4E+04 | n | 1.6E+02 | n | 1.6E+04 | n >S | – | – | – | – | – | 3.4E+04 | n | 8.1E+01 | n | 8.1E+03 | n >S | – | – | – | – | _ |
| Benzyl alcohol | 100-51-6 | 6.8E+04 | n | 1.7E+01 | n | 1.7E+03 | n | – | – | – | – | – | 6.8E+04 | n | 8.7E+00 | n | 8.7E+02 | n | – | – | – | – | _ |
| Benzyl chloride | 100-44-7 | 4.2E+01 | n | 1.1E-01 | c | 1.1E+01 | c | 4.3E+01 | n | 1.3E+03 | n | – | 2.2E+01 | n | 5.6E-02 | c | 5.6E+00 | c | 2.2E+01 | n | 8.4E+01 | n | _ |
| Benzyl dichloride | 98-87-3 | 7.3E+01 | n | 1.4E-01 | c | 1.4E+01 | c | 7.7E+01 | n | 3.3E+03 | n >S | – | 3.9E+01 | n | 7.1E-02 | c | 7.1E+00 | c | 4.0E+01 | n | 2.1E+02 | n | _ |
| Beryllium | 7440-41-7 | 2.5E+02 | n | 1.8E+00 | m >S | 1.8E+02 | m >S | – | – | – | – | – | 2.5E+02 | n | 9.2E-01 | m >S | 9.2E+01 | m >S | – | – | – | – | _ |
| Biphenyl, 1,1- | 92-52-4 | 8.5E+04 | n | 7.6E+03 | n >S | 7.6E+05 | n >S | – | – | – | – | – | 8.5E+04 | n | 3.8E+03 | n >S | 3.8E+05 | n >S | – | – | – | – | _ |
| Biphenyl, 1,1'-, 2-phenoxy- | 6738-04-1 | 3.4E+04 | n | 2.2E+05 | n >S | 1.0E+06 | n >S | – | – | – | – | – | 3.4E+04 | n | 1.1E+05 | n >S | 1.0E+06 | n >S | – | – | – | – | _ |
| Biquinoline, 2,2'- | 119-91-5 | 2.0E+03 | n | 8.0E+01 | n | 8.0E+03 | n >S | – | – | – | – | – | 2.0E+03 | n | 4.0E+01 | n | 4.0E+03 | n >S | – | – | – | – | _ |
| Bis (2-chloroethoxy) methane | 111-91-1 | 9.1E+00 | c | 2.6E-02 | c | 2.6E+00 | c | 1.9E+01 | c | 1.9E+03 | c | – | 6.2E+00 | c | 1.3E-02 | c | 1.3E+00 | c | 9.8E+00 | c | 1.2E+02 | c | _ |
| Bis (2-chloroethyl) ether | 111-44-4 | 4.9E+00 | c | 4.7E-03 | c | 4.7E-01 | c | 6.0E+00 | c | 4.0E+02 | c | – | 2.8E+00 | c | 2.4E-03 | c | 2.4E-01 | c | 3.1E+00 | c | 2.6E+01 | c | _ |
| Bis (2-chloro-1-methyl) ether | 108-60-1 | 1.5E+02 | c | 4.3E-01 | c | 4.3E+01 | c | 3.5E+02 | c | 2.1E+04 | c | – | 1.1E+02 | c | 2.1E-01 | c | 2.1E+01 | c | 1.8E+02 | c | 1.4E+03 | c | _ |
| Bis (2-chloromethyl) ether | 542-88-1 | 9.0E-03 | c | 1.8E-05 | c | 1.8E-03 | c | 9.7E-03 | c | 2.8E-01 | c | – | 4.8E-03 | c | 9.2E-06 | c | 9.2E-04 | c | 5.0E-03 | c | 1.8E-02 | c | _ |
| Bis (2-ethyl-hexyl) phthalate | 117-81-7 | 5.6E+02 | c | 1.6E+02 | m | 1.6E+04 | m >S | – | – | – | – | – | 5.6E+02 | c | 8.2E+01 | m | 8.2E+03 | m >S | – | – | – | – | _ |
| Bismuth | 7440-69-9 | 4.1E+05 | n | – | – | – | – | – | – | – | – | – | 4.1E+05 | n | – | – | – | – | – | – | – | – | _ |
| Bisphenol A | 80-05-7 | 3.4E+04 | n | 8.7E+01 | n | 8.7E+03 | n | – | – | – | – | – | 3.4E+04 | n | 4.4E+01 | n | 4.4E+03 | n | – | – | – | – | _ |
| Boron | 7440-42-8 | 1.9E+05 | n | – | – | – | – | – | – | – | – | – | 1.9E+05 | n | – | – | – | – | – | – | – | – | _ |
| Bromacil | 314-40-9 | 6.8E+04 | n | 5.1E+01 | n | 5.1E+03 | n | – | – | – | – | – | 6.8E+04 | n | 2.6E+01 | n | 2.6E+03 | n | – | – | – | – | _ |
| Bromo-2-chloroethane, 1- | 107-04-0 | 4.1E+04 | n | 1.0E+01 | n | 1.0E+03 | n | – | – | – | – | – | 4.1E+04 | n | 5.2E+00 | n | 5.2E+02 | n | – | – | – | – | _ |
| Bromobenzene | 108-86-1 | 1.2E+03 | n | 6.9E+00 | n | 6.9E+02 | n | 1.4E+03 | n | 3.7E+04 | n >S | – | 6.4E+02 | n | 3.4E+00 | n | 3.4E+02 | n | 7.0E+02 | n | 2.4E+03 | n >S | _ |
| Bromodichloromethane[8] | 75-27-4 | 4.6E+02 | c | 3.6E-01 | m | 3.6E+01 | m | – | – | – | – | – | 4.6E+02 | c | 1.8E-01 | m | 1.8E+01 | m | – | – | – | – | _ |
| Bromoform[8] | 75-25-2 | 1.0E+03 | c | 4.4E-01 | m | 4.4E+01 | m | 1.4E+03 | c | 4.7E+04 | c >S | – | 6.0E+02 | c | 2.2E-01 | m | 2.2E+01 | m | 7.2E+02 | c | 3.1E+03 | c | _ |
| Bromomethane | 74-83-9 | 1.0E+02 | n | 3.9E-01 | n | 3.9E+01 | n | 1.1E+02 | n | 2.5E+02 | n | – | 5.3E+01 | n | 2.0E-01 | n | 2.0E+01 | n | 5.5E+01 | n | 1.6E+01 | n | _ |
| Bromophenyl phenylether, 4- | 101-55-3 | 1.2E+00 | c | 7.9E-01 | c | 7.9E+01 | c | 1.6E+01 | c | 1.5E+04 | c >S | – | 1.1E+00 | c | 4.0E-01 | c | 4.0E+01 | c | 8.4E+00 | c | 1.0E+03 | c | _ |
| Butadiene, 1,3- | 106-99-0 | 7.1E+02 | n | – | – | – | – | 7.1E+02 | n | 6.9E+02 | n | – | 3.6E+02 | n | – | – | – | – | 3.6E+02 | n | 4.5E+01 | n | _ |
| Butadiene, 2-methyl-1,3- (isoprene) | 78-79-5 | 5.3E+04 | n | 3.3E+01 | n | 3.3E+03 | n | 3.9E+05 | n | 8.7E+05 | n >S | – | 4.7E+04 | n | 1.7E+01 | n | 1.7E+03 | n | 2.0E+05 | n | 5.6E+04 | n >S | _ |
| Butanal (butyraldehyde) | 123-72-8 | 2.1E+03 | n | 9.4E+00 | n | 9.4E+02 | n | 2.1E+03 | n | 6.0E+04 | n | – | 1.1E+03 | n | 4.7E+00 | n | 4.7E+02 | n | 1.1E+03 | n | 3.9E+03 | n | _ |
| Butane, 2,3-dimethyl- | 79-29-8 | 5.3E+04 | n | 8.5E+02 | n | 8.5E+04 | n >S | 3.9E+05 | n | 6.4E+05 | n >S | – | 4.7E+04 | n | 4.2E+02 | n | 4.2E+04 | n >S | 2.0E+05 | n | 4.1E+04 | n >S | _ |
| Butanoic acid (butyric acid) | 107-92-6 | 1.8E+02 | n | 7.0E+01 | n | 7.0E+03 | n | 1.8E+02 | n | 5.1E+04 | n | – | 9.3E+01 | n | 3.5E+01 | n | 3.5E+03 | n | 9.3E+01 | n | 3.3E+03 | n | _ |
| Butanol, 2- | 78-92-2 | 1.0E+06 | n | 3.1E+02 | n | 3.1E+04 | n | 1.0E+06 | n | 1.0E+06 | n >S | – | 6.8E+05 | n | 1.6E+02 | n | 1.6E+04 | n | 1.0E+06 | n | 1.0E+06 | n >S | _ |
| Butanol, 2-methyl-1- | 137-32-6 | 1.0E+04 | n | 1.8E+00 | n | 1.8E+02 | n | – | – | – | – | – | 1.0E+04 | n | 8.9E-01 | n | 8.9E+01 | n | – | – | – | – | _ |
| Butanol, 2-methyl-2- | 75-85-4 | 1.0E+04 | n | 1.8E+00 | n | 1.8E+02 | n | – | – | – | – | – | 1.0E+04 | n | 8.8E-01 | n | 8.8E+01 | n | – | – | – | – | _ |

## Table 2
## Tier 1 Commercial/Industrial Soil PCLs[1]

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | 0.5 acre source area | | | | | | | | | | | 30 acre source area | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | $^{Tot}Soil_{Comb}$[2] (mg/kg) | note[3] | $^{GW}Soil_{Ing}$ (mg/kg) | note[3] | $^{GW}Soil_{Class\ 3}$ (mg/kg) | note[3] | $^{Air}Soil_{Inh\text{-}V}$[4] (mg/kg) | note[3] | $^{Air}GW\text{-}Soil_{Inh\text{-}V}$ (mg/kg) | note[3] | $^{GW}$Soil for Secondary MCL (mg/kg) | $^{Tot}Soil_{Comb}$[2] (mg/kg) | note[3] | $^{GW}Soil_{Ing}$ (mg/kg) | note[3] | $^{GW}Soil_{Class\ 3}$ (mg/kg) | note[3] | $^{Air}Soil_{Inh\text{-}V}$[4] (mg/kg) | note[3] | $^{Air}GW\text{-}Soil_{Inh\text{-}V}$ (mg/kg) | note[3] | $^{GW}$Soil for Secondary MCL (mg/kg) |
| Butanol, n- | 71-36-3 | 1.0E+05 | n | 1.6E+01 | n | 1.6E+03 | n | – | – | – | – | – | 1.0E+05 | n | 7.9E+00 | n | 7.9E+02 | n | – | – | – | – | _ |
| Butene, 1- | 106-98-9 | 4.0E+04 | n | 1.3E+02 | n | 1.3E+04 | n >S | 1.1E+05 | n | 1.2E+05 | n >S | – | 3.0E+04 | n | 6.6E+01 | n | 6.6E+03 | n >S | 5.9E+04 | n | 8.0E+03 | n >S | _ |
| Butene, cis-2- | 590-18-1 | 2.2E+04 | n | 9.6E+01 | n | 9.6E+03 | n >S | 3.4E+04 | n | 3.9E+04 | n >S | – | 1.4E+04 | n | 4.8E+01 | n | 4.8E+03 | n >S | 1.8E+04 | n | 2.5E+03 | n | _ |
| Butene, trans-2- | 624-64-6 | 2.2E+04 | n | 9.6E+01 | n | 9.6E+03 | n >S | 3.4E+04 | n | 3.9E+04 | n >S | – | 1.4E+04 | n | 4.8E+01 | n | 4.8E+03 | n >S | 1.8E+04 | n | 2.5E+03 | n | _ |
| Butoxy ethanol, 2- (Ethylene glycol monobutyl ether; EGBE) | 111-76-2 | 5.8E+04 | n | 1.8E+01 | n | 1.8E+03 | n | 4.1E+05 | n | 1.0E+06 | n >S | – | 5.2E+04 | n | 8.8E+00 | n | 8.8E+02 | n | 2.1E+05 | n | 1.0E+06 | n >S | _ |
| Butyl acetate | 123-86-4 | 6.4E+04 | n | 3.1E+01 | n | 3.1E+03 | n | 1.2E+05 | n | 1.0E+06 | n >S | – | 4.2E+04 | n | 1.5E+01 | n | 1.5E+03 | n | 6.0E+04 | n | 1.9E+05 | n >S | _ |
| Butyl acrylate | 141-32-2 | 9.2E+03 | n | 3.1E+00 | n | 3.1E+02 | n | – | – | – | – | – | 9.2E+03 | n | 1.5E+00 | n | 1.5E+02 | n | – | – | – | – | _ |
| Butyl benzyl phthalate | 85-68-7 | 1.0E+04 | c | 5.9E+02 | c | 5.9E+04 | c >S | – | – | – | – | – | 1.0E+04 | c | 3.0E+02 | c | 3.0E+04 | c >S | – | – | – | – | _ |
| Butyl ether, n- (dibutyl ether) | 142-96-1 | 1.0E+05 | n | 1.3E+02 | n | 1.3E+04 | n >S | – | – | – | – | – | 1.0E+05 | n | 6.5E+01 | n | 6.5E+03 | n >S | – | – | – | – | _ |
| Butyl methacrylate | 97-88-1 | 2.6E+04 | n | 7.8E+01 | n | 7.8E+03 | n >S | – | – | – | – | – | 2.6E+04 | n | 3.9E+01 | n | 3.9E+03 | n >S | – | – | – | – | _ |
| Butylate | 2008-41-5 | 3.4E+04 | n | 2.5E+01 | n | 2.5E+03 | n >S | – | – | – | – | – | 3.4E+04 | n | 1.3E+01 | n | 1.3E+03 | n >S | – | – | – | – | _ |
| Butylbenzene, n- | 104-51-8 | 3.4E+04 | n | 4.5E+02 | n | 4.5E+04 | n >S | – | – | – | – | – | 3.4E+04 | n | 2.3E+02 | n | 2.3E+04 | n >S | – | – | – | – | _ |
| Butylbenzene, sec- | 135-98-8 | 4.1E+04 | n | 2.5E+02 | n | 2.5E+04 | n >S | – | – | – | – | – | 4.1E+04 | n | 1.3E+02 | n | 1.3E+04 | n >S | – | – | – | – | _ |
| Butylbenzene, tert- | 98-06-6 | 4.1E+04 | n | 3.0E+02 | n | 3.0E+04 | n >S | – | – | – | – | – | 4.1E+04 | n | 1.5E+02 | n | 1.5E+04 | n >S | – | – | – | – | _ |
| Cacodylic acid | 75-60-5 | 2.0E+03 | n | 4.4E-01 | n | 4.4E+01 | n | – | – | – | – | – | 2.0E+03 | n | 2.2E-01 | n | 2.2E+01 | n | – | – | – | – | _ |
| Cadmium | 7440-43-9 | 8.1E+02 | n | 1.5E+00 | m >S | 1.5E+02 | m >S | – | – | – | – | – | 7.7E+02 | n | 7.5E-01 | m >S | 7.5E+01 | m >S | – | – | – | – | _ |
| Calcium* | 7440-70-2 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | _ |
| Caprolactam | 105-60-2 | 3.4E+05 | n | 1.4E+02 | n | 1.4E+04 | n | – | – | – | – | – | 3.4E+05 | n | 7.0E+01 | n | 7.0E+03 | n | – | – | – | – | _ |
| Captan | 133-06-2 | 5.5E+03 | c | 1.5E+02 | c >S | 1.5E+04 | c >S | – | – | – | – | – | 5.5E+03 | c | 7.5E+01 | c >S | 7.5E+03 | c >S | – | – | – | – | _ |
| Carbaryl | 63-25-2 | 6.8E+04 | n | 8.2E+01 | n | 8.2E+03 | n >S | – | – | – | – | – | 6.8E+04 | n | 4.1E+01 | n | 4.1E+03 | n >S | – | – | – | – | _ |
| Carbazole | 86-74-8 | 9.5E+02 | c | 1.0E+01 | c | 1.0E+03 | c >S | – | – | – | – | – | 9.5E+02 | c | 5.1E+00 | c | 5.1E+02 | c >S | – | – | – | – | _ |
| Carbofuran | 1563-66-2 | 3.4E+03 | n | 1.2E-01 | m | 1.2E+01 | m | – | – | – | – | – | 3.4E+03 | n | 6.2E-02 | m | 6.2E+00 | m | – | – | – | – | _ |
| Carbon disulfide | 75-15-0 | 1.3E+04 | n | 4.1E+01 | n | 4.1E+03 | n | 1.5E+04 | n | 3.8E+04 | n >S | – | 7.2E+03 | n | 2.0E+01 | n | 2.0E+03 | n | 7.7E+03 | n | 2.4E+03 | n | _ |
| Carbon tetrachloride | 56-23-5 | 8.1E+01 | c | 6.2E-02 | m | 6.2E+00 | m | 1.0E+02 | c | 4.1E+02 | c | – | 4.6E+01 | c | 3.1E-02 | m | 3.1E+00 | m | 5.2E+01 | c | 2.6E+01 | c | _ |
| Carbophenothion | 786-19-6 | 8.9E+03 | n | 4.4E+03 | n | 4.4E+05 | n >S | – | – | – | – | – | 8.9E+03 | n | 2.2E+03 | n | 2.2E+05 | n >S | – | – | – | – | _ |
| Carbosulfan | 55285-14-8 | 6.8E+03 | n | 7.5E+02 | n >S | 7.5E+04 | n >S | – | – | – | – | – | 6.8E+03 | n | 3.8E+02 | n >S | 3.8E+04 | n >S | – | – | – | – | _ |
| Carboxin | 5234-68-4 | 6.8E+04 | n | 2.6E+02 | n | 2.6E+04 | n >S | – | – | – | – | – | 6.8E+04 | n | 1.3E+02 | n | 1.3E+04 | n >S | – | – | – | – | _ |
| Chloral | 75-87-6 | 1.0E+05 | n | 1.6E+01 | n | 1.6E+03 | n | – | – | – | – | – | 1.0E+05 | n | 7.9E+00 | n | 7.9E+02 | n | – | – | – | – | _ |
| Chloral hydrate (1,1-ethanediol, 2,2,2-trichloro-) | 302-17-0 | 6.8E+04 | n | 1.6E+01 | n | 1.6E+03 | n | – | – | – | – | – | 6.8E+04 | n | 7.8E+00 | n | 7.8E+02 | n | – | – | – | – | _ |
| Chloramben (amiben; 3-amino-2,5-dichlorobenzoic acid) | 133-90-4 | 1.0E+04 | n | 1.1E+01 | n | 1.1E+03 | n | – | – | – | – | – | 1.0E+04 | n | 5.6E+00 | n | 5.6E+02 | n | – | – | – | – | _ |
| Chlordane (technical) | 12789-03-6 | 6.6E+01 | c | 9.6E+00 | m | 9.6E+02 | m >S | 2.1E+03 | c | 1.0E+06 | c >S | – | 6.4E+01 | c | 4.8E+00 | m | 4.8E+02 | m >S | 1.1E+03 | c | 4.0E+05 | c >S | _ |
| Chlordane, cis- (alpha chlordane) | 5103-71-9 | 5.4E+01 | c | 1.7E+03 | c | 1.7E+05 | c >S | 6.9E+03 | c | 1.0E+06 | c >S | – | 5.4E+01 | c | 8.3E+02 | c | 8.3E+04 | c >S | 3.5E+03 | c | 1.0E+06 | c >S | _ |
| Chlordane, trans- (gamma chordane) | 5103-74-2 | 5.3E+01 | c | 9.2E+01 | c | 9.2E+03 | c >S | 1.6E+03 | c | 1.0E+06 | c >S | – | 5.1E+01 | c | 4.6E+01 | c | 4.6E+03 | c >S | 8.4E+02 | c | 2.6E+05 | c >S | _ |
| Chlorfenvinphos | 470-90-6 | 3.9E+01 | n | 2.7E+00 | n | 2.7E+02 | n | 4.3E+01 | n | – | – | – | 2.1E+01 | n | 1.4E+00 | n | 1.4E+02 | n | 2.2E+01 | n | – | – | _ |
| Chloride* | 16887-00-6 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | _ |
| Chlorine | 7782-50-5 | 1.9E+02 | n | – | – | – | – | 1.9E+02 | n | – | – | – | 9.6E+01 | n | – | – | – | – | 9.6E+01 | n | – | – | _ |
| Chloro-1,3-butadiene, 2- | 126-99-8 | 2.0E+00 | c | – | – | – | – | 2.0E+00 | c | 4.4E+00 | c | – | 1.0E+00 | c | – | – | – | – | 1.0E+00 | c | 2.8E-01 | c | _ |
| Chloro-2-propanol, 1- | 127-00-4 | 2.0E+04 | n | 3.2E+00 | n | 3.2E+02 | n | – | – | – | – | – | 2.0E+04 | n | 1.6E+00 | n | 1.6E+02 | n | – | – | – | – | _ |
| Chloro-3-methylphenol, 4- | 59-50-7 | 3.4E+03 | n | 1.4E+01 | n | 1.4E+03 | n | – | – | – | – | – | 3.4E+03 | n | 6.8E+00 | n | 6.8E+02 | n | – | – | – | – | _ |
| Chloroaniline, p- | 106-47-8 | 9.5E+01 | c | 4.7E-02 | c | 4.7E+00 | c | – | – | – | – | – | 9.5E+01 | c | 2.3E-02 | c | 2.3E+00 | c | – | – | – | – | _ |
| Chlorobenzene | 108-90-7 | 1.0E+03 | n | 1.1E+00 | m | 1.1E+02 | m | 1.1E+03 | n | 1.8E+04 | n >S | – | 5.4E+02 | n | 5.5E-01 | m | 5.5E+01 | m | 5.5E+02 | n | 1.1E+03 | n | _ |
| Chlorobenzilate | 510-15-6 | 6.3E+01 | c | 2.6E-01 | c | 2.6E+01 | c | 5.9E+02 | c | 4.0E+05 | c >S | – | 5.7E+01 | c | 1.3E-01 | c | 1.3E+01 | c | 3.0E+02 | c | 2.6E+04 | c >S | _ |
| Chlorobromomethane (bromochloromethane) | 74-97-5 | 4.1E+04 | n | 9.1E+00 | n | 9.1E+02 | n | – | – | – | – | – | 4.1E+04 | n | 4.5E+00 | n | 4.5E+02 | n | – | – | – | – | _ |
| Chlorodifluoromethane | 75-45-6 | 1.0E+06 | n | – | – | – | – | 1.0E+06 | n | 1.0E+06 | n >S | – | 5.5E+05 | n | – | – | – | – | 5.5E+05 | n | 8.1E+04 | n >S | _ |
| Chloroethane (ethyl chloride) | 75-00-3 | 1.4E+05 | n | 9.2E+01 | n | 9.2E+03 | n | 2.1E+05 | n | 5.1E+05 | n >S | – | 8.7E+04 | n | 4.6E+01 | n | 4.6E+03 | n | 1.1E+05 | n | 3.3E+04 | n >S | _ |
| Chloroethanol, 2- | 107-07-3 | 2.0E+04 | n | 2.9E+00 | n | 2.9E+02 | n | – | – | – | – | – | 2.0E+04 | n | 1.4E+00 | n | 1.4E+02 | n | – | – | – | – | _ |
| Chloroethoxy ethene, 2- (2-chloroethylvinylether) | 110-75-8 | 6.4E+00 | n | 6.5E-03 | c | 6.5E-01 | c | 6.4E+00 | n | 9.5E+01 | n | – | 3.3E+00 | n | 3.2E-03 | c | 3.2E-01 | c | 3.3E+00 | n | 6.2E+00 | n | _ |
| Chloroform[8] | 67-66-3 | 2.6E+01 | c | 3.3E-01 | m | 3.3E+01 | m | 2.6E+01 | c | 1.4E+02 | c | – | 1.3E+01 | c | 1.7E-01 | m | 1.7E+01 | m | 1.3E+01 | c | 9.0E+00 | c | _ |

## Table 2
## Tier 1 Commercial/Industrial Soil PCLs[1]

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | 0.5 acre source area | | | | | | | | | | | 30 acre source area | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | $^{Tot}Soil_{Comb}$[2] (mg/kg) | note[3] | $^{GW}Soil_{Ing}$ (mg/kg) | note[3] | $^{GW}Soil_{Class\ 3}$ (mg/kg) | note[3] | $^{Air}Soil_{Inh\text{-}V}$[4] (mg/kg) | note[3] | $^{Air}GW\text{-}Soil_{Inh\text{-}V}$ (mg/kg) | note[3] | $^{GW}$Soil for Secondary MCL (mg/kg) | $^{Tot}Soil_{Comb}$[2] (mg/kg) | note[3] | $^{GW}Soil_{Ing}$ (mg/kg) | note[3] | $^{GW}Soil_{Class\ 3}$ (mg/kg) | note[3] | $^{Air}Soil_{Inh\text{-}V}$[4] (mg/kg) | note[3] | $^{Air}GW\text{-}Soil_{Inh\text{-}V}$ (mg/kg) | note[3] | $^{GW}$Soil for Secondary MCL (mg/kg) |
| Chlorohexane, 1- | 544-10-5 | 1.4E+04 | n | 1.2E+02 | n | 1.2E+04 | n >S | 2.1E+04 | n | 4.1E+05 | n >S | – | 8.7E+03 | n | 5.9E+01 | n | 5.9E+03 | n >S | 1.1E+04 | n | 2.6E+04 | n >S | _ |
| Chloromethane (methyl chloride) | 74-87-3 | 2.9E+02 | c | 9.1E-01 | c | 9.1E+01 | c | 3.3E+02 | c | 3.5E+02 | c | – | 1.6E+02 | c | 4.5E-01 | c | 4.5E+01 | c | 1.7E+02 | c | 2.3E+01 | c | _ |
| Chloronaphthalene, 1- (Chloronaphthalene, alpha-) | 90-13-1 | 5.0E+04 | n | 2.2E+03 | n | 2.2E+05 | n >S | – | – | – | – | – | 5.0E+04 | n | 1.1E+03 | n | 1.1E+05 | n >S | – | – | – | – | _ |
| Chloronaphthalene, 2- (chloronaphthalene, beta) | 91-58-7 | 5.0E+04 | n | 2.0E+03 | n | 2.0E+05 | n >S | – | – | – | – | – | 5.0E+04 | n | 1.0E+03 | n | 1.0E+05 | n >S | – | – | – | – | _ |
| Chloronitrobenzene, p- (1-chloro-4-nitrobenzene) | 100-00-5 | 7.8E+01 | n | 4.6E-01 | n | 4.6E+01 | n | 8.8E+01 | n | 6.7E+03 | n >S | – | 4.2E+01 | n | 2.3E-01 | n | 2.3E+01 | n | 4.5E+01 | n | 4.3E+02 | n | _ |
| Chlorophenol, 2- | 95-57-8 | 5.1E+03 | n | 4.9E+00 | n | 4.9E+02 | n | – | – | – | – | – | 5.1E+03 | n | 2.4E+00 | n | 2.4E+02 | n | – | – | – | – | _ |
| Chlorophenol, 3- | 108-43-0 | 3.4E+03 | n | 2.3E+00 | n | 2.3E+02 | n | – | – | – | – | – | 3.4E+03 | n | 1.2E+00 | n | 1.2E+02 | n | – | – | – | – | _ |
| Chlorophenol, 4- | 106-48-9 | 3.4E+03 | n | 2.5E+00 | n | 2.5E+02 | n | – | – | – | – | – | 3.4E+03 | n | 1.2E+00 | n | 1.2E+02 | n | – | – | – | – | _ |
| Chlorophenyl phenylether, 4- | 7005-72-3 | 9.8E-01 | c | 7.2E-02 | c | 7.2E+00 | c | 4.2E+00 | c | 1.1E+03 | c >S | – | 8.0E-01 | c | 3.6E-02 | c | 3.6E+00 | c | 2.2E+00 | c | 7.0E+01 | c | _ |
| Chloropropane, 2- | 75-29-6 | 2.0E+03 | n | 1.6E+01 | n | 1.6E+03 | n | 2.1E+03 | n | 4.8E+03 | n | – | 1.1E+03 | n | 8.1E+00 | n | 8.1E+02 | n | 1.1E+03 | n | 3.1E+02 | n | _ |
| Chlorothalonil | 1897-45-6 | 1.7E+03 | c | 1.8E+01 | c | 1.8E+03 | c | – | – | – | – | – | 1.7E+03 | c | 9.1E+00 | c | 9.1E+02 | c | – | – | – | – | _ |
| Chlorotoluene, o- (2-chlorotoluene) | 95-49-8 | 7.8E+03 | n | 2.7E+01 | n | 2.7E+03 | n | 1.8E+04 | n | 6.1E+05 | n >S | – | 5.6E+03 | n | 1.4E+01 | n | 1.4E+03 | n | 9.5E+03 | n | 4.0E+04 | n >S | _ |
| Chlorotoluene, p- (4-chlorotoluene) | 106-43-4 | 2.0E+04 | n | 3.2E+01 | n | 3.2E+03 | n >S | – | – | – | – | – | 2.0E+04 | n | 1.6E+01 | n | 1.6E+03 | n >S | – | – | – | – | _ |
| Chlorpyrifos | 2921-88-2 | 2.0E+03 | n | 4.4E+01 | n | 4.4E+03 | n >S | – | – | – | – | – | 2.0E+03 | n | 2.2E+01 | n | 2.2E+03 | n >S | – | – | – | – | _ |
| Chromium (III) | 16065-83-1 | 1.2E+05 | n | 2.4E+03 | m >S | 2.4E+05 | m >S | – | – | – | – | – | 7.5E+04 | n | 1.2E+03 | m >S | 1.2E+05 | m >S | – | – | – | – | _ |
| Chromium (total) | 7440-47-3 | 1.2E+05 | n | 2.4E+03 | m >S | 2.4E+05 | m >S | – | – | – | – | – | 7.5E+04 | n | 1.2E+03 | m >S | 1.2E+05 | m >S | – | – | – | – | _ |
| Chromium (VI) | 18540-29-9 | 1.0E+03 | n | 2.8E+01 | m >S | 2.8E+03 | m >S | – | – | – | – | – | 1.0E+03 | n | 1.4E+01 | m >S | 1.4E+03 | m >S | – | – | – | – | _ |
| Chrysene | 218-01-9 | 1.7E+04 | c | 2.5E+04 | c >S | 1.0E+06 | c >S | 1.0E+06 | c | 1.0E+06 | c >S | – | 1.7E+04 | c | 1.3E+04 | c >S | 1.0E+06 | c >S | 7.5E+05 | c | 1.0E+06 | c >S | _ |
| Cobalt | 7440-48-4 | 6.3E+03 | c | 6.6E+02 | n >S | 6.6E+04 | n >S | – | – | – | – | – | 3.3E+03 | c | 3.3E+02 | n >S | 3.3E+04 | n >S | – | – | – | – | _ |
| Copolymer acrylamide | 69418-26-4 | 1.4E+02 | n | 2.8E-02 | n | 2.8E+00 | n | – | – | – | – | – | 1.4E+02 | n | 1.4E-02 | n | 1.4E+00 | n | – | – | – | – | _ |
| Copper | 7440-50-8 | 9.4E+04 | n | 1.0E+03 | e >S | 1.0E+05 | e >S | – | – | – | – | 800 | 9.4E+04 | n | 5.2E+02 | e >S | 5.2E+04 | e >S | – | – | – | – | 400 |
| Coronene | 191-07-1 | 1.4E+03 | n | 1.7E+05 | n >S | 1.0E+06 | n >S | – | – | – | – | – | 1.4E+03 | n | 8.4E+04 | n >S | 1.0E+06 | n >S | – | – | – | – | _ |
| Coumaphos | 56-72-4 | 4.8E+03 | n | 3.3E+02 | n >S | 3.3E+04 | n >S | – | – | – | – | – | 4.8E+03 | n | 1.6E+02 | n >S | 1.6E+04 | n >S | – | – | – | – | _ |
| Cresol | 1319-77-3 | 3.4E+04 | n | 2.0E+01 | n | 2.0E+03 | n | – | – | – | – | – | 3.4E+04 | n | 9.9E+00 | n | 9.9E+02 | n | – | – | – | – | _ |
| Cresol, m- (3-methylphenol) | 108-39-4 | 3.4E+04 | n | 2.0E+01 | n | 2.0E+03 | n | – | – | – | – | – | 3.4E+04 | n | 9.9E+00 | n | 9.9E+02 | n | – | – | – | – | _ |
| Cresol, o- (2-methylphenol) | 95-48-7 | 3.4E+04 | n | 2.1E+01 | n | 2.1E+03 | n | – | – | – | – | – | 3.4E+04 | n | 1.1E+01 | n | 1.1E+03 | n | – | – | – | – | _ |
| Cresol, p- (4-methylphenol) | 106-44-5 | 3.4E+03 | n | 1.9E+00 | n | 1.9E+02 | n | – | – | – | – | – | 3.4E+03 | n | 9.4E-01 | n | 9.4E+01 | n | – | – | – | – | _ |
| Crotonaldehyde | 123-73-9 | 1.5E+01 | c | 2.1E-03 | c | 2.1E-01 | c | – | – | – | – | – | 1.5E+01 | c | 1.1E-03 | c | 1.1E-01 | c | – | – | – | – | _ |
| Cumene (isopropylbenzene) | 98-82-8 | 1.1E+04 | n | 1.0E+03 | n | 1.0E+05 | n >S | 1.3E+04 | n | 8.7E+05 | n >S | – | 6.3E+03 | n | 5.2E+02 | n | 5.2E+04 | n >S | 6.7E+03 | n | 5.7E+04 | n >S | _ |
| Cyanazine | 21725-46-2 | 2.3E+01 | c | 9.4E-03 | c | 9.4E-01 | c | – | – | – | – | – | 2.3E+01 | c | 4.7E-03 | c | 4.7E-01 | c | – | – | – | – | _ |
| Cyanide | 57-12-5 | 3.7E+02 | n | 4.0E+01 | m | 4.0E+03 | m | 1.0E+03 | n | – | – | – | 2.8E+02 | n | 2.0E+01 | m | 2.0E+03 | m | 5.2E+02 | n | – | – | _ |
| Cyanogen | 460-19-5 | 1.7E+01 | n | 1.8E-01 | n | 1.8E+01 | n | 1.7E+01 | n | 2.5E+01 | n | – | 8.8E+00 | n | 9.1E-02 | n | 9.1E+00 | n | 8.8E+00 | n | 1.6E+00 | n | _ |
| Cycloate | 1134-23-2 | 3.7E+04 | n | 4.5E+02 | n | 4.5E+04 | n >S | – | – | – | – | – | 3.7E+04 | n | 2.3E+02 | n | 2.3E+04 | n >S | – | – | – | – | _ |
| Cyclohexane | 110-82-7 | 1.3E+05 | n | 1.8E+04 | n >S | 1.0E+06 | n >S | 1.3E+05 | n | 4.0E+05 | n >S | – | 6.5E+04 | n | 8.8E+03 | n >S | 8.8E+05 | n >S | 6.6E+04 | n | 2.6E+04 | n >S | _ |
| Cyclohexanol | 108-93-0 | 1.0E+06 | n | 8.8E+02 | n >S | 8.8E+04 | n >S | – | – | – | – | – | 1.0E+06 | n | 4.4E+02 | n >S | 4.4E+04 | n >S | – | – | – | – | _ |
| Cyclohexanone | 108-94-1 | 4.9E+04 | n | 7.8E+02 | n | 7.8E+04 | n >S | 4.9E+04 | n | 1.0E+06 | n >S | – | 2.5E+04 | n | 3.9E+02 | n | 3.9E+04 | n >S | 2.5E+04 | n | 2.7E+05 | n >S | _ |
| Cyclohexene, 1-methanol-3- | 1679-51-2 | 1.4E+04 | n | 1.1E+01 | n | 1.1E+03 | n | – | – | – | – | – | 1.4E+04 | n | 5.6E+00 | n | 5.6E+02 | n | – | – | – | – | _ |
| Cyclohexene, 4-vinyl-1- | 100-40-3 | 5.4E+03 | n | 9.1E+01 | n | 9.1E+03 | n >S | 7.1E+03 | n | 8.7E+04 | n >S | – | 3.1E+03 | n | 4.6E+01 | n | 4.6E+03 | n >S | 3.6E+03 | n | 5.6E+03 | n >S | _ |
| Cyclopentane | 287-92-3 | 5.5E+04 | n | 8.4E+01 | n | 8.4E+03 | n >S | 5.2E+05 | n | 9.9E+05 | n >S | – | 5.0E+04 | n | 4.2E+01 | n | 4.2E+03 | n >S | 2.7E+05 | n | 6.4E+04 | n >S | _ |
| Cyclopentane, methyl- | 96-37-7 | 1.8E+04 | n | 4.1E+02 | n | 4.1E+04 | n >S | 2.1E+04 | n | 5.3E+04 | n >S | – | 1.0E+04 | n | 2.0E+02 | n | 2.0E+04 | n >S | 1.1E+04 | n | 3.4E+03 | n >S | _ |
| Cyclopentene | 142-29-0 | 1.0E+06 | n | 3.2E+03 | n | 3.2E+05 | n >S | – | – | – | – | – | 1.0E+06 | n | 1.6E+03 | n | 1.6E+05 | n >S | – | – | – | – | _ |
| Cyclotetramethylenetetranitramine (HMX) | 2691-41-0 | 1.2E+04 | n | 7.0E+00 | n | 7.0E+02 | n | – | – | – | – | – | 1.2E+04 | n | 3.5E+00 | n | 3.5E+02 | n | – | – | – | – | _ |
| Cyclotrimethylenetrinitramine (RDX) | 121-82-4 | 2.4E+02 | c | 1.1E-01 | c | 1.1E+01 | c | – | – | – | – | – | 2.4E+02 | c | 5.7E-02 | c | 5.7E+00 | c | – | – | – | – | _ |
| Cymene (isopropyltoluene) | 99-87-6 | 1.0E+05 | n | 6.9E+02 | n | 6.9E+04 | n >S | – | – | – | – | – | 1.0E+05 | n | 3.5E+02 | n | 3.5E+04 | n >S | – | – | – | – | _ |
| Cymoxanil | 57966-95-7 | 8.9E+03 | n | 1.8E+00 | n | 1.8E+02 | n | – | – | – | – | – | 8.9E+03 | n | 9.1E-01 | n | 9.1E+01 | n | – | – | – | – | _ |
| Dacthal (DCPA) | 1861-32-1 | 6.8E+03 | n | 1.4E+03 | n >S | 1.4E+05 | n >S | – | – | – | – | – | 6.8E+03 | n | 6.8E+02 | n >S | 6.8E+04 | n >S | – | – | – | – | _ |
| Dalapon, sodium salt (2,2-dichloropropanoic acid) | 75-99-0 | 2.0E+04 | n | 5.8E-01 | m | 5.8E+01 | m | – | – | – | – | – | 2.0E+04 | n | 2.9E-01 | m | 2.9E+01 | m | – | – | – | – | _ |
| DDD | 72-54-8 | 1.0E+02 | c | 2.9E+01 | c | 2.9E+03 | c >S | – | – | – | – | – | 1.0E+02 | c | 1.5E+01 | c | 1.5E+03 | c >S | – | – | – | – | _ |

## Table 2
## Tier 1 Commercial/Industrial Soil PCLs[1]

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | 0.5 acre source area | | | | | | | | | | | 30 acre source area | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | $^{Tot}Soil_{Comb}$[2] (mg/kg) | note[3] | $^{GW}Soil_{Ing}$ (mg/kg) | note[3] | $^{GW}Soil_{Class\ 3}$ (mg/kg) | note[3] | $^{Air}Soil_{Inh\text{-}V}$[4] (mg/kg) | note[3] | $^{Air}GW\text{-}Soil_{Inh\text{-}V}$ (mg/kg) | note[3] | $^{GW}$Soil for Secondary MCL (mg/kg) | $^{Tot}Soil_{Comb}$[2] (mg/kg) | note[3] | $^{GW}Soil_{Ing}$ (mg/kg) | note[3] | $^{GW}Soil_{Class\ 3}$ (mg/kg) | note[3] | $^{Air}Soil_{Inh\text{-}V}$[4] (mg/kg) | note[3] | $^{Air}GW\text{-}Soil_{Inh\text{-}V}$ (mg/kg) | note[3] | $^{GW}$Soil for Secondary MCL (mg/kg) |
| DDE | 72-55-9 | 7.3E+01 | c | 2.6E+01 | c | 2.6E+03 | c >S | – | – | – | – | – | 7.3E+01 | c | 1.3E+01 | c | 1.3E+03 | c >S | – | – | – | – | _ |
| DDT | 50-29-3 | 7.1E+01 | c | 3.3E+01 | c >S | 3.3E+03 | c >S | 2.0E+03 | c | 1.0E+06 | c >S | – | 6.8E+01 | c | 1.7E+01 | c >S | 1.7E+03 | c >S | 1.0E+03 | c | 3.7E+05 | c >S | _ |
| Demeton | 8065-48-3 | 2.7E+01 | n | 3.7E-02 | n | 3.7E+00 | n | – | – | – | – | – | 2.7E+01 | n | 1.9E-02 | n | 1.9E+00 | n | – | – | – | – | _ |
| Desethylatrazine | 6190-65-4 | 2.4E+04 | n | 1.2E+01 | n | 1.2E+03 | n | – | – | – | – | – | 2.4E+04 | n | 6.0E+00 | n | 6.0E+02 | n | – | – | – | – | _ |
| Diacetone alcohol (4-hydroxy-4-methyl-2-pentanone) | 123-42-2 | 2.7E+04 | n | 5.8E+00 | n | 5.8E+02 | n | – | – | – | – | – | 2.7E+04 | n | 2.9E+00 | n | 2.9E+02 | n | – | – | – | – | _ |
| Diallate | 2303-16-4 | 3.1E+02 | c | 2.6E+00 | c | 2.6E+02 | c | – | – | – | – | – | 3.1E+02 | c | 1.3E+00 | c | 1.3E+02 | c | – | – | – | – | _ |
| Diazinon | 333-41-5 | 7.9E+01 | n | 4.7E-01 | n | 4.7E+01 | n | 9.1E+01 | n | 4.0E+04 | n >S | – | 4.3E+01 | n | 2.4E-01 | n | 2.4E+01 | n | 4.7E+01 | n | 2.6E+03 | n >S | _ |
| Dibenz(a,h)acridine | 226-36-8 | 1.6E+01 | c | 1.3E+02 | c >S | 1.3E+04 | c >S | 2.6E+04 | c | 1.0E+06 | c >S | – | 1.6E+01 | c | 6.5E+01 | c >S | 6.5E+03 | c >S | 1.3E+04 | c | 1.0E+06 | c >S | _ |
| Dibenz(a,j)acridine | 224-42-0 | 2.4E+01 | c | 2.5E+02 | c >S | 2.5E+04 | c >S | 3.5E+04 | c | 1.0E+06 | c >S | – | 2.4E+01 | c | 1.3E+02 | c >S | 1.3E+04 | c >S | 1.8E+04 | c | 1.0E+06 | c >S | _ |
| Dibenz-a,h-anthracene | 53-70-3 | 1.7E+01 | c | 1.6E+02 | c >S | 1.6E+04 | c >S | 4.8E+03 | c | 1.0E+06 | c >S | – | 1.7E+01 | c | 7.8E+01 | c >S | 7.8E+03 | c >S | 2.5E+03 | c | 1.0E+06 | c >S | _ |
| Dibenzo(a,e)pyrene | 192-65-4 | 2.6E+00 | c | 2.9E+02 | c >S | 2.9E+04 | c >S | 1.2E+04 | c | 1.0E+06 | c >S | – | 2.6E+00 | c | 1.5E+02 | c >S | 1.5E+04 | c >S | 6.2E+03 | c | 1.0E+06 | c >S | _ |
| Dibenzo(a,h)pyrene | 189-64-0 | 2.6E-01 | c | 2.7E+01 | c >S | 2.7E+03 | c >S | 1.2E+03 | c | 1.0E+06 | c >S | – | 2.6E-01 | c | 1.3E+01 | c >S | 1.3E+03 | c >S | 6.0E+02 | c | 1.0E+06 | c >S | _ |
| Dibenzo(a,i)pyrene | 189-55-9 | 2.6E-01 | c | 2.7E+01 | c | 2.7E+03 | c >S | 1.2E+03 | c | 1.0E+06 | c >S | – | 2.6E-01 | c | 1.3E+01 | c | 1.3E+03 | c >S | 6.0E+02 | c | 1.0E+06 | c >S | _ |
| Dibenzofuran | 132-64-9 | 2.7E+03 | n | 1.0E+02 | n | 1.0E+04 | n >S | – | – | – | – | – | 2.7E+03 | n | 5.0E+01 | n | 5.0E+03 | n >S | – | – | – | – | _ |
| Dibenzothiophene | 132-65-0 | 3.8E+03 | n | 1.0E+03 | n >S | 1.0E+05 | n >S | – | – | – | – | – | 3.8E+03 | n | 5.0E+02 | n >S | 5.0E+04 | n >S | – | – | – | – | _ |
| Dibromo-3-chloropropane, 1,2- | 96-12-8 | 2.6E-01 | c | 1.7E-03 | m | 1.7E-01 | m | 2.6E-01 | c | 9.0E+00 | c | – | 1.4E-01 | c | 8.7E-04 | m | 8.7E-02 | m | 1.4E-01 | c | 5.9E-01 | c | _ |
| Dibromochloromethane (chlorodibromomethane)[8] | 124-48-1 | 3.4E+02 | c | 3.6E-01 | m | 3.6E+01 | m | – | – | – | – | – | 3.4E+02 | c | 1.8E-01 | m | 1.8E+01 | m | – | – | – | – | _ |
| Dibromofluoromethane | 1868-53-7 | 2.0E+05 | n | 4.7E+01 | n | 4.7E+03 | n | – | – | – | – | – | 2.0E+05 | n | 2.3E+01 | n | 2.3E+03 | n | – | – | – | – | _ |
| Dicamba | 1918-00-9 | 2.0E+04 | n | 4.4E+00 | n | 4.4E+02 | n | – | – | – | – | – | 2.0E+04 | n | 2.2E+00 | n | 2.2E+02 | n | – | – | – | – | _ |
| Dichlormid | 37764-25-3 | 1.7E+04 | n | 7.8E+00 | n | 7.8E+02 | n | – | – | – | – | – | 1.7E+04 | n | 3.9E+00 | n | 3.9E+02 | n | – | – | – | – | _ |
| Dichloro-2-butene, 1,4- | 764-41-0 | 3.3E-01 | c | – | – | – | – | 3.3E-01 | c | 1.0E+01 | c | – | 1.7E-01 | c | – | – | – | – | 1.7E-01 | c | 6.7E-01 | c | _ |
| Dichloro-2-butene, 1,4- trans | 110-57-6 | 3.4E-01 | c | – | – | – | – | 3.4E-01 | c | 1.1E+01 | c | – | 1.8E-01 | c | – | – | – | – | 1.8E-01 | c | 7.2E-01 | c | _ |
| Dichlorobenzene, 1,2- | 95-50-1 | 1.1E+03 | n | 1.8E+01 | m | 1.8E+03 | m | 1.1E+03 | n | 4.8E+04 | n >S | – | 5.7E+02 | n | 8.9E+00 | m | 8.9E+02 | m | 5.7E+02 | n | 3.1E+03 | n >S | _ |
| Dichlorobenzene, 1,3- | 541-73-1 | 1.7E+02 | n | 2.0E+01 | n | 2.0E+03 | n >S | 1.7E+02 | n | 2.4E+03 | n >S | – | 8.8E+01 | n | 1.0E+01 | n | 1.0E+03 | n >S | 8.8E+01 | n | 1.6E+02 | n | _ |
| Dichlorobenzene, 1,4- | 106-46-7 | 1.2E+03 | c | 2.1E+00 | m | 2.1E+02 | m | 1.6E+04 | n | 6.8E+05 | n >S | – | 1.2E+03 | c | 1.1E+00 | m | 1.1E+02 | m | 8.5E+03 | n | 4.4E+04 | n >S | _ |
| Dichlorobenzidine, 3,3- | 91-94-1 | 4.2E+01 | c | 1.4E-01 | c | 1.4E+01 | c | – | – | – | – | – | 4.2E+01 | c | 7.0E-02 | c | 7.0E+00 | c | – | – | – | – | _ |
| Dichlorobutane, 2,3- | 7581-97-7 | 1.5E+02 | n | 7.7E+00 | n | 7.7E+02 | n | 1.5E+02 | n | 2.1E+03 | n | – | 7.7E+01 | n | 3.8E+00 | n | 3.8E+02 | n | 7.7E+01 | n | 1.4E+02 | n | _ |
| Dichlorodifluoromethane | 75-71-8 | 2.1E+03 | n | 7.2E+02 | n | 7.2E+04 | n >S | 2.1E+03 | n | 4.1E+03 | n | – | 1.1E+03 | n | 3.6E+02 | n | 3.6E+04 | n >S | 1.1E+03 | n | 2.7E+02 | n | _ |
| Dichloroethane, 1,1- | 75-34-3 | 4.1E+04 | n | 5.5E+01 | n | 5.5E+03 | n | 5.2E+04 | n | 2.3E+05 | n >S | – | 2.3E+04 | n | 2.8E+01 | n | 2.8E+03 | n | 2.7E+04 | n | 1.5E+04 | n >S | _ |
| Dichloroethane, 1,2- | 107-06-2 | 1.1E+02 | c | 1.4E-02 | m | 1.4E+00 | m | 1.8E+02 | c | 1.2E+03 | c | – | 7.1E+01 | c | 6.9E-03 | m | 6.9E-01 | m | 9.1E+01 | c | 7.5E+01 | c | _ |
| Dichloroethylene, 1,1- | 75-35-4 | 6.4E+03 | n | 5.0E-02 | m | 5.0E+00 | m | 7.3E+03 | n | 1.7E+04 | n | – | 3.5E+03 | n | 2.5E-02 | m | 2.5E+00 | m | 3.8E+03 | n | 1.1E+03 | n | _ |
| Dichloroethylene, cis-1,2- | 156-59-2 | 7.9E+02 | n | 2.5E-01 | m | 2.5E+01 | m | 1.3E+03 | n | 6.1E+03 | n | – | 5.0E+02 | n | 1.2E-01 | m | 1.2E+01 | m | 6.6E+02 | n | 3.9E+02 | n | _ |
| Dichloroethylene, trans-1,2 | 156-60-5 | 1.2E+03 | n | 4.9E-01 | m | 4.9E+01 | m | 1.3E+03 | n | 5.3E+03 | n | – | 6.4E+02 | n | 2.5E-01 | m | 2.5E+01 | m | 6.6E+02 | n | 3.4E+02 | n | _ |
| Dichlorofluoromethane | 75-43-4 | 2.0E+05 | n | 4.2E+01 | n | 4.2E+03 | n | – | – | – | – | – | 2.0E+05 | n | 2.1E+01 | n | 2.1E+03 | n | – | – | – | – | _ |
| Dichlorophenol, 2,3- | 576-24-9 | 2.0E+03 | n | 1.6E+00 | n | 1.6E+02 | n | – | – | – | – | – | 2.0E+03 | n | 8.1E-01 | n | 8.1E+01 | n | – | – | – | – | _ |
| Dichlorophenol, 2,4- | 120-83-2 | 2.0E+03 | n | 1.1E+00 | n | 1.1E+02 | n | – | – | – | – | – | 2.0E+03 | n | 5.3E-01 | n | 5.3E+01 | n | – | – | – | – | _ |
| Dichlorophenol, 2,5- | 583-78-8 | 2.0E+03 | n | 1.5E+00 | n | 1.5E+02 | n | – | – | – | – | – | 2.0E+03 | n | 7.5E-01 | n | 7.5E+01 | n | – | – | – | – | _ |
| Dichlorophenol, 2,6- | 87-65-0 | 6.8E+02 | n | 2.0E-01 | n | 2.0E+01 | n | – | – | – | – | – | 6.8E+02 | n | 1.0E-01 | n | 1.0E+01 | n | – | – | – | – | _ |
| Dichlorophenol, 3,4- | 95-77-2 | 2.0E+03 | n | 6.0E+00 | n | 6.0E+02 | n | – | – | – | – | – | 2.0E+03 | n | 3.0E+00 | n | 3.0E+02 | n | – | – | – | – | _ |
| Dichlorophenol, 3,5- | 591-35-5 | 2.0E+03 | n | 4.0E+00 | n | 4.0E+02 | n | – | – | – | – | – | 2.0E+03 | n | 2.0E+00 | n | 2.0E+02 | n | – | – | – | – | _ |
| Dichlorophenoxy, 2,4- butyric acid, 4- (2,4-DB) | 94-82-6 | 5.5E+03 | n | 1.2E+00 | n | 1.2E+02 | n | – | – | – | – | – | 5.5E+03 | n | 5.8E-01 | n | 5.8E+01 | n | – | – | – | – | _ |
| Dichlorophenoxyacetic acid, 2,4- (2,4-D) | 94-75-7 | 8.2E+03 | n | 2.6E+00 | m | 2.6E+02 | m | – | – | – | – | – | 8.2E+03 | n | 1.3E+00 | m | 1.3E+02 | m | – | – | – | – | _ |
| Dichloroprop (2-(2,4-dichlorophenoxy) propanoic acid) | 120-36-5 | 6.8E+03 | n | 1.4E+00 | n | 1.4E+02 | n | – | – | – | – | – | 6.8E+03 | n | 7.0E-01 | n | 7.0E+01 | n | – | – | – | – | _ |
| Dichloropropane, 1,2- | 78-87-5 | 8.6E+01 | n | 2.3E-02 | m | 2.3E+00 | m | 8.6E+01 | n | 7.4E+02 | n | – | 4.4E+01 | n | 1.1E-02 | m | 1.1E+00 | m | 4.4E+01 | n | 4.8E+01 | n | _ |
| Dichloropropane, 1,3- | 142-28-9 | 9.9E+01 | c | 1.4E-01 | c | 1.4E+01 | c | 1.5E+02 | c | 3.0E+03 | c | – | 6.1E+01 | c | 7.2E-02 | c | 7.2E+00 | c | 7.7E+01 | c | 2.0E+02 | c | _ |
| Dichloropropane, 2,2- | 594-20-7 | 8.6E+01 | n | 2.7E-01 | c | 2.7E+01 | c | 8.6E+01 | n | 7.1E+02 | n | – | 4.4E+01 | n | 1.4E-01 | c | 1.4E+01 | c | 4.4E+01 | n | 4.6E+01 | n | _ |
| Dichloropropanol, 2,3- | 616-23-9 | 2.0E+03 | n | 7.2E-01 | n | 7.2E+01 | n | – | – | – | – | – | 2.0E+03 | n | 3.6E-01 | n | 3.6E+01 | n | – | – | – | – | _ |
| Dichloropropene, 1,1- | 563-58-6 | 9.9E+01 | c | 3.0E-01 | c | 3.0E+01 | c | 1.5E+02 | c | 4.8E+02 | c | – | 6.1E+01 | c | 1.5E-01 | c | 1.5E+01 | c | 7.7E+01 | c | 3.1E+01 | c | _ |

## Table 2
## Tier 1 Commercial/Industrial Soil PCLs[1]

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | 0.5 acre source area | | | | | | | | | | | 30 acre source area | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | $^{Tot}Soil_{Comb}$[2] (mg/kg) | note[3] | $^{GW}Soil_{Ing}$ (mg/kg) | note[3] | $^{GW}Soil_{Class\ 3}$ (mg/kg) | note[3] | $^{Air}Soil_{Inh\text{-}V}$[4] (mg/kg) | note[3] | $^{Air}GW\text{-}Soil_{Inh\text{-}V}$ (mg/kg) | note[3] | $^{GW}$Soil for Secondary MCL (mg/kg) | $^{Tot}Soil_{Comb}$[2] (mg/kg) | note[3] | $^{GW}Soil_{Ing}$ (mg/kg) | note[3] | $^{GW}Soil_{Class\ 3}$ (mg/kg) | note[3] | $^{Air}Soil_{Inh\text{-}V}$[4] (mg/kg) | note[3] | $^{Air}GW\text{-}Soil_{Inh\text{-}V}$ (mg/kg) | note[3] | $^{GW}$Soil for Secondary MCL (mg/kg) |
| Dichloropropene, 1,3- (mixed isomers) | 542-75-6 | 9.9E+01 | c | 8.8E-02 | c | 8.8E+00 | c | 1.5E+02 | c | 1.3E+03 | c | – | 6.1E+01 | c | 4.4E-02 | c | 4.4E+00 | c | 7.7E+01 | c | 8.3E+01 | c | _ |
| Dichloropropene, cis 1,3- | 10061-01-5 | 5.3E+01 | c | 1.5E-02 | c | 1.5E+00 | c | 4.3E+02 | n | 3.8E+03 | n | – | 5.3E+01 | c | 7.4E-03 | c | 7.4E-01 | c | 2.2E+02 | n | 2.5E+02 | n | _ |
| Dichloropropene, trans 1,3- | 10061-02-6 | 9.9E+01 | c | 8.0E-02 | c | 8.0E+00 | c | 1.5E+02 | c | 1.3E+03 | c | – | 6.1E+01 | c | 4.0E-02 | c | 4.0E+00 | c | 7.7E+01 | c | 8.1E+01 | c | _ |
| Dichlorvos | 62-73-7 | 6.6E+01 | c | 1.0E+06 | c | 1.0E+06 | c | 1.0E+06 | n | 1.0E+06 | n | – | 6.6E+01 | c | 5.5E+05 | c | 1.0E+06 | c | 8.7E+05 | n | 1.0E+06 | n | _ |
| Dicrotophos (bidrin) | 141-66-2 | 6.8E+01 | n | 1.4E-02 | n | 1.4E+00 | n | – | – | – | – | – | 6.8E+01 | n | 7.0E-03 | n | 7.0E-01 | n | – | – | – | – | _ |
| Dicyclopentadiene | 77-73-6 | 8.2E+04 | n | – | – | – | – | – | – | – | – | – | 8.2E+04 | n | – | – | – | – | – | – | – | – | _ |
| Dieldrin | 60-57-1 | 1.2E+00 | c | 1.1E-01 | c | 1.1E+01 | c | 5.3E+01 | c | 1.8E+05 | c >S | – | 1.1E+00 | c | 5.5E-02 | c | 5.5E+00 | c | 2.7E+01 | c | 1.2E+04 | c >S | _ |
| Diethanolamine | 111-42-2 | 3.2E+02 | n | 7.0E-02 | n | 7.0E+00 | n | 4.9E+03 | n | 1.0E+06 | n | – | 3.0E+02 | n | 3.5E-02 | n | 3.5E+00 | n | 2.5E+03 | n | 9.6E+05 | n | _ |
| Diethyldithiocarbamate, sodium salt | 148-18-5 | 1.1E+02 | c | – | – | – | – | – | – | – | – | – | 1.1E+02 | c | – | – | – | – | – | – | – | – | _ |
| Diethyl phthalate | 84-66-2 | 5.5E+05 | n | 4.7E+02 | n | 4.7E+04 | n >S | – | – | – | – | – | 5.5E+05 | n | 2.3E+02 | n | 2.3E+04 | n >S | – | – | – | – | _ |
| Diethylene glycol | 111-46-6 | 1.0E+06 | n | 2.8E+02 | n | 2.8E+04 | n | – | – | – | – | – | 1.0E+06 | n | 1.4E+02 | n | 1.4E+04 | n | – | – | – | – | _ |
| Diethylene glycol monobutyl ether | 112-34-5 | 2.8E+01 | n | 4.7E+00 | n | 4.7E+02 | n | 2.8E+01 | n | 9.6E+03 | n | – | 1.5E+01 | n | 2.3E+00 | n | 2.3E+02 | n | 1.5E+01 | n | 6.2E+02 | n | _ |
| Diethylhexyl adipate | 103-23-1 | 1.6E+04 | c | 6.1E+03 | m >S | 6.1E+05 | m >S | – | – | – | – | – | 1.6E+04 | c | 3.0E+03 | m >S | 3.0E+05 | m >S | – | – | – | – | _ |
| Diethylstilbestrol | 56-53-1 | 4.1E-03 | c | 1.3E-03 | c | 1.3E-01 | c | – | – | – | – | – | 4.1E-03 | c | 6.5E-04 | c | 6.5E-02 | c | – | – | – | – | _ |
| Diisobutylene (trimethyl-1-pentene, 2,4,4-) | 107-39-1 | 4.0E+03 | n | 1.8E+03 | n >S | 1.8E+05 | n >S | 4.3E+03 | n | 1.3E+04 | n >S | – | 2.1E+03 | n | 9.0E+02 | n >S | 9.0E+04 | n >S | 2.2E+03 | n | 8.6E+02 | n >S | _ |
| Diisopropylbenzene, p- | 100-18-5 | 6.8E+03 | n | 2.8E+02 | n | 2.8E+04 | n >S | – | – | – | – | – | 6.8E+03 | n | 1.4E+02 | n | 1.4E+04 | n >S | – | – | – | – | _ |
| Diisopropyl ether (2,2'-oxybis-propane) | 108-20-3 | 1.3E+04 | n | 3.6E+01 | n | 3.6E+03 | n | 1.5E+04 | n | 1.3E+05 | n >S | – | 7.2E+03 | n | 1.8E+01 | n | 1.8E+03 | n | 7.7E+03 | n | 8.7E+03 | n >S | _ |
| Dimethenamid | 87674-68-8 | 1.0E+04 | n | 3.1E+00 | n | 3.1E+02 | n | – | – | – | – | – | 1.0E+04 | n | 1.5E+00 | n | 1.5E+02 | n | – | – | – | – | _ |
| Dimethoate | 60-51-5 | 1.4E+02 | n | 3.0E-02 | n | 3.0E+00 | n | – | – | – | – | – | 1.4E+02 | n | 1.5E-02 | n | 1.5E+00 | n | – | – | – | – | _ |
| Dimethoxybenzidine, 3,3'- | 119-90-4 | 1.4E+03 | c | 6.3E-01 | c | 6.3E+01 | c | – | – | – | – | – | 1.4E+03 | c | 3.2E-01 | c | 3.2E+01 | c | – | – | – | – | _ |
| Dimethyl-2-nitrobenzene, 1,3- | 81-20-9 | 1.0E+03 | n | 6.7E+00 | n | 6.7E+02 | n | 3.9E+03 | n | 6.9E+05 | n >S | – | 8.1E+02 | n | 3.3E+00 | n | 3.3E+02 | n | 2.0E+03 | n | 4.5E+04 | n >S | _ |
| Dimethyl-3-nitrobenzene, 1,2- | 83-41-0 | 9.7E+02 | n | 4.2E+00 | n | 4.2E+02 | n | 3.4E+03 | n | 5.4E+05 | n >S | – | 7.7E+02 | n | 2.1E+00 | n | 2.1E+02 | n | 1.7E+03 | n | 3.5E+04 | n >S | _ |
| Dimethyl-4-nitrobenzene, 1-2- | 99-51-4 | 9.8E+02 | n | 4.2E+00 | n | 4.2E+02 | n | 3.5E+03 | n | 5.9E+05 | n >S | – | 7.8E+02 | n | 2.1E+00 | n | 2.1E+02 | n | 1.8E+03 | n | 3.8E+04 | n >S | _ |
| Dimethyl-5-nitrobenzene, 1,3- | 99-12-7 | 9.4E+02 | n | 4.9E+00 | n | 4.9E+02 | n | 3.1E+03 | n | 4.5E+05 | n >S | – | 7.3E+02 | n | 2.5E+00 | n | 2.5E+02 | n | 1.6E+03 | n | 2.9E+04 | n >S | _ |
| Dimethylphenethylamine, alpha, alpha- | 122-09-8 | 1.4E+03 | n | 1.1E+00 | n | 1.1E+02 | n | – | – | – | – | – | 1.4E+03 | n | 5.6E-01 | n | 5.6E+01 | n | – | – | – | – | _ |
| Dimethyl phenol, 2,4- | 105-67-9 | 1.4E+04 | n | 9.7E+00 | n | 9.7E+02 | n | – | – | – | – | – | 1.4E+04 | n | 4.8E+00 | n | 4.8E+02 | n | – | – | – | – | _ |
| Dimethylaminoazobenzene, p- | 60-11-7 | 6.8E+00 | n | 3.4E+00 | n | 3.4E+02 | n | – | – | – | – | – | 6.8E+00 | n | 1.7E+00 | n | 1.7E+02 | n | – | – | – | – | _ |
| Dimethylbenz-a-anthracene, 7,12- | 57-97-6 | 6.9E-02 | c | 2.8E+00 | c | 2.8E+02 | c | 2.4E+02 | c | 1.0E+06 | c >S | – | 6.9E-02 | c | 1.4E+00 | c | 1.4E+02 | c | 1.2E+02 | c | 1.0E+06 | c >S | _ |
| Dimethylbenzidine, 3,3'- | 119-93-7 | 1.7E+00 | c | 1.8E-03 | c | 1.8E-01 | c | – | – | – | – | – | 1.7E+00 | c | 9.2E-04 | c | 9.2E-02 | c | – | – | – | – | _ |
| Dimethylformamide, N,N- | 68-12-2 | 4.3E+03 | n | 1.4E+01 | n | 1.4E+03 | n | 4.5E+03 | n | 1.0E+06 | n | – | 2.3E+03 | n | 7.1E+00 | n | 7.1E+02 | n | 2.3E+03 | n | 6.6E+04 | n | _ |
| Dimethylnaphthalene, 1,3- | 575-41-7 | 2.5E+04 | n | 2.4E+03 | n | 2.4E+05 | n >S | – | – | – | – | – | 2.5E+04 | n | 1.2E+03 | n | 1.2E+05 | n >S | – | – | – | – | _ |
| Dimethylphthalate | 131-11-3 | 5.5E+05 | n | 1.9E+02 | n | 1.9E+04 | n >S | – | – | – | – | – | 5.5E+05 | n | 9.3E+01 | n | 9.3E+03 | n >S | – | – | – | – | _ |
| Di-n-butyl phthalate | 84-74-2 | 6.8E+04 | n | 9.9E+03 | n | 9.9E+05 | n >S | – | – | – | – | – | 6.8E+04 | n | 5.0E+03 | n | 5.0E+05 | n >S | – | – | – | – | _ |
| Dinitro-2-methylphenol, 4,6- (dinitro-o-cresol, 4, 6-) | 534-52-1 | 6.8E+01 | n | 1.4E-02 | n | 1.4E+00 | n | – | – | – | – | – | 6.8E+01 | n | 7.0E-03 | n | 7.0E-01 | n | – | – | – | – | _ |
| Dinitrobenzene, 1,3- (dinitrobenzene, 2,4-) | 99-65-0 | 6.8E+01 | n | 2.3E-02 | n | 2.3E+00 | n | – | – | – | – | – | 6.8E+01 | n | 1.1E-02 | n | 1.1E+00 | n | – | – | – | – | _ |
| Dinitrobenzene, 1,4- | 100-25-4 | 6.8E+01 | n | 2.2E-02 | n | 2.2E+00 | n | – | – | – | – | – | 6.8E+01 | n | 1.1E-02 | n | 1.1E+00 | n | – | – | – | – | _ |
| Dinitrophenol, 2,4- | 51-28-5 | 1.4E+03 | n | 2.8E-01 | n | 2.8E+01 | n | – | – | – | – | – | 1.4E+03 | n | 1.4E-01 | n | 1.4E+01 | n | – | – | – | – | _ |
| Dinitrophenol, 2,5- | 329-71-5 | 1.4E+03 | n | 2.9E-01 | n | 2.9E+01 | n | – | – | – | – | – | 1.4E+03 | n | 1.4E-01 | n | 1.4E+01 | n | – | – | – | – | _ |
| Dinitrotoluene, 2,4- | 121-14-2 | 2.8E+01 | c | 1.2E-02 | c | 1.2E+00 | c | – | – | – | – | – | 2.8E+01 | c | 6.0E-03 | c | 6.0E-01 | c | – | – | – | – | _ |
| Dinitrotoluene, 2,6- | 606-20-2 | 2.8E+01 | c | 1.1E-02 | c | 1.1E+00 | c | – | – | – | – | – | 2.8E+01 | c | 5.4E-03 | c | 5.4E-01 | c | – | – | – | – | _ |
| Di-n-octyl phthalate | 117-84-0 | 6.8E+03 | n | 1.0E+06 | n >S | 1.0E+06 | n >S | – | – | – | – | – | 6.8E+03 | n | 1.0E+06 | n >S | 1.0E+06 | n >S | – | – | – | – | _ |
| Dinoseb | 88-85-7 | 6.8E+02 | n | 3.5E-01 | m | 3.5E+01 | m | – | – | – | – | – | 6.8E+02 | n | 1.8E-01 | m | 1.8E+01 | m | – | – | – | – | _ |
| Dioxane 1,4- | 123-91-1 | 1.5E+02 | c | 4.0E-02 | c | 4.0E+00 | c | 3.0E+02 | c | 2.5E+04 | c | – | 1.0E+02 | c | 2.0E-02 | c | 2.0E+00 | c | 1.6E+02 | c | 1.6E+03 | c | _ |
| Dioxin (as 2,3,7,8-TCDD toxicity equivalent quotients (TEQs)) | 1746-01-6 | 5.0E-03 | e | 1.7E-02 | m | 1.7E+00 | m | – | – | – | – | – | 5.0E-03 | e | 8.5E-03 | m | 8.5E-01 | m | – | – | – | – | _ |
| Diphenyl ether | 101-84-8 | 4.2E+03 | n | 2.7E+02 | n | 2.7E+04 | n >S | – | – | – | – | – | 4.2E+03 | n | 1.4E+02 | n | 1.4E+04 | n >S | – | – | – | – | _ |
| Diphenylamine | 122-39-4 | 1.7E+04 | n | 2.9E+01 | n | 2.9E+03 | n | – | – | – | – | – | 1.7E+04 | n | 1.4E+01 | n | 1.4E+03 | n | – | – | – | – | _ |
| Diphenylhydrazine, 1,2- | 122-66-7 | 2.2E+01 | c | 7.2E-02 | c | 7.2E+00 | c | 2.4E+02 | c | 1.8E+05 | c >S | – | 2.0E+01 | c | 3.6E-02 | c | 3.6E+00 | c | 1.2E+02 | c | 1.2E+04 | c | _ |
| Dipropylene glycol | 110-98-5 | 8.2E+04 | n | 1.7E+01 | n | 1.7E+03 | n | – | – | – | – | – | 8.2E+04 | n | 8.5E+00 | n | 8.5E+02 | n | – | – | – | – | _ |

## Table 2
## Tier 1 Commercial/Industrial Soil PCLs[1]

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | 0.5 acre source area | | | | | | | | | | | 30 acre source area | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | $^{Tot}Soil_{Comb}$[2] (mg/kg) | note[3] | $^{GW}Soil_{Ing}$ (mg/kg) | note[3] | $^{GW}Soil_{Class\ 3}$ (mg/kg) | note[3] | $^{Air}Soil_{Inh\text{-}V}$[4] (mg/kg) | note[3] | $^{Air}GW\text{-}Soil_{Inh\text{-}V}$ (mg/kg) | note[3] | $^{GW}$Soil for Secondary MCL (mg/kg) | $^{Tot}Soil_{Comb}$[2] (mg/kg) | note[3] | $^{GW}Soil_{Ing}$ (mg/kg) | note[3] | $^{GW}Soil_{Class\ 3}$ (mg/kg) | note[3] | $^{Air}Soil_{Inh\text{-}V}$[4] (mg/kg) | note[3] | $^{Air}GW\text{-}Soil_{Inh\text{-}V}$ (mg/kg) | note[3] | $^{GW}$Soil for Secondary MCL (mg/kg) |
| Diquat | 85-00-7 | 1.5E+03 | n | 2.0E-01 | m | 2.0E+01 | m | – | – | – | – | – | 1.5E+03 | n | 1.0E-01 | m | 1.0E+01 | m | – | – | – | – | _ |
| Disodium iminodiacetate (iminodiacetic acid, disodium salt) | 142-73-4 | 6.8E+03 | n | 1.4E+00 | n | 1.4E+02 | n | – | – | – | – | – | 6.8E+03 | n | 7.0E-01 | n | 7.0E+01 | n | – | – | – | – | _ |
| Disulfoton | 298-04-4 | 2.7E+01 | n | 1.0E+00 | n | 1.0E+02 | n | – | – | – | – | – | 2.7E+01 | n | 5.2E-01 | n | 5.2E+01 | n | – | – | – | – | _ |
| Diuron | 330-54-1 | 1.4E+03 | n | 2.8E+00 | n | 2.8E+02 | n | – | – | – | – | – | 1.4E+03 | n | 1.4E+00 | n | 1.4E+02 | n | – | – | – | – | _ |
| Dodecylphenol, 4- | 104-43-8 | 3.4E+04 | n | 1.0E+06 | n >S | 1.0E+06 | n >S | – | – | – | – | – | 3.4E+04 | n | 1.0E+06 | n >S | 1.0E+06 | n >S | – | – | – | – | _ |
| Endosulfan | 115-29-7 | 4.1E+03 | n | 1.4E+01 | n | 1.4E+03 | n >S | – | – | – | – | – | 4.1E+03 | n | 6.9E+00 | n | 6.9E+02 | n >S | – | – | – | – | _ |
| Endosulfan I | 959-98-8 | 1.4E+03 | n | 9.2E+01 | n | 9.2E+03 | n >S | – | – | – | – | – | 1.4E+03 | n | 4.6E+01 | n | 4.6E+03 | n >S | – | – | – | – | _ |
| Endosulfan II | 33213-65-9 | 4.1E+03 | n | 2.8E+02 | n | 2.8E+04 | n >S | – | – | – | – | – | 4.1E+03 | n | 1.4E+02 | n | 1.4E+04 | n >S | – | – | – | – | _ |
| Endosulfan sulfate | 1031-07-8 | 4.1E+03 | n | 1.4E+04 | n >S | 1.0E+06 | n >S | – | – | – | – | – | 4.1E+03 | n | 7.0E+03 | n >S | 7.0E+05 | n >S | – | – | – | – | _ |
| Endothall | 145-73-3 | 1.4E+04 | n | 5.3E-01 | m | 5.3E+01 | m | – | – | – | – | – | 1.4E+04 | n | 2.7E-01 | m | 2.7E+01 | m | – | – | – | – | _ |
| Endrin | 72-20-8 | 2.0E+02 | n | 7.5E-01 | m | 7.5E+01 | m | – | – | – | – | – | 2.0E+02 | n | 3.8E-01 | m | 3.8E+01 | m | – | – | – | – | _ |
| Endrin aldehyde | 7421-93-4 | 2.0E+02 | n | 1.9E+03 | n >S | 1.9E+05 | n >S | – | – | – | – | – | 2.0E+02 | n | 9.4E+02 | n >S | 9.4E+04 | n >S | – | – | – | – | _ |
| Endrin ketone | 53494-70-5 | 2.0E+02 | n | 1.5E+02 | n | 1.5E+04 | n >S | – | – | – | – | – | 2.0E+02 | n | 7.6E+01 | n | 7.6E+03 | n >S | – | – | – | – | _ |
| Epichlorohydrin | 106-89-8 | 3.7E+01 | n | 4.1E-01 | c | 4.1E+01 | c | 3.7E+01 | n | 2.0E+03 | n | – | 1.9E+01 | n | 2.1E-01 | c | 2.1E+01 | c | 1.9E+01 | n | 1.3E+02 | n | _ |
| EPN (o-ethyl o-(4-nitrophenyl)phenylphosphonothioate) | 2104-64-5 | 6.8E+00 | n | 1.6E-01 | n | 1.6E+01 | n | – | – | – | – | – | 6.8E+00 | n | 8.2E-02 | n | 8.2E+00 | n | – | – | – | – | _ |
| Esfenvalerate | 66230-04-4 | 1.4E+03 | n | 3.7E+02 | n >S | 3.7E+04 | n >S | – | – | – | – | – | 1.4E+03 | n | 1.9E+02 | n >S | 1.9E+04 | n >S | – | – | – | – | _ |
| Ethalfluralin (sonolan) | 55283-68-6 | 2.1E+02 | c | 5.6E+01 | c | 5.6E+03 | c | – | – | – | – | – | 2.1E+02 | c | 2.8E+01 | c | 2.8E+03 | c | – | – | – | – | _ |
| Ethanol | 64-17-5 | 1.0E+06 | n | 4.7E+03 | n | 4.7E+05 | n | – | – | – | – | – | 1.0E+06 | n | 2.4E+03 | n | 2.4E+05 | n | – | – | – | – | _ |
| Ethanol, 2-amino- | 141-43-5 | 9.0E+02 | n | 2.4E-01 | n | 2.4E+01 | n | 4.1E+03 | n | 1.0E+06 | n | – | 7.5E+02 | n | 1.2E-01 | n | 1.2E+01 | n | 2.1E+03 | n | 7.4E+04 | n | _ |
| Ethanol, 2-(2-aminoethoxy)- | 929-06-6 | 3.4E+02 | n | 7.0E-02 | n | 7.0E+00 | n | – | – | – | – | – | 3.4E+02 | n | 3.5E-02 | n | 3.5E+00 | n | – | – | – | – | _ |
| Ethanol, 2-(2-ethoxyethoxy)- | 111-90-0 | 1.0E+06 | n | 4.9E+02 | n | 4.9E+04 | n | – | – | – | – | – | 1.0E+06 | n | 2.5E+02 | n | 2.5E+04 | n | – | – | – | – | _ |
| Ethanol, 2-(methylamino)- | 109-83-1 | 4.9E+03 | n | 2.2E+00 | n | 2.2E+02 | n | 9.0E+03 | n | 1.0E+06 | n >S | – | 3.3E+03 | n | 1.1E+00 | n | 1.1E+02 | n | 4.6E+03 | n | 1.8E+05 | n | _ |
| Ethion | 563-12-2 | 3.4E+02 | n | 2.3E+01 | n | 2.3E+03 | n >S | – | – | – | – | – | 3.4E+02 | n | 1.1E+01 | n | 1.1E+03 | n >S | – | – | – | – | _ |
| Ethoprop | 13194-48-4 | 6.8E+01 | n | 3.7E-01 | n | 3.7E+01 | n | – | – | – | – | – | 6.8E+01 | n | 1.8E-01 | n | 1.8E+01 | n | – | – | – | – | _ |
| Ethoxy ethanol, 2- | 110-80-5 | 2.5E+04 | n | 1.3E+01 | n | 1.3E+03 | n >S | 3.5E+04 | n | 1.0E+06 | n >S | – | 1.5E+04 | n | 6.4E+00 | n | 6.4E+02 | n >S | 1.8E+04 | n | 5.9E+05 | n >S | _ |
| Ethyl acetate | 141-78-6 | 5.1E+03 | n | 1.4E+02 | n | 1.4E+04 | n | 5.1E+03 | n | 1.6E+05 | n | – | 2.6E+03 | n | 7.0E+01 | n | 7.0E+03 | n | 2.6E+03 | n | 1.0E+04 | n | _ |
| Ethyl acrylate | 140-88-5 | 3.2E+02 | n | 2.7E-01 | c | 2.7E+01 | c | 3.4E+02 | n | 9.6E+03 | n | – | 1.7E+02 | n | 1.3E-01 | c | 1.3E+01 | c | 1.7E+02 | n | 6.2E+02 | n | _ |
| Ethyl benzene | 100-41-4 | 2.9E+04 | n | 7.6E+00 | m | 7.6E+02 | m | 4.1E+04 | n | 4.5E+05 | n >S | – | 1.7E+04 | n | 3.8E+00 | m | 3.8E+02 | m | 2.1E+04 | n | 2.9E+04 | n >S | _ |
| Ethyl dipropylthiocarbamate, S- | 759-94-4 | 1.7E+04 | n | 2.1E+01 | n | 2.1E+03 | n | – | – | – | – | – | 1.7E+04 | n | 1.1E+01 | n | 1.1E+03 | n | – | – | – | – | _ |
| Ethyl ether | 60-29-7 | 2.0E+05 | n | 3.3E+01 | n | 3.3E+03 | n | – | – | – | – | – | 2.0E+05 | n | 1.7E+01 | n | 1.7E+03 | n | – | – | – | – | _ |
| Ethyl methacrylate | 97-63-2 | 8.9E+03 | n | 2.2E+01 | n | 2.2E+03 | n | 9.9E+03 | n | 2.7E+05 | n >S | – | 4.8E+03 | n | 1.1E+01 | n | 1.1E+03 | n | 5.1E+03 | n | 1.8E+04 | n | _ |
| Ethyl methanesulfonate | 62-50-0 | 9.8E+01 | c | 4.0E-02 | c | 4.0E+00 | c | 2.0E+02 | c | 6.0E+04 | c | – | 6.7E+01 | c | 2.0E-02 | c | 2.0E+00 | c | 1.0E+02 | c | 3.9E+03 | c | _ |
| Ethyl tert-butyl ether (2-ethyl-2-ethoxypropane) | 637-92-3 | 8.8E+02 | n | 2.7E-01 | n | 2.7E+01 | n | 6.4E+03 | n | 5.6E+04 | n >S | – | 7.8E+02 | n | 1.3E-01 | n | 1.3E+01 | n | 3.3E+03 | n | 3.6E+03 | n | _ |
| Ethyl-1-hexanol, 2- | 104-76-7 | 1.0E+05 | n | 2.3E+02 | n | 2.3E+04 | n >S | – | – | – | – | – | 1.0E+05 | n | 1.1E+02 | n | 1.1E+04 | n >S | – | – | – | – | _ |
| Ethyl-2-hexenal, 2- | 645-62-5 | 1.5E+05 | n | 8.4E+01 | n | 8.4E+03 | n >S | – | – | – | – | – | 1.5E+05 | n | 4.2E+01 | n | 4.2E+03 | n >S | – | – | – | – | _ |
| Ethyl-2-methyl benzene, 1- | 611-14-3 | 9.6E+03 | n | 1.7E+02 | n | 1.7E+04 | n >S | 1.2E+04 | n | 5.8E+05 | n >S | – | 5.4E+03 | n | 8.3E+01 | n | 8.3E+03 | n >S | 6.1E+03 | n | 3.8E+04 | n >S | _ |
| Ethyl-4-methyl benzene, 1- | 622-96-8 | 8.4E+03 | n | 1.8E+02 | n | 1.8E+04 | n >S | 1.0E+04 | n | 4.8E+05 | n >S | – | 4.7E+03 | n | 9.0E+01 | n | 9.0E+03 | n >S | 5.2E+03 | n | 3.1E+04 | n >S | _ |
| Ethylene* | 74-85-1 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | _ |
| Ethylene dibromide (dibromoethane, 1,2- ) | 106-93-4 | 8.7E+00 | c | 2.1E-04 | m | 2.1E-02 | m | 2.2E+01 | c | 5.3E+02 | c | – | 6.3E+00 | c | 1.0E-04 | m | 1.0E-02 | m | 1.1E+01 | c | 3.4E+01 | c | _ |
| Ethylene glycol | 107-21-1 | 1.0E+06 | n | 2.8E+02 | n | 2.8E+04 | n | – | – | – | – | – | 1.0E+06 | n | 1.4E+02 | n | 1.4E+04 | n | – | – | – | – | _ |
| Ethylene oxide | 75-21-8 | 6.2E+00 | c | 4.0E-03 | c | 4.0E-01 | c | 7.9E+00 | c | 1.9E+02 | c | – | 3.6E+00 | c | 2.0E-03 | c | 2.0E-01 | c | 4.1E+00 | c | 1.2E+01 | c | _ |
| Ethylene thiourea | 96-45-7 | 5.5E+01 | n | 1.1E-02 | n | 1.1E+00 | n | – | – | – | – | – | 5.5E+01 | n | 5.6E-03 | n | 5.6E-01 | n | – | – | – | – | _ |
| Ethylenediamine | 107-15-3 | 9.2E+04 | n | 1.4E+01 | n | 1.4E+03 | n | – | – | – | – | – | 9.2E+04 | n | 6.9E+00 | n | 6.9E+02 | n | – | – | – | – | _ |
| Ethylenimine | 151-56-4 | 1.5E-01 | c | 6.3E-05 | c | 6.3E-03 | c | 2.2E-01 | c | 4.7E+01 | c | – | 9.0E-02 | c | 3.1E-05 | c | 3.1E-03 | c | 1.1E-01 | c | 3.0E+00 | c | _ |
| Ethylhexyl acrylate, 2- | 103-11-7 | 4.0E+02 | c | 1.7E+01 | c | 1.7E+03 | c | – | – | – | – | – | 4.0E+02 | c | 8.6E+00 | c | 8.6E+02 | c | – | – | – | – | _ |
| Famphur | 52-85-7 | 2.0E+01 | n | 5.4E-03 | n | 5.4E-01 | n | – | – | – | – | – | 2.0E+01 | n | 2.7E-03 | n | 2.7E-01 | n | – | – | – | – | _ |
| Fensulfothion | 115-90-2 | 6.8E+02 | n | 1.0E+00 | n | 1.0E+02 | n | – | – | – | – | – | 6.8E+02 | n | 5.2E-01 | n | 5.2E+01 | n | – | – | – | – | _ |
| Fenthion | 55-38-9 | 4.8E+01 | n | 2.3E-01 | n | 2.3E+01 | n | – | – | – | – | – | 4.8E+01 | n | 1.2E-01 | n | 1.2E+01 | n | – | – | – | – | _ |

## Table 2
## Tier 1 Commercial/Industrial Soil PCLs[1]

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | 0.5 acre source area | | | | | | | | | | | 30 acre source area | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | $^{Tot}Soil_{Comb}$[2] (mg/kg) | note[3] | $^{GW}Soil_{Ing}$ (mg/kg) | note[3] | $^{GW}Soil_{Class\ 3}$ (mg/kg) | note[3] | $^{Air}Soil_{Inh\text{-}V}$[4] (mg/kg) | note[3] | $^{Air}GW\text{-}Soil_{Inh\text{-}V}$ (mg/kg) | note[3] | $^{GW}$Soil for Secondary MCL (mg/kg) | $^{Tot}Soil_{Comb}$[2] (mg/kg) | note[3] | $^{GW}Soil_{Ing}$ (mg/kg) | note[3] | $^{GW}Soil_{Class\ 3}$ (mg/kg) | note[3] | $^{Air}Soil_{Inh\text{-}V}$[4] (mg/kg) | note[3] | $^{Air}GW\text{-}Soil_{Inh\text{-}V}$ (mg/kg) | note[3] | $^{GW}$Soil for Secondary MCL (mg/kg) |
| Fenuron | 101-42-8 | 4.8E+04 | n | 1.4E+01 | n | 1.4E+03 | n | – | – | – | – | – | 4.8E+04 | n | 6.9E+00 | n | 6.9E+02 | n | – | – | – | – | _ |
| Fluoranthene | 206-44-0 | 2.5E+04 | n | 5.7E+03 | n >S | 5.7E+05 | n >S | – | – | – | – | – | 2.5E+04 | n | 2.9E+03 | n >S | 2.9E+05 | n >S | – | – | – | – | _ |
| Fluorene | 86-73-7 | 2.5E+04 | n | 8.9E+02 | n >S | 8.9E+04 | n >S | – | – | – | – | – | 2.5E+04 | n | 4.5E+02 | n >S | 4.5E+04 | n >S | – | – | – | – | _ |
| Fluorine (soluble fluoride) | 7782-41-4 | 5.8E+04 | n | – | – | – | – | – | – | – | – | – | 5.8E+04 | n | – | – | – | – | – | – | – | – | _ |
| Fluorochloridone | 61213-25-0 | 5.1E+03 | n | 1.2E+01 | n | 1.2E+03 | n | – | – | – | – | – | 5.1E+03 | n | 5.9E+00 | n | 5.9E+02 | n | – | – | – | – | _ |
| Fonofos | 944-22-9 | 1.4E+03 | n | 2.1E+01 | n | 2.1E+03 | n >S | – | – | – | – | – | 1.4E+03 | n | 1.1E+01 | n | 1.1E+03 | n >S | – | – | – | – | _ |
| Formaldehyde | 50-00-0 | 1.4E+03 | n | 2.9E+01 | n | 2.9E+03 | n | 1.4E+03 | n | 2.4E+05 | n | – | 7.1E+02 | n | 1.5E+01 | n | 1.5E+03 | n | 7.1E+02 | n | 1.6E+04 | n | _ |
| Formic acid | 64-18-6 | 3.0E+02 | n | 1.3E+02 | n | 1.3E+04 | n | 3.0E+02 | n | 4.7E+04 | n | – | 1.5E+02 | n | 6.3E+01 | n | 6.3E+03 | n | 1.5E+02 | n | 3.1E+03 | n | _ |
| Furan | 110-00-9 | 1.0E+03 | n | 2.4E-01 | n | 2.4E+01 | n | – | – | – | – | – | 1.0E+03 | n | 1.2E-01 | n | 1.2E+01 | n | – | – | – | – | _ |
| Furfural | 98-01-1 | 3.1E+03 | n | 4.4E-01 | n | 4.4E+01 | n | – | – | – | – | – | 3.1E+03 | n | 2.2E-01 | n | 2.2E+01 | n | – | – | – | – | _ |
| Glycidylaldehyde | 765-34-4 | 1.4E+02 | n | 6.7E-02 | n | 6.7E+00 | n | 2.1E+02 | n | 4.6E+04 | n | – | 8.5E+01 | n | 3.3E-02 | n | 3.3E+00 | n | 1.1E+02 | n | 3.0E+03 | n | _ |
| Glyphosate | 1071-83-6 | 6.8E+04 | n | 2.9E+01 | m | 2.9E+03 | m | – | – | – | – | – | 6.8E+04 | n | 1.5E+01 | m | 1.5E+03 | m | – | – | – | – | _ |
| Heptachlor | 76-44-8 | 3.3E+00 | c | 1.9E-01 | m | 1.9E+01 | m | 1.5E+01 | c | 5.0E+03 | c >S | – | 2.8E+00 | c | 9.4E-02 | m | 9.4E+00 | m | 7.9E+00 | c | 3.2E+02 | c >S | _ |
| Heptachlor epoxide | 1024-57-3 | 2.0E+00 | c | 5.8E-02 | m | 5.8E+00 | m | 4.0E+01 | c | 5.8E+04 | c >S | – | 1.9E+00 | c | 2.9E-02 | m | 2.9E+00 | m | 2.1E+01 | c | 3.8E+03 | c >S | _ |
| Heptane, n- | 142-82-5 | 4.7E+04 | n | 2.1E+03 | n >S | 2.1E+05 | n >S | 1.9E+05 | n | 5.9E+05 | n >S | – | 3.8E+04 | n | 1.1E+03 | n >S | 1.1E+05 | n >S | 9.9E+04 | n | 3.8E+04 | n >S | _ |
| Heptanoic acid, n- | 111-14-8 | 1.7E+02 | n | 7.1E+01 | n | 7.1E+03 | n >S | 1.7E+02 | n | 4.5E+04 | n >S | – | 8.8E+01 | n | 3.5E+01 | n | 3.5E+03 | n >S | 8.8E+01 | n | 2.9E+03 | n >S | _ |
| Hexachlorobenzene | 118-74-1 | 8.7E+00 | c | 1.1E+00 | m | 1.1E+02 | m >S | 3.2E+01 | c | 1.1E+04 | c >S | – | 6.9E+00 | c | 5.6E-01 | m | 5.6E+01 | m >S | 1.6E+01 | c | 7.0E+02 | c >S | _ |
| Hexachlorobutadiene | 87-68-3 | 4.1E+01 | c | 7.4E+00 | c | 7.4E+02 | c >S | 4.9E+01 | c | 4.2E+03 | c >S | – | 2.3E+01 | c | 3.7E+00 | c | 3.7E+02 | c >S | 2.5E+01 | c | 2.7E+02 | c | _ |
| Hexachlorocyclohexane, alpha (alpha-BHC) | 319-84-6 | 3.3E+00 | c | 1.8E-02 | c | 1.8E+00 | c | 2.3E+01 | c | 1.4E+04 | c >S | – | 2.9E+00 | c | 8.9E-03 | c | 8.9E-01 | c | 1.2E+01 | c | 9.1E+02 | c >S | _ |
| Hexachlorocyclohexane, beta (beta-BHC) | 319-85-7 | 1.2E+01 | c | 6.5E-02 | c | 6.5E+00 | c | 1.2E+02 | c | 1.1E+05 | c >S | – | 1.1E+01 | c | 3.2E-02 | c | 3.2E+00 | c | 6.2E+01 | c | 7.1E+03 | c >S | _ |
| Hexachlorocyclohexane, delta (delta-BHC) | 319-86-8 | 1.2E+01 | c | 3.9E-01 | c | 3.9E+01 | c | 1.7E+02 | c | 2.1E+05 | c >S | – | 1.2E+01 | c | 1.9E-01 | c | 1.9E+01 | c | 8.8E+01 | c | 1.3E+04 | c >S | _ |
| Hexachlorocyclohexane, gamma (lindane; gamma-BHC) | 58-89-9 | 1.8E+01 | c | 9.2E-03 | m | 9.2E-01 | m | – | – | – | – | – | 1.8E+01 | c | 4.6E-03 | m | 4.6E-01 | m | – | – | – | – | _ |
| Hexachlorocyclohexane, techn (technical-BHC) | 608-73-1 | 1.2E+01 | c | 1.1E-01 | c | 1.1E+01 | c | 1.5E+02 | c | 1.6E+05 | c >S | – | 1.1E+01 | c | 5.6E-02 | c | 5.6E+00 | c | 7.7E+01 | c | 1.1E+04 | c >S | _ |
| Hexachlorocyclopentadiene | 77-47-4 | 2.0E+01 | n | 1.9E+01 | m | 1.9E+03 | m >S | 2.0E+01 | n | 2.9E+03 | n >S | – | 1.0E+01 | n | 9.6E+00 | m | 9.6E+02 | m >S | 1.0E+01 | n | 1.9E+02 | n | _ |
| Hexachloroethane | 67-72-1 | 4.5E+02 | n | 3.8E+00 | n | 3.8E+02 | n | 6.9E+03 | n | 7.7E+05 | n >S | – | 4.2E+02 | n | 1.9E+00 | n | 1.9E+02 | n | 3.6E+03 | n | 5.0E+04 | n >S | _ |
| Hexachlorophene | 70-30-4 | 2.0E+02 | n | 1.8E+04 | n >S | 1.0E+06 | n >S | – | – | – | – | – | 2.0E+02 | n | 8.8E+03 | n >S | 8.8E+05 | n >S | – | – | – | – | _ |
| Hexachloropropylene | 1888-71-7 | 4.5E+02 | n | 2.2E+01 | n | 2.2E+03 | n | 7.1E+03 | n | 1.0E+06 | n >S | – | 4.2E+02 | n | 1.1E+01 | n | 1.1E+03 | n | 3.7E+03 | n | 8.3E+04 | n >S | _ |
| Hexanal, 2-ethyl- | 123-05-7 | 1.0E+05 | n | 7.9E+01 | n | 7.9E+03 | n >S | – | – | – | – | – | 1.0E+05 | n | 3.9E+01 | n | 3.9E+03 | n >S | – | – | – | – | _ |
| Hexane, n- | 110-54-3 | 1.2E+04 | n | 6.1E+02 | n | 6.1E+04 | n >S | 1.4E+04 | n | 7.4E+03 | n >S | – | 6.6E+03 | n | 3.0E+02 | n | 3.0E+04 | n >S | 7.4E+03 | n | 4.8E+02 | n | _ |
| Hexanediamine, 1,6- | 124-09-4 | 3.4E+03 | n | 7.3E-01 | n | 7.3E+01 | n | – | – | – | – | – | 3.4E+03 | n | 3.7E-01 | n | 3.7E+01 | n | – | – | – | – | _ |
| Hexanedinitrile | 111-69-3 | 5.6E+02 | n | 2.0E-01 | n | 2.0E+01 | n | 1.4E+03 | n | 4.5E+05 | n | – | 4.1E+02 | n | 1.0E-01 | n | 1.0E+01 | n | 7.1E+02 | n | 2.9E+04 | n | _ |
| Hexanediol, 1,6- | 629-11-8 | 1.0E+06 | n | 7.8E+02 | n | 7.8E+04 | n >S | 1.0E+06 | n | 1.0E+06 | n >S | – | 1.0E+06 | n | 3.9E+02 | n | 3.9E+04 | n >S | 1.0E+06 | n | 1.0E+06 | n >S | _ |
| Hexanoic acid | 142-62-1 | 1.9E+02 | n | 9.0E+00 | n | 9.0E+02 | n | 1.9E+02 | n | 5.7E+04 | n >S | – | 9.8E+01 | n | 4.5E+00 | n | 4.5E+02 | n | 9.8E+01 | n | 3.7E+03 | n | _ |
| Hexanone, 2- | 591-78-6 | 9.4E+02 | n | 9.6E-01 | n | 9.6E+01 | n | 1.2E+03 | n | 4.3E+04 | n | – | 5.3E+02 | n | 4.8E-01 | n | 4.8E+01 | n | 5.9E+02 | n | 2.7E+03 | n | _ |
| Hexazinone | 51235-04-2 | 2.2E+04 | n | 8.2E+00 | n | 8.2E+02 | n | – | – | – | – | – | 2.2E+04 | n | 4.1E+00 | n | 4.1E+02 | n | – | – | – | – | _ |
| Hexene, 1- | 592-41-6 | 2.3E+03 | n | 2.2E+03 | n | 2.2E+05 | n >S | 2.4E+03 | n | 4.3E+03 | n >S | – | 1.2E+03 | n | 1.1E+03 | n | 1.1E+05 | n >S | 1.2E+03 | n | 2.8E+02 | n | _ |
| Hexene, cis-2- | 7688-21-3 | 2.3E+03 | n | 1.8E+03 | n | 1.8E+05 | n >S | 2.4E+03 | n | 5.2E+03 | n >S | – | 1.2E+03 | n | 9.2E+02 | n | 9.2E+04 | n >S | 1.2E+03 | n | 3.3E+02 | n | _ |
| Hexylene glycol (2-methyl-2,4-pentanediol) | 107-41-5 | 2.0E+05 | n | 4.4E+01 | n | 4.4E+03 | n | – | – | – | – | – | 2.0E+05 | n | 2.2E+01 | n | 2.2E+03 | n | – | – | – | – | _ |
| Hydrazine | 302-01-2 | 7.2E-01 | c | 1.3E-03 | c | 1.3E-01 | c | 7.8E-01 | c | 1.6E+02 | c | – | 3.8E-01 | c | 6.5E-04 | c | 6.5E-02 | c | 4.0E-01 | c | 1.1E+01 | c | _ |
| Hydrocaproic acid, 6- (6-hydroxyhexanoic acid) | 1191-25-9 | 2.2E+02 | n | 9.1E+00 | n | 9.1E+02 | n | 2.3E+02 | n | 7.8E+04 | n >S | – | 1.2E+02 | n | 4.5E+00 | n | 4.5E+02 | n | 1.2E+02 | n | 5.7E+03 | n | _ |
| Hydrogen chloride (hydrochloric acid)* | 7647-01-0 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | _ |
| Hydroquinone | 123-31-9 | 3.2E+02 | c | 7.0E-02 | c | 7.0E+00 | c | – | – | – | – | – | 3.2E+02 | c | 3.5E-02 | c | 3.5E+00 | c | – | – | – | – | _ |
| Indene | 95-13-6 | 1.6E+02 | n | 2.1E+01 | n | 2.1E+03 | n | 1.6E+02 | n | 5.6E+03 | n | – | 8.0E+01 | n | 1.1E+01 | n | 1.1E+03 | n | 8.1E+01 | n | 3.6E+02 | n | _ |
| Indeno-1,2,3-cd-pyrene | 193-39-5 | 1.7E+02 | c | 2.8E+03 | c >S | 2.8E+05 | c >S | 6.2E+04 | c | 1.0E+06 | c >S | – | 1.7E+02 | c | 1.4E+03 | c >S | 1.4E+05 | c >S | 3.2E+04 | c | 1.0E+06 | c >S | _ |
| Iron* | 7439-89-6 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | _ |
| Isoamyl alcohol | 123-51-3 | 5.1E+03 | n | 9.6E-01 | n | 9.6E+01 | n | – | – | – | – | – | 5.1E+03 | n | 4.8E-01 | n | 4.8E+01 | n | – | – | – | – | _ |
| Isobutyl alcohol | 78-83-1 | 3.1E+05 | n | 4.7E+01 | n | 4.7E+03 | n | – | – | – | – | – | 3.1E+05 | n | 2.3E+01 | n | 2.3E+03 | n | – | – | – | – | _ |
| Isobutylene (2-methyl-1-propene) | 115-11-7 | 3.8E+03 | n | 8.2E+00 | n | 8.2E+02 | n | 1.0E+06 | n | 1.0E+06 | n >S | – | 3.8E+03 | n | 4.1E+00 | n | 4.1E+02 | n | 1.0E+06 | n | 1.7E+05 | n >S | _ |

## Table 2
## Tier 1 Commercial/Industrial Soil PCLs[1]

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | 0.5 acre source area | | | | | | | | | | | 30 acre source area | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | $^{Tot}Soil_{Comb}$[2] (mg/kg) | note[3] | $^{GW}Soil_{Ing}$ (mg/kg) | note[3] | $^{GW}Soil_{Class\ 3}$ (mg/kg) | note[3] | $^{Air}Soil_{Inh\text{-}V}$[4] (mg/kg) | note[3] | $^{Air}GW\text{-}Soil_{Inh\text{-}V}$ (mg/kg) | note[3] | $^{GW}$Soil for Secondary MCL (mg/kg) | $^{Tot}Soil_{Comb}$[2] (mg/kg) | note[3] | $^{GW}Soil_{Ing}$ (mg/kg) | note[3] | $^{GW}Soil_{Class\ 3}$ (mg/kg) | note[3] | $^{Air}Soil_{Inh\text{-}V}$[4] (mg/kg) | note[3] | $^{Air}GW\text{-}Soil_{Inh\text{-}V}$ (mg/kg) | note[3] | $^{GW}$Soil for Secondary MCL (mg/kg) |
| Isobutyric acid (2-methylpropanoic acid) | 79-31-2 | 3.4E+05 | n | 7.0E+01 | n | 7.0E+03 | n | – | – | – | – | – | 3.4E+05 | n | 3.5E+01 | n | 3.5E+03 | n | – | – | – | – | _ |
| Isodecanol | 25339-17-7 | 1.1E+03 | n | 8.8E+00 | n | 8.8E+02 | n | – | – | – | – | – | 1.1E+03 | n | 4.4E+00 | n | 4.4E+02 | n | – | – | – | – | _ |
| Isodrin | 465-73-6 | 1.1E-01 | c | 3.3E+00 | c | 3.3E+02 | c | 2.9E+00 | c | 1.6E+04 | c >S | – | 1.0E-01 | c | 1.7E+00 | c | 1.7E+02 | c | 1.5E+00 | c | 1.0E+03 | c | _ |
| Isopentane | 78-78-4 | 5.5E+04 | n | 8.0E+02 | n | 8.0E+04 | n >S | 5.2E+05 | n | 6.3E+05 | n >S | – | 5.0E+04 | n | 4.0E+02 | n | 4.0E+04 | n >S | 2.7E+05 | n | 4.0E+04 | n >S | _ |
| Isophorone | 78-59-1 | 2.0E+04 | c | 6.7E+00 | c | 6.7E+02 | c | – | – | – | – | – | 2.0E+04 | c | 3.4E+00 | c | 3.4E+02 | c | – | – | – | – | _ |
| Isopropyl acetate | 108-21-4 | 7.2E+04 | n | 1.2E+01 | n | 1.2E+03 | n | – | – | – | – | – | 7.2E+04 | n | 6.0E+00 | n | 6.0E+02 | n | – | – | – | – | _ |
| Isopropyl alcohol | 67-63-0 | 1.3E+04 | n | 3.0E+02 | n | 3.0E+04 | n | 1.4E+04 | n | 1.0E+06 | n >S | – | 6.9E+03 | n | 1.5E+02 | n | 1.5E+04 | n | 7.0E+03 | n | 7.8E+04 | n | _ |
| Isosafrole | 120-58-1 | 5.5E+01 | c | 2.9E-01 | c | 2.9E+01 | c | 1.5E+02 | c | 2.2E+04 | c >S | – | 4.1E+01 | c | 1.5E-01 | c | 1.5E+01 | c | 7.9E+01 | c | 1.5E+03 | c | _ |
| Kelthane (dicofol) | 115-32-2 | 4.1E+03 | n | 2.2E+02 | n | 2.2E+04 | n >S | – | – | – | – | – | 4.1E+03 | n | 1.1E+02 | n | 1.1E+04 | n >S | – | – | – | – | _ |
| Kepone (chlordecone) | 143-50-0 | 1.9E+00 | c | 2.2E-01 | c | 2.2E+01 | c | 8.2E+01 | c | 4.3E+05 | c >S | – | 1.8E+00 | c | 1.1E-01 | c | 1.1E+01 | c | 4.2E+01 | c | 2.8E+04 | c >S | _ |
| Lead (inorganic) | 7439-92-1 | 1.6E+03 | e | 3.0E+00 | e >S | 3.0E+02 | e >S | – | – | – | – | – | 1.6E+03 | e | 1.5E+00 | e >S | 1.5E+02 | e >S | – | – | – | – | _ |
| Leptophos | 21609-90-5 | 3.2E+00 | n | 1.9E+00 | n | 1.9E+02 | n >S | 4.7E+01 | n | 4.7E+05 | n >S | – | 3.0E+00 | n | 9.6E-01 | n | 9.6E+01 | n >S | 2.4E+01 | n | 3.0E+04 | n >S | _ |
| Limonene, d-* | 5989-27-5 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | _ |
| Lithium | 7439-93-2 | 1.9E+03 | n | – | – | – | – | – | – | – | – | – | 1.9E+03 | n | – | – | – | – | – | – | – | – | _ |
| Magnesium* | 7439-95-4 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | _ |
| Malathion | 121-75-5 | 2.8E+02 | n | 2.0E+01 | n | 2.0E+03 | n >S | 2.8E+02 | n | 1.7E+05 | n >S | – | 1.4E+02 | n | 9.8E+00 | n | 9.8E+02 | n >S | 1.4E+02 | n | 1.1E+04 | n >S | _ |
| Maleic anhydride | 108-31-6 | 6.8E+04 | n | 2.1E+01 | n | 2.1E+03 | n | – | – | – | – | – | 6.8E+04 | n | 1.1E+01 | n | 1.1E+03 | n | – | – | – | – | _ |
| Maleic hydrazide | 123-33-1 | 3.4E+05 | n | 1.1E+02 | n | 1.1E+04 | n | – | – | – | – | – | 3.4E+05 | n | 5.3E+01 | n | 5.3E+03 | n | – | – | – | – | _ |
| Malononitrile | 109-77-3 | 6.8E+01 | n | 1.5E-02 | n | 1.5E+00 | n | – | – | – | – | – | 6.8E+01 | n | 7.7E-03 | n | 7.7E-01 | n | – | – | – | – | _ |
| Mancozeb | 8018-01-7 | 2.0E+04 | n | 5.4E+00 | n | 5.4E+02 | n >S | – | – | – | – | – | 2.0E+04 | n | 2.7E+00 | n | 2.7E+02 | n >S | – | – | – | – | _ |
| Manganese | 7439-96-5 | 7.3E+04 | n | 1.0E+04 | n >S | 1.0E+06 | n >S | – | – | – | – | 50 | 6.9E+04 | n | 5.1E+03 | n >S | 5.1E+05 | n >S | – | – | – | – | 25 |
| MCPA (4-(chloro-2-methylphenoxy) acetic acid) | 94-74-6 | 3.4E+02 | n | 7.0E-02 | n | 7.0E+00 | n | – | – | – | – | – | 3.4E+02 | n | 3.5E-02 | n | 3.5E+00 | n | – | – | – | – | _ |
| MCPP (2-(4-chloro-2-methylphenoxy) propanoic acid) | 93-65-2 | 6.8E+02 | n | 1.4E-01 | n | 1.4E+01 | n | – | – | – | – | – | 6.8E+02 | n | 7.0E-02 | n | 7.0E+00 | n | – | – | – | – | _ |
| Mercury (pH = 4.9)[5] | 7439-97-6 | 6.2E+00 | n | 7.8E-03 | m | 7.8E-01 | m >S | 6.4E+00 | n | 4.0E+01 | n >S | – | 3.3E+00 | n | 3.9E-03 | m | 3.9E-01 | m >S | 3.3E+00 | n | 2.6E+00 | n >S | _ |
| Mercury (pH=6.8)[5] | 7439-97-6A | 1.9E+01 | n | 2.1E+00 | m | 2.1E+02 | m >S | 2.2E+01 | n | 1.1E+04 | n >S | – | 1.1E+01 | n | 1.0E+00 | m | 1.0E+02 | m >S | 1.1E+01 | n | 6.9E+02 | n >S | _ |
| Merphos | 150-50-5 | 2.0E+01 | n | 1.9E+01 | n | 1.9E+03 | n >S | – | – | – | – | – | 2.0E+01 | n | 9.7E+00 | n | 9.7E+02 | n >S | – | – | – | – | _ |
| Methacrylic acid (2-methyl-2-propenoic acid) | 79-41-4 | 1.0E+04 | n | 1.4E+00 | n | 1.4E+02 | n | – | – | – | – | – | 1.0E+04 | n | 7.0E-01 | n | 7.0E+01 | n | – | – | – | – | _ |
| Methacrylonitrile | 126-98-7 | 8.0E+02 | n | 7.5E+00 | n | 7.5E+02 | n | 8.2E+02 | n | 3.2E+04 | n | – | 4.2E+02 | n | 3.8E+00 | n | 3.8E+02 | n | 4.2E+02 | n | 2.1E+03 | n | _ |
| Methanol | 67-56-1 | 3.7E+05 | n | 2.8E+02 | n | 2.8E+04 | n | 4.6E+05 | n | 1.0E+06 | n >S | – | 2.1E+05 | n | 1.4E+02 | n | 1.4E+04 | n | 2.4E+05 | n | 9.6E+05 | n >S | _ |
| Methapyrilene | 91-80-5 | 4.1E+00 | c | 1.2E-03 | c | 1.2E-01 | c | – | – | – | – | – | 4.1E+00 | c | 5.9E-04 | c | 5.9E-02 | c | – | – | – | – | _ |
| Methomyl | 16752-77-5 | 1.7E+04 | n | 1.5E+01 | n | 1.5E+03 | n | – | – | – | – | – | 1.7E+04 | n | 7.6E+00 | n | 7.6E+02 | n | – | – | – | – | _ |
| Methoxychlor | 72-43-5 | 3.4E+03 | n | 1.2E+02 | m | 1.2E+04 | m >S | – | – | – | – | – | 3.4E+03 | n | 6.2E+01 | m | 6.2E+03 | m >S | – | – | – | – | _ |
| Methoxyethanol, 2- | 109-86-4 | 4.2E+02 | n | 1.1E+01 | n | 1.1E+03 | n >S | 4.3E+02 | n | 6.2E+02 | n >S | – | 2.2E+02 | n | 5.4E+00 | n | 5.4E+02 | n >S | 2.2E+02 | n | 4.0E+01 | n | _ |
| Methyl acetate (acetic acid, methyl ester) | 79-20-9 | 1.0E+06 | n | 1.5E+02 | n | 1.5E+04 | n | – | – | – | – | – | 1.0E+06 | n | 7.3E+01 | n | 7.3E+03 | n | – | – | – | – | _ |
| Methyl acrylate | 96-33-3 | 3.6E+02 | n | 3.1E-01 | n | 3.1E+01 | n | 4.3E+02 | n | 7.9E+03 | n | – | 2.0E+02 | n | 1.5E-01 | n | 1.5E+01 | n | 2.2E+02 | n | 5.1E+02 | n | _ |
| Methyl amyl ketone (2-heptanone) | 110-43-0 | 3.8E+04 | n | 1.4E+01 | n | 1.4E+03 | n | 1.6E+05 | n | 1.0E+06 | n >S | – | 3.1E+04 | n | 7.1E+00 | n | 7.1E+02 | n | 8.0E+04 | n | 3.9E+05 | n >S | _ |
| Methyl chrysene, 1- | 3351-28-8 | 2.4E+03 | c | 5.0E+04 | c >S | 1.0E+06 | c >S | 1.0E+06 | c | 1.0E+06 | c >S | – | 2.4E+03 | c | 2.5E+04 | c >S | 1.0E+06 | c >S | 1.0E+06 | c | 1.0E+06 | c >S | _ |
| Methyl chrysene, 2- | 3351-32-4 | 2.4E+03 | c | 5.0E+04 | c >S | 1.0E+06 | c >S | 1.0E+06 | c | 1.0E+06 | c >S | – | 2.4E+03 | c | 2.5E+04 | c >S | 1.0E+06 | c >S | 1.0E+06 | c | 1.0E+06 | c >S | _ |
| Methyl chrysene, 6- | 1705-85-7 | 2.4E+02 | c | 4.0E+03 | c >S | 4.0E+05 | c >S | 3.9E+05 | c | 1.0E+06 | c >S | – | 2.4E+02 | c | 2.0E+03 | c >S | 2.0E+05 | c >S | 2.0E+05 | c | 1.0E+06 | c >S | _ |
| Methyl cyclohexane | 108-87-2 | 6.4E+04 | n | 4.6E+04 | n >S | 1.0E+06 | n >S | 6.4E+04 | n | 2.5E+05 | n >S | – | 3.3E+04 | n | 2.3E+04 | n >S | 1.0E+06 | n >S | 3.3E+04 | n | 1.6E+04 | n >S | _ |
| Methyl ethyl ketone (2-butanone) | 78-93-3 | 1.9E+05 | n | 8.7E+01 | n | 8.7E+03 | n | 2.8E+05 | n | 1.0E+06 | n >S | – | 1.2E+05 | n | 4.4E+01 | n | 4.4E+03 | n | 1.5E+05 | n | 8.7E+05 | n >S | _ |
| Methyl iodide (iodomethane) | 74-88-4 | 1.4E+03 | n | 3.4E-01 | n | 3.4E+01 | n | – | – | – | – | – | 1.4E+03 | n | 1.7E-01 | n | 1.7E+01 | n | – | – | – | – | _ |
| Methyl isobutyl ketone (4-methyl-2-pentanone) | 108-10-1 | 4.1E+04 | n | 1.5E+01 | n | 1.5E+03 | n | 8.1E+04 | n | 1.0E+06 | n >S | – | 2.8E+04 | n | 7.4E+00 | n | 7.4E+02 | n | 4.2E+04 | n | 1.5E+05 | n >S | _ |
| Methyl mercury | 22967-92-6 | 9.7E+01 | n | – | – | – | – | – | – | – | – | – | 9.7E+01 | n | – | – | – | – | – | – | – | – | _ |
| Methyl methacrylate | 80-62-6 | 1.5E+04 | n | 2.9E+02 | n | 2.9E+04 | n | 1.5E+04 | n | 3.2E+05 | n >S | – | 7.7E+03 | n | 1.5E+02 | n | 1.5E+04 | n | 7.7E+03 | n | 2.0E+04 | n | _ |
| Methyl methanesulfonate | 66-27-3 | 9.5E+01 | c | 4.0E-02 | c | 4.0E+00 | c | 1.9E+02 | c | 5.4E+04 | c | – | 6.4E+01 | c | 2.0E-02 | c | 2.0E+00 | c | 9.7E+01 | c | 3.5E+03 | c | _ |
| Methyl parathion | 298-00-0 | 1.7E+02 | n | 5.1E-01 | n | 5.1E+01 | n | – | – | – | – | – | 1.7E+02 | n | 2.5E-01 | n | 2.5E+01 | n | – | – | – | – | _ |
| Methyl-1-butene, 2- | 563-46-2 | 5.3E+04 | n | 1.9E+02 | n | 1.9E+04 | n >S | 3.9E+05 | n | 4.8E+05 | n >S | – | 4.7E+04 | n | 9.7E+01 | n | 9.7E+03 | n >S | 2.0E+05 | n | 3.1E+04 | n >S | _ |

## Table 2
## Tier 1 Commercial/Industrial Soil PCLs[1]

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | 0.5 acre source area | | | | | | | | | | | 30 acre source area | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | $^{Tot}Soil_{Comb}$[2] (mg/kg) | note[3] | $^{GW}Soil_{Ing}$ (mg/kg) | note[3] | $^{GW}Soil_{Class\ 3}$ (mg/kg) | note[3] | $^{Air}Soil_{Inh\text{-}V}$[4] (mg/kg) | note[3] | $^{Air}GW\text{-}Soil_{Inh\text{-}V}$ (mg/kg) | note[3] | $^{GW}$Soil for Secondary MCL (mg/kg) | $^{Tot}Soil_{Comb}$[2] (mg/kg) | note[3] | $^{GW}Soil_{Ing}$ (mg/kg) | note[3] | $^{GW}Soil_{Class\ 3}$ (mg/kg) | note[3] | $^{Air}Soil_{Inh\text{-}V}$[4] (mg/kg) | note[3] | $^{Air}GW\text{-}Soil_{Inh\text{-}V}$ (mg/kg) | note[3] | $^{GW}$Soil for Secondary MCL (mg/kg) |
| Methyl-1-propanal, 2- (isobutyraldehyde) | 78-84-2 | 4.1E+04 | n | 6.2E+00 | n | 6.2E+02 | n | – | – | – | – | – | 4.1E+04 | n | 3.1E+00 | n | 3.1E+02 | n | – | – | – | – | _ |
| Methyl-2-butene, 2- | 513-35-9 | 5.3E+04 | n | 1.2E+02 | n | 1.2E+04 | n >S | 3.9E+05 | n | 5.5E+05 | n >S | – | 4.7E+04 | n | 5.8E+01 | n | 5.8E+03 | n >S | 2.0E+05 | n | 3.6E+04 | n >S | _ |
| Methyl-2-pentenal, 2- | 623-36-9 | 1.5E+01 | c | 3.3E-03 | c | 3.3E-01 | c | – | – | – | – | – | 1.5E+01 | c | 1.6E-03 | c | 1.6E-01 | c | – | – | – | – | _ |
| Methylcholanthrene, 3- | 56-49-5 | 7.9E-01 | c | 3.4E+01 | c | 3.4E+03 | c >S | 3.0E+03 | c | 1.0E+06 | c >S | – | 7.9E-01 | c | 1.7E+01 | c | 1.7E+03 | c >S | 1.5E+03 | c | 1.0E+06 | c >S | _ |
| Methylene bromide (dibromomethane) | 74-95-3 | 1.1E+02 | n | 2.5E+00 | c | 2.5E+02 | c | 1.1E+02 | n | 3.1E+03 | n | – | 5.9E+01 | n | 1.3E+00 | c | 1.3E+02 | c | 5.9E+01 | n | 2.0E+02 | n | _ |
| Methylene chloride (dichloromethane) | 75-09-2 | 1.2E+04 | n | 1.3E-02 | m | 1.3E+00 | m | 2.1E+04 | c | 9.4E+04 | c >S | – | 8.6E+03 | n | 6.5E-03 | m | 6.5E-01 | m | 1.1E+04 | c | 6.1E+03 | c | _ |
| Methylene-bis (2-chloroaniline) 4,4'- | 101-14-4 | 1.8E+02 | c | 6.5E+00 | c | 6.5E+02 | c | 4.5E+03 | c | 1.0E+06 | c >S | – | 1.8E+02 | c | 3.2E+00 | c | 3.2E+02 | c | 2.3E+03 | c | 6.9E+05 | c >S | _ |
| Methylmecury hydroxide | 1184-57-2 | 6.8E+01 | n | 1.4E-02 | n | 1.4E+00 | n | – | – | – | – | – | 6.8E+01 | n | 7.1E-03 | n | 7.1E-01 | n | – | – | – | – | _ |
| Methylnaphthalene, 1- | 90-12-0 | 6.0E+02 | c | 6.6E+00 | c | 6.6E+02 | c | – | – | – | – | – | 6.0E+02 | c | 3.3E+00 | c | 3.3E+02 | c | – | – | – | – | _ |
| Methylnaphthalene, 2- | 91-57-6 | 2.5E+03 | n | 5.1E+01 | n | 5.1E+03 | n >S | – | – | – | – | – | 2.5E+03 | n | 2.5E+01 | n | 2.5E+03 | n >S | – | – | – | – | _ |
| Methylpyrrolidone, N- | 872-50-4 | 1.4E+04 | n | 2.9E+00 | n | 2.9E+02 | n | – | – | – | – | – | 1.4E+04 | n | 1.4E+00 | n | 1.4E+02 | n | – | – | – | – | _ |
| Methylstyrene, alpha- | 98-83-9 | 6.3E+02 | n | 1.9E+01 | n | 1.9E+03 | n | 6.8E+02 | n | 3.0E+04 | n >S | – | 3.3E+02 | n | 9.7E+00 | n | 9.7E+02 | n | 3.5E+02 | n | 1.9E+03 | n >S | _ |
| Methyltetrahydrofuran, 2- | 96-47-9 | 2.9E+02 | c | 6.2E-01 | c | 6.2E+01 | c | 3.2E+02 | c | 7.0E+03 | c | – | 1.6E+02 | c | 3.1E-01 | c | 3.1E+01 | c | 1.6E+02 | c | 4.5E+02 | c | _ |
| Methyltetrahydropyran, 2- | 10141-72-7 | 3.3E+02 | c | 7.3E-01 | c | 7.3E+01 | c | 3.7E+02 | c | 9.6E+03 | c | – | 1.8E+02 | c | 3.6E-01 | c | 3.6E+01 | c | 1.9E+02 | c | 6.2E+02 | c | _ |
| Metolachlor | 51218-45-2 | 1.0E+05 | n | 3.3E+02 | n | 3.3E+04 | n >S | – | – | – | – | – | 1.0E+05 | n | 1.6E+02 | n | 1.6E+04 | n >S | – | – | – | – | _ |
| Metribuzin | 21087-64-9 | 1.7E+04 | n | 3.7E+00 | n | 3.7E+02 | n | – | – | – | – | – | 1.7E+04 | n | 1.8E+00 | n | 1.8E+02 | n | – | – | – | – | _ |
| Mirex | 2385-85-5 | 1.4E+02 | n | 1.3E+04 | n >S | 1.0E+06 | n >S | – | – | – | – | – | 1.4E+02 | n | 6.7E+03 | n >S | 6.7E+05 | n >S | – | – | – | – | _ |
| Molinate | 2212-67-1 | 1.4E+03 | n | 5.7E-01 | n | 5.7E+01 | n | – | – | – | – | – | 1.4E+03 | n | 2.9E-01 | n | 2.9E+01 | n | – | – | – | – | _ |
| Molybdenum | 7439-98-7 | 4.5E+03 | n | 1.5E+02 | n >S | 1.5E+04 | n >S | – | – | – | – | – | 4.5E+03 | n | 7.3E+01 | n >S | 7.3E+03 | n >S | – | – | – | – | _ |
| Monocrotophos | 2157-98-4 | 4.1E+02 | n | 8.8E-02 | n | 8.8E+00 | n | – | – | – | – | – | 4.1E+02 | n | 4.4E-02 | n | 4.4E+00 | n | – | – | – | – | _ |
| Morpholine | 110-91-8 | 1.0E+06 | n | 7.1E+04 | n | 1.0E+06 | n | – | – | – | – | – | 1.0E+06 | n | 3.6E+04 | n | 9.8E+05 | n | – | – | – | – | _ |
| Morpholine, N-butyl- | 1005-67-0 | 1.6E+03 | n | 6.9E-01 | n | 6.9E+01 | n | – | – | – | – | – | 1.6E+03 | n | 3.5E-01 | n | 3.5E+01 | n | – | – | – | – | _ |
| MTBE (methyl tert-butyl ether)[6] | 1634-04-4 | 2.0E+03 | c | 1.9E+00 | n | 1.9E+02 | n | 2.3E+03 | c | 1.7E+04 | c | 3.8E-02 | 1.1E+03 | c | 9.3E-01 | n | 9.3E+01 | n | 1.2E+03 | c | 1.1E+03 | c | 0.019 |
| Naled | 300-76-5 | 1.4E+03 | n | 1.1E+00 | n | 1.1E+02 | n >S | – | – | – | – | – | 1.4E+03 | n | 5.3E-01 | n | 5.3E+01 | n >S | – | – | – | – | _ |
| Naphthalene | 91-20-3 | 3.6E+02 | n | 9.3E+01 | n | 9.3E+03 | n >S | 3.7E+02 | n | 2.8E+04 | n >S | – | 1.9E+02 | n | 4.7E+01 | n | 4.7E+03 | n >S | 1.9E+02 | n | 1.8E+03 | n >S | _ |
| Naphthoquinone, 1,4- | 130-15-4 | 4.8E+03 | n | 1.4E+00 | n | 1.4E+02 | n | – | – | – | – | – | 4.8E+03 | n | 6.9E-01 | n | 6.9E+01 | n | – | – | – | – | _ |
| Naphthylamine, 1- | 134-32-7 | 1.4E+04 | n | 2.8E+01 | n | 2.8E+03 | n | – | – | – | – | – | 1.4E+04 | n | 1.4E+01 | n | 1.4E+03 | n | – | – | – | – | _ |
| Naphthylamine, 2- | 91-59-8 | 1.1E+01 | c | 2.9E-02 | c | 2.9E+00 | c | – | – | – | – | – | 1.1E+01 | c | 1.4E-02 | c | 1.4E+00 | c | – | – | – | – | _ |
| Napropamide | 15299-99-7 | 6.8E+04 | n | 1.6E+03 | n | 1.6E+05 | n >S | – | – | – | – | – | 6.8E+04 | n | 8.2E+02 | n | 8.2E+04 | n >S | – | – | – | – | _ |
| Neopentyl glycol | 126-30-7 | 2.0E+05 | n | 4.4E+01 | n | 4.4E+03 | n | – | – | – | – | – | 2.0E+05 | n | 2.2E+01 | n | 2.2E+03 | n | – | – | – | – | _ |
| Nickel and compounds | 7440-02-0 | 8.8E+03 | n | 4.7E+02 | n >S | 4.7E+04 | n >S | – | – | – | – | – | 8.6E+03 | n | 2.3E+02 | n >S | 2.3E+04 | n >S | – | – | – | – | _ |
| Nitrate-N[7] | 14797-55-8 | 1.0E+06 | n | – | – | – | – | – | – | – | – | – | 1.0E+06 | n | – | – | – | – | – | – | – | – | _ |
| Nitrite-N[7, 9] | 14797-65-0 | 9.7E+04 | n | – | – | – | – | – | – | – | – | – | 9.7E+04 | n | – | – | – | – | – | – | – | – | _ |
| Nitroaniline, 2- | 88-74-4 | 5.0E+01 | n | 6.6E-02 | n | 6.6E+00 | n | 6.7E+01 | n | 1.7E+04 | n >S | – | 2.9E+01 | n | 3.3E-02 | n | 3.3E+00 | n | 3.4E+01 | n | 1.1E+03 | n | _ |
| Nitroaniline, 3- | 99-09-2 | 5.9E+01 | n | 7.6E-02 | n | 7.6E+00 | n | 8.4E+01 | n | 2.3E+04 | n >S | – | 3.6E+01 | n | 3.8E-02 | n | 3.8E+00 | n | 4.3E+01 | n | 1.5E+03 | n >S | _ |
| Nitroaniline, 4- | 100-01-6 | 9.5E+02 | c | 2.4E-01 | c | 2.4E+01 | c | 1.7E+03 | n | 4.7E+05 | n >S | – | 6.6E+02 | n | 1.2E-01 | c | 1.2E+01 | c | 8.7E+02 | n | 3.1E+04 | n >S | _ |
| Nitrobenzene | 98-95-3 | 1.1E+02 | c | 1.0E+00 | n | 1.0E+02 | n | 1.1E+02 | c | 8.7E+03 | c | – | 5.7E+01 | c | 5.2E-01 | n | 5.2E+01 | n | 5.7E+01 | c | 5.6E+02 | c | _ |
| Nitroglycerin | 55-63-0 | 6.8E+01 | n | 4.1E-02 | n | 4.1E+00 | n | – | – | – | – | – | 6.8E+01 | n | 2.1E-02 | n | 2.1E+00 | n | – | – | – | – | _ |
| Nitrophenol, 2- | 88-75-5 | 1.4E+03 | n | 4.0E-01 | n | 4.0E+01 | n | – | – | – | – | – | 1.4E+03 | n | 2.0E-01 | n | 2.0E+01 | n | – | – | – | – | _ |
| Nitrophenol, 3- | 554-84-7 | 1.4E+03 | n | 6.8E-01 | n | 6.8E+01 | n | – | – | – | – | – | 1.4E+03 | n | 3.4E-01 | n | 3.4E+01 | n | – | – | – | – | _ |
| Nitrophenol, 4- | 100-02-7 | 1.4E+03 | n | 3.0E-01 | n | 3.0E+01 | n | – | – | – | – | – | 1.4E+03 | n | 1.5E-01 | n | 1.5E+01 | n | – | – | – | – | _ |
| Nitropropane, 2- | 79-46-9 | 2.2E-01 | c | 2.1E-02 | n | 2.1E+00 | n | 2.2E-01 | c | 6.0E+00 | c | – | 1.1E-01 | c | 1.1E-02 | n | 1.1E+00 | n | 1.1E-01 | c | 3.9E-01 | c | _ |
| Nitroquinoline-N-oxide, 4- | 56-57-5 | 1.2E+00 | c | 5.2E-04 | c | 5.2E-02 | c | 3.2E+00 | c | 4.5E+04 | c | – | 9.0E-01 | c | 2.6E-04 | c | 2.6E-02 | c | 1.6E+00 | c | 2.2E+04 | c | _ |
| Nitrosodiethanolamine | 1116-54-7 | 6.8E+00 | c | 1.5E-03 | c | 1.5E-01 | c | – | – | – | – | – | 6.8E+00 | c | 7.4E-04 | c | 7.4E-02 | c | – | – | – | – | _ |
| Nitrosodiethylamine, n- | 55-18-5 | 7.0E-02 | c | 2.8E-05 | c | 2.8E-03 | c | 1.1E-01 | c | 2.5E+01 | c | – | 4.4E-02 | c | 1.4E-05 | c | 1.4E-03 | c | 5.7E-02 | c | 1.6E+00 | c | _ |
| Nitrosodimethylamine, n- | 62-75-9 | 2.1E-01 | c | 8.3E-05 | c | 8.3E-03 | c | 3.3E-01 | c | 7.0E+01 | c | – | 1.3E-01 | c | 4.1E-05 | c | 4.1E-03 | c | 1.7E-01 | c | 4.5E+00 | c | _ |
| Nitrosodi-n-butylamine, n- | 924-16-3 | 1.2E+00 | c | 4.2E-03 | c | 4.2E-01 | c | 1.7E+00 | c | 8.8E+01 | c | – | 7.1E-01 | c | 2.1E-03 | c | 2.1E-01 | c | 9.0E-01 | c | 5.7E+00 | c | _ |
| Nitrosodi-n-propylamine, n- | 621-64-7 | 1.4E+00 | c | 7.9E-04 | c | 7.9E-02 | c | – | – | – | – | – | 1.4E+00 | c | 3.9E-04 | c | 3.9E-02 | c | – | – | – | – | _ |

## Table 2
## Tier 1 Commercial/Industrial Soil PCLs[1]

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | 0.5 acre source area | | | | | | | | | | | 30 acre source area | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | $^{Tot}Soil_{Comb}$[2] (mg/kg) | note[3] | $^{GW}Soil_{Ing}$ (mg/kg) | note[3] | $^{GW}Soil_{Class\ 3}$ (mg/kg) | note[3] | $^{Air}Soil_{Inh\text{-}V}$[4] (mg/kg) | note[3] | $^{Air}GW\text{-}Soil_{Inh\text{-}V}$ (mg/kg) | note[3] | $^{GW}$Soil for Secondary MCL (mg/kg) | $^{Tot}Soil_{Comb}$[2] (mg/kg) | note[3] | $^{GW}Soil_{Ing}$ (mg/kg) | note[3] | $^{GW}Soil_{Class\ 3}$ (mg/kg) | note[3] | $^{Air}Soil_{Inh\text{-}V}$[4] (mg/kg) | note[3] | $^{Air}GW\text{-}Soil_{Inh\text{-}V}$ (mg/kg) | note[3] | $^{GW}$Soil for Secondary MCL (mg/kg) |
| Nitrosodiphenylamine | 86-30-6 | 1.9E+03 | c | 6.3E+00 | c | 6.3E+02 | c >S | – | – | – | – | – | 1.9E+03 | c | 3.2E+00 | c | 3.2E+02 | c >S | – | – | – | – | _ |
| Nitroso-methyl-ethyl-amine, n- | 10595-95-6 | 1.3E+00 | c | 2.6E-04 | c | 2.6E-02 | c | – | – | – | – | – | 1.3E+00 | c | 1.3E-04 | c | 1.3E-02 | c | – | – | – | – | _ |
| Nitrosomorpholine, N- | 59-89-2 | 1.4E+00 | c | 5.9E-04 | c | 5.9E-02 | c | 2.9E+00 | c | 8.8E+02 | c | – | 9.7E-01 | c | 2.9E-04 | c | 2.9E-02 | c | 1.5E+00 | c | 5.7E+01 | c | _ |
| Nitroso-n-ethylurea, n- | 759-73-9 | 1.4E-01 | c | 4.7E-05 | c | 4.7E-03 | c | – | – | – | – | – | 1.4E-01 | c | 2.3E-05 | c | 2.3E-03 | c | – | – | – | – | _ |
| Nitrosopiperidine, N- | 100-75-4 | 1.1E+00 | c | 4.6E-04 | c | 4.6E-02 | c | 2.2E+00 | c | 5.9E+02 | c | – | 7.4E-01 | c | 2.3E-04 | c | 2.3E-02 | c | 1.2E+00 | c | 3.8E+01 | c | _ |
| Nitrosopyrrolidine, n- | 930-55-2 | 4.7E+00 | c | 1.9E-03 | c | 1.9E-01 | c | 9.8E+00 | c | 3.1E+03 | c | – | 3.2E+00 | c | 9.5E-04 | c | 9.5E-02 | c | 5.0E+00 | c | 2.0E+02 | c | _ |
| Nitrotoluene, m- | 99-08-1 | 6.8E+03 | n | 5.5E+00 | n | 5.5E+02 | n | – | – | – | – | – | 6.8E+03 | n | 2.8E+00 | n | 2.8E+02 | n | – | – | – | – | _ |
| Nitrotoluene, o- | 88-72-2 | 8.7E+01 | c | 7.0E-02 | c | 7.0E+00 | c | – | – | – | – | – | 8.7E+01 | c | 3.5E-02 | c | 3.5E+00 | c | – | – | – | – | _ |
| Nitrotoluene, p- | 99-99-0 | 1.2E+03 | c | 9.6E-01 | c | 9.6E+01 | c | – | – | – | – | – | 1.2E+03 | c | 4.8E-01 | c | 4.8E+01 | c | – | – | – | – | _ |
| Nonachlor, cis- | 5103-73-1 | 5.3E+01 | c | 2.8E+01 | c | 2.8E+03 | c >S | 2.1E+03 | c | 1.0E+06 | c >S | – | 5.2E+01 | c | 1.4E+01 | c | 1.4E+03 | c >S | 1.1E+03 | c | 4.0E+05 | c >S | _ |
| Nonachlor, trans- | 39765-80-5 | 5.3E+01 | c | 2.8E+01 | c | 2.8E+03 | c >S | 2.1E+03 | c | 1.0E+06 | c >S | – | 5.2E+01 | c | 1.4E+01 | c | 1.4E+03 | c >S | 1.1E+03 | c | 4.0E+05 | c >S | _ |
| Nonanal | 124-19-6 | 1.4E+05 | n | 4.4E+02 | n | 4.4E+04 | n >S | – | – | – | – | – | 1.4E+05 | n | 2.2E+02 | n | 2.2E+04 | n >S | – | – | – | – | _ |
| Nonene, 1-n | 124-11-8 | 1.0E+05 | n | 9.9E+03 | n >S | 9.9E+05 | n >S | – | – | – | – | – | 1.0E+05 | n | 4.9E+03 | n >S | 4.9E+05 | n >S | – | – | – | – | _ |
| Nonylphenol, 4-n- | 104-40-5 | 6.8E+04 | n | 8.8E+05 | n >S | 1.0E+06 | n >S | – | – | – | – | – | 6.8E+04 | n | 4.4E+05 | n >S | 1.0E+06 | n >S | – | – | – | – | _ |
| Nonylphenol ethoxylate | 9016-45-9 | 6.8E+04 | n | 1.0E+06 | n >S | 1.0E+06 | n >S | – | – | – | – | – | 6.8E+04 | n | 1.0E+06 | n >S | 1.0E+06 | n >S | – | – | – | – | _ |
| Octamethylpyrophosphoramide | 152-16-9 | 1.4E+03 | n | 2.8E-01 | n | 2.8E+01 | n | – | – | – | – | – | 1.4E+03 | n | 1.4E-01 | n | 1.4E+01 | n | – | – | – | – | _ |
| Octanone | 106-68-3 | 5.8E+04 | n | 3.3E+01 | n | 3.3E+03 | n | 1.0E+06 | n | 1.0E+06 | n >S | – | 5.6E+04 | n | 1.6E+01 | n | 1.6E+03 | n | 6.5E+05 | n | 1.0E+06 | n >S | _ |
| Oxamyl | 23135-22-0 | 1.7E+04 | n | 4.2E-01 | m | 4.2E+01 | m | – | – | – | – | – | 1.7E+04 | n | 2.1E-01 | m | 2.1E+01 | m | – | – | – | – | _ |
| Oxychlordane | 27304-13-8 | 5.3E+01 | c | 2.8E+01 | c | 2.8E+03 | c >S | 2.1E+03 | c | 1.0E+06 | c >S | – | 5.2E+01 | c | 1.4E+01 | c | 1.4E+03 | c >S | 1.1E+03 | c | 4.0E+05 | c >S | _ |
| Paraquat | 1910-42-5 | 3.1E+03 | n | 6.3E-01 | n | 6.3E+01 | n | – | – | – | – | – | 3.1E+03 | n | 3.1E-01 | n | 3.1E+01 | n | – | – | – | – | _ |
| Parathion (ethyl parathion) | 56-38-2 | 4.1E+03 | n | 9.9E+01 | n | 9.9E+03 | n >S | – | – | – | – | – | 4.1E+03 | n | 4.9E+01 | n | 4.9E+03 | n >S | – | – | – | – | _ |
| Pebulate | 1114-71-2 | 3.4E+04 | n | 7.0E+01 | n | 7.0E+03 | n >S | – | – | – | – | – | 3.4E+04 | n | 3.5E+01 | n | 3.5E+03 | n >S | – | – | – | – | _ |
| Pendimethalin | 40487-42-1 | 2.7E+04 | n | 2.2E+04 | n >S | 1.0E+06 | n >S | – | – | – | – | – | 2.7E+04 | n | 1.1E+04 | n >S | 1.0E+06 | n >S | – | – | – | – | _ |
| Pentachlorobenzene | 608-93-5 | 5.5E+02 | n | 7.4E+01 | n | 7.4E+03 | n >S | – | – | – | – | – | 5.5E+02 | n | 3.7E+01 | n | 3.7E+03 | n >S | – | – | – | – | _ |
| Pentachloroethane | 76-01-7 | 1.1E+02 | c | 2.2E-01 | c | 2.2E+01 | c | 1.6E+02 | c | 4.8E+03 | c | – | 6.5E+01 | c | 1.1E-01 | c | 1.1E+01 | c | 8.1E+01 | c | 3.1E+02 | c | _ |
| Pentachloronitrobenzene | 82-68-8 | 7.3E+01 | c | 4.1E+00 | c | 4.1E+02 | c >S | – | – | – | – | – | 7.3E+01 | c | 2.1E+00 | c | 2.1E+02 | c >S | – | – | – | – | _ |
| Pentachlorophenol | 87-86-5 | 3.2E+01 | c | 1.8E-02 | m | 1.8E+00 | m | – | – | – | – | – | 3.2E+01 | c | 9.2E-03 | m | 9.2E-01 | m | – | – | – | – | _ |
| Pentadiene, 1,3-cis- | 1574-41-0 | 5.3E+04 | n | 5.6E+01 | n | 5.6E+03 | n | 3.9E+05 | n | 7.7E+05 | n >S | – | 4.7E+04 | n | 2.8E+01 | n | 2.8E+03 | n | 2.0E+05 | n | 5.0E+04 | n >S | _ |
| Pentadiene, 1,3-trans- | 2004-70-8 | 5.3E+04 | n | 3.9E+01 | n | 3.9E+03 | n | 3.9E+05 | n | 9.3E+05 | n >S | – | 4.7E+04 | n | 1.9E+01 | n | 1.9E+03 | n | 2.0E+05 | n | 6.0E+04 | n >S | _ |
| Pentaerythritol tetranitrate (PETN) | 78-11-5 | 1.4E+03 | n | 3.7E+01 | n | 3.7E+03 | n | – | – | – | – | – | 1.4E+03 | n | 1.8E+01 | n | 1.8E+03 | n | – | – | – | – | _ |
| Pentane | 109-66-0 | 5.5E+04 | n | 1.0E+03 | n | 1.0E+05 | n >S | 5.2E+05 | n | 1.1E+05 | n >S | – | 5.0E+04 | n | 5.2E+02 | n | 5.2E+04 | n >S | 2.7E+05 | n | 7.3E+03 | n >S | _ |
| Pentane, 2-methyl- | 107-83-5 | 5.3E+04 | n | 1.1E+03 | n | 1.1E+05 | n >S | 3.9E+05 | n | 6.4E+05 | n >S | – | 4.7E+04 | n | 5.7E+02 | n | 5.7E+04 | n >S | 2.0E+05 | n | 4.1E+04 | n >S | _ |
| Pentane, 3-methyl- | 96-14-0 | 5.3E+04 | n | 9.3E+02 | n | 9.3E+04 | n >S | 3.9E+05 | n | 6.6E+05 | n >S | – | 4.7E+04 | n | 4.7E+02 | n | 4.7E+04 | n >S | 2.0E+05 | n | 4.3E+04 | n >S | _ |
| Pentanediol, 1,5- | 111-29-5 | 1.0E+06 | n | 7.2E+02 | n | 7.2E+04 | n | 1.0E+06 | n | 1.0E+06 | n >S | – | 1.0E+06 | n | 3.6E+02 | n | 3.6E+04 | n | 1.0E+06 | n | 9.9E+05 | n >S | _ |
| Pentanol, 1- | 71-41-0 | 3.4E+04 | n | 6.8E+00 | n | 6.8E+02 | n | – | – | – | – | – | 3.4E+04 | n | 3.4E+00 | n | 3.4E+02 | n | – | – | – | – | _ |
| Pentanol, 4-methyl-2- | 108-11-2 | 2.7E+04 | n | 5.3E+00 | n | 5.3E+02 | n | – | – | – | – | – | 2.7E+04 | n | 2.6E+00 | n | 2.6E+02 | n | – | – | – | – | _ |
| Pentanone, 2- | 107-87-9 | 4.1E+04 | n | 6.6E+00 | n | 6.6E+02 | n | – | – | – | – | – | 4.1E+04 | n | 3.3E+00 | n | 3.3E+02 | n | – | – | – | – | _ |
| Pentene, 2- | 109-68-2 | 5.3E+04 | n | 1.4E+02 | n | 1.4E+04 | n >S | 3.9E+05 | n | 6.2E+05 | n >S | – | 4.7E+04 | n | 7.0E+01 | n | 7.0E+03 | n >S | 2.0E+05 | n | 4.0E+04 | n >S | _ |
| Pentyne, 1- | 627-19-0 | 5.3E+04 | n | 3.8E+01 | n | 3.8E+03 | n | 3.9E+05 | n | 8.7E+05 | n >S | – | 4.7E+04 | n | 1.9E+01 | n | 1.9E+03 | n | 2.0E+05 | n | 5.6E+04 | n >S | _ |
| Perchlorate | 14797-73-0 | 5.7E+02 | n | 4.2E-01 | n | 4.2E+01 | n | – | – | – | – | – | 5.7E+02 | n | 2.1E-01 | n | 2.1E+01 | n | – | – | – | – | _ |
| Perfluorooctanoic sulfonic acid (1-Octanesulfonic acid, heptadecafluoro-1-) | 1763-23-1 | 1.5E+01 | n | 1.5E-01 | n | 1.5E+01 | n | 2.2E+02 | n | 2.3E+05 | n >S | – | 1.4E+01 | n | 7.5E-02 | n | 7.5E+00 | n | 1.1E+02 | n | 1.5E+04 | n | _ |
| Perfluoroundecanoic acid (Undecanoic acid, uncosafluoro-) | 2058-94-8 | 8.2E+00 | n | 5.5E-02 | n | 5.5E+00 | n | – | – | – | – | – | 8.2E+00 | n | 2.7E-02 | n | 2.7E+00 | n | – | – | – | – | _ |
| Perfluoropentanoic acid (Pentanoic acid, nonafluoro-) | 2706-90-3 | 2.6E+00 | n | 9.5E-04 | n | 9.5E-02 | n | – | – | – | – | – | 2.6E+00 | n | 4.8E-04 | n | 4.8E-02 | n | – | – | – | – | _ |
| Perfluorohexanoic acid (Hexanoic acid, undecafluoro-) | 307-24-4 | 2.6E+00 | n | 1.4E-03 | n | 1.4E-01 | n | – | – | – | – | – | 2.6E+00 | n | 7.2E-04 | n | 7.2E-02 | n | – | – | – | – | _ |
| Perfluorododecanoic acid (Dodecanoic acid, tricosafluoro-) | 307-55-1 | 7.5E+00 | n | 1.0E-01 | n | 1.0E+01 | n >S | 9.7E+01 | n | 8.9E+04 | n >S | – | 7.0E+00 | n | 5.0E-02 | n | 5.0E+00 | n >S | 5.0E+01 | n | 5.8E+03 | n >S | _ |
| Perfluorooctanoic acid (Octanoic acid, pentadecafluoro-) | 335-67-1 | 2.4E+00 | n | 8.8E-03 | n | 8.8E-01 | n | 3.4E+00 | n | 1.3E+03 | n | – | 1.4E+00 | n | 4.4E-03 | n | 4.4E-01 | n | 1.7E+00 | n | 8.3E+01 | n | _ |
| Perfluorodecanoic acid (Decanoic acid, nonadecafluoro-) | 335-76-2 | 9.4E+00 | n | 6.7E-02 | n | 6.7E+00 | n | 1.2E+02 | n | 1.1E+05 | n >S | – | 8.8E+00 | n | 3.3E-02 | n | 3.3E+00 | n | 6.2E+01 | n | 7.1E+03 | n >S | _ |

## Table 2
## Tier 1 Commercial/Industrial Soil PCLs[1]

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | 0.5 acre source area | | | | | | | | | | | 30 acre source area | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | $^{Tot}Soil_{Comb}$[2] (mg/kg) | note[3] | $^{GW}Soil_{Ing}$ (mg/kg) | note[3] | $^{GW}Soil_{Class\ 3}$ (mg/kg) | note[3] | $^{Air}Soil_{Inh\text{-}V}$[4] (mg/kg) | note[3] | $^{Air}GW\text{-}Soil_{Inh\text{-}V}$ (mg/kg) | note[3] | $^{GW}$Soil for Secondary MCL (mg/kg) | $^{Tot}Soil_{Comb}$[2] (mg/kg) | note[3] | $^{GW}Soil_{Ing}$ (mg/kg) | note[3] | $^{GW}Soil_{Class\ 3}$ (mg/kg) | note[3] | $^{Air}Soil_{Inh\text{-}V}$[4] (mg/kg) | note[3] | $^{Air}GW\text{-}Soil_{Inh\text{-}V}$ (mg/kg) | note[3] | $^{GW}$Soil for Secondary MCL (mg/kg) |
| Perfluorodecane sulfonic acid (1-Decanesulfonic acid, heneicosafluoro-) | 335-77-3 | 8.2E+00 | n | 1.2E-01 | n | 1.2E+01 | n >S | – | – | – | – | – | 8.2E+00 | n | 6.0E-02 | n | 6.0E+00 | n >S | – | – | – | – | _ |
| Perfluorohexane sulfonic acid (1-Hexanesulfonic acid, triddecafluoro-) | 355-46-4 | 2.2E+00 | n | 6.1E-03 | n | 6.1E-01 | n | 1.6E+01 | n | 8.8E+03 | n >S | – | 2.0E+00 | n | 3.0E-03 | n | 3.0E-01 | n | 8.2E+00 | n | 8.7E+02 | n | _ |
| Perfluorobutyric acid (Butanoic acid, heptafluoro-) | 375-22-4 | 1.1E+03 | n | 5.8E-01 | n | 5.8E+01 | n | 2.7E+03 | n | 1.0E+06 | n >S | – | 8.2E+02 | n | 2.9E-01 | n | 2.9E+01 | n | 1.4E+03 | n | 1.0E+06 | n >S | _ |
| Perfluorobutane sulfonic acid (1-Butanesulfonic acid, nonafluoro-) | 375-73-5 | 6.0E+02 | n | 3.2E-01 | n | 3.2E+01 | n | 1.6E+03 | n | 1.0E+06 | n >S | – | 4.4E+02 | n | 1.6E-01 | n | 1.6E+01 | n | 8.2E+02 | n | 1.0E+06 | n >S | _ |
| Perfluoroheptanoic acid (Heptanoic acid, tridecafluoro-) | 375-85-9 | 1.6E+01 | n | 1.4E-02 | n | 1.4E+00 | n | – | – | – | – | – | 1.6E+01 | n | 6.8E-03 | n | 6.8E-01 | n | – | – | – | – | _ |
| Perfluorononanoic acid (Nonanoic acid, heptadecafluoro-) | 375-95-1 | 6.1E+00 | n | 9.2E-03 | n | 9.2E-01 | n | 2.4E+01 | n | 9.5E+03 | n >S | – | 4.9E+00 | n | 4.6E-03 | n | 4.6E-01 | n | 1.2E+01 | n | 6.2E+02 | n >S | _ |
| Perfluorotetradecanoic acid (Tetradecanoic acid, heptacosafluoro-) | 376-06-7 | 8.2E+00 | n | 3.4E-01 | n | 3.4E+01 | n >S | – | – | – | – | – | 8.2E+00 | n | 1.7E-01 | n | 1.7E+01 | n >S | – | – | – | – | _ |
| Perfluorotridecanoic acid (Tridecanoic acid, pentacosafluoro-) | 72629-94-8 | 8.2E+00 | n | 1.8E-01 | n | 1.8E+01 | n >S | – | – | – | – | – | 8.2E+00 | n | 9.1E-02 | n | 9.1E+00 | n >S | – | – | – | – | _ |
| Perfluorooctane sulfonamide (1-Octanesulfonamide, hetpadecafluoro-) | 754-91-6 | 8.7E-02 | n | 2.8E+00 | n | 2.8E+02 | n >S | 8.8E-02 | n | 2.3E-01 | n | – | 4.5E-02 | n | 1.4E+00 | n | 1.4E+02 | n >S | 4.5E-02 | n | 1.5E-02 | n | _ |
| Perylene | 198-55-0 | 1.4E+04 | n | 2.3E+05 | n >S | 1.0E+06 | n >S | – | – | – | – | – | 1.4E+04 | n | 1.1E+05 | n >S | 1.0E+06 | n >S | – | – | – | – | _ |
| Phenacetin | 62-44-2 | 5.9E+03 | c | 2.8E+00 | c | 2.8E+02 | c | 1.8E+04 | c | 1.0E+06 | c >S | – | 4.5E+03 | c | 1.4E+00 | c | 1.4E+02 | c | 9.4E+03 | c | 3.8E+05 | c >S | _ |
| Phenanthrene | 85-01-8 | 1.9E+04 | n | 1.2E+03 | n >S | 1.2E+05 | n >S | – | – | – | – | – | 1.9E+04 | n | 6.2E+02 | n >S | 6.2E+04 | n >S | – | – | – | – | _ |
| Phenanthridine | 229-87-8 | 2.0E+03 | n | 1.6E+01 | n | 1.6E+03 | n | – | – | – | – | – | 2.0E+03 | n | 7.9E+00 | n | 7.9E+02 | n | – | – | – | – | _ |
| Phenol | 108-95-2 | 2.7E+03 | n | 5.7E+01 | n | 5.7E+03 | n | 2.7E+03 | n | 5.8E+05 | n >S | – | 1.4E+03 | n | 2.9E+01 | n | 2.9E+03 | n | 1.4E+03 | n | 3.8E+04 | n | _ |
| Phenol, 4-tert-butyl- | 98-54-4 | 8.2E+04 | n | 3.2E+02 | n | 3.2E+04 | n >S | – | – | – | – | – | 8.2E+04 | n | 1.6E+02 | n | 1.6E+04 | n >S | – | – | – | – | _ |
| Phenothiazine | 92-84-2 | 7.5E+02 | n | 2.4E+01 | n >S | 2.4E+03 | n >S | – | – | – | – | – | 7.5E+02 | n | 1.2E+01 | n >S | 1.2E+03 | n >S | – | – | – | – | _ |
| Phenyl mercuric acetate | 62-38-4 | 5.5E+01 | n | 4.9E-02 | n | 4.9E+00 | n | – | – | – | – | – | 5.5E+01 | n | 2.4E-02 | n | 2.4E+00 | n | – | – | – | – | _ |
| Phenylene diamine, m- | 108-45-2 | 4.1E+03 | n | 8.6E-01 | n | 8.6E+01 | n | – | – | – | – | – | 4.1E+03 | n | 4.3E-01 | n | 4.3E+01 | n | – | – | – | – | _ |
| Phenylene diamine, p- | 106-50-3 | 1.3E+05 | n | 2.7E+01 | n | 2.7E+03 | n | – | – | – | – | – | 1.3E+05 | n | 1.4E+01 | n | 1.4E+03 | n | – | – | – | – | _ |
| Phorate | 298-02-2 | 1.4E+02 | n | 3.2E+00 | n | 3.2E+02 | n | – | – | – | – | – | 1.4E+02 | n | 1.6E+00 | n | 1.6E+02 | n | – | – | – | – | _ |
| Phosalone | 2310-17-0 | 1.4E+03 | n | 7.0E+00 | n | 7.0E+02 | n | – | – | – | – | – | 1.4E+03 | n | 3.5E+00 | n | 3.5E+02 | n | – | – | – | – | _ |
| Phosdrin (mevinphos) | 7786-34-7 | 1.7E+01 | n | 3.5E-03 | n | 3.5E-01 | n | – | – | – | – | – | 1.7E+01 | n | 1.8E-03 | n | 1.8E-01 | n | – | – | – | – | _ |
| Phosmet | 732-11-6 | 1.4E+04 | n | 1.2E+01 | n | 1.2E+03 | n | – | – | – | – | – | 1.4E+04 | n | 6.1E+00 | n | 6.1E+02 | n | – | – | – | – | _ |
| Phosphine | 7803-51-2 | 6.3E+00 | n | – | – | – | – | 6.4E+00 | n | – | – | – | 3.3E+00 | n | – | – | – | – | 3.3E+00 | n | – | – | _ |
| Phosphorotrithioic acid, S,S,S-tributyl ester | 78-48-8 | 2.3E+02 | c | 9.7E+02 | c >S | 9.7E+04 | c >S | – | – | – | – | – | 2.3E+02 | c | 4.8E+02 | c >S | 4.8E+04 | c >S | – | – | – | – | _ |
| Phosphorus, total* | 7723-14-0 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | _ |
| Phosphorus, white | 7723-14-0 | 1.6E+01 | n | 6.9E-02 | n | 6.9E+00 | n | – | – | – | – | – | 1.6E+01 | n | 3.4E-02 | n | 3.4E+00 | n | – | – | – | – | _ |
| Phthalic anhydride | 85-44-9 | 6.6E+04 | n | 7.4E+02 | n | 7.4E+04 | n >S | 7.0E+04 | n | 1.0E+06 | n >S | – | 3.5E+04 | n | 3.7E+02 | n | 3.7E+04 | n >S | 3.6E+04 | n | 1.0E+06 | n >S | _ |
| Picloram | 1918-02-1 | 4.8E+04 | n | 9.8E-01 | m | 9.8E+01 | m | – | – | – | – | – | 4.8E+04 | n | 4.9E-01 | m | 4.9E+01 | m | – | – | – | – | _ |
| Picoline, 2- (2-methylpyridine) | 109-06-8 | 9.2E+03 | n | 1.7E+00 | n | 1.7E+02 | n | – | – | – | – | – | 9.2E+03 | n | 8.4E-01 | n | 8.4E+01 | n | – | – | – | – | _ |
| Polybrominated biphenyls (PBBs) | 67774-32-7 | 2.1E+00 | c | 2.0E-02 | c | 2.0E+00 | c >S | – | – | – | – | – | 2.1E+00 | c | 1.0E-02 | c | 1.0E+00 | c >S | – | – | – | – | _ |
| Polychlorinated biphenyls (PCBs) | 1336-36-3 | 7.7E+00 | c | 1.1E+01 | m | 1.1E+03 | m | 9.1E+01 | c | 1.0E+05 | c >S | – | 7.1E+00 | c | 5.3E+00 | m | 5.3E+02 | m | 4.7E+01 | c | 6.8E+03 | c >S | _ |
| Potassium* | 7440-09-7 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | _ |
| Primene | 68955-53-3 | 4.1E+03 | n | 1.6E+02 | n | 1.6E+04 | n | – | – | – | – | – | 4.1E+03 | n | 8.1E+01 | n | 8.1E+03 | n | – | – | – | – | _ |
| Prometon (pramitol) | 1610-18-0 | 1.0E+04 | n | 2.9E+01 | n | 2.9E+03 | n >S | – | – | – | – | – | 1.0E+04 | n | 1.4E+01 | n | 1.4E+03 | n >S | – | – | – | – | _ |
| Prometryn | 7287-19-6 | 2.7E+04 | n | 2.9E+02 | n | 2.9E+04 | n >S | – | – | – | – | – | 2.7E+04 | n | 1.5E+02 | n | 1.5E+04 | n >S | – | – | – | – | _ |
| Pronamide | 23950-58-5 | 5.1E+04 | n | 5.4E+01 | n | 5.4E+03 | n >S | – | – | – | – | – | 5.1E+04 | n | 2.7E+01 | n | 2.7E+03 | n >S | – | – | – | – | _ |
| Propanal (propionaldehyde) | 123-38-6 | 1.7E+02 | n | 1.2E+00 | n | 1.2E+02 | n | 1.7E+02 | n | 4.6E+03 | n | – | 8.7E+01 | n | 5.9E-01 | n | 5.9E+01 | n | 8.8E+01 | n | 3.0E+02 | n | _ |
| Propane, 1-bromo- | 106-94-5 | 3.7E+04 | n | 1.0E+01 | n | 1.0E+03 | n | – | – | – | – | – | 3.7E+04 | n | 5.1E+00 | n | 5.1E+02 | n | – | – | – | – | _ |
| Propanil | 709-98-8 | 3.4E+03 | n | 1.4E+01 | n | 1.4E+03 | n | – | – | – | – | – | 3.4E+03 | n | 6.9E+00 | n | 6.9E+02 | n | – | – | – | – | _ |
| Propanoic acid (propionic acid) | 79-09-4 | 5.1E+05 | n | 7.0E+01 | n | 7.0E+03 | n | – | – | – | – | – | 5.1E+05 | n | 3.5E+01 | n | 3.5E+03 | n | – | – | – | – | _ |
| Propanol, 1- | 71-23-8 | 2.0E+05 | n | 3.0E+01 | n | 3.0E+03 | n | – | – | – | – | – | 2.0E+05 | n | 1.5E+01 | n | 1.5E+03 | n | – | – | – | – | _ |
| Propargite | 2312-35-8 | 1.4E+04 | n | 3.3E+02 | n >S | 3.3E+04 | n >S | – | – | – | – | – | 1.4E+04 | n | 1.6E+02 | n >S | 1.6E+04 | n >S | – | – | – | – | _ |
| Propargyl alcohol | 107-19-7 | 2.0E+03 | n | 3.1E-01 | n | 3.1E+01 | n | – | – | – | – | – | 2.0E+03 | n | 1.6E-01 | n | 1.6E+01 | n | – | – | – | – | _ |
| Propazine | 139-40-2 | 4.3E+02 | c | 2.1E+00 | c | 2.1E+02 | c | – | – | – | – | – | 4.3E+02 | c | 1.1E+00 | c | 1.1E+02 | c | – | – | – | – | _ |
| Propham | 122-42-9 | 1.4E+04 | n | 5.8E+00 | n | 5.8E+02 | n | – | – | – | – | – | 1.4E+04 | n | 2.9E+00 | n | 2.9E+02 | n | – | – | – | – | _ |

## Table 2
## Tier 1 Commercial/Industrial Soil PCLs[1]

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | 0.5 acre source area | | | | | | | | | | | 30 acre source area | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | $^{Tot}Soil_{Comb}$[2] (mg/kg) | note[3] | $^{GW}Soil_{Ing}$ (mg/kg) | note[3] | $^{GW}Soil_{Class\ 3}$ (mg/kg) | note[3] | $^{Air}Soil_{Inh\text{-}V}$[4] (mg/kg) | note[3] | $^{Air}GW\text{-}Soil_{Inh\text{-}V}$ (mg/kg) | note[3] | $^{GW}$Soil for Secondary MCL (mg/kg) | $^{Tot}Soil_{Comb}$[2] (mg/kg) | note[3] | $^{GW}Soil_{Ing}$ (mg/kg) | note[3] | $^{GW}Soil_{Class\ 3}$ (mg/kg) | note[3] | $^{Air}Soil_{Inh\text{-}V}$[4] (mg/kg) | note[3] | $^{Air}GW\text{-}Soil_{Inh\text{-}V}$ (mg/kg) | note[3] | $^{GW}$Soil for Secondary MCL (mg/kg) |
| Propionitrile (propane nitrile) | 107-12-0 | 4.1E+02 | n | 5.8E-02 | n | 5.8E+00 | n | – | – | – | – | – | 4.1E+02 | n | 2.9E-02 | n | 2.9E+00 | n | – | – | – | – | _ |
| Propyl acetate, n- | 109-60-4 | 9.2E+04 | n | 1.6E+01 | n | 1.6E+03 | n | – | – | – | – | – | 9.2E+04 | n | 7.9E+00 | n | 7.9E+02 | n | – | – | – | – | _ |
| Propylbenzene, n- | 103-65-1 | 7.3E+03 | n | 1.3E+02 | n | 1.3E+04 | n >S | 8.9E+03 | n | 3.9E+05 | n >S | – | 4.1E+03 | n | 6.7E+01 | n | 6.7E+03 | n >S | 4.6E+03 | n | 2.5E+04 | n >S | _ |
| Propylene glycol | 57-55-6 | 5.1E+02 | n | 2.8E+03 | n | 2.8E+05 | n >S | 5.1E+02 | n | 1.3E+05 | n | – | 2.6E+02 | n | 1.4E+03 | n | 1.4E+05 | n >S | 2.6E+02 | n | 8.7E+03 | n | _ |
| Propylene glycol monomethyl ether | 107-98-2 | 2.2E+05 | n | 9.9E+01 | n | 9.9E+03 | n | 3.2E+05 | n | 1.0E+06 | n >S | – | 1.3E+05 | n | 5.0E+01 | n | 5.0E+03 | n | 1.7E+05 | n | 9.7E+05 | n >S | _ |
| Propylene oxide | 75-56-9 | 6.9E+01 | c | 1.7E-02 | c | 1.7E+00 | c | 1.6E+02 | c | 5.3E+03 | c | – | 4.9E+01 | c | 8.4E-03 | c | 8.4E-01 | c | 8.4E+01 | c | 3.4E+02 | c | _ |
| Propylene tetramer | 6842-15-5 | 1.6E+04 | n | 7.6E+04 | n >S | 1.0E+06 | n >S | 2.1E+04 | n | 6.4E+05 | n >S | – | 9.5E+03 | n | 3.8E+04 | n >S | 1.0E+06 | n >S | 1.1E+04 | n | 4.1E+04 | n >S | _ |
| Prothiofos (Tokuthion) | 34643-46-4 | 6.8E+01 | n | 7.2E+03 | n >S | 7.2E+05 | n >S | – | – | – | – | – | 6.8E+01 | n | 3.6E+03 | n >S | 3.6E+05 | n >S | – | – | – | – | _ |
| Pyrene | 129-00-0 | 1.9E+04 | n | 3.3E+03 | n >S | 3.3E+05 | n >S | – | – | – | – | – | 1.9E+04 | n | 1.7E+03 | n >S | 1.7E+05 | n >S | – | – | – | – | _ |
| Pyridine | 110-86-1 | 1.0E+03 | n | 2.1E-01 | n | 2.1E+01 | n | – | – | – | – | – | 1.0E+03 | n | 1.0E-01 | n | 1.0E+01 | n | – | – | – | – | _ |
| Quinoline | 91-22-5 | 6.4E+00 | c | 1.7E-02 | c | 1.7E+00 | c | – | – | – | – | – | 6.4E+00 | c | 8.4E-03 | c | 8.4E-01 | c | – | – | – | – | _ |
| Ronnel | 299-84-3 | 3.4E+04 | n | 1.2E+03 | n >S | 1.2E+05 | n >S | – | – | – | – | – | 3.4E+04 | n | 6.2E+02 | n >S | 6.2E+04 | n >S | – | – | – | – | _ |
| Safrole | 94-59-7 | 4.9E+01 | c | 3.7E-01 | c | 3.7E+01 | c | 1.1E+02 | c | 1.3E+04 | c >S | – | 3.5E+01 | c | 1.8E-01 | c | 1.8E+01 | c | 5.8E+01 | c | 8.1E+02 | c | _ |
| Selenium | 7782-49-2 | 4.9E+03 | n | 2.3E+00 | m >S | 2.3E+02 | m >S | – | – | – | – | – | 4.9E+03 | n | 1.1E+00 | m >S | 1.1E+02 | m >S | – | – | – | – | _ |
| Selenourea | 630-10-4 | 5.1E+03 | n | – | – | – | – | – | – | – | – | – | 5.1E+03 | n | – | – | – | – | – | – | – | – | _ |
| Silver | 7440-22-4 | 2.3E+03 | n | 1.4E+00 | n >S | 1.4E+02 | n >S | – | – | – | – | 0.39 | 2.3E+03 | n | 7.1E-01 | n >S | 7.1E+01 | n >S | – | – | – | – | 0.2 |
| Simazine | 122-34-9 | 1.6E+02 | c | 5.5E-02 | m | 5.5E+00 | m | – | – | – | – | – | 1.6E+02 | c | 2.8E-02 | m | 2.8E+00 | m | – | – | – | – | _ |
| Sodium* | 7440-23-5 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | _ |
| Sodium hypochlorite | 7681-52-9 | 1.2E+05 | n | – | – | – | – | – | – | – | – | – | 9.6E+04 | n | – | – | – | – | – | – | – | – | _ |
| Sodium polyacrylate | 9003-04-7 | 1.7E+02 | n | 7.2E+01 | n | 7.2E+03 | n | 1.7E+02 | n | 4.1E+04 | n | – | 8.7E+01 | n | 3.6E+01 | n | 3.6E+03 | n | 8.7E+01 | n | 2.7E+03 | n | _ |
| Strontium | 7440-24-6 | 4.9E+05 | n | 1.8E+03 | n | 1.8E+05 | n | – | – | – | – | – | 4.9E+05 | n | 9.2E+02 | n | 9.2E+04 | n | – | – | – | – | _ |
| Strychnine | 57-24-9 | 2.0E+02 | n | 1.1E-01 | n | 1.1E+01 | n | – | – | – | – | – | 2.0E+02 | n | 5.6E-02 | n | 5.6E+00 | n | – | – | – | – | _ |
| Styrene | 100-42-5 | 1.5E+04 | n | 3.3E+00 | m | 3.3E+02 | m | 1.6E+04 | n | 6.9E+05 | n >S | – | 7.8E+03 | n | 1.6E+00 | m | 1.6E+02 | m | 8.1E+03 | n | 4.5E+04 | n >S | _ |
| Sulfate* | 14808-79-8 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | _ |
| Sulfide* | 18496-25-8 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | _ |
| Sulfolane | 126-33-0 | 1.1E+03 | n | 1.8E+00 | n | 1.8E+02 | n | 1.2E+03 | n | 3.5E+05 | n >S | – | 5.8E+02 | n | 9.1E-01 | n | 9.1E+01 | n | 6.2E+02 | n | 2.2E+04 | n >S | _ |
| Sulfur* | 7704-34-9 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | _ |
| Sulprofos (Bolstar) | 35400-43-2 | 2.0E+03 | n | 2.3E+04 | n >S | 1.0E+06 | n >S | – | – | – | – | – | 2.0E+03 | n | 1.1E+04 | n >S | 1.0E+06 | n >S | – | – | – | – | _ |
| Tebuconazole | 107534-96-3 | 2.0E+04 | n | 9.4E+01 | n | 9.4E+03 | n >S | – | – | – | – | – | 2.0E+04 | n | 4.7E+01 | n | 4.7E+03 | n >S | – | – | – | – | _ |
| Tebuthiuron | 34014-18-1 | 4.8E+04 | n | 1.6E+01 | n | 1.6E+03 | n | – | – | – | – | – | 4.8E+04 | n | 8.1E+00 | n | 8.1E+02 | n | – | – | – | – | _ |
| Terbufos | 13071-79-9 | 1.7E+01 | n | 1.0E+00 | n | 1.0E+02 | n | – | – | – | – | – | 1.7E+01 | n | 5.0E-01 | n | 5.0E+01 | n | – | – | – | – | _ |
| Tert-amyl ethyl ether (TAEE) | 919-94-8 | 4.1E+04 | n | 2.8E+01 | n | 2.8E+03 | n | – | – | – | – | – | 4.1E+04 | n | 1.4E+01 | n | 1.4E+03 | n | – | – | – | – | _ |
| Tert-amyl-methyl ether (TAME) | 994-05-8 | 4.1E+04 | n | 1.1E+01 | n | 1.1E+03 | n | – | – | – | – | – | 4.1E+04 | n | 5.7E+00 | n | 5.7E+02 | n | – | – | – | – | _ |
| Tert-butyl alcohol (2-methyl-2-propanol) | 75-65-0 | 9.2E+04 | n | 1.4E+01 | n | 1.4E+03 | n | – | – | – | – | – | 9.2E+04 | n | 6.9E+00 | n | 6.9E+02 | n | – | – | – | – | _ |
| Tetrachlorobenzene, 1,2,3,4- | 634-66-2 | 2.0E+02 | n | 3.6E+01 | n | 3.6E+03 | n | – | – | – | – | – | 2.0E+02 | n | 1.8E+01 | n | 1.8E+03 | n | – | – | – | – | _ |
| Tetrachlorobenzene, 1,2,3,5- | 634-90-2 | 2.0E+02 | n | 5.6E+00 | n | 5.6E+02 | n | – | – | – | – | – | 2.0E+02 | n | 2.8E+00 | n | 2.8E+02 | n | – | – | – | – | _ |
| Tetrachlorobenzene, 1,2,4,5- | 95-94-3 | 2.0E+02 | n | 1.4E+00 | n | 1.4E+02 | n >S | – | – | – | – | – | 2.0E+02 | n | 7.2E-01 | n | 7.2E+01 | n >S | – | – | – | – | _ |
| Tetrachloroethane, 1,1,1,2- | 630-20-6 | 1.3E+02 | c | 3.2E+00 | c | 3.2E+02 | c | 1.5E+02 | c | 7.5E+03 | c | – | 7.3E+01 | c | 1.6E+00 | c | 1.6E+02 | c | 7.8E+01 | c | 4.9E+02 | c | _ |
| Tetrachloroethane, 1,1,2,2- | 79-34-5 | 1.4E+02 | c | 5.2E-02 | c | 5.2E+00 | c | – | – | – | – | – | 1.4E+02 | c | 2.6E-02 | c | 2.6E+00 | c | – | – | – | – | _ |
| Tetrachloroethylene | 127-18-4 | 1.4E+03 | c | 5.0E-02 | m | 5.0E+00 | m | 1.6E+03 | c | 8.4E+03 | c >S | – | 7.7E+02 | c | 2.5E-02 | m | 2.5E+00 | m | 8.1E+02 | c | 5.4E+02 | c | _ |
| Tetrachlorophenol, 2,3,4,5- | 4901-51-3 | 2.0E+04 | n | 4.4E+01 | n | 4.4E+03 | n | – | – | – | – | – | 2.0E+04 | n | 2.2E+01 | n | 2.2E+03 | n | – | – | – | – | _ |
| Tetrachlorophenol, 2,3,4,6- | 58-90-2 | 2.0E+04 | n | 1.3E+01 | n | 1.3E+03 | n >S | – | – | – | – | – | 2.0E+04 | n | 6.7E+00 | n | 6.7E+02 | n >S | – | – | – | – | _ |
| Tetrachlorophenol, 2,3,5,6- | 935-95-5 | 2.0E+04 | n | 6.5E+00 | n >S | 6.5E+02 | n >S | – | – | – | – | – | 2.0E+04 | n | 3.2E+00 | n >S | 3.2E+02 | n >S | – | – | – | – | _ |
| Tetrachlorvinphos (Stirophos) | 22248-79-9 | 2.9E+04 | n | 7.1E+03 | n | 7.1E+05 | n >S | – | – | – | – | – | 2.9E+04 | n | 3.5E+03 | n | 3.5E+05 | n >S | – | – | – | – | _ |
| Tetradifon | 116-29-0 | 1.4E+04 | n | 2.6E+02 | n >S | 2.6E+04 | n >S | – | – | – | – | – | 1.4E+04 | n | 1.3E+02 | n >S | 1.3E+04 | n >S | – | – | – | – | _ |
| Tetraethyl dithiopyrophosphate (sulfotep) | 3689-24-5 | 3.4E+02 | n | 1.2E+00 | n | 1.2E+02 | n | – | – | – | – | – | 3.4E+02 | n | 5.8E-01 | n | 5.8E+01 | n | – | – | – | – | _ |
| Tetraethyl lead | 78-00-2 | 6.8E-02 | n | 1.5E-03 | n | 1.5E-01 | n | – | – | – | – | – | 6.8E-02 | n | 7.5E-04 | n | 7.5E-02 | n | – | – | – | – | _ |
| Tetraethyl pyrophosphate (TEPP) | 107-49-3 | 7.5E+00 | n | 2.8E-02 | n | 2.8E+00 | n | – | – | – | – | – | 7.5E+00 | n | 1.4E-02 | n | 1.4E+00 | n | – | – | – | – | _ |

## Table 2
## Tier 1 Commercial/Industrial Soil PCLs[1]

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | 0.5 acre source area | | | | | | | | | | | 30 acre source area | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | $^{Tot}Soil_{Comb}$[2] (mg/kg) | note[3] | $^{GW}Soil_{Ing}$ (mg/kg) | note[3] | $^{GW}Soil_{Class\ 3}$ (mg/kg) | note[3] | $^{Air}Soil_{Inh\text{-}V}$[4] (mg/kg) | note[3] | $^{Air}GW\text{-}Soil_{Inh\text{-}V}$ (mg/kg) | note[3] | $^{GW}$Soil for Secondary MCL (mg/kg) | $^{Tot}Soil_{Comb}$[2] (mg/kg) | note[3] | $^{GW}Soil_{Ing}$ (mg/kg) | note[3] | $^{GW}Soil_{Class\ 3}$ (mg/kg) | note[3] | $^{Air}Soil_{Inh\text{-}V}$[4] (mg/kg) | note[3] | $^{Air}GW\text{-}Soil_{Inh\text{-}V}$ (mg/kg) | note[3] | $^{GW}$Soil for Secondary MCL (mg/kg) |
| Tetraethylene glycol | 112-60-7 | 2.2E+05 | n | 4.6E+01 | n | 4.6E+03 | n | – | – | – | – | – | 2.2E+05 | n | 2.3E+01 | n | 2.3E+03 | n | – | – | – | – | _ |
| Tetrahydrofuran | 109-99-9 | 2.9E+02 | c | 5.6E-01 | c | 5.6E+01 | c | 3.2E+02 | c | 7.8E+03 | c | – | 1.6E+02 | c | 2.8E-01 | c | 2.8E+01 | c | 1.6E+02 | c | 5.0E+02 | c | _ |
| Tetrahydropyran | 142-68-7 | 3.1E+02 | c | 6.1E-01 | c | 6.1E+01 | c | 3.4E+02 | c | 1.0E+04 | c | – | 1.7E+02 | c | 3.0E-01 | c | 3.0E+01 | c | 1.7E+02 | c | 6.5E+02 | c | _ |
| Tetraoxadodecane, 2,5,8,11- | 112-49-2 | 1.7E+04 | n | 5.1E+00 | n | 5.1E+02 | n | – | – | – | – | – | 1.7E+04 | n | 2.6E+00 | n | 2.6E+02 | n | – | – | – | – | _ |
| Thallium | 7440-28-0 | 6.5E+01 | n | 1.7E+00 | m | 1.7E+02 | m | – | – | – | – | – | 6.5E+01 | n | 8.7E-01 | m | 8.7E+01 | m | – | – | – | – | _ |
| Thiofanox | 39196-18-4 | 2.0E+02 | n | 9.4E-02 | n | 9.4E+00 | n | – | – | – | – | – | 2.0E+02 | n | 4.7E-02 | n | 4.7E+00 | n | – | – | – | – | _ |
| Thionazin | 297-97-2 | 4.8E+01 | n | 3.3E-02 | n | 3.3E+00 | n | – | – | – | – | – | 4.8E+01 | n | 1.7E-02 | n | 1.7E+00 | n | – | – | – | – | _ |
| Thiophanate-methyl | 23564-05-8 | 5.5E+04 | n | 1.3E+01 | n >S | 1.3E+03 | n >S | – | – | – | – | – | 5.5E+04 | n | 6.6E+00 | n >S | 6.6E+02 | n >S | – | – | – | – | _ |
| Thiram | 137-26-8 | 3.4E+03 | n | 1.0E+01 | n | 1.0E+03 | n >S | – | – | – | – | – | 3.4E+03 | n | 5.2E+00 | n | 5.2E+02 | n >S | – | – | – | – | _ |
| Tin | 7440-31-5 | 4.1E+05 | n | 1.1E+05 | n >S | 1.0E+06 | n >S | – | – | – | – | – | 4.1E+05 | n | 5.5E+04 | n >S | 1.0E+06 | n >S | – | – | – | – | _ |
| Titanium | 7440-32-6 | 1.0E+06 | n | – | – | – | – | – | – | – | – | – | 1.0E+06 | n | – | – | – | – | – | – | – | – | _ |
| Toluene | 108-88-3 | 4.2E+04 | n | 8.2E+00 | m | 8.2E+02 | m | 8.8E+04 | n | 7.3E+05 | n >S | – | 2.9E+04 | n | 4.1E+00 | m | 4.1E+02 | m | 4.5E+04 | n | 4.7E+04 | n >S | _ |
| Toluene diisocyanate, 2,4/2,6- | 26471-62-5 | 2.0E+02 | n | – | – | – | – | 2.0E+02 | n | 2.4E+05 | n | – | 1.0E+02 | n | – | – | – | – | 1.0E+02 | n | 1.5E+04 | n | _ |
| Toluenediamine, 2,4- | 95-80-7 | 6.0E+00 | c | 3.4E-02 | c | 3.4E+00 | c | – | – | – | – | – | 6.0E+00 | c | 1.7E-02 | c | 1.7E+00 | c | – | – | – | – | _ |
| Toluenediamine, 2,6- | 823-40-5 | 2.0E+04 | n | 4.3E+00 | n | 4.3E+02 | n | – | – | – | – | – | 2.0E+04 | n | 2.2E+00 | n | 2.2E+02 | n | – | – | – | – | _ |
| Toluidine, o- | 95-53-4 | 1.1E+02 | c | 1.3E+00 | c | 1.3E+02 | c | 2.3E+02 | c | 4.5E+04 | c | – | 7.6E+01 | c | 6.5E-01 | c | 6.5E+01 | c | 1.2E+02 | c | 2.9E+03 | c | _ |
| Toluidine, p- | 106-49-0 | 2.3E+02 | c | 2.0E-01 | c | 2.0E+01 | c | – | – | – | – | – | 2.3E+02 | c | 9.9E-02 | c | 9.9E+00 | c | – | – | – | – | _ |
| Toxaphene | 8001-35-2 | 1.7E+01 | c | 1.2E+01 | m | 1.2E+03 | m | 1.6E+03 | c | 1.0E+06 | c >S | – | 1.7E+01 | c | 5.8E+00 | m | 5.8E+02 | m | 8.3E+02 | c | 7.5E+05 | c >S | _ |
| TPH, TX1005, C6-C12 | TPH-1005-1 | 3.9E+03 | n | 1.9E+02 | n | 1.9E+04 | n >S | 4.3E+03 | n | 1.6E+05 | n >S | – | 2.1E+03 | n | 9.7E+01 | n | 9.7E+03 | n >S | 2.2E+03 | n | 1.1E+04 | n >S | _ |
| TPH, TX1005, >C12-C28 | TPH-1005-2 | 1.2E+04 | n | 5.9E+02 | n | 5.9E+04 | n >S | 2.1E+04 | n | 1.0E+06 | n >S | – | 7.8E+03 | n | 3.0E+02 | n | 3.0E+04 | n >S | 1.1E+04 | n | 1.4E+05 | n >S | _ |
| TPH, TX1005, >C12-C35 | TPH-1005-3 | 1.2E+04 | n | 5.9E+02 | n | 5.9E+04 | n >S | 2.1E+04 | n | 1.0E+06 | n >S | – | 7.8E+03 | n | 3.0E+02 | n | 3.0E+04 | n >S | 1.1E+04 | n | 1.4E+05 | n >S | _ |
| TPH, TX1005, >C28-C35 | TPH-1005-4 | 1.2E+04 | n | 5.9E+02 | n | 5.9E+04 | n >S | 2.1E+04 | n | 1.0E+06 | n >S | – | 7.8E+03 | n | 3.0E+02 | n | 3.0E+04 | n >S | 1.1E+04 | n | 1.4E+05 | n >S | _ |
| TP Silvex, 2,4,5- | 93-72-1 | 5.5E+03 | n | 5.3E+00 | m | 5.3E+02 | m | – | – | – | – | – | 5.5E+03 | n | 2.6E+00 | m | 2.6E+02 | m | – | – | – | – | _ |
| Triademenol | 55219-65-3 | 2.0E+04 | n | 2.5E+01 | n | 2.5E+03 | n >S | – | – | – | – | – | 2.0E+04 | n | 1.2E+01 | n | 1.2E+03 | n >S | – | – | – | – | _ |
| Triallate | 2303-17-5 | 8.9E+03 | n | 5.6E+01 | n | 5.6E+03 | n >S | – | – | – | – | – | 8.9E+03 | n | 2.8E+01 | n | 2.8E+03 | n >S | – | – | – | – | _ |
| Triaminotrinitrobenzene (TATB) | 3058-38-6 | 2.0E+03 | n | 4.6E-01 | n | 4.6E+01 | n | – | – | – | – | – | 2.0E+03 | n | 2.3E-01 | n | 2.3E+01 | n | – | – | – | – | _ |
| Tributyltin oxide | 56-35-9 | 2.0E+02 | n | – | – | – | – | – | – | – | – | – | 2.0E+02 | n | – | – | – | – | – | – | – | – | _ |
| Trichloro-1,2,2-trifluoroethane, 1,1,2- | 76-13-1 | 1.1E+05 | n | 2.4E+05 | n >S | 1.0E+06 | n >S | 1.1E+05 | n | 2.3E+05 | n >S | – | 5.5E+04 | n | 1.2E+05 | n >S | 1.0E+06 | n >S | 5.5E+04 | n | 1.5E+04 | n >S | _ |
| Trichlorobenzene, 1,2,3- | 87-61-6 | 3.5E+02 | n | 7.9E+01 | n | 7.9E+03 | n >S | 4.2E+02 | n | 6.7E+04 | n >S | – | 2.0E+02 | n | 3.9E+01 | n | 3.9E+03 | n >S | 2.2E+02 | n | 4.3E+03 | n >S | _ |
| Trichlorobenzene, 1,2,4- | 120-82-1 | 2.0E+02 | n | 4.8E+00 | m | 4.8E+02 | m | 2.1E+02 | n | 1.5E+04 | n >S | – | 1.1E+02 | n | 2.4E+00 | m | 2.4E+02 | m | 1.1E+02 | n | 9.7E+02 | n | _ |
| Trichlorobenzene, 1,3,5- | 108-70-3 | 1.6E+02 | n | 2.2E+01 | n | 2.2E+03 | n >S | 1.8E+02 | n | 1.5E+04 | n >S | – | 8.7E+01 | n | 1.1E+01 | n | 1.1E+03 | n >S | 9.1E+01 | n | 9.4E+02 | n >S | _ |
| Trichloroethane, 1,1,1- | 71-55-6 | 1.0E+05 | n | 1.6E+00 | m | 1.6E+02 | m | 1.1E+05 | n | 4.6E+05 | n >S | – | 5.5E+04 | n | 8.1E-01 | m | 8.1E+01 | m | 5.6E+04 | n | 3.0E+04 | n >S | _ |
| Trichloroethane, 1,1,2- | 79-00-5 | 3.5E+01 | c | 2.0E-02 | m | 2.0E+00 | m | 3.8E+01 | c | 5.4E+02 | c | – | 1.9E+01 | c | 1.0E-02 | m | 1.0E+00 | m | 1.9E+01 | c | 3.5E+01 | c | _ |
| Trichloroethylene | 79-01-6 | 4.0E+01 | n | 3.4E-02 | m | 3.4E+00 | m | 4.3E+01 | n | 2.2E+02 | n | – | 2.1E+01 | n | 1.7E-02 | m | 1.7E+00 | m | 2.2E+01 | n | 1.4E+01 | n | _ |
| Trichlorofluoromethane | 75-69-4 | 3.1E+05 | n | 3.8E+02 | n | 3.8E+04 | n >S | – | – | – | – | – | 3.1E+05 | n | 1.9E+02 | n | 1.9E+04 | n >S | – | – | – | – | _ |
| Trichloronate | 327-98-0 | 2.0E+03 | n | 3.7E+02 | n | 3.7E+04 | n >S | – | – | – | – | – | 2.0E+03 | n | 1.8E+02 | n | 1.8E+04 | n >S | – | – | – | – | _ |
| Trichlorophenol, 2,3,4- | 15950-66-0 | 6.8E+04 | n | 1.8E+02 | n | 1.8E+04 | n | – | – | – | – | – | 6.8E+04 | n | 8.9E+01 | n | 8.9E+03 | n | – | – | – | – | _ |
| Trichlorophenol, 2,3,5- | 933-78-8 | 6.8E+04 | n | 8.3E+01 | n | 8.3E+03 | n | – | – | – | – | – | 6.8E+04 | n | 4.1E+01 | n | 4.1E+03 | n | – | – | – | – | _ |
| Trichlorophenol, 2,3,6- | 933-75-5 | 6.8E+04 | n | 8.6E+01 | n | 8.6E+03 | n >S | – | – | – | – | – | 6.8E+04 | n | 4.3E+01 | n | 4.3E+03 | n >S | – | – | – | – | _ |
| Trichlorophenol, 2,4,5- | 95-95-4 | 6.8E+04 | n | 1.0E+02 | n | 1.0E+04 | n | – | – | – | – | – | 6.8E+04 | n | 5.1E+01 | n | 5.1E+03 | n | – | – | – | – | _ |
| Trichlorophenol, 2,4,6- | 88-06-2 | 6.8E+02 | n | 5.2E-01 | n | 5.2E+01 | n | 3.3E+03 | c | 5.9E+05 | c >S | – | 6.8E+02 | n | 2.6E-01 | n | 2.6E+01 | n | 1.7E+03 | c | 3.8E+04 | c >S | _ |
| Trichlorophenol, 3,4,5- | 609-19-8 | 6.8E+04 | n | 9.8E+02 | n | 9.8E+04 | n | – | – | – | – | – | 6.8E+04 | n | 4.9E+02 | n | 4.9E+04 | n | – | – | – | – | _ |
| Trichlorophenoxyacetic acid, 2,4,5- | 93-76-5 | 6.8E+03 | n | 2.9E+00 | n | 2.9E+02 | n | – | – | – | – | – | 6.8E+03 | n | 1.5E+00 | n | 1.5E+02 | n | – | – | – | – | _ |
| Trichloropropane, 1,1,2- | 598-77-6 | 6.4E+00 | n | 4.3E+00 | n | 4.3E+02 | n | 6.4E+00 | n | 4.5E+01 | n | – | 3.3E+00 | n | 2.2E+00 | n | 2.2E+02 | n | 3.3E+00 | n | 2.9E+00 | n | _ |
| Trichloropropane, 1,2,3- | 96-18-4 | 9.5E-01 | c | 1.2E-03 | c | 1.2E-01 | c | 2.0E+01 | n | 7.9E+02 | n | – | 9.5E-01 | c | 6.0E-04 | c | 6.0E-02 | c | 1.0E+01 | n | 5.1E+01 | n | _ |
| Triethanolamine | 102-71-6 | 5.2E+03 | n | 2.8E+01 | n | 2.8E+03 | n | 5.4E+03 | n | 1.0E+06 | n | – | 2.7E+03 | n | 1.4E+01 | n | 1.4E+03 | n | 2.8E+03 | n | 9.6E+05 | n | _ |
| Triethylamine | 121-44-8 | 1.5E+02 | n | – | – | – | – | 1.5E+02 | n | 2.2E+03 | n | – | 7.7E+01 | n | – | – | – | – | 7.7E+01 | n | 1.4E+02 | n | _ |
| Triethylene glycol | 112-27-6 | 1.0E+06 | n | 2.8E+02 | n | 2.8E+04 | n | – | – | – | – | – | 1.0E+06 | n | 1.4E+02 | n | 1.4E+04 | n | – | – | – | – | _ |

## Table 2
## Tier 1 Commercial/Industrial Soil PCLs[1]

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | 0.5 acre source area | | | | | | | | | | | 30 acre source area | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | $^{Tot}Soil_{Comb}$[2] (mg/kg) | note[3] | $^{GW}Soil_{Ing}$ (mg/kg) | note[3] | $^{GW}Soil_{Class\ 3}$ (mg/kg) | note[3] | $^{Air}Soil_{Inh\text{-}V}$[4] (mg/kg) | note[3] | $^{Air}GW\text{-}Soil_{Inh\text{-}V}$ (mg/kg) | note[3] | $^{GW}$Soil for Secondary MCL (mg/kg) | $^{Tot}Soil_{Comb}$[2] (mg/kg) | note[3] | $^{GW}Soil_{Ing}$ (mg/kg) | note[3] | $^{GW}Soil_{Class\ 3}$ (mg/kg) | note[3] | $^{Air}Soil_{Inh\text{-}V}$[4] (mg/kg) | note[3] | $^{Air}GW\text{-}Soil_{Inh\text{-}V}$ (mg/kg) | note[3] | $^{GW}$Soil for Secondary MCL (mg/kg) |
| Triethylphosphorothioate, O, O, O- | 126-68-1 | 5.7E+00 | n | 1.3E-02 | n | 1.3E+00 | n | – | – | – | – | – | 5.7E+00 | n | 6.5E-03 | n | 6.5E-01 | n | – | – | – | – | _ |
| Trifluralin | 1582-09-8 | 2.5E+03 | c | 1.5E+02 | c | 1.5E+04 | c >S | – | – | – | – | – | 2.5E+03 | c | 7.3E+01 | c | 7.3E+03 | c >S | – | – | – | – | _ |
| Trimethylamine | 75-50-3 | 2.1E+02 | n | – | – | – | – | 2.1E+02 | n | 6.1E+03 | n | – | 1.1E+02 | n | – | – | – | – | 1.1E+02 | n | 3.9E+02 | n | _ |
| Trimethylbenzene, 1,2,3- | 526-73-8 | 4.4E+03 | n | 6.4E+01 | n | 6.4E+03 | n >S | 5.1E+03 | n | 2.0E+05 | n >S | – | 2.4E+03 | n | 3.2E+01 | n | 3.2E+03 | n >S | 2.6E+03 | n | 1.3E+04 | n >S | _ |
| Trimethylbenzene, 1,2,4- | 95-63-6 | 4.9E+03 | n | 9.9E+01 | n | 9.9E+03 | n >S | 5.6E+03 | n | 2.7E+05 | n >S | – | 2.7E+03 | n | 4.9E+01 | n | 4.9E+03 | n >S | 2.9E+03 | n | 1.8E+04 | n >S | _ |
| Trimethylbenzene, 1,3,5- | 108-67-8 | 4.3E+03 | n | 1.1E+02 | n | 1.1E+04 | n >S | 4.9E+03 | n | 2.3E+05 | n >S | – | 2.3E+03 | n | 5.4E+01 | n | 5.4E+03 | n >S | 2.5E+03 | n | 1.5E+04 | n >S | _ |
| Trinitrobenzene, 1,3,5- | 99-35-4 | 2.0E+04 | n | 5.4E+00 | n | 5.4E+02 | n | – | – | – | – | – | 2.0E+04 | n | 2.7E+00 | n | 2.7E+02 | n | – | – | – | – | _ |
| Trinitrophenylmethylnitramine (tetryl; nitramine) | 479-45-8 | 1.6E+03 | n | 1.6E+00 | n | 1.6E+02 | n | – | – | – | – | – | 1.6E+03 | n | 8.2E-01 | n | 8.2E+01 | n | – | – | – | – | _ |
| Trinitrotoluene, 2,4,6- | 118-96-7 | 3.4E+02 | n | 5.1E-01 | n | 5.1E+01 | n | – | – | – | – | – | 3.4E+02 | n | 2.6E-01 | n | 2.6E+01 | n | – | – | – | – | _ |
| Tungsten (as sodium tungstate dihydride) | 7440-33-7 | 8.2E+02 | n | 2.4E+02 | n | 2.4E+04 | n | – | – | – | – | – | 8.2E+02 | n | 1.2E+02 | n | 1.2E+04 | n | – | – | – | – | _ |
| Uranium (soluble salts) | 7440-61-1 | 2.8E+03 | n | 1.8E+03 | m >S | 1.8E+05 | m >S | – | – | – | – | – | 2.6E+03 | n | 8.9E+02 | m >S | 8.9E+04 | m >S | – | – | – | – | _ |
| Valeric acid (pentanoic acid) | 109-52-4 | 1.8E+02 | n | 7.0E+01 | n >S | 7.0E+03 | n >S | 1.8E+02 | n | 5.3E+04 | n >S | – | 9.5E+01 | n | 3.5E+01 | n >S | 3.5E+03 | n >S | 9.5E+01 | n | 3.4E+03 | n >S | _ |
| Vanadium | 7440-62-2 | 6.2E+02 | n | 2.6E+03 | n >S | 2.6E+05 | n >S | – | – | – | – | – | 6.1E+02 | n | 1.3E+03 | n >S | 1.3E+05 | n >S | – | – | – | – | _ |
| Vernam | 1929-77-7 | 6.8E+02 | n | 8.2E+00 | n | 8.2E+02 | n | – | – | – | – | – | 6.8E+02 | n | 4.1E+00 | n | 4.1E+02 | n | – | – | – | – | _ |
| Vinyl acetate | 108-05-4 | 4.3E+03 | n | 1.6E+02 | n | 1.6E+04 | n | 4.3E+03 | n | 4.3E+04 | n | – | 2.2E+03 | n | 8.0E+01 | n | 8.0E+03 | n | 2.2E+03 | n | 2.8E+03 | n | _ |
| Vinyl chloride | 75-01-4 | 1.5E+01 | c | 2.2E-02 | m | 2.2E+00 | m | 7.2E+01 | c | 7.1E+01 | c | – | 1.3E+01 | c | 1.1E-02 | m | 1.1E+00 | m | 3.7E+01 | c | 4.6E+00 | c | _ |
| Vinylcyclohexane | 695-12-5 | 5.1E+05 | n | 4.2E+03 | n >S | 4.2E+05 | n >S | – | – | – | – | – | 5.1E+05 | n | 2.1E+03 | n >S | 2.1E+05 | n >S | – | – | – | – | _ |
| Warfarin | 81-81-2 | 2.0E+02 | n | 8.4E-01 | n | 8.4E+01 | n | – | – | – | – | – | 2.0E+02 | n | 4.2E-01 | n | 4.2E+01 | n | – | – | – | – | _ |
| Xylene, m- | 108-38-3 | 1.3E+04 | n | 1.1E+02 | m | 1.1E+04 | m >S | 1.3E+04 | n | 1.6E+05 | n >S | – | 6.7E+03 | n | 5.3E+01 | m | 5.3E+03 | m >S | 6.7E+03 | n | 1.0E+04 | n >S | _ |
| Xylene, o- | 95-47-6 | 9.1E+04 | n | 7.1E+01 | m | 7.1E+03 | m >S | 9.5E+04 | n | 1.0E+06 | n >S | – | 4.8E+04 | n | 3.5E+01 | m | 3.5E+03 | m >S | 4.9E+04 | n | 4.9E+05 | n >S | _ |
| Xylene, p- | 106-42-3 | 1.3E+04 | n | 1.5E+02 | m | 1.5E+04 | m >S | 1.3E+04 | n | 2.0E+05 | n >S | – | 6.7E+03 | n | 7.5E+01 | m | 7.5E+03 | m >S | 6.7E+03 | n | 1.3E+04 | n >S | _ |
| Xylenes | 1330-20-7 | 1.2E+04 | n | 1.2E+02 | m | 1.2E+04 | m >S | 1.3E+04 | n | 1.8E+05 | n >S | – | 6.5E+03 | n | 6.1E+01 | m | 6.1E+03 | m >S | 6.7E+03 | n | 1.1E+04 | n >S | _ |
| Zinc | 7440-66-6 | 2.5E+05 | n | 7.0E+03 | n >S | 7.0E+05 | n >S | – | – | – | – | 1600 | 2.5E+05 | n | 3.5E+03 | n >S | 3.5E+05 | n >S | – | – | – | – | 800 |
| 6 C aliphatics (TPH) (>53% n-hexane content) | NA | 1.2E+04 | n | 5.1E+02 | n | 5.1E+04 | n >S | 1.4E+04 | n | 1.7E+04 | n >S | – | 6.6E+03 | n | 2.6E+02 | n | 2.6E+04 | n >S | 7.4E+03 | n | 1.1E+03 | n | _ |
| 6 C aliphatics (TPH) (<53% n-hexane content) | NA | 5.3E+04 | n | 5.1E+02 | n | 5.1E+04 | n >S | 4.0E+05 | n | 4.8E+05 | n >S | – | 4.7E+04 | n | 2.6E+02 | n | 2.6E+04 | n >S | 2.0E+05 | n | 3.1E+04 | n >S | _ |
| >6-8 C aliphatics (TPH) (>53% n-hexane content) | NA | 1.2E+04 | n | 1.3E+03 | n | 1.3E+05 | n >S | 1.4E+04 | n | 2.8E+04 | n >S | – | 6.6E+03 | n | 6.3E+02 | n | 6.3E+04 | n >S | 7.4E+03 | n | 1.8E+03 | n >S | _ |
| >6-8 C aliphatics (TPH) (<53% n-hexane content) | NA | 5.3E+04 | n | 1.3E+03 | n | 1.3E+05 | n >S | 4.0E+05 | n | 7.8E+05 | n >S | – | 4.7E+04 | n | 6.3E+02 | n | 6.3E+04 | n >S | 2.0E+05 | n | 5.0E+04 | n >S | _ |
| >8-10 C aliphatics (TPH) | NA | 9.7E+03 | n | 1.1E+04 | n >S | 1.0E+06 | n >S | 1.1E+04 | n | 6.8E+04 | n >S | – | 5.2E+03 | n | 5.4E+03 | n >S | 5.4E+05 | n >S | 5.5E+03 | n | 4.4E+03 | n >S | _ |
| >10-12 C aliphatics (TPH) | NA | 9.3E+03 | n | 7.6E+04 | n >S | 1.0E+06 | n >S | 1.1E+04 | n | 3.2E+05 | n >S | – | 5.1E+03 | n | 3.8E+04 | n >S | 1.0E+06 | n >S | 5.5E+03 | n | 2.1E+04 | n >S | _ |
| >12-16 C aliphatics (TPH) | NA | 1.4E+04 | n | 1.0E+06 | n >S | 1.0E+06 | n >S | 1.7E+04 | n | 1.0E+06 | n >S | – | 7.7E+03 | n | 7.4E+05 | n >S | 1.0E+06 | n >S | 8.7E+03 | n | 9.3E+04 | n >S | _ |
| >16-21 C aliphatics (TPH) | NA | 1.0E+06 | n | 1.0E+06 | n >S | 1.0E+06 | n >S | – | – | – | – | – | 1.0E+06 | n | 1.0E+06 | n >S | 1.0E+06 | n >S | – | – | – | – | _ |
| >16-21 C aliphatics (TPH) (for transformer mineral oil releases only) | NA | 1.0E+06 | n | 1.0E+06 | n >S | 1.0E+06 | n >S | – | – | – | – | – | 1.0E+06 | n | 1.0E+06 | n >S | 1.0E+06 | n >S | – | – | – | – | _ |
| >21-35 C aliphatics (TPH) | NA | 1.0E+06 | n | 1.0E+06 | n >S | 1.0E+06 | n >S | – | – | – | – | – | 1.0E+06 | n | 1.0E+06 | n >S | 1.0E+06 | n >S | – | – | – | – | _ |
| >21-35 C aliphatics (TPH) (for transformer mineral oil releases only) | NA | 1.0E+06 | n | 1.0E+06 | n >S | 1.0E+06 | n >S | – | – | – | – | – | 1.0E+06 | n | 1.0E+06 | n >S | 1.0E+06 | n >S | – | – | – | – | _ |
| >7-8 C aromatics (TPH) | NA | 2.9E+04 | n | 6.0E+01 | n | 6.0E+03 | n >S | 4.1E+04 | n | 3.4E+05 | n >S | – | 1.7E+04 | n | 3.0E+01 | n | 3.0E+03 | n >S | 2.1E+04 | n | 2.2E+04 | n >S | _ |
| >8-10 C aromatics (TPH) | NA | 3.9E+03 | n | 1.9E+02 | n | 1.9E+04 | n >S | 4.3E+03 | n | 1.6E+05 | n >S | – | 2.1E+03 | n | 9.7E+01 | n | 9.7E+03 | n >S | 2.2E+03 | n | 1.1E+04 | n >S | _ |
| >10-12 C aromatics (TPH) | NA | 6.9E+03 | n | 3.0E+02 | n | 3.0E+04 | n >S | 9.2E+03 | n | 6.1E+05 | n >S | – | 4.0E+03 | n | 1.5E+02 | n | 1.5E+04 | n >S | 4.8E+03 | n | 4.0E+04 | n >S | _ |
| >12-16 C aromatics (TPH) | NA | 1.2E+04 | n | 5.9E+02 | n | 5.9E+04 | n >S | 2.1E+04 | n | 1.0E+06 | n >S | – | 7.8E+03 | n | 3.0E+02 | n | 3.0E+04 | n >S | 1.1E+04 | n | 1.4E+05 | n >S | _ |
| >16-21 C aromatics (TPH) | NA | 2.0E+04 | n | 1.4E+03 | n >S | 1.4E+05 | n >S | – | – | – | – | – | 2.0E+04 | n | 7.0E+02 | n >S | 7.0E+04 | n >S | – | – | – | – | _ |
| >21-35 C aromatics (TPH) | NA | 2.0E+04 | n | 1.1E+04 | n >S | 1.0E+06 | n >S | – | – | – | – | – | 2.0E+04 | n | 5.5E+03 | n >S | 5.5E+05 | n >S | – | – | – | – | _ |
| Transformer Mineral Oil | NA | 8.0E+04 | n | 7.5E+05 | n | 1.0E+06 | n | 1.2E+05 | n | 1.0E+06 | n | – | 5.2E+04 | n | 3.7E+05 | n | 1.0E+06 | n | 6.1E+04 | n | 8.6E+05 | n | _ |

**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, the 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 inhalation; ingestion; dermal pathways

**3** c = carcinogenic; n = noncarcinogenic; m = primary MCL-based; e = EPA Action Level-based; > S = solubility limit exceeded during calculation

**4** For subsurface soils only

## Table 2
## Tier 1 Commercial/Industrial Soil PCLs[1]

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | 0.5 acre source area | | | | | | 30 acre source area | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | $^{Tot}Soil_{Comb}$[2] (mg/kg) | note[3] | $^{GW}Soil_{Ing}$ (mg/kg) | note[3] | $^{GW}Soil_{Class\ 3}$ (mg/kg) | note[3] | $^{Air}Soil_{Inh\text{-}V}$[4] (mg/kg) | note[3] | $^{Air}GW\text{-}Soil_{Inh\text{-}V}$ (mg/kg) | note[3] | $^{GW}$Soil for Secondary MCL (mg/kg) | $^{Tot}Soil_{Comb}$[2] (mg/kg) | note[3] | $^{GW}Soil_{Ing}$ (mg/kg) | note[3] | $^{GW}Soil_{Class\ 3}$ (mg/kg) | note[3] | $^{Air}Soil_{Inh\text{-}V}$[4] (mg/kg) | note[3] | $^{Air}GW\text{-}Soil_{Inh\text{-}V}$ (mg/kg) | note[3] | $^{GW}$Soil for Secondary MCL (mg/kg) |

**5** Site-specific PCLs for mercury may vary based on the pH-dependent Kd value (see Figure:30 TAC §350.73(f)(1)(C)).

**6** Persons must use the value provided in the "$^{GW}$Soil for Secondary MCL" column of this table as the $^{GW}$Soil PCL for MTBE if the conditions described in §350.74(f)(3) exist.

**7** Please see the note on nitrate/nitrite in the "List of Updates" spreadsheet for March 31, 2017.

**8** This chemical is one of four chemicals that make up total trihalomethanes (TTHMs). USEPA has established an MCL for TTHMs of 0.08 mg/L. Each individual chemical that contributes to TTHMs must meet the 0.08 mg/L based $^{GW}Soil_{Ing}$ PCL, and the person must ensure that the total soil concentrations for all four will not impact groundwater above the $^{GW}GW_{Ing}$ based MCL.

**9** Nitrate, nitrite, and ammonia are inorganic anions that are mobile in most environmental situations, quickly partitioning from soil to groundwater. Due to these partitioning characteristics it is difficult to calculate a reliable soil-water partition coefficient (Kd) and Henry's law constant (H') for these compounds. The Kd and H' are parameters that are required to calculate the $^{GW}Soil_{Ing}$ PCL in accordance with 30 TAC 350.75(b)(1) using the Tier 1 $^{GW}Soil_{Ing}$ PCL equation.

***** These compounds are not necessarily of concern from a human health standpoint, therefore calculation of human health-based values is not required. However, aesthetics and ecological criteria would still apply. See table entitled "Compounds for which Calculation of a Human Health PCL is Not Required" available on the TCEQ website at http://www.tceq.state.tx.us/remediation/trrp/trrp.html.

NA=Not applicable

All values capped at 1.0E+06

This table shows the commerical industrial protective concentration levels for 0.5 and 30 acre source areas

end of worksheet

## Table 3
## Tier 1 Groundwater PCLs - Residential and Commercial/Industrial[1]

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | Residential | | | | | | | | Commercial/Industrial | | | | | | | | Secondary MCL[5] (mg/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | $^{GW}GW_{Ing}$[2] (mg/L) | note[4] | $^{GW}GW_{Class3}$[3] (mg/L) | note[4] | $^{Air}GW_{Inh-V}$ 0.5 acre source area (mg/L) | note[4] | $^{Air}GW_{Inh-V}$ 30 acre source area (mg/L) | note[4] | $^{GW}GW_{Ing}$[2] (mg/L) | note[4] | $^{GW}GW_{Class3}$[3] (mg/L) | note[4] | $^{Air}GW_{Inh-V}$ 0.5 acre source area (mg/L) | note[4] | $^{Air}GW_{Inh-V}$ 30 acre source area (mg/L) | note[4] | |
| Acenaphthene | 83-32-9 | 1.5E+00 | n | 1.5E+02 | n >S | – | – | – | – | 4.4E+00 | n >S | 4.4E+02 | n >S | – | – | – | – | – |
| Acenaphthylene | 208-96-8 | 1.5E+00 | n | 1.5E+02 | n >S | – | – | – | – | 4.4E+00 | n >S | 4.4E+02 | n >S | – | – | – | – | – |
| Acetaldehyde | 75-07-0 | 2.4E+00 | n | 2.4E+02 | n | 2.4E+03 | n | 3.1E+02 | n | 7.3E+00 | n | 7.3E+02 | n | 3.3E+03 | n | 4.3E+02 | n | – |
| Acetate, 2-ethoxyethanol | 111-15-9 | 2.4E+00 | n | 2.4E+02 | n | 4.5E+05 | n >S | 5.8E+04 | n | 7.3E+00 | n | 7.3E+02 | n | 6.3E+05 | n >S | 8.1E+04 | n | – |
| Acetate, isoamyl | 123-92-2 | 1.8E+00 | n | 1.8E+02 | n | – | – | – | – | 5.3E+00 | n | 5.3E+02 | n | – | – | – | – | – |
| Acetate, isobutyl | 110-19-0 | 1.2E+00 | n | 1.2E+02 | n | – | – | – | – | 3.5E+00 | n | 3.5E+02 | n | – | – | – | – | – |
| Acetate, sec-butyl | 105-46-4 | 1.2E+00 | n | 1.2E+02 | n | – | – | – | – | 3.5E+00 | n | 3.5E+02 | n | – | – | – | – | – |
| Acetic acid* | 64-19-7 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – |
| Acetone (2-propanone) | 67-64-1 | 2.2E+01 | n | 2.2E+03 | n | 1.0E+06 | n >S | 1.0E+06 | n >S | 6.6E+01 | n | 6.6E+03 | n | 1.0E+06 | n >S | 1.0E+06 | n >S | – |
| Acetone cyanohydrin | 75-86-5 | 7.3E-02 | n | 7.3E+00 | n | 3.4E+05 | n | 4.4E+04 | n | 2.2E-01 | n | 2.2E+01 | n | 4.8E+05 | n | 6.2E+04 | n | – |
| Acetonitrile | 75-05-8 | 7.8E-01 | n | 7.8E+01 | n | 3.2E+04 | n | 4.2E+03 | n | 2.3E+00 | n | 2.3E+02 | n | 4.5E+04 | n | 5.8E+03 | n | – |
| Acetophenone | 98-86-2 | 2.4E+00 | n | 2.4E+02 | n | – | – | – | – | 7.3E+00 | n | 7.3E+02 | n | – | – | – | – | – |
| Acetylaminofluorene, 2- | 53-96-3 | 2.4E-04 | c | 2.4E-02 | c | 6.3E+02 | c >S | 1.0E+02 | c >S | 5.4E-04 | c | 5.4E-02 | c | 1.1E+03 | c >S | 1.8E+02 | c >S | – |
| Acifluorfen, sodium | 62476-59-9 | 3.2E-01 | n | 3.2E+01 | n | – | – | – | – | 9.5E-01 | n | 9.5E+01 | n | – | – | – | – | – |
| Acridine | 260-94-6 | 7.3E-02 | n | 7.3E+00 | n | – | – | – | – | 2.2E-01 | n | 2.2E+01 | n | – | – | – | – | – |
| Acrolein | 107-02-8 | 1.2E-02 | n | 1.2E+00 | n | 9.5E+03 | n | 1.2E+03 | n | 3.7E-02 | n | 3.7E+00 | n | 1.3E+04 | n | 1.7E+03 | n | – |
| Acrylamide | 79-06-1 | 1.8E-03 | c | 1.8E-01 | c | 3.8E+03 | c | 5.0E+02 | c | 4.1E-03 | c | 4.1E-01 | c | 6.3E+03 | c | 8.4E+02 | c | – |
| Acrylic acid | 79-10-7 | 1.2E+01 | n | 1.2E+03 | n | 1.5E+04 | n | 2.0E+03 | n | 3.7E+01 | n | 3.7E+03 | n | 2.1E+04 | n | 2.7E+03 | n | – |
| Acrylonitrile | 107-13-1 | 1.7E-03 | c | 1.7E-01 | c | 5.8E+01 | c | 7.5E+00 | c | 3.8E-03 | c | 3.8E-01 | c | 9.7E+01 | c | 1.3E+01 | c | – |
| Adipic acid (hexanedioic acid) | 124-04-9 | 4.9E+01 | n | 4.9E+03 | n | – | – | – | – | 1.5E+02 | n | 1.5E+04 | n | – | – | – | – | – |
| Alachlor | 15972-60-8 | 2.0E-03 | m | 2.0E-01 | m | – | – | – | – | 2.0E-03 | m | 2.0E-01 | m | – | – | – | – | – |
| Aldicarb | 116-06-3 | 7.0E-03 | m | 7.0E-01 | m | – | – | – | – | 7.0E-03 | m | 7.0E-01 | m | – | – | – | – | – |
| Aldicarb sulfone | 1646-88-4 | 7.0E-03 | m | 7.0E-01 | m | – | – | – | – | 7.0E-03 | m | 7.0E-01 | m | – | – | – | – | – |
| Aldrin | 309-00-2 | 5.4E-05 | c | 5.4E-03 | c | 4.4E+00 | c >S | 5.7E-01 | c >S | 1.2E-04 | c | 1.2E-02 | c | 7.4E+00 | c >S | 9.6E-01 | c >S | – |
| Allyl alcohol | 107-18-6 | 1.2E-01 | n | 1.2E+01 | n | 3.0E+02 | n | 3.8E+01 | n | 3.7E-01 | n | 3.7E+01 | n | 4.1E+02 | n | 5.4E+01 | n | – |
| Allyl chloride | 107-05-1 | 2.4E-01 | n | 2.4E+01 | n | 9.1E+00 | n | 1.2E+00 | n | 7.3E-01 | n | 7.3E+01 | n | 1.3E+01 | n | 1.7E+00 | n | – |
| Aluminum | 7429-90-5 | 2.4E+01 | n >S | 2.4E+03 | n >S | – | – | – | – | 7.3E+01 | n >S | 7.3E+03 | n >S | – | – | – | – | 0.2 |
| Ametryn | 834-12-8 | 2.2E-01 | n | 2.2E+01 | n | – | – | – | – | 6.6E-01 | n | 6.6E+01 | n | – | – | – | – | – |
| Amino-2,6-dinitrotoluene, 4- | 19406-51-0 | 4.1E-03 | n | 4.1E-01 | n | – | – | – | – | 1.2E-02 | n | 1.2E+00 | n | – | – | – | – | – |
| Amino-4,6-dinitrotoluene, 2- | 35572-78-2 | 4.1E-03 | n | 4.1E-01 | n | – | – | – | – | 1.2E-02 | n | 1.2E+00 | n | – | – | – | – | – |
| Aminobiphenyl, 4- (1,1-biphenyl-4-amine) | 92-67-1 | 1.5E-04 | c | 1.5E-02 | c | – | – | – | – | 3.4E-04 | c | 3.4E-02 | c | – | – | – | – | – |
| Aminopyridine, 4- | 504-24-5 | 4.9E-04 | n | 4.9E-02 | n | – | – | – | – | 1.5E-03 | n | 1.5E-01 | n | – | – | – | – | – |
| Ammonia[5] | 7664-41-7 | – | – | – | – | 8.7E+03 | n | 1.1E+03 | n | – | – | – | – | 1.2E+04 | n | 1.6E+03 | n | 1.5 |
| Ammonium polyphosphate* | 6833-79-9 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – |
| Ammonium salts* | AMMONIUM | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – |
| Aniline | 62-53-3 | 1.6E-01 | c | 1.6E+01 | c | 1.1E+04 | n | 1.4E+03 | n | 3.6E-01 | c | 3.6E+01 | c | 1.6E+04 | n | 2.0E+03 | n | – |
| Anthracene | 120-12-7 | 7.3E+00 | n >S | 7.3E+02 | n >S | – | – | – | – | 2.2E+01 | n >S | 2.2E+03 | n >S | – | – | – | – | – |
| Anthraquinone, 9,10- | 84-65-1 | 2.3E-02 | c | 2.3E+00 | c >S | – | – | – | – | 5.2E-02 | c | 5.2E+00 | c >S | – | – | – | – | – |
| Antimony | 7440-36-0 | 6.0E-03 | m >S | 6.0E-01 | m >S | – | – | – | – | 6.0E-03 | m >S | 6.0E-01 | m >S | – | – | – | – | – |
| Aramite | 140-57-8 | 3.7E-02 | c | 3.7E+00 | c | – | – | – | – | 8.2E-02 | c | 8.2E+00 | c | – | – | – | – | – |

## Table 3
## Tier 1 Groundwater PCLs - Residential and Commercial/Industrial[1]

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | Residential | | | | | | | | Commercial/Industrial | | | | | | | | Secondary MCL[5] (mg/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | $^{GW}GW_{Ing}$[2] (mg/L) | note[4] | $^{GW}GW_{Class3}$[3] (mg/L) | note[4] | $^{Air}GW_{Inh-V}$ 0.5 acre source area (mg/L) | note[4] | $^{Air}GW_{Inh-V}$ 30 acre source area (mg/L) | note[4] | $^{GW}GW_{Ing}$[2] (mg/L) | note[4] | $^{GW}GW_{Class3}$[3] (mg/L) | note[4] | $^{Air}GW_{Inh-V}$ 0.5 acre source area (mg/L) | note[4] | $^{Air}GW_{Inh-V}$ 30 acre source area (mg/L) | note[4] | |
| Arsenic | 7440-38-2 | 1.0E-02 | m >S | 1.0E+00 | m >S | – | – | – | – | 1.0E-02 | m >S | 1.0E+00 | m >S | – | – | – | – | – |
| Arsine | 7784-42-1 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – |
| Atrazine | 1912-24-9 | 3.0E-03 | m | 3.0E-01 | m | – | – | – | – | 3.0E-03 | m | 3.0E-01 | m | – | – | – | – | – |
| Azinphos-methyl (guthion) | 86-50-0 | 3.7E-02 | n | 3.7E+00 | n >S | – | – | – | – | 1.1E-01 | n >S | 1.1E+01 | n >S | – | – | – | – | – |
| Azobenzene | 103-33-3 | 8.3E-03 | c | 8.3E-01 | c | 6.8E+02 | c >S | 8.8E+01 | c >S | 1.9E-02 | c | 1.9E+00 | c >S | 1.1E+03 | c >S | 1.5E+02 | c >S | – |
| Barium | 7440-39-3 | 2.0E+00 | m >S | 2.0E+02 | m >S | – | – | – | – | 2.0E+00 | m >S | 2.0E+02 | m >S | – | – | – | – | – |
| Bayleton | 43121-43-3 | 7.3E-01 | n | 7.3E+01 | n >S | – | – | – | – | 2.2E+00 | n | 2.2E+02 | n >S | – | – | – | – | – |
| Benefin (benfluralin) | 1861-40-1 | 7.3E+00 | n >S | 7.3E+02 | n >S | – | – | – | – | 2.2E+01 | n >S | 2.2E+03 | n >S | – | – | – | – | – |
| Benomyl | 17804-35-2 | 1.2E+00 | n | 1.2E+02 | n >S | – | – | – | – | 3.7E+00 | n >S | 3.7E+02 | n >S | – | – | – | – | – |
| Benz-a-anthracene | 56-55-3 | 9.1E-03 | c | 9.1E-01 | c >S | 3.0E+03 | c >S | 3.9E+02 | c >S | 2.0E-02 | c >S | 2.0E+00 | c >S | 5.0E+03 | c >S | 6.5E+02 | c >S | – |
| Benzaldehyde | 100-52-7 | 2.4E+00 | n | 2.4E+02 | n | – | – | – | – | 7.3E+00 | n | 7.3E+02 | n | – | – | – | – | – |
| Benzene | 71-43-2 | 5.0E-03 | m | 5.0E-01 | m | 1.8E+02 | c | 2.3E+01 | c | 5.0E-03 | m | 5.0E-01 | m | 3.0E+02 | c | 3.9E+01 | c | – |
| Benzenedicarbonitrile, 1,3- | 626-17-5 | 1.5E-01 | n | 1.5E+01 | n | – | – | – | – | 4.4E-01 | n | 4.4E+01 | n | – | – | – | – | – |
| Benzenedicarboxylic acid, 1,2-disodecyl ester | 26761-40-0 | 9.8E-01 | n >S | 9.8E+01 | n >S | 1.5E+05 | n >S | 1.9E+04 | n >S | 2.9E+00 | n >S | 2.9E+02 | n >S | 2.0E+05 | n >S | 2.6E+04 | n >S | – |
| Benzenethiol | 108-98-5 | 2.4E-02 | n | 2.4E+00 | n | – | – | – | – | 7.3E-02 | n | 7.3E+00 | n | – | – | – | – | – |
| Benzidine | 92-87-5 | 4.0E-06 | c | 4.0E-04 | c | 5.0E+00 | c | 8.4E-01 | c | 8.9E-06 | c | 8.9E-04 | c | 8.4E+00 | c | 1.4E+00 | c | – |
| Benzo-a-pyrene | 50-32-8 | 2.0E-04 | m | 2.0E-02 | m >S | 2.9E+01 | n >S | 3.8E+00 | n >S | 2.0E-04 | m | 2.0E-02 | m >S | 4.1E+01 | n >S | 5.3E+00 | n >S | – |
| Benzo-b-fluoranthene | 205-99-2 | 9.1E-03 | c >S | 9.1E-01 | c >S | 2.4E+03 | c >S | 3.1E+02 | c >S | 2.0E-02 | c >S | 2.0E+00 | c >S | 4.0E+03 | c >S | 5.2E+02 | c >S | – |
| Benzo-e-pyrene | 192-97-2 | 7.3E-01 | n >S | 7.3E+01 | n >S | – | – | – | – | 2.2E+00 | n >S | 2.2E+02 | n >S | – | – | – | – | – |
| Benzo-g,h,i-perylene | 191-24-2 | 7.3E-01 | n >S | 7.3E+01 | n >S | – | – | – | – | 2.2E+00 | n >S | 2.2E+02 | n >S | – | – | – | – | – |
| Benzoic acid | 65-85-0 | 9.8E+01 | n | 9.8E+03 | n >S | – | – | – | – | 2.9E+02 | n | 2.9E+04 | n >S | – | – | – | – | – |
| Benzo-j-fluoranthene | 205-82-3 | 9.1E-03 | c >S | 9.1E-01 | c >S | 1.5E+03 | c >S | 2.0E+02 | c >S | 2.0E-02 | c >S | 2.0E+00 | c >S | 2.6E+03 | c >S | 3.3E+02 | c >S | – |
| Benzo-k-fluoranthene | 207-08-9 | 9.1E-02 | c >S | 9.1E+00 | c >S | 1.4E+05 | c >S | 1.8E+04 | c >S | 2.0E-01 | c >S | 2.0E+01 | c >S | 2.4E+05 | c >S | 3.1E+04 | c >S | – |
| Benzophenone | 119-61-9 | 1.6E-01 | n | 1.6E+01 | n | – | – | – | – | 4.9E-01 | n | 4.9E+01 | n >S | – | – | – | – | – |
| Benzotrichloride | 98-07-7 | 7.0E-05 | c | 7.0E-03 | c | – | – | – | – | 1.6E-04 | c | 1.6E-02 | c | – | – | – | – | – |
| Benzoyl peroxide | 94-36-0 | 1.2E+00 | n | 1.2E+02 | n >S | – | – | – | – | 3.7E+00 | n | 3.7E+02 | n >S | – | – | – | – | – |
| Benzyl alcohol | 100-51-6 | 2.4E+00 | n | 2.4E+02 | n | – | – | – | – | 7.3E+00 | n | 7.3E+02 | n | – | – | – | – | – |
| Benzyl chloride | 100-44-7 | 5.4E-03 | c | 5.4E-01 | c | 1.0E+02 | n | 1.3E+01 | n | 1.2E-02 | c | 1.2E+00 | c | 1.4E+02 | n | 1.8E+01 | n | – |
| Benzyl dichloride | 98-87-3 | 5.4E-03 | c | 5.4E-01 | c | 2.0E+02 | n | 2.6E+01 | n | 1.2E-02 | c | 1.2E+00 | c | 2.8E+02 | n >S | 3.6E+01 | n | – |
| Beryllium | 7440-41-7 | 4.0E-03 | m >S | 4.0E-01 | m >S | – | – | – | – | 4.0E-03 | m >S | 4.0E-01 | m >S | – | – | – | – | – |
| Biphenyl, 1,1- | 92-52-4 | 1.2E+01 | n >S | 1.2E+03 | n >S | – | – | – | – | 3.7E+01 | n >S | 3.7E+03 | n >S | – | – | – | – | – |
| Biphenyl, 1,1'-, 2-phenoxy- | 6738-04-1 | 1.2E+00 | n >S | 1.2E+02 | n >S | – | – | – | – | 3.7E+00 | n >S | 3.7E+02 | n >S | – | – | – | – | – |
| Biquinoline, 2,2'- | 119-91-5 | 7.3E-02 | n | 7.3E+00 | n >S | – | – | – | – | 2.2E-01 | n | 2.2E+01 | n >S | – | – | – | – | – |
| Bis (2-chloroethoxy) methane | 111-91-1 | 8.3E-04 | c | 8.3E-02 | c | 8.0E+01 | c | 1.0E+01 | c | 1.9E-03 | c | 1.9E-01 | c | 1.3E+02 | c | 1.7E+01 | c | – |
| Bis (2-chloroethyl) ether | 111-44-4 | 8.3E-04 | c | 8.3E-02 | c | 9.3E+01 | c | 1.2E+01 | c | 1.9E-03 | c | 1.9E-01 | c | 1.6E+02 | c | 2.0E+01 | c | – |
| Bis (2-chloro-1-methyl) ether | 108-60-1 | 1.3E-02 | c | 1.3E+00 | c | 8.7E+02 | c | 1.1E+02 | c | 2.9E-02 | c | 2.9E+00 | c | 1.5E+03 | c | 1.9E+02 | c | – |
| Bis (2-chloromethyl) ether | 542-88-1 | 4.1E-06 | c | 4.1E-04 | c | 8.5E-02 | c | 1.1E-02 | c | 9.3E-06 | c | 9.3E-04 | c | 1.4E-01 | c | 1.9E-02 | c | – |
| Bis (2-ethyl-hexyl) phthalate | 117-81-7 | 6.0E-03 | m | 6.0E-01 | m >S | – | – | – | – | 6.0E-03 | m | 6.0E-01 | m >S | – | – | – | – | – |
| Bismuth | 7440-69-9 | 1.2E+01 | n | 1.2E+03 | n | – | – | – | – | 3.7E+01 | n | 3.7E+03 | n | – | – | – | – | – |
| Bisphenol A | 80-05-7 | 1.2E+00 | n | 1.2E+02 | n | – | – | – | – | 3.7E+00 | n | 3.7E+02 | n | – | – | – | – | – |

# Table 3
## Tier 1 Groundwater PCLs - Residential and Commercial/Industrial[1]

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | Residential | | | | | | | | Commercial/Industrial | | | | | | | | Secondary MCL[5] (mg/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | $^{GW}GW_{Ing}$[2] (mg/L) | note[4] | $^{GW}GW_{Class3}$[3] (mg/L) | note[4] | $^{Air}GW_{Inh-V}$ 0.5 acre source area (mg/L) | note[4] | $^{Air}GW_{Inh-V}$ 30 acre source area (mg/L) | note[4] | $^{GW}GW_{Ing}$[2] (mg/L) | note[4] | $^{GW}GW_{Class3}$[3] (mg/L) | note[4] | $^{Air}GW_{Inh-V}$ 0.5 acre source area (mg/L) | note[4] | $^{Air}GW_{Inh-V}$ 30 acre source area (mg/L) | note[4] | |
| Boron | 7440-42-8 | 4.9E+00 | n | 4.9E+02 | n | – | – | – | – | 1.5E+01 | n | 1.5E+03 | n | – | – | – | – | – |
| Bromacil | 314-40-9 | 2.4E+00 | n | 2.4E+02 | n | – | – | – | – | 7.3E+00 | n | 7.3E+02 | n | – | – | – | – | – |
| Bromo-2-chloroethane, 1- | 107-04-0 | 9.8E-01 | n | 9.8E+01 | n | – | – | – | – | 2.9E+00 | n | 2.9E+02 | n | – | – | – | – | – |
| Bromobenzene | 108-86-1 | 2.0E-01 | n | 2.0E+01 | n | 2.3E+03 | n >S | 2.9E+02 | n | 5.8E-01 | n | 5.8E+01 | n | 3.2E+03 | n >S | 4.1E+02 | n >S | – |
| Bromodichloromethane[6] | 75-27-4 | 8.0E-02 | m | 8.0E+00 | m | – | – | – | – | 8.0E-02 | m | 8.0E+00 | m | – | – | – | – | – |
| Bromoform[6] | 75-25-2 | 8.0E-02 | m | 8.0E+00 | m | 5.1E+03 | c >S | 6.7E+02 | c | 8.0E-02 | m | 8.0E+00 | m | 8.6E+03 | c >S | 1.1E+03 | c | – |
| Bromomethane | 74-83-9 | 3.4E-02 | n | 3.4E+00 | n | 4.6E+01 | n | 6.0E+00 | n | 1.0E-01 | n | 1.0E+01 | n | 6.4E+01 | n | 8.3E+00 | n | – |
| Bromophenyl phenylether, 4- | 101-55-3 | 6.1E-05 | c | 6.1E-03 | c | 1.6E+00 | c >S | 2.0E-01 | c | 1.4E-04 | c | 1.4E-02 | c | 2.7E+00 | c >S | 3.4E-01 | c | – |
| Butadiene, 1,3- | 106-99-0 | – | – | – | – | 3.6E+01 | n | 4.7E+00 | n | – | – | – | – | 5.1E+01 | n | 6.6E+00 | n | – |
| Butadiene, 2-methyl-1,3- (isoprene) | 78-79-5 | 1.5E+00 | n | 1.5E+02 | n | 8.2E+04 | n >S | 1.1E+04 | n >S | 4.4E+00 | n | 4.4E+02 | n | 1.2E+05 | n >S | 1.5E+04 | n >S | – |
| Butanal (butyraldehyde) | 123-72-8 | 1.5E+00 | n | 1.5E+02 | n | 2.0E+04 | n | 2.6E+03 | n | 4.4E+00 | n | 4.4E+02 | n | 2.8E+04 | n | 3.6E+03 | n | – |
| Butane, 2,3-dimethyl- | 79-29-8 | 1.5E+00 | n | 1.5E+02 | n >S | 2.4E+03 | n >S | 3.0E+02 | n >S | 4.4E+00 | n | 4.4E+02 | n >S | 3.3E+03 | n >S | 4.3E+02 | n >S | – |
| Butanoic acid (butyric acid) | 107-92-6 | 1.2E+01 | n | 1.2E+03 | n | 1.9E+04 | n | 2.5E+03 | n | 3.7E+01 | n | 3.7E+03 | n | 2.7E+04 | n | 3.4E+03 | n | – |
| Butanol, 2- | 78-92-2 | 4.9E+01 | n | 4.9E+03 | n | 1.0E+06 | n >S | 1.0E+06 | n >S | 1.5E+02 | n | 1.5E+04 | n | 1.0E+06 | n >S | 1.0E+06 | n >S | – |
| Butanol, 2-methyl-1- | 137-32-6 | 2.4E-01 | n | 2.4E+01 | n | – | – | – | – | 7.3E-01 | n | 7.3E+01 | n | – | – | – | – | – |
| Butanol, 2-methyl-2- | 75-85-4 | 2.4E-01 | n | 2.4E+01 | n | – | – | – | – | 7.3E-01 | n | 7.3E+01 | n | – | – | – | – | – |
| Butanol, n- | 71-36-3 | 2.4E+00 | n | 2.4E+02 | n | – | – | – | – | 7.3E+00 | n | 7.3E+02 | n | – | – | – | – | – |
| Butene, 1- | 106-98-9 | 1.5E+00 | n | 1.5E+02 | n | 2.9E+03 | n >S | 3.8E+02 | n >S | 4.4E+00 | n | 4.4E+02 | n >S | 4.1E+03 | n >S | 5.3E+02 | n >S | – |
| Butene, cis-2- | 590-18-1 | 1.5E+00 | n | 1.5E+02 | n | 1.3E+03 | n >S | 1.7E+02 | n | 4.4E+00 | n | 4.4E+02 | n >S | 1.8E+03 | n >S | 2.3E+02 | n | – |
| Butene, trans-2- | 624-64-6 | 1.5E+00 | n | 1.5E+02 | n | 1.3E+03 | n >S | 1.7E+02 | n | 4.4E+00 | n | 4.4E+02 | n >S | 1.8E+03 | n >S | 2.3E+02 | n | – |
| Butoxy ethanol, 2- (Ethylene glycol monobutyl ether; EGBE) | 111-76-2 | 2.4E+00 | n | 2.4E+02 | n | 1.0E+06 | n >S | 1.0E+06 | n >S | 7.3E+00 | n | 7.3E+02 | n | 1.0E+06 | n >S | 1.0E+06 | n >S | – |
| Butyl acetate | 123-86-4 | 3.4E+00 | n | 3.4E+02 | n | 7.0E+05 | n >S | 9.1E+04 | n >S | 1.0E+01 | n | 1.0E+03 | n | 9.8E+05 | n >S | 1.3E+05 | n >S | – |
| Butyl acrylate | 141-32-2 | 2.2E-01 | n | 2.2E+01 | n | – | – | – | – | 6.6E-01 | n | 6.6E+01 | n | – | – | – | – | – |
| Butyl benzyl phthalate | 85-68-7 | 4.8E-01 | c | 4.8E+01 | c >S | – | – | – | – | 1.1E+00 | c | 1.1E+02 | c >S | – | – | – | – | – |
| Butyl ether, n- (dibutyl ether) | 142-96-1 | 2.4E+00 | n | 2.4E+02 | n | – | – | – | – | 7.3E+00 | n | 7.3E+02 | n >S | – | – | – | – | – |
| Butyl methacrylate | 97-88-1 | 2.2E+00 | n | 2.2E+02 | n | – | – | – | – | 6.6E+00 | n | 6.6E+02 | n >S | – | – | – | – | – |
| Butylate | 2008-41-5 | 1.2E+00 | n | 1.2E+02 | n >S | – | – | – | – | 3.7E+00 | n | 3.7E+02 | n >S | – | – | – | – | – |
| Butylbenzene, n- | 104-51-8 | 1.2E+00 | n | 1.2E+02 | n >S | – | – | – | – | 3.7E+00 | n | 3.7E+02 | n >S | – | – | – | – | – |
| Butylbenzene, sec- | 135-98-8 | 9.8E-01 | n | 9.8E+01 | n >S | – | – | – | – | 2.9E+00 | n | 2.9E+02 | n >S | – | – | – | – | – |
| Butylbenzene, tert- | 98-06-6 | 9.8E-01 | n | 9.8E+01 | n >S | – | – | – | – | 2.9E+00 | n | 2.9E+02 | n >S | – | – | – | – | – |
| Cacodylic acid | 75-60-5 | 7.3E-02 | n | 7.3E+00 | n | – | – | – | – | 2.2E-01 | n | 2.2E+01 | n | – | – | – | – | – |
| Cadmium | 7440-43-9 | 5.0E-03 | m >S | 5.0E-01 | m >S | – | – | – | – | 5.0E-03 | m >S | 5.0E-01 | m >S | – | – | – | – | – |
| Calcium* | 7440-70-2 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – |
| Caprolactam | 105-60-2 | 1.2E+01 | n | 1.2E+03 | n | – | – | – | – | 3.7E+01 | n | 3.7E+03 | n | – | – | – | – | – |
| Captan | 133-06-2 | 2.6E-01 | c | 2.6E+01 | c >S | – | – | – | – | 5.8E-01 | c >S | 5.8E+01 | c >S | – | – | – | – | – |
| Carbaryl | 63-25-2 | 2.4E+00 | n | 2.4E+02 | n >S | – | – | – | – | 7.3E+00 | n | 7.3E+02 | n >S | – | – | – | – | – |
| Carbazole | 86-74-8 | 4.6E-02 | c | 4.6E+00 | c >S | – | – | – | – | 1.0E-01 | c | 1.0E+01 | c >S | – | – | – | – | – |
| Carbofuran | 1563-66-2 | 4.0E-02 | m | 4.0E+00 | m | – | – | – | – | 4.0E-02 | m | 4.0E+00 | m | – | – | – | – | – |
| Carbon disulfide | 75-15-0 | 2.4E+00 | n | 2.4E+02 | n | 4.9E+03 | n >S | 6.3E+02 | n | 7.3E+00 | n | 7.3E+02 | n | 6.8E+03 | n >S | 8.8E+02 | n | – |
| Carbon tetrachloride | 56-23-5 | 5.0E-03 | m | 5.0E-01 | m | 2.0E+01 | c | 2.5E+00 | c | 5.0E-03 | m | 5.0E-01 | m | 3.3E+01 | c | 4.3E+00 | c | – |

## Table 3
## Tier 1 Groundwater PCLs - Residential and Commercial/Industrial[1]

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | Residential | | | | | | | | Commercial/Industrial | | | | | | | | Secondary MCL[5] (mg/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | $^{GW}GW_{Ing}$[2] (mg/L) | note[4] | $^{GW}GW_{Class3}$[3] (mg/L) | note[4] | $^{Air}GW_{Inh-V}$ 0.5 acre source area (mg/L) | note[4] | $^{Air}GW_{Inh-V}$ 30 acre source area (mg/L) | note[4] | $^{GW}GW_{Ing}$[2] (mg/L) | note[4] | $^{GW}GW_{Class3}$[3] (mg/L) | note[4] | $^{Air}GW_{Inh-V}$ 0.5 acre source area (mg/L) | note[4] | $^{Air}GW_{Inh-V}$ 30 acre source area (mg/L) | note[4] | |
| Carbophenothion | 786-19-6 | 3.2E-01 | n | 3.2E+01 | n >S | – | – | – | – | 9.5E-01 | n | 9.5E+01 | n >S | – | – | – | – | – |
| Carbosulfan | 55285-14-8 | 2.4E-01 | n | 2.4E+01 | n >S | – | – | – | – | 7.3E-01 | n >S | 7.3E+01 | n >S | – | – | – | – | – |
| Carboxin | 5234-68-4 | 2.4E+00 | n | 2.4E+02 | n >S | – | – | – | – | 7.3E+00 | n | 7.3E+02 | n >S | – | – | – | – | – |
| Chloral | 75-87-6 | 2.4E+00 | n | 2.4E+02 | n | – | – | – | – | 7.3E+00 | n | 7.3E+02 | n | – | – | – | – | – |
| Chloral hydrate (1,1-ethanediol, 2,2,2-trichloro-) | 302-17-0 | 2.4E+00 | n | 2.4E+02 | n | – | – | – | – | 7.3E+00 | n | 7.3E+02 | n | – | – | – | – | – |
| Chloramben (amiben; 3-amino-2,5-dichlorobenzoic acid) | 133-90-4 | 3.7E-01 | n | 3.7E+01 | n | – | – | – | – | 1.1E+00 | n | 1.1E+02 | n | – | – | – | – | – |
| Chlordane (technical) | 12789-03-6 | 2.0E-03 | m | 2.0E-01 | m >S | 7.7E+02 | c >S | 9.9E+01 | c >S | 2.0E-03 | m | 2.0E-01 | m >S | 1.3E+03 | c >S | 1.7E+02 | c >S | – |
| Chlordane, cis- (alpha chlordane) | 5103-71-9 | 2.6E-03 | c | 2.6E-01 | c >S | 1.5E+02 | c >S | 2.0E+01 | c >S | 5.8E-03 | c | 5.8E-01 | c >S | 2.6E+02 | c >S | 3.3E+01 | c >S | – |
| Chlordane, trans- (gamma chordane) | 5103-74-2 | 2.6E-03 | c | 2.6E-01 | c >S | 1.5E+02 | c >S | 2.0E+01 | c >S | 5.8E-03 | c | 5.8E-01 | c >S | 2.6E+02 | c >S | 3.3E+01 | c >S | – |
| Chlorfenvinphos | 470-90-6 | 1.7E-02 | n | 1.7E+00 | n | – | – | – | – | 5.1E-02 | n | 5.1E+00 | n | – | – | – | – | – |
| Chloride* | 16887-00-6 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | 250 |
| Chlorine | 7782-50-5 | 4.0E+00 | m | 4.0E+02 | m | 1.3E+01 | n | 1.6E+00 | n | 4.0E+00 | m | 4.0E+02 | m | 1.8E+01 | n | 2.3E+00 | n | – |
| Chloro-1,3-butadiene, 2- | 126-99-8 | – | – | – | – | 2.8E-01 | c | 3.7E-02 | c | – | – | – | – | 4.7E-01 | c | 6.1E-02 | c | – |
| Chloro-2-propanol, 1- | 127-00-4 | 4.9E-01 | n | 4.9E+01 | n | – | – | – | – | 1.5E+00 | n | 1.5E+02 | n | – | – | – | – | – |
| Chloro-3-methylphenol, 4- | 59-50-7 | 1.2E-01 | n | 1.2E+01 | n | – | – | – | – | 3.7E-01 | n | 3.7E+01 | n | – | – | – | – | – |
| Chloroaniline, p- | 106-47-8 | 4.6E-03 | c | 4.6E-01 | c | – | – | – | – | 1.0E-02 | c | 1.0E+00 | c | – | – | – | – | – |
| Chlorobenzene | 108-90-7 | 1.0E-01 | m | 1.0E+01 | m | 1.2E+03 | n >S | 1.5E+02 | n | 1.0E-01 | m | 1.0E+01 | m | 1.6E+03 | n >S | 2.1E+02 | n | – |
| Chlorobenzilate | 510-15-6 | 3.4E-03 | c | 3.4E-01 | c | 7.0E+03 | c >S | 9.0E+02 | c >S | 7.6E-03 | c | 7.6E-01 | c | 1.2E+04 | c >S | 1.5E+03 | c >S | – |
| Chlorobromomethane (bromochloromethane) | 74-97-5 | 9.8E-01 | n | 9.8E+01 | n | – | – | – | – | 2.9E+00 | n | 2.9E+02 | n | – | – | – | – | – |
| Chlorodifluoromethane | 75-45-6 | – | – | – | – | 1.7E+05 | n >S | 2.2E+04 | n >S | – | – | – | – | 2.4E+05 | n >S | 3.1E+04 | n >S | – |
| Chloroethane (ethyl chloride) | 75-00-3 | 9.8E+00 | n | 9.8E+02 | n | 1.2E+05 | n >S | 1.5E+04 | n | 2.9E+01 | n | 2.9E+03 | n | 1.6E+05 | n >S | 2.1E+04 | n >S | – |
| Chloroethanol, 2- | 107-07-3 | 4.9E-01 | n | 4.9E+01 | n | – | – | – | – | 1.5E+00 | n | 1.5E+02 | n | – | – | – | – | – |
| Chloroethoxy ethene, 2- (2-chloroethylvinylether) | 110-75-8 | 8.3E-04 | c | 8.3E-02 | c | 2.0E+01 | n | 2.5E+00 | n | 1.9E-03 | c | 1.9E-01 | c | 2.7E+01 | n | 3.5E+00 | n | – |
| Chloroform[6] | 67-66-3 | 8.0E-02 | m | 8.0E+00 | m | 2.0E+01 | c | 2.6E+00 | c | 8.0E-02 | m | 8.0E+00 | m | 3.3E+01 | c | 4.3E+00 | c | – |
| Chlorohexane, 1- | 544-10-5 | 9.8E-01 | n | 9.8E+01 | n >S | 7.3E+03 | n >S | 9.4E+02 | n >S | 2.9E+00 | n | 2.9E+02 | n >S | 1.0E+04 | n >S | 1.3E+03 | n >S | – |
| Chloromethane (methyl chloride) | 74-87-3 | 7.0E-02 | c | 7.0E+00 | c | 3.6E+01 | c | 4.7E+00 | c | 1.6E-01 | c | 1.6E+01 | c | 6.1E+01 | c | 7.9E+00 | c | – |
| Chloronaphthalene, 1- (Chloronaphthalene, alpha-) | 90-13-1 | 2.0E+00 | n | 2.0E+02 | n >S | – | – | – | – | 5.8E+00 | n | 5.8E+02 | n >S | – | – | – | – | – |
| Chloronaphthalene, 2- (chloronaphthalene, beta) | 91-58-7 | 2.0E+00 | n | 2.0E+02 | n >S | – | – | – | – | 5.8E+00 | n | 5.8E+02 | n >S | – | – | – | – | – |
| Chloronitrobenzene, p- (1-chloro-4-nitrobenzene) | 100-00-5 | 2.4E-02 | n | 2.4E+00 | n | 7.6E+02 | n >S | 9.9E+01 | n | 7.3E-02 | n | 7.3E+00 | n | 1.1E+03 | n >S | 1.4E+02 | n | – |
| Chlorophenol, 2- | 95-57-8 | 1.2E-01 | n | 1.2E+01 | n | – | – | – | – | 3.7E-01 | n | 3.7E+01 | n | – | – | – | – | – |
| Chlorophenol, 3- | 108-43-0 | 1.2E-01 | n | 1.2E+01 | n | – | – | – | – | 3.7E-01 | n | 3.7E+01 | n | – | – | – | – | – |
| Chlorophenol, 4- | 106-48-9 | 1.2E-01 | n | 1.2E+01 | n | – | – | – | – | 3.7E-01 | n | 3.7E+01 | n | – | – | – | – | – |
| Chlorophenyl phenylether, 4- | 7005-72-3 | 6.1E-05 | c | 6.1E-03 | c | 1.2E+00 | c | 1.6E-01 | c | 1.4E-04 | c | 1.4E-02 | c | 2.1E+00 | c >S | 2.7E-01 | c | – |
| Chloropropane, 2- | 75-29-6 | 7.3E-01 | n | 7.3E+01 | n | 4.7E+02 | n | 6.0E+01 | n | 2.2E+00 | n | 2.2E+02 | n | 6.5E+02 | n | 8.5E+01 | n | – |
| Chlorothalonil | 1897-45-6 | 8.3E-02 | c | 8.3E+00 | c | – | – | – | – | 1.9E-01 | c | 1.9E+01 | c | – | – | – | – | – |
| Chlorotoluene, o- (2-chlorotoluene) | 95-49-8 | 4.9E-01 | n | 4.9E+01 | n | 2.4E+04 | n >S | 3.1E+03 | n >S | 1.5E+00 | n | 1.5E+02 | n | 3.3E+04 | n >S | 4.3E+03 | n >S | – |
| Chlorotoluene, p- (4-chlorotoluene) | 106-43-4 | 4.9E-01 | n | 4.9E+01 | n | – | – | – | – | 1.5E+00 | n | 1.5E+02 | n >S | – | – | – | – | – |
| Chlorpyrifos | 2921-88-2 | 7.3E-02 | n | 7.3E+00 | n >S | – | – | – | – | 2.2E-01 | n | 2.2E+01 | n >S | – | – | – | – | – |
| Chromium (III) | 16065-83-1 | 1.0E-01 | m >S | 1.0E+01 | m >S | – | – | – | – | 1.0E-01 | m >S | 1.0E+01 | m >S | – | – | – | – | – |
| Chromium (total) | 7440-47-3 | 1.0E-01 | m >S | 1.0E+01 | m >S | – | – | – | – | 1.0E-01 | m >S | 1.0E+01 | m >S | – | – | – | – | – |

## Table 3
## Tier 1 Groundwater PCLs - Residential and Commercial/Industrial[1]

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | Residential | | | | | | | | Commercial/Industrial | | | | | | | | Secondary MCL[5] (mg/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | $^{GW}GW_{Ing}$[2] (mg/L) | note[4] | $^{GW}GW_{Class3}$[3] (mg/L) | note[4] | $^{Air}GW_{Inh-V}$ 0.5 acre source area (mg/L) | note[4] | $^{Air}GW_{Inh-V}$ 30 acre source area (mg/L) | note[4] | $^{GW}GW_{Ing}$[2] (mg/L) | note[4] | $^{GW}GW_{Class3}$[3] (mg/L) | note[4] | $^{Air}GW_{Inh-V}$ 0.5 acre source area (mg/L) | note[4] | $^{Air}GW_{Inh-V}$ 30 acre source area (mg/L) | note[4] | |
| Chromium (VI) | 18540-29-9 | 1.0E-01 | m >S | 1.0E+01 | m >S | – | – | – | – | 1.0E-01 | m >S | 1.0E+01 | m >S | – | – | – | – | – |
| Chrysene | 218-01-9 | 9.1E-01 | c >S | 9.1E+01 | c >S | 8.6E+05 | c >S | 1.1E+05 | c >S | 2.0E+00 | c >S | 2.0E+02 | c >S | 1.0E+06 | c >S | 1.9E+05 | c >S | – |
| Cobalt | 7440-48-4 | 2.4E-01 | n >S | 2.4E+01 | n >S | – | – | – | – | 7.3E-01 | n >S | 7.3E+01 | n >S | – | – | – | – | – |
| Copolymer acrylamide | 69418-26-4 | 4.9E-03 | n | 4.9E-01 | n | – | – | – | – | 1.5E-02 | n | 1.5E+00 | n | – | – | – | – | – |
| Copper | 7440-50-8 | 1.3E+00 | e >S | 1.3E+02 | e >S | – | – | – | – | 1.3E+00 | e >S | 1.3E+02 | e >S | – | – | – | – | 1 |
| Coronene | 191-07-1 | 4.9E-02 | n >S | 4.9E+00 | n >S | – | – | – | – | 1.5E-01 | n >S | 1.5E+01 | n >S | – | – | – | – | – |
| Coumaphos | 56-72-4 | 1.7E-01 | n | 1.7E+01 | n >S | – | – | – | – | 5.1E-01 | n >S | 5.1E+01 | n >S | – | – | – | – | – |
| Cresol | 1319-77-3 | 1.2E+00 | n | 1.2E+02 | n | – | – | – | – | 3.7E+00 | n | 3.7E+02 | n | – | – | – | – | – |
| Cresol, m- (3-methylphenol) | 108-39-4 | 1.2E+00 | n | 1.2E+02 | n | – | – | – | – | 3.7E+00 | n | 3.7E+02 | n | – | – | – | – | – |
| Cresol, o- (2-methylphenol) | 95-48-7 | 1.2E+00 | n | 1.2E+02 | n | – | – | – | – | 3.7E+00 | n | 3.7E+02 | n | – | – | – | – | – |
| Cresol, p- (4-methylphenol) | 106-44-5 | 1.2E-01 | n | 1.2E+01 | n | – | – | – | – | 3.7E-01 | n | 3.7E+01 | n | – | – | – | – | – |
| Crotonaldehyde | 123-73-9 | 4.8E-04 | c | 4.8E-02 | c | – | – | – | – | 1.1E-03 | c | 1.1E-01 | c | – | – | – | – | – |
| Cumene (isopropylbenzene) | 98-82-8 | 2.4E+00 | n | 2.4E+02 | n >S | 4.4E+03 | n >S | 5.7E+02 | n >S | 7.3E+00 | n | 7.3E+02 | n >S | 6.2E+03 | n >S | 8.0E+02 | n >S | – |
| Cyanazine | 21725-46-2 | 1.1E-03 | c | 1.1E-01 | c | – | – | – | – | 2.4E-03 | c | 2.4E-01 | c | – | – | – | – | – |
| Cyanide | 57-12-5 | 2.0E-01 | m | 2.0E+01 | m | – | – | – | – | 2.0E-01 | m | 2.0E+01 | m | – | – | – | – | – |
| Cyanogen | 460-19-5 | 2.4E-02 | n | 2.4E+00 | n | 7.3E+00 | n | 9.4E-01 | n | 7.3E-02 | n | 7.3E+00 | n | 1.0E+01 | n | 1.3E+00 | n | – |
| Cycloate | 1134-23-2 | 1.3E+00 | n | 1.3E+02 | n >S | – | – | – | – | 4.0E+00 | n | 4.0E+02 | n >S | – | – | – | – | – |
| Cyclohexane | 110-82-7 | 1.2E+02 | n >S | 1.2E+04 | n >S | 5.9E+03 | n >S | 7.7E+02 | n >S | 3.7E+02 | n >S | 3.7E+04 | n >S | 8.3E+03 | n >S | 1.1E+03 | n >S | – |
| Cyclohexanol | 108-93-0 | 1.2E+02 | n >S | 1.2E+04 | n >S | – | – | – | – | 3.7E+02 | n >S | 3.7E+04 | n >S | – | – | – | – | – |
| Cyclohexanone | 108-94-1 | 1.2E+02 | n | 1.2E+04 | n | 1.0E+06 | n >S | 1.8E+05 | n >S | 3.7E+02 | n | 3.7E+04 | n >S | 1.0E+06 | n >S | 2.5E+05 | n >S | – |
| Cyclohexene, 1-methanol-3- | 1679-51-2 | 4.9E-01 | n | 4.9E+01 | n | – | – | – | – | 1.5E+00 | n | 1.5E+02 | n | – | – | – | – | – |
| Cyclohexene, 4-vinyl-1- | 100-40-3 | 5.4E-01 | n | 5.4E+01 | n >S | 1.1E+03 | n >S | 1.4E+02 | n >S | 1.6E+00 | n | 1.6E+02 | n >S | 1.5E+03 | n >S | 2.0E+02 | n >S | – |
| Cyclopentane | 287-92-3 | 1.5E+00 | n | 1.5E+02 | n | 3.7E+04 | n >S | 4.8E+03 | n >S | 4.4E+00 | n | 4.4E+02 | n >S | 5.1E+04 | n >S | 6.7E+03 | n >S | – |
| Cyclopentane, methyl- | 96-37-7 | 2.4E+00 | n | 2.4E+02 | n >S | 6.8E+02 | n >S | 8.8E+01 | n >S | 7.3E+00 | n | 7.3E+02 | n >S | 9.5E+02 | n >S | 1.2E+02 | n >S | – |
| Cyclopentene | 142-29-0 | 1.2E+02 | n | 1.2E+04 | n >S | – | – | – | – | 3.7E+02 | n | 3.7E+04 | n >S | – | – | – | – | – |
| Cyclotetramethylenetetranitramine (HMX) | 2691-41-0 | 1.2E+00 | n | 1.2E+02 | n | – | – | – | – | 3.7E+00 | n | 3.7E+02 | n | – | – | – | – | – |
| Cyclotrimethylenetrinitramine (RDX) | 121-82-4 | 1.1E-02 | c | 1.1E+00 | c | – | – | – | – | 2.6E-02 | c | 2.6E+00 | c | – | – | – | – | – |
| Cymene (isopropyltoluene) | 99-87-6 | 2.4E+00 | n | 2.4E+02 | n >S | – | – | – | – | 7.3E+00 | n | 7.3E+02 | n >S | – | – | – | – | – |
| Cymoxanil | 57966-95-7 | 3.2E-01 | n | 3.2E+01 | n | – | – | – | – | 9.5E-01 | n | 9.5E+01 | n | – | – | – | – | – |
| Dacthal (DCPA) | 1861-32-1 | 2.4E-01 | n >S | 2.4E+01 | n >S | – | – | – | – | 7.3E-01 | n >S | 7.3E+01 | n >S | – | – | – | – | – |
| Dalapon, sodium salt (2,2-dichloropropanoic acid) | 75-99-0 | 2.0E-01 | m | 2.0E+01 | m | – | – | – | – | 2.0E-01 | m | 2.0E+01 | m | – | – | – | – | – |
| DDD | 72-54-8 | 3.8E-03 | c | 3.8E-01 | c >S | – | – | – | – | 8.5E-03 | c | 8.5E-01 | c >S | – | – | – | – | – |
| DDE | 72-55-9 | 2.7E-03 | c | 2.7E-01 | c >S | – | – | – | – | 6.0E-03 | c | 6.0E-01 | c >S | – | – | – | – | – |
| DDT | 50-29-3 | 2.7E-03 | c | 2.7E-01 | c >S | 6.2E+02 | c >S | 8.1E+01 | c >S | 6.0E-03 | c >S | 6.0E-01 | c >S | 1.0E+03 | c >S | 1.4E+02 | c >S | – |
| Demeton | 8065-48-3 | 9.8E-04 | n | 9.8E-02 | n | – | – | – | – | 2.9E-03 | n | 2.9E-01 | n | – | – | – | – | – |
| Desethylatrazine | 6190-65-4 | 8.6E-01 | n | 8.6E+01 | n | – | – | – | – | 2.6E+00 | n | 2.6E+02 | n | – | – | – | – | – |
| Diacetone alcohol (4-hydroxy-4-methyl-2-pentanone) | 123-42-2 | 9.8E-01 | n | 9.8E+01 | n | – | – | – | – | 2.9E+00 | n | 2.9E+02 | n | – | – | – | – | – |
| Diallate | 2303-16-4 | 1.5E-02 | c | 1.5E+00 | c | – | – | – | – | 3.4E-02 | c | 3.4E+00 | c | – | – | – | – | – |
| Diazinon | 333-41-5 | 2.2E-02 | n | 2.2E+00 | n | 4.0E+03 | n >S | 5.2E+02 | n >S | 6.6E-02 | n | 6.6E+00 | n | 5.6E+03 | n >S | 7.2E+02 | n >S | – |
| Dibenz(a,h)acridine | 226-36-8 | 7.6E-04 | c >S | 7.6E-02 | c >S | 8.1E+03 | c >S | 1.1E+03 | c >S | 1.7E-03 | c >S | 1.7E-01 | c >S | 1.4E+04 | c >S | 1.8E+03 | c >S | – |

## Table 3
## Tier 1 Groundwater PCLs - Residential and Commercial/Industrial[1]

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | Residential | | | | | | | | Commercial/Industrial | | | | | | | | Secondary MCL[5] (mg/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | $^{GW}GW_{Ing}$[2] (mg/L) | note[4] | $^{GW}GW_{Class3}$[3] (mg/L) | note[4] | $^{Air}GW_{Inh-V}$ 0.5 acre source area (mg/L) | note[4] | $^{Air}GW_{Inh-V}$ 30 acre source area (mg/L) | note[4] | $^{GW}GW_{Ing}$[2] (mg/L) | note[4] | $^{GW}GW_{Class3}$[3] (mg/L) | note[4] | $^{Air}GW_{Inh-V}$ 0.5 acre source area (mg/L) | note[4] | $^{Air}GW_{Inh-V}$ 30 acre source area (mg/L) | note[4] | |
| Dibenz(a,j)acridine | 224-42-0 | 1.3E-03 | c >S | 1.3E-01 | c >S | 1.0E+04 | c >S | 1.3E+03 | c >S | 2.8E-03 | c >S | 2.8E-01 | c >S | 1.7E+04 | c >S | 2.2E+03 | c >S | – |
| Dibenz-a,h-anthracene[7] | 53-70-3 | 2.0E-04 | m[7] | 2.0E-02 | m >S | 1.5E+03 | c >S | 2.0E+02 | c >S | 2.0E-03 | c >S | 2.0E-01 | c >S | 2.6E+03 | c >S | 3.3E+02 | c >S | – |
| Dibenzo(a,e)pyrene | 192-65-4 | 1.3E-04 | c >S | 1.3E-02 | c >S | 1.0E+03 | c >S | 1.3E+02 | c >S | 2.8E-04 | c >S | 2.8E-02 | c >S | 1.7E+03 | c >S | 2.2E+02 | c >S | – |
| Dibenzo(a,h)pyrene | 189-64-0 | 1.3E-05 | c | 1.3E-03 | c >S | 1.0E+02 | c >S | 1.3E+01 | c >S | 2.8E-05 | c >S | 2.8E-03 | c >S | 1.7E+02 | c >S | 2.2E+01 | c >S | – |
| Dibenzo(a,i)pyrene | 189-55-9 | 1.3E-05 | c | 1.3E-03 | c >S | 1.0E+02 | c >S | 1.3E+01 | c >S | 2.8E-05 | c | 2.8E-03 | c >S | 1.7E+02 | c >S | 2.2E+01 | c >S | – |
| Dibenzofuran | 132-64-9 | 9.8E-02 | n | 9.8E+00 | n >S | – | – | – | – | 2.9E-01 | n | 2.9E+01 | n >S | – | – | – | – | – |
| Dibenzothiophene | 132-65-0 | 2.4E-01 | n >S | 2.4E+01 | n >S | – | – | – | – | 7.3E-01 | n >S | 7.3E+01 | n >S | – | – | – | – | – |
| Dibromo-3-chloropropane, 1,2- | 96-12-8 | 2.0E-04 | m | 2.0E-02 | m | 6.2E-01 | c | 8.0E-02 | c | 2.0E-04 | m | 2.0E-02 | m | 1.0E+00 | c | 1.3E-01 | c | – |
| Dibromochloromethane (chlorodibromomethane)[6] | 124-48-1 | 8.0E-02 | m | 8.0E+00 | m | – | – | – | – | 8.0E-02 | m | 8.0E+00 | m | – | – | – | – | – |
| Dibromofluoromethane | 1868-53-7 | 4.9E+00 | n | 4.9E+02 | n | – | – | – | – | 1.5E+01 | n | 1.5E+03 | n | – | – | – | – | – |
| Dicamba | 1918-00-9 | 7.3E-01 | n | 7.3E+01 | n | – | – | – | – | 2.2E+00 | n | 2.2E+02 | n | – | – | – | – | – |
| Dichlormid | 37764-25-3 | 6.1E-01 | n | 6.1E+01 | n | – | – | – | – | 1.8E+00 | n | 1.8E+02 | n | – | – | – | – | – |
| Dichloro-2-butene, 1,4- | 764-41-0 | – | – | – | – | 6.7E-01 | c | 8.7E-02 | c | – | – | – | – | 1.1E+00 | c | 1.5E-01 | c | – |
| Dichloro-2-butene, 1,4- trans | 110-57-6 | – | – | – | – | 6.5E-01 | c | 8.5E-02 | c | – | – | – | – | 1.1E+00 | c | 1.4E-01 | c | – |
| Dichlorobenzene, 1,2- | 95-50-1 | 6.0E-01 | m | 6.0E+01 | m | 1.2E+03 | n >S | 1.5E+02 | n | 6.0E-01 | m | 6.0E+01 | m | 1.6E+03 | n >S | 2.1E+02 | n >S | – |
| Dichlorobenzene, 1,3- | 541-73-1 | 7.3E-01 | n | 7.3E+01 | n | 1.9E+02 | n >S | 2.5E+01 | n | 2.2E+00 | n | 2.2E+02 | n >S | 2.7E+02 | n >S | 3.4E+01 | n | – |
| Dichlorobenzene, 1,4- | 106-46-7 | 7.5E-02 | m | 7.5E+00 | m | 1.7E+04 | n >S | 2.2E+03 | n >S | 7.5E-02 | m | 7.5E+00 | m | 2.4E+04 | n >S | 3.1E+03 | n >S | – |
| Dichlorobenzidine, 3,3- | 91-94-1 | 2.0E-03 | c | 2.0E-01 | c | – | – | – | – | 4.5E-03 | c | 4.5E-01 | c | – | – | – | – | – |
| Dichlorobutane, 2,3- | 7581-97-7 | 2.4E-01 | n | 2.4E+01 | n | 1.4E+02 | n | 1.9E+01 | n | 7.3E-01 | n | 7.3E+01 | n | 2.0E+02 | n | 2.6E+01 | n | – |
| Dichlorodifluoromethane | 75-71-8 | 4.9E+00 | n | 4.9E+02 | n >S | 6.0E+01 | n | 7.8E+00 | n | 1.5E+01 | n | 1.5E+03 | n >S | 8.4E+01 | n | 1.1E+01 | n | – |
| Dichloroethane, 1,1- | 75-34-3 | 4.9E+00 | n | 4.9E+02 | n | 4.3E+04 | n >S | 5.6E+03 | n >S | 1.5E+01 | n | 1.5E+03 | n | 6.0E+04 | n >S | 7.8E+03 | n >S | – |
| Dichloroethane, 1,2- | 107-06-2 | 5.0E-03 | m | 5.0E-01 | m | 2.5E+02 | c | 3.3E+01 | c | 5.0E-03 | m | 5.0E-01 | m | 4.2E+02 | c | 5.5E+01 | c | – |
| Dichloroethylene, 1,1- | 75-35-4 | 7.0E-03 | m | 7.0E-01 | m | 1.7E+03 | n | 2.2E+02 | n | 7.0E-03 | m | 7.0E-01 | m | 2.3E+03 | n | 3.0E+02 | n | – |
| Dichloroethylene, cis-1,2- | 156-59-2 | 7.0E-02 | m | 7.0E+00 | m | 1.2E+03 | n | 1.6E+02 | n | 7.0E-02 | m | 7.0E+00 | m | 1.7E+03 | n | 2.2E+02 | n | – |
| Dichloroethylene, trans-1,2 | 156-60-5 | 1.0E-01 | m | 1.0E+01 | m | 7.7E+02 | n | 9.9E+01 | n | 1.0E-01 | m | 1.0E+01 | m | 1.1E+03 | n | 1.4E+02 | n | – |
| Dichlorofluoromethane | 75-43-4 | 4.9E+00 | n | 4.9E+02 | n | – | – | – | – | 1.5E+01 | n | 1.5E+03 | n | – | – | – | – | – |
| Dichlorophenol, 2,3- | 576-24-9 | 7.3E-02 | n | 7.3E+00 | n | – | – | – | – | 2.2E-01 | n | 2.2E+01 | n | – | – | – | – | – |
| Dichlorophenol, 2,4- | 120-83-2 | 7.3E-02 | n | 7.3E+00 | n | – | – | – | – | 2.2E-01 | n | 2.2E+01 | n | – | – | – | – | – |
| Dichlorophenol, 2,5- | 583-78-8 | 7.3E-02 | n | 7.3E+00 | n | – | – | – | – | 2.2E-01 | n | 2.2E+01 | n | – | – | – | – | – |
| Dichlorophenol, 2,6- | 87-65-0 | 2.4E-02 | n | 2.4E+00 | n | – | – | – | – | 7.3E-02 | n | 7.3E+00 | n | – | – | – | – | – |
| Dichlorophenol, 3,4- | 95-77-2 | 7.3E-02 | n | 7.3E+00 | n | – | – | – | – | 2.2E-01 | n | 2.2E+01 | n | – | – | – | – | – |
| Dichlorophenol, 3,5- | 591-35-5 | 7.3E-02 | n | 7.3E+00 | n | – | – | – | – | 2.2E-01 | n | 2.2E+01 | n | – | – | – | – | – |
| Dichlorophenoxy, 2,4- butyric acid, 4- (2,4-DB) | 94-82-6 | 2.0E-01 | n | 2.0E+01 | n | – | – | – | – | 5.8E-01 | n | 5.8E+01 | n | – | – | – | – | – |
| Dichlorophenoxyacetic acid, 2,4- (2,4-D) | 94-75-7 | 7.0E-02 | m | 7.0E+00 | m | – | – | – | – | 7.0E-02 | m | 7.0E+00 | m | – | – | – | – | – |
| Dichloroprop (2-(2,4-dichlorophenoxy) propanoic acid) | 120-36-5 | 2.4E-01 | n | 2.4E+01 | n | – | – | – | – | 7.3E-01 | n | 7.3E+01 | n | – | – | – | – | – |
| Dichloropropane, 1,2- | 78-87-5 | 5.0E-03 | m | 5.0E-01 | m | 1.2E+02 | n | 1.5E+01 | n | 5.0E-03 | m | 5.0E-01 | m | 1.6E+02 | n | 2.1E+01 | n | – |
| Dichloropropane, 1,3- | 142-28-9 | 9.1E-03 | c | 9.1E-01 | c | 2.5E+02 | c | 3.3E+01 | c | 2.0E-02 | c | 2.0E+00 | c | 4.3E+02 | c | 5.5E+01 | c | – |
| Dichloropropane, 2,2- | 594-20-7 | 1.3E-02 | c | 1.3E+00 | c | 5.7E+01 | n | 7.3E+00 | n | 3.0E-02 | c | 3.0E+00 | c | 7.9E+01 | n | 1.0E+01 | n | – |
| Dichloropropanol, 2,3- | 616-23-9 | 7.3E-02 | n | 7.3E+00 | n | – | – | – | – | 2.2E-01 | n | 2.2E+01 | n | – | – | – | – | – |
| Dichloropropene, 1,1- | 563-58-6 | 9.1E-03 | c | 9.1E-01 | c | 1.9E+01 | c | 2.5E+00 | c | 2.0E-02 | c | 2.0E+00 | c | 3.2E+01 | c | 4.2E+00 | c | – |

## Table 3
## Tier 1 Groundwater PCLs - Residential and Commercial/Industrial[1]

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | Residential | | | | | | | | Commercial/Industrial | | | | | | | | Secondary MCL[5] (mg/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | $^{GW}GW_{Ing}$[2] (mg/L) | note[4] | $^{GW}GW_{Class3}$[3] (mg/L) | note[4] | $^{Air}GW_{Inh-V}$ 0.5 acre source area (mg/L) | note[4] | $^{Air}GW_{Inh-V}$ 30 acre source area (mg/L) | note[4] | $^{GW}GW_{Ing}$[2] (mg/L) | note[4] | $^{GW}GW_{Class3}$[3] (mg/L) | note[4] | $^{Air}GW_{Inh-V}$ 0.5 acre source area (mg/L) | note[4] | $^{Air}GW_{Inh-V}$ 30 acre source area (mg/L) | note[4] | |
| Dichloropropene, 1,3- (mixed isomers) | 542-75-6 | 9.1E-03 | c | 9.1E-01 | c | 1.8E+02 | c | 2.3E+01 | c | 2.0E-02 | c | 2.0E+00 | c | 3.0E+02 | c | 3.8E+01 | c | – |
| Dichloropropene, cis 1,3- | 10061-01-5 | 1.7E-03 | c | 1.7E-01 | c | 6.9E+02 | n | 8.9E+01 | n | 3.8E-03 | c | 3.8E-01 | c | 9.7E+02 | n | 1.2E+02 | n | – |
| Dichloropropene, trans 1,3- | 10061-02-6 | 9.1E-03 | c | 9.1E-01 | c | 1.9E+02 | c | 2.5E+01 | c | 2.0E-02 | c | 2.0E+00 | c | 3.2E+02 | c | 4.1E+01 | c | – |
| Dichlorvos | 62-73-7 | 3.1E-03 | c | 3.1E-01 | c | 1.0E+04 | n | 1.3E+03 | n | 7.0E-03 | c | 7.0E-01 | c | 1.4E+04 | n | 1.8E+03 | n | – |
| Dicrotophos (bidrin) | 141-66-2 | 2.4E-03 | n | 2.4E-01 | n | – | – | – | – | 7.3E-03 | n | 7.3E-01 | n | – | – | – | – | – |
| Dicyclopentadiene | 77-73-6 | 2.0E+00 | n | 2.0E+02 | n | – | – | – | – | 5.8E+00 | n | 5.8E+02 | n | – | – | – | – | – |
| Dieldrin | 60-57-1 | 5.7E-05 | c | 5.7E-03 | c | 1.3E+02 | c >S | 1.6E+01 | c >S | 1.3E-04 | c | 1.3E-02 | c | 2.1E+02 | c >S | 2.8E+01 | c >S | – |
| Diethanolamine | 111-42-2 | 1.2E-02 | n | 1.2E+00 | n | 1.0E+06 | n | 1.0E+06 | n | 3.7E-02 | n | 3.7E+00 | n | 1.0E+06 | n | 1.0E+06 | n | – |
| Diethyldithiocarbamate, sodium salt | 148-18-5 | 3.4E-03 | c | 3.4E-01 | c | – | – | – | – | 7.6E-03 | c | 7.6E-01 | c | – | – | – | – | – |
| Diethyl phthalate | 84-66-2 | 2.0E+01 | n | 2.0E+03 | n >S | – | – | – | – | 5.8E+01 | n | 5.8E+03 | n >S | – | – | – | – | – |
| Diethylene glycol | 111-46-6 | 4.9E+01 | n | 4.9E+03 | n | – | – | – | – | 1.5E+02 | n | 1.5E+04 | n | – | – | – | – | – |
| Diethylene glycol monobutyl ether | 112-34-5 | 7.3E-01 | n | 7.3E+01 | n | 3.2E+03 | n | 4.1E+02 | n | 2.2E+00 | n | 2.2E+02 | n | 4.5E+03 | n | 5.8E+02 | n | – |
| Diethylhexyl adipate | 103-23-1 | 4.0E-01 | m >S | 4.0E+01 | m >S | – | – | – | – | 4.0E-01 | m >S | 4.0E+01 | m >S | – | – | – | – | – |
| Diethylstilbestrol | 56-53-1 | 1.9E-07 | c | 1.9E-05 | c | – | – | – | – | 4.3E-07 | c | 4.3E-05 | c | – | – | – | – | – |
| Diisobutylene (trimethyl-1-pentene, 2,4,4-) | 107-39-1 | 1.5E+00 | n | 1.5E+02 | n >S | 2.3E+01 | n >S | 3.0E+00 | n | 4.4E+00 | n >S | 4.4E+02 | n >S | 3.2E+01 | n >S | 4.2E+00 | n >S | – |
| Diisopropylbenzene, p- | 100-18-5 | 2.4E-01 | n | 2.4E+01 | n >S | – | – | – | – | 7.3E-01 | n | 7.3E+01 | n >S | – | – | – | – | – |
| Diisopropyl ether (2,2'-oxybis-propane) | 108-20-3 | 2.4E+00 | n | 2.4E+02 | n | 2.0E+04 | n >S | 2.5E+03 | n | 7.3E+00 | n | 7.3E+02 | n | 2.7E+04 | n >S | 3.5E+03 | n >S | – |
| Dimethenamid | 87674-68-8 | 3.7E-01 | n | 3.7E+01 | n | – | – | – | – | 1.1E+00 | n | 1.1E+02 | n | – | – | – | – | – |
| Dimethoate | 60-51-5 | 4.9E-03 | n | 4.9E-01 | n | – | – | – | – | 1.5E-02 | n | 1.5E+00 | n | – | – | – | – | – |
| Dimethoxybenzidine, 3,3'- | 119-90-4 | 6.5E-02 | c | 6.5E+00 | c | – | – | – | – | 1.5E-01 | c | 1.5E+01 | c | – | – | – | – | – |
| Dimethyl-2-nitrobenzene, 1,3- | 81-20-9 | 4.9E-02 | n | 4.9E+00 | n | 1.1E+04 | n >S | 1.4E+03 | n >S | 1.5E-01 | n | 1.5E+01 | n | 1.5E+04 | n >S | 2.0E+03 | n >S | – |
| Dimethyl-3-nitrobenzene, 1,2- | 83-41-0 | 4.9E-02 | n | 4.9E+00 | n | 1.3E+04 | n >S | 1.7E+03 | n >S | 1.5E-01 | n | 1.5E+01 | n | 1.9E+04 | n >S | 2.4E+03 | n >S | – |
| Dimethyl-4-nitrobenzene, 1-2- | 99-51-4 | 4.9E-02 | n | 4.9E+00 | n | 1.5E+04 | n >S | 1.9E+03 | n >S | 1.5E-01 | n | 1.5E+01 | n | 2.1E+04 | n >S | 2.7E+03 | n >S | – |
| Dimethyl-5-nitrobenzene, 1,3- | 99-12-7 | 4.9E-02 | n | 4.9E+00 | n | 9.5E+03 | n >S | 1.2E+03 | n >S | 1.5E-01 | n | 1.5E+01 | n | 1.3E+04 | n >S | 1.7E+03 | n >S | – |
| Dimethylphenethylamine, alpha, alpha- | 122-09-8 | 4.9E-02 | n | 4.9E+00 | n | – | – | – | – | 1.5E-01 | n | 1.5E+01 | n | – | – | – | – | – |
| Dimethyl phenol, 2,4- | 105-67-9 | 4.9E-01 | n | 4.9E+01 | n | – | – | – | – | 1.5E+00 | n | 1.5E+02 | n | – | – | – | – | – |
| Dimethylaminoazobenzene, p- | 60-11-7 | 2.4E-04 | n | 2.4E-02 | n | – | – | – | – | 7.3E-04 | n | 7.3E-02 | n | – | – | – | – | – |
| Dimethylbenz-a-anthracene, 7,12- | 57-97-6 | 3.7E-06 | c | 3.7E-04 | c | 3.3E+01 | c >S | 4.3E+00 | c >S | 8.2E-06 | c | 8.2E-04 | c | 5.5E+01 | c >S | 7.2E+00 | c >S | – |
| Dimethylbenzidine, 3,3'- | 119-93-7 | 8.3E-05 | c | 8.3E-03 | c | – | – | – | – | 1.9E-04 | c | 1.9E-02 | c | – | – | – | – | – |
| Dimethylformamide, N,N- | 68-12-2 | 2.4E+00 | n | 2.4E+02 | n | 3.7E+05 | n | 4.8E+04 | n | 7.3E+00 | n | 7.3E+02 | n | 5.2E+05 | n | 6.8E+04 | n | – |
| Dimethylnaphthalene, 1,3- | 575-41-7 | 9.8E-01 | n | 9.8E+01 | n >S | – | – | – | – | 2.9E+00 | n | 2.9E+02 | n >S | – | – | – | – | – |
| Dimethylphthalate | 131-11-3 | 2.0E+01 | n | 2.0E+03 | n | – | – | – | – | 5.8E+01 | n | 5.8E+03 | n >S | – | – | – | – | – |
| Di-n-butyl phthalate | 84-74-2 | 2.4E+00 | n | 2.4E+02 | n >S | – | – | – | – | 7.3E+00 | n | 7.3E+02 | n >S | – | – | – | – | – |
| Dinitro-2-methylphenol, 4,6- (dinitro-o-cresol, 4, 6-) | 534-52-1 | 2.4E-03 | n | 2.4E-01 | n | – | – | – | – | 7.3E-03 | n | 7.3E-01 | n | – | – | – | – | – |
| Dinitrobenzene, 1,3- (dinitrobenzene, 2,4-) | 99-65-0 | 2.4E-03 | n | 2.4E-01 | n | – | – | – | – | 7.3E-03 | n | 7.3E-01 | n | – | – | – | – | – |
| Dinitrobenzene, 1,4- | 100-25-4 | 2.4E-03 | n | 2.4E-01 | n | – | – | – | – | 7.3E-03 | n | 7.3E-01 | n | – | – | – | – | – |
| Dinitrophenol, 2,4- | 51-28-5 | 4.9E-02 | n | 4.9E+00 | n | – | – | – | – | 1.5E-01 | n | 1.5E+01 | n | – | – | – | – | – |
| Dinitrophenol, 2,5- | 329-71-5 | 4.9E-02 | n | 4.9E+00 | n | – | – | – | – | 1.5E-01 | n | 1.5E+01 | n | – | – | – | – | – |
| Dinitrotoluene, 2,4- | 121-14-2 | 1.3E-03 | c | 1.3E-01 | c | – | – | – | – | 3.0E-03 | c | 3.0E-01 | c | – | – | – | – | – |
| Dinitrotoluene, 2,6- | 606-20-2 | 1.3E-03 | c | 1.3E-01 | c | – | – | – | – | 3.0E-03 | c | 3.0E-01 | c | – | – | – | – | – |

## Table 3
## Tier 1 Groundwater PCLs - Residential and Commercial/Industrial[1]

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | Residential | | | | | | | | Commercial/Industrial | | | | | | | | Secondary MCL[5] (mg/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | $^{GW}GW_{Ing}$[2] (mg/L) | note[4] | $^{GW}GW_{Class3}$[3] (mg/L) | note[4] | $^{Air}GW_{Inh-V}$ 0.5 acre source area (mg/L) | note[4] | $^{Air}GW_{Inh-V}$ 30 acre source area (mg/L) | note[4] | $^{GW}GW_{Ing}$[2] (mg/L) | note[4] | $^{GW}GW_{Class3}$[3] (mg/L) | note[4] | $^{Air}GW_{Inh-V}$ 0.5 acre source area (mg/L) | note[4] | $^{Air}GW_{Inh-V}$ 30 acre source area (mg/L) | note[4] | |
| Di-n-octyl phthalate | 117-84-0 | 2.4E-01 | n >S | 2.4E+01 | n >S | – | – | – | – | 7.3E-01 | n >S | 7.3E+01 | n >S | – | – | – | – | – |
| Dinoseb | 88-85-7 | 7.0E-03 | m | 7.0E-01 | m | – | – | – | – | 7.0E-03 | m | 7.0E-01 | m | – | – | – | – | – |
| Dioxane 1,4- | 123-91-1 | 9.1E-03 | c | 9.1E-01 | c | 7.7E+03 | c | 1.0E+03 | c | 2.0E-02 | c | 2.0E+00 | c | 1.3E+04 | c | 1.7E+03 | c | – |
| Dioxin (as 2,3,7,8-TCDD toxicity equivalent quotients (TEQs)) | 1746-01-6 | 3.0E-08 | m | 3.0E-06 | m | – | – | – | – | 3.0E-08 | m | 3.0E-06 | m | – | – | – | – | – |
| Diphenyl ether | 101-84-8 | 1.5E-01 | n | 1.5E+01 | n >S | – | – | – | – | 4.5E-01 | n | 4.5E+01 | n >S | – | – | – | – | – |
| Diphenylamine | 122-39-4 | 6.1E-01 | n | 6.1E+01 | n | – | – | – | – | 1.8E+00 | n | 1.8E+02 | n | – | – | – | – | – |
| Diphenylhydrazine, 1,2- | 122-66-7 | 1.1E-03 | c | 1.1E-01 | c | 3.8E+03 | c >S | 4.9E+02 | c | 2.6E-03 | c | 2.6E-01 | c | 6.4E+03 | c >S | 8.3E+02 | c | – |
| Dipropylene glycol | 110-98-5 | 2.9E+00 | n | 2.9E+02 | n | – | – | – | – | 8.8E+00 | n | 8.8E+02 | n | – | – | – | – | – |
| Diquat | 85-00-7 | 2.0E-02 | m | 2.0E+00 | m | – | – | – | – | 2.0E-02 | m | 2.0E+00 | m | – | – | – | – | – |
| Disodium iminodiacetate (iminodiacetic acid, disodium salt) | 142-73-4 | 2.4E-01 | n | 2.4E+01 | n | – | – | – | – | 7.3E-01 | n | 7.3E+01 | n | – | – | – | – | – |
| Disulfoton | 298-04-4 | 9.8E-04 | n | 9.8E-02 | n | – | – | – | – | 2.9E-03 | n | 2.9E-01 | n | – | – | – | – | – |
| Diuron | 330-54-1 | 4.9E-02 | n | 4.9E+00 | n | – | – | – | – | 1.5E-01 | n | 1.5E+01 | n | – | – | – | – | – |
| Dodecylphenol, 4- | 104-43-8 | 1.2E+00 | n >S | 1.2E+02 | n >S | – | – | – | – | 3.7E+00 | n >S | 3.7E+02 | n >S | – | – | – | – | – |
| Endosulfan | 115-29-7 | 1.5E-01 | n | 1.5E+01 | n >S | – | – | – | – | 4.4E-01 | n | 4.4E+01 | n >S | – | – | – | – | – |
| Endosulfan I | 959-98-8 | 4.9E-02 | n | 4.9E+00 | n >S | – | – | – | – | 1.5E-01 | n | 1.5E+01 | n >S | – | – | – | – | – |
| Endosulfan II | 33213-65-9 | 1.5E-01 | n | 1.5E+01 | n >S | – | – | – | – | 4.4E-01 | n | 4.4E+01 | n >S | – | – | – | – | – |
| Endosulfan sulfate | 1031-07-8 | 1.5E-01 | n >S | 1.5E+01 | n >S | – | – | – | – | 4.4E-01 | n >S | 4.4E+01 | n >S | – | – | – | – | – |
| Endothall | 145-73-3 | 1.0E-01 | m | 1.0E+01 | m | – | – | – | – | 1.0E-01 | m | 1.0E+01 | m | – | – | – | – | – |
| Endrin | 72-20-8 | 2.0E-03 | m | 2.0E-01 | m | – | – | – | – | 2.0E-03 | m | 2.0E-01 | m | – | – | – | – | – |
| Endrin aldehyde | 7421-93-4 | 7.3E-03 | n | 7.3E-01 | n >S | – | – | – | – | 2.2E-02 | n >S | 2.2E+00 | n >S | – | – | – | – | – |
| Endrin ketone | 53494-70-5 | 7.3E-03 | n | 7.3E-01 | n | – | – | – | – | 2.2E-02 | n | 2.2E+00 | n >S | – | – | – | – | – |
| Epichlorohydrin | 106-89-8 | 9.2E-02 | c | 9.2E+00 | c | 7.1E+02 | n | 9.1E+01 | n | 2.1E-01 | c | 2.1E+01 | c | 9.9E+02 | n | 1.3E+02 | n | – |
| EPN (o-ethyl o-(4-nitrophenyl)phenylphosphonothioate) | 2104-64-5 | 2.4E-04 | n | 2.4E-02 | n | – | – | – | – | 7.3E-04 | n | 7.3E-02 | n | – | – | – | – | – |
| Esfenvalerate | 66230-04-4 | 4.9E-02 | n >S | 4.9E+00 | n >S | – | – | – | – | 1.5E-01 | n >S | 1.5E+01 | n >S | – | – | – | – | – |
| Ethalfluralin (sonolan) | 55283-68-6 | 1.0E-02 | c | 1.0E+00 | c | – | – | – | – | 2.3E-02 | c | 2.3E+00 | c | – | – | – | – | – |
| Ethanol | 64-17-5 | 8.1E+02 | n | 8.1E+04 | n | – | – | – | – | 2.4E+03 | n | 2.4E+05 | n | – | – | – | – | – |
| Ethanol, 2-amino- | 141-43-5 | 4.2E-02 | n | 4.2E+00 | n | 4.2E+05 | n | 5.5E+04 | n | 1.2E-01 | n | 1.2E+01 | n | 5.9E+05 | n | 7.7E+04 | n | – |
| Ethanol, 2-(2-aminoethoxy)- | 929-06-6 | 1.2E-02 | n | 1.2E+00 | n | – | – | – | – | 3.7E-02 | n | 3.7E+00 | n | – | – | – | – | – |
| Ethanol, 2-(2-ethoxyethoxy)- | 111-90-0 | 4.9E+01 | n | 4.9E+03 | n | – | – | – | – | 1.5E+02 | n | 1.5E+04 | n | – | – | – | – | – |
| Ethanol, 2-(methylamino)- | 109-83-1 | 3.9E-01 | n | 3.9E+01 | n | 1.0E+06 | n | 1.3E+05 | n | 1.2E+00 | n | 1.2E+02 | n | 1.0E+06 | n >S | 1.8E+05 | n | – |
| Ethion | 563-12-2 | 1.2E-02 | n | 1.2E+00 | n >S | – | – | – | – | 3.7E-02 | n | 3.7E+00 | n >S | – | – | – | – | – |
| Ethoprop | 13194-48-4 | 2.4E-03 | n | 2.4E-01 | n | – | – | – | – | 7.3E-03 | n | 7.3E-01 | n | – | – | – | – | – |
| Ethoxy ethanol, 2- | 110-80-5 | 2.2E+00 | n | 2.2E+02 | n >S | 1.0E+06 | n >S | 4.3E+05 | n >S | 6.6E+00 | n | 6.6E+02 | n >S | 1.0E+06 | n >S | 6.1E+05 | n >S | – |
| Ethyl acetate | 141-78-6 | 2.2E+01 | n | 2.2E+03 | n | 5.3E+04 | n | 6.9E+03 | n | 6.6E+01 | n | 6.6E+03 | n | 7.4E+04 | n | 9.6E+03 | n | – |
| Ethyl acrylate | 140-88-5 | 1.9E-02 | c | 1.9E+00 | c | 1.1E+03 | n | 1.4E+02 | n | 4.3E-02 | c | 4.3E+00 | c | 1.5E+03 | n | 2.0E+02 | n | – |
| Ethyl benzene | 100-41-4 | 7.0E-01 | m | 7.0E+01 | m | 3.0E+04 | n >S | 3.8E+03 | n >S | 7.0E-01 | m | 7.0E+01 | m | 4.2E+04 | n >S | 5.4E+03 | n >S | – |
| Ethyl dipropylthiocarbamate, S- | 759-94-4 | 6.1E-01 | n | 6.1E+01 | n | – | – | – | – | 1.8E+00 | n | 1.8E+02 | n | – | – | – | – | – |
| Ethyl ether | 60-29-7 | 4.9E+00 | n | 4.9E+02 | n | – | – | – | – | 1.5E+01 | n | 1.5E+03 | n | – | – | – | – | – |
| Ethyl methacrylate | 97-63-2 | 2.2E+00 | n | 2.2E+02 | n | 5.7E+04 | n >S | 7.4E+03 | n | 6.6E+00 | n | 6.6E+02 | n | 8.0E+04 | n >S | 1.0E+04 | n | – |
| Ethyl methanesulfonate | 62-50-0 | 9.2E-03 | c | 9.2E-01 | c | 1.9E+04 | c | 2.4E+03 | c | 2.1E-02 | c | 2.1E+00 | c | 3.1E+04 | c | 4.0E+03 | c | – |

# Table 3
## Tier 1 Groundwater PCLs - Residential and Commercial/Industrial[1]

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | Residential | | | | | | | | Commercial/Industrial | | | | | | | | Secondary MCL[5] (mg/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | $^{GW}GW_{Ing}$[2] (mg/L) | note[4] | $^{GW}GW_{Class3}$[3] (mg/L) | note[4] | $^{Air}GW_{Inh-V}$ 0.5 acre source area (mg/L) | note[4] | $^{Air}GW_{Inh-V}$ 30 acre source area (mg/L) | note[4] | $^{GW}GW_{Ing}$[2] (mg/L) | note[4] | $^{GW}GW_{Class3}$[3] (mg/L) | note[4] | $^{Air}GW_{Inh-V}$ 0.5 acre source area (mg/L) | note[4] | $^{Air}GW_{Inh-V}$ 30 acre source area (mg/L) | note[4] | |
| Ethyl tert-butyl ether (2-ethyl-2-ethoxypropane) | 637-92-3 | 2.4E-02 | n | 2.4E+00 | n | 1.1E+04 | n >S | 1.4E+03 | n | 7.3E-02 | n | 7.3E+00 | n | 1.5E+04 | n >S | 2.0E+03 | n | – |
| Ethyl-1-hexanol, 2- | 104-76-7 | 3.7E+00 | n | 3.7E+02 | n | – | – | – | – | 1.1E+01 | n | 1.1E+03 | n >S | – | – | – | – | – |
| Ethyl-2-hexenal, 2- | 645-62-5 | 3.7E+00 | n | 3.7E+02 | n | – | – | – | – | 1.1E+01 | n | 1.1E+03 | n >S | – | – | – | – | – |
| Ethyl-2-methyl benzene, 1- | 611-14-3 | 1.2E+00 | n | 1.2E+02 | n >S | 9.2E+03 | n >S | 1.2E+03 | n >S | 3.7E+00 | n | 3.7E+02 | n >S | 1.3E+04 | n >S | 1.7E+03 | n >S | – |
| Ethyl-4-methyl benzene, 1- | 622-96-8 | 1.2E+00 | n | 1.2E+02 | n >S | 7.0E+03 | n >S | 9.0E+02 | n >S | 3.7E+00 | n | 3.7E+02 | n >S | 9.7E+03 | n >S | 1.3E+03 | n >S | – |
| Ethylene* | 74-85-1 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – |
| Ethylene dibromide (dibromoethane, 1,2- ) | 106-93-4 | 5.0E-05 | m | 5.0E-03 | m | 7.6E+01 | c | 9.8E+00 | c | 5.0E-05 | m | 5.0E-03 | m | 1.3E+02 | c | 1.7E+01 | c | – |
| Ethylene glycol | 107-21-1 | 4.9E+01 | n | 4.9E+03 | n | – | – | – | – | 1.5E+02 | n | 1.5E+04 | n | – | – | – | – | – |
| Ethylene oxide | 75-21-8 | 8.9E-04 | c | 8.9E-02 | c | 5.5E+01 | c | 7.1E+00 | c | 2.0E-03 | c | 2.0E-01 | c | 9.3E+01 | c | 1.2E+01 | c | – |
| Ethylene thiourea | 96-45-7 | 2.0E-03 | n | 2.0E-01 | n | – | – | – | – | 5.8E-03 | n | 5.8E-01 | n | – | – | – | – | – |
| Ethylenediamine | 107-15-3 | 2.2E+00 | n | 2.2E+02 | n | – | – | – | – | 6.6E+00 | n | 6.6E+02 | n | – | – | – | – | – |
| Ethylenimine | 151-56-4 | 1.4E-05 | c | 1.4E-03 | c | 1.4E+01 | c | 1.8E+00 | c | 3.1E-05 | c | 3.1E-03 | c | 2.3E+01 | c | 3.0E+00 | c | – |
| Ethylhexyl acrylate, 2- | 103-11-7 | 1.9E-02 | c | 1.9E+00 | c | – | – | – | – | 4.3E-02 | c | 4.3E+00 | c | – | – | – | – | – |
| Famphur | 52-85-7 | 7.3E-04 | n | 7.3E-02 | n | – | – | – | – | 2.2E-03 | n | 2.2E-01 | n | – | – | – | – | – |
| Fensulfothion | 115-90-2 | 2.4E-02 | n | 2.4E+00 | n | – | – | – | – | 7.3E-02 | n | 7.3E+00 | n | – | – | – | – | – |
| Fenthion | 55-38-9 | 1.7E-03 | n | 1.7E-01 | n | – | – | – | – | 5.1E-03 | n | 5.1E-01 | n | – | – | – | – | – |
| Fenuron | 101-42-8 | 1.7E+00 | n | 1.7E+02 | n | – | – | – | – | 5.1E+00 | n | 5.1E+02 | n | – | – | – | – | – |
| Fluoranthene | 206-44-0 | 9.8E-01 | n >S | 9.8E+01 | n >S | – | – | – | – | 2.9E+00 | n >S | 2.9E+02 | n >S | – | – | – | – | – |
| Fluorene | 86-73-7 | 9.8E-01 | n | 9.8E+01 | n >S | – | – | – | – | 2.9E+00 | n >S | 2.9E+02 | n >S | – | – | – | – | – |
| Fluorine (soluble fluoride) | 7782-41-4 | 4.0E+00 | m | 4.0E+02 | m | – | – | – | – | 4.0E+00 | m | 4.0E+02 | m | – | – | – | – | 2 |
| Fluorochloridone | 61213-25-0 | 1.8E-01 | n | 1.8E+01 | n | – | – | – | – | 5.5E-01 | n | 5.5E+01 | n | – | – | – | – | – |
| Fonofos | 944-22-9 | 4.9E-02 | n | 4.9E+00 | n | – | – | – | – | 1.5E-01 | n | 1.5E+01 | n >S | – | – | – | – | – |
| Formaldehyde | 50-00-0 | 4.9E+00 | n | 4.9E+02 | n | 8.6E+04 | n | 1.1E+04 | n | 1.5E+01 | n | 1.5E+03 | n | 1.2E+05 | n | 1.6E+04 | n | – |
| Formic acid | 64-18-6 | 2.2E+01 | n | 2.2E+03 | n | 1.7E+04 | n | 2.3E+03 | n | 6.6E+01 | n | 6.6E+03 | n | 2.4E+04 | n | 3.2E+03 | n | – |
| Furan | 110-00-9 | 2.4E-02 | n | 2.4E+00 | n | – | – | – | – | 7.3E-02 | n | 7.3E+00 | n | – | – | – | – | – |
| Furfural | 98-01-1 | 7.3E-02 | n | 7.3E+00 | n | – | – | – | – | 2.2E-01 | n | 2.2E+01 | n | – | – | – | – | – |
| Glycidylaldehyde | 765-34-4 | 9.8E-03 | n | 9.8E-01 | n | 1.4E+04 | n | 1.9E+03 | n | 2.9E-02 | n | 2.9E+00 | n | 2.0E+04 | n | 2.6E+03 | n | – |
| Glyphosate | 1071-83-6 | 7.0E-01 | m | 7.0E+01 | m | – | – | – | – | 7.0E-01 | m | 7.0E+01 | m | – | – | – | – | – |
| Heptachlor | 76-44-8 | 4.0E-04 | m | 4.0E-02 | m | 6.3E+00 | c >S | 8.1E-01 | c >S | 4.0E-04 | m | 4.0E-02 | m | 1.1E+01 | c >S | 1.4E+00 | c >S | – |
| Heptachlor epoxide | 1024-57-3 | 2.0E-04 | m | 2.0E-02 | m | 1.2E+02 | c >S | 1.5E+01 | c >S | 2.0E-04 | m | 2.0E-02 | m | 2.0E+02 | c >S | 2.6E+01 | c >S | – |
| Heptane, n- | 142-82-5 | 1.5E+00 | n | 1.5E+02 | n >S | 8.7E+02 | n >S | 1.1E+02 | n >S | 4.4E+00 | n >S | 4.4E+02 | n >S | 1.2E+03 | n >S | 1.6E+02 | n >S | – |
| Heptanoic acid, n- | 111-14-8 | 1.2E+01 | n | 1.2E+03 | n | 1.7E+04 | n >S | 2.1E+03 | n >S | 3.7E+01 | n | 3.7E+03 | n >S | 2.3E+04 | n >S | 3.0E+03 | n >S | – |
| Hexachlorobenzene | 118-74-1 | 1.0E-03 | m | 1.0E-01 | m >S | 5.7E+00 | c >S | 7.4E-01 | c >S | 1.0E-03 | m | 1.0E-01 | m >S | 9.6E+00 | c >S | 1.2E+00 | c >S | – |
| Hexachlorobutadiene | 87-68-3 | 1.2E-02 | c | 1.2E+00 | c | 8.9E+00 | c >S | 1.1E+00 | c | 2.6E-02 | c | 2.6E+00 | c >S | 1.5E+01 | c >S | 1.9E+00 | c | – |
| Hexachlorocyclohexane, alpha (alpha-BHC) | 319-84-6 | 1.4E-04 | c | 1.4E-02 | c | 1.5E+02 | c >S | 2.0E+01 | c >S | 3.2E-04 | c | 3.2E-02 | c | 2.6E+02 | c >S | 3.3E+01 | c >S | – |
| Hexachlorocyclohexane, beta (beta-BHC) | 319-85-7 | 5.1E-04 | c | 5.1E-02 | c | 1.1E+03 | c >S | 1.5E+02 | c >S | 1.1E-03 | c | 1.1E-01 | c | 1.9E+03 | c >S | 2.5E+02 | c >S | – |
| Hexachlorocyclohexane, delta (delta-BHC) | 319-86-8 | 5.1E-04 | c | 5.1E-02 | c | 3.6E+02 | c >S | 4.7E+01 | c >S | 1.1E-03 | c | 1.1E-01 | c | 6.1E+02 | c >S | 7.9E+01 | c >S | – |
| Hexachlorocyclohexane, gamma (lindane; gamma-BHC) | 58-89-9 | 2.0E-04 | m | 2.0E-02 | m | – | – | – | – | 2.0E-04 | m | 2.0E-02 | m | – | – | – | – | – |
| Hexachlorocyclohexane, techn (technical-BHC) | 608-73-1 | 5.1E-04 | c | 5.1E-02 | c | 9.9E+02 | c >S | 1.3E+02 | c >S | 1.1E-03 | c | 1.1E-01 | c | 1.7E+03 | c >S | 2.2E+02 | c >S | – |
| Hexachlorocyclopentadiene | 77-47-4 | 5.0E-02 | m | 5.0E+00 | m >S | 5.4E+00 | n >S | 7.0E-01 | n | 5.0E-02 | m | 5.0E+00 | m >S | 7.6E+00 | n >S | 9.8E-01 | n | – |

## Table 3
## Tier 1 Groundwater PCLs - Residential and Commercial/Industrial[1]

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | Residential | | | | | | | | Commercial/Industrial | | | | | | | | Secondary MCL[5] (mg/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | $^{GW}GW_{Ing}$[2] (mg/L) | note[4] | $^{GW}GW_{Class3}$[3] (mg/L) | note[4] | $^{Air}GW_{Inh-V}$ 0.5 acre source area (mg/L) | note[4] | $^{Air}GW_{Inh-V}$ 30 acre source area (mg/L) | note[4] | $^{GW}GW_{Ing}$[2] (mg/L) | note[4] | $^{GW}GW_{Class3}$[3] (mg/L) | note[4] | $^{Air}GW_{Inh-V}$ 0.5 acre source area (mg/L) | note[4] | $^{Air}GW_{Inh-V}$ 30 acre source area (mg/L) | note[4] | |
| Hexachloroethane | 67-72-1 | 1.7E-02 | n | 1.7E+00 | n | 7.3E+03 | n >S | 9.5E+02 | n >S | 5.1E-02 | n | 5.1E+00 | n | 1.0E+04 | n >S | 1.3E+03 | n >S | – |
| Hexachlorophene | 70-30-4 | 7.3E-03 | n >S | 7.3E-01 | n >S | – | – | – | – | 2.2E-02 | n >S | 2.2E+00 | n >S | – | – | – | – | – |
| Hexachloropropylene | 1888-71-7 | 1.7E-02 | n | 1.7E+00 | n | 2.1E+03 | n >S | 2.8E+02 | n >S | 5.1E-02 | n | 5.1E+00 | n | 3.0E+03 | n >S | 3.9E+02 | n >S | – |
| Hexanal, 2-ethyl- | 123-05-7 | 3.7E+00 | n | 3.7E+02 | n | – | – | – | – | 1.1E+01 | n | 1.1E+03 | n >S | – | – | – | – | – |
| Hexane, n- | 110-54-3 | 1.5E+00 | n | 1.5E+02 | n >S | 3.8E+01 | n >S | 4.9E+00 | n | 4.4E+00 | n | 4.4E+02 | n >S | 5.3E+01 | n >S | 6.9E+00 | n | – |
| Hexanediamine, 1,6- | 124-09-4 | 1.2E-01 | n | 1.2E+01 | n | – | – | – | – | 3.7E-01 | n | 3.7E+01 | n | – | – | – | – | – |
| Hexanedinitrile | 111-69-3 | 3.4E-02 | n | 3.4E+00 | n | 1.6E+05 | n | 2.1E+04 | n | 1.0E-01 | n | 1.0E+01 | n | 2.2E+05 | n | 2.9E+04 | n | – |
| Hexanediol, 1,6- | 629-11-8 | 1.2E+02 | n | 1.2E+04 | n | 1.0E+06 | n >S | 1.0E+06 | n >S | 3.7E+02 | n | 3.7E+04 | n >S | 1.0E+06 | n >S | 1.0E+06 | n >S | – |
| Hexanoic acid | 142-62-1 | 1.6E+00 | n | 1.6E+02 | n | 2.1E+04 | n >S | 2.7E+03 | n | 4.7E+00 | n | 4.7E+02 | n | 3.0E+04 | n >S | 3.8E+03 | n | – |
| Hexanone, 2- | 591-78-6 | 1.2E-01 | n | 1.2E+01 | n | 1.2E+04 | n | 1.5E+03 | n | 3.7E-01 | n | 3.7E+01 | n | 1.6E+04 | n | 2.1E+03 | n | – |
| Hexazinone | 51235-04-2 | 8.1E-01 | n | 8.1E+01 | n | – | – | – | – | 2.4E+00 | n | 2.4E+02 | n | – | – | – | – | – |
| Hexene, 1- | 592-41-6 | 8.1E+00 | n | 8.1E+02 | n >S | 3.4E+01 | n >S | 4.3E+00 | n | 2.4E+01 | n | 2.4E+03 | n >S | 4.7E+01 | n >S | 6.1E+00 | n | – |
| Hexene, cis-2- | 7688-21-3 | 8.1E+00 | n | 8.1E+02 | n >S | 4.8E+01 | n >S | 6.2E+00 | n | 2.4E+01 | n | 2.4E+03 | n >S | 6.7E+01 | n >S | 8.7E+00 | n | – |
| Hexylene glycol (2-methyl-2,4-pentanediol) | 107-41-5 | 7.3E+00 | n | 7.3E+02 | n | – | – | – | – | 2.2E+01 | n | 2.2E+03 | n | – | – | – | – | – |
| Hydrazine | 302-01-2 | 3.0E-04 | c | 3.0E-02 | c | 5.1E+01 | c | 6.7E+00 | c | 6.8E-04 | c | 6.8E-02 | c | 8.6E+01 | c | 1.1E+01 | c | – |
| Hydrocaproic acid, 6- (6-hydroxyhexanoic acid) | 1191-25-9 | 1.6E+00 | n | 1.6E+02 | n | 2.9E+04 | n >S | 4.2E+03 | n | 4.7E+00 | n | 4.7E+02 | n | 4.0E+04 | n >S | 5.9E+03 | n | – |
| Hydrogen chloride (hydrochloric acid)* | 7647-01-0 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – |
| Hydroquinone | 123-31-9 | 1.5E-02 | c | 1.5E+00 | c | – | – | – | – | 3.4E-02 | c | 3.4E+00 | c | – | – | – | – | – |
| Indene | 95-13-6 | 4.9E-01 | n | 4.9E+01 | n | 2.7E+02 | n | 3.5E+01 | n | 1.5E+00 | n | 1.5E+02 | n | 3.8E+02 | n | 5.0E+01 | n | – |
| Indeno-1,2,3-cd-pyrene | 193-39-5 | 9.1E-03 | c >S | 9.1E-01 | c >S | 1.4E+04 | c >S | 1.8E+03 | c >S | 2.0E-02 | c >S | 2.0E+00 | c >S | 2.3E+04 | c >S | 3.0E+03 | c >S | – |
| Iron* | 7439-89-6 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | 0.3 |
| Isoamyl alcohol | 123-51-3 | 1.2E-01 | n | 1.2E+01 | n | – | – | – | – | 3.7E-01 | n | 3.7E+01 | n | – | – | – | – | – |
| Isobutyl alcohol | 78-83-1 | 7.3E+00 | n | 7.3E+02 | n | – | – | – | – | 2.2E+01 | n | 2.2E+03 | n | – | – | – | – | – |
| Isobutylene (2-methyl-1-propene) | 115-11-7 | 9.0E-02 | n | 9.0E+00 | n | 6.1E+04 | n >S | 7.9E+03 | n >S | 2.7E-01 | n | 2.7E+01 | n | 8.5E+04 | n >S | 1.1E+04 | n >S | – |
| Isobutyric acid (2-methylpropanoic acid) | 79-31-2 | 1.2E+01 | n | 1.2E+03 | n | – | – | – | – | 3.7E+01 | n | 3.7E+03 | n | – | – | – | – | – |
| Isodecanol | 25339-17-7 | 3.9E-02 | n | 3.9E+00 | n | – | – | – | – | 1.2E-01 | n | 1.2E+01 | n | – | – | – | – | – |
| Isodrin | 465-73-6 | 5.4E-06 | c | 5.4E-04 | c | 3.4E-02 | c >S | 4.4E-03 | c | 1.2E-05 | c | 1.2E-03 | c | 5.7E-02 | c >S | 7.4E-03 | c | – |
| Isopentane | 78-78-4 | 1.5E+00 | n | 1.5E+02 | n >S | 2.5E+03 | n >S | 3.2E+02 | n >S | 4.4E+00 | n | 4.4E+02 | n >S | 3.4E+03 | n >S | 4.4E+02 | n >S | – |
| Isophorone | 78-59-1 | 9.6E-01 | c | 9.6E+01 | c | – | – | – | – | 2.2E+00 | c | 2.2E+02 | c | – | – | – | – | – |
| Isopropyl acetate | 108-21-4 | 1.7E+00 | n | 1.7E+02 | n | – | – | – | – | 5.1E+00 | n | 5.1E+02 | n | – | – | – | – | – |
| Isopropyl alcohol | 67-63-0 | 4.9E+01 | n | 4.9E+03 | n | 4.2E+05 | n >S | 5.5E+04 | n | 1.5E+02 | n | 1.5E+04 | n | 5.9E+05 | n >S | 7.6E+04 | n | – |
| Isosafrole | 120-58-1 | 4.1E-03 | c | 4.1E-01 | c | 4.3E+02 | c >S | 5.5E+01 | c | 9.3E-03 | c | 9.3E-01 | c | 7.2E+02 | c >S | 9.3E+01 | c | – |
| Kelthane (dicofol) | 115-32-2 | 1.5E-01 | n | 1.5E+01 | n >S | – | – | – | – | 4.4E-01 | n | 4.4E+01 | n >S | – | – | – | – | – |
| Kepone (chlordecone) | 143-50-0 | 9.1E-05 | c | 9.1E-03 | c | 2.4E+02 | c >S | 3.0E+01 | c >S | 2.0E-04 | c | 2.0E-02 | c | 4.0E+02 | c >S | 5.1E+01 | c >S | – |
| Lead (inorganic) | 7439-92-1 | 1.5E-02 | e >S | 1.5E+00 | e >S | – | – | – | – | 1.5E-02 | e >S | 1.5E+00 | e >S | – | – | – | – | – |
| Leptophos | 21609-90-5 | 1.2E-04 | n | 1.2E-02 | n >S | 6.4E+01 | n >S | 8.2E+00 | n >S | 3.7E-04 | n | 3.7E-02 | n >S | 8.9E+01 | n >S | 1.2E+01 | n >S | – |
| Limonene, d-* | 5989-27-5 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – |
| Lithium | 7439-93-2 | 4.9E-02 | n | 4.9E+00 | n | – | – | – | – | 1.5E-01 | n | 1.5E+01 | n | – | – | – | – | – |
| Magnesium* | 7439-95-4 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – |
| Malathion | 121-75-5 | 4.9E-01 | n | 4.9E+01 | n | 9.2E+03 | n >S | 1.2E+03 | n >S | 1.5E+00 | n | 1.5E+02 | n >S | 1.3E+04 | n >S | 1.7E+03 | n >S | – |

## Table 3
## Tier 1 Groundwater PCLs - Residential and Commercial/Industrial[1]

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | Residential | | | | | | | | Commercial/Industrial | | | | | | | | Secondary MCL[5] (mg/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | $^{GW}GW_{Ing}$[2] (mg/L) | note[4] | $^{GW}GW_{Class3}$[3] (mg/L) | note[4] | $^{Air}GW_{Inh-V}$ 0.5 acre source area (mg/L) | note[4] | $^{Air}GW_{Inh-V}$ 30 acre source area (mg/L) | note[4] | $^{GW}GW_{Ing}$[2] (mg/L) | note[4] | $^{GW}GW_{Class3}$[3] (mg/L) | note[4] | $^{Air}GW_{Inh-V}$ 0.5 acre source area (mg/L) | note[4] | $^{Air}GW_{Inh-V}$ 30 acre source area (mg/L) | note[4] | |
| Maleic anhydride | 108-31-6 | 2.4E+00 | n | 2.4E+02 | n | – | – | – | – | 7.3E+00 | n | 7.3E+02 | n | – | – | – | – | – |
| Maleic hydrazide | 123-33-1 | 1.2E+01 | n | 1.2E+03 | n | – | – | – | – | 3.7E+01 | n | 3.7E+03 | n | – | – | – | – | – |
| Malononitrile | 109-77-3 | 2.4E-03 | n | 2.4E-01 | n | – | – | – | – | 7.3E-03 | n | 7.3E-01 | n | – | – | – | – | – |
| Mancozeb | 8018-01-7 | 7.3E-01 | n | 7.3E+01 | n >S | – | – | – | – | 2.2E+00 | n | 2.2E+02 | n >S | – | – | – | – | – |
| Manganese | 7439-96-5 | 1.1E+00 | n >S | 1.1E+02 | n >S | – | – | – | – | 1.0E+01 | n >S | 1.0E+03 | n >S | – | – | – | – | 0.05 |
| MCPA (4-(chloro-2-methylphenoxy) acetic acid) | 94-74-6 | 1.2E-02 | n | 1.2E+00 | n | – | – | – | – | 3.7E-02 | n | 3.7E+00 | n | – | – | – | – | – |
| MCPP (2-(4-chloro-2-methylphenoxy) propanoic acid) | 93-65-2 | 2.4E-02 | n | 2.4E+00 | n | – | – | – | – | 7.3E-02 | n | 7.3E+00 | n | – | – | – | – | – |
| Mercury (pH = 4.9) | 7439-97-6 | 2.0E-03 | m | 2.0E-01 | m >S | 7.3E+00 | n >S | 9.4E-01 | n >S | 2.0E-03 | m | 2.0E-01 | m >S | 1.0E+01 | n >S | 1.3E+00 | n >S | – |
| Mercury (pH=6.8) | 7439-97-6A | 2.0E-03 | m | 2.0E-01 | m >S | 7.3E+00 | n >S | 9.4E-01 | n >S | 2.0E-03 | m | 2.0E-01 | m >S | 1.0E+01 | n >S | 1.3E+00 | n >S | – |
| Merphos | 150-50-5 | 7.3E-04 | n | 7.3E-02 | n >S | – | – | – | – | 2.2E-03 | n | 2.2E-01 | n >S | – | – | – | – | – |
| Methacrylic acid (2-methyl-2-propenoic acid) | 79-41-4 | 2.4E-01 | n | 2.4E+01 | n | – | – | – | – | 7.3E-01 | n | 7.3E+01 | n | – | – | – | – | – |
| Methacrylonitrile | 126-98-7 | 1.2E+00 | n | 1.2E+02 | n | 1.1E+04 | n | 1.4E+03 | n | 3.7E+00 | n | 3.7E+02 | n | 1.6E+04 | n | 2.0E+03 | n | – |
| Methanol | 67-56-1 | 4.9E+01 | n | 4.9E+03 | n | 1.0E+06 | n >S | 1.0E+06 | n >S | 1.5E+02 | n | 1.5E+04 | n | 1.0E+06 | n >S | 1.0E+06 | n >S | – |
| Methapyrilene | 91-80-5 | 1.9E-04 | c | 1.9E-02 | c | – | – | – | – | 4.3E-04 | c | 4.3E-02 | c | – | – | – | – | – |
| Methomyl | 16752-77-5 | 6.1E-01 | n | 6.1E+01 | n | – | – | – | – | 1.8E+00 | n | 1.8E+02 | n | – | – | – | – | – |
| Methoxychlor | 72-43-5 | 4.0E-02 | m | 4.0E+00 | m >S | – | – | – | – | 4.0E-02 | m | 4.0E+00 | m >S | – | – | – | – | – |
| Methoxyethanol, 2- | 109-86-4 | 6.6E-01 | n | 6.6E+01 | n >S | 8.1E+01 | n >S | 1.1E+01 | n | 2.0E+00 | n | 2.0E+02 | n >S | 1.1E+02 | n >S | 1.5E+01 | n | – |
| Methyl acetate (acetic acid, methyl ester) | 79-20-9 | 2.4E+01 | n | 2.4E+03 | n | – | – | – | – | 7.3E+01 | n | 7.3E+03 | n | – | – | – | – | – |
| Methyl acrylate | 96-33-3 | 4.9E-02 | n | 4.9E+00 | n | 2.7E+03 | n | 3.4E+02 | n | 1.5E-01 | n | 1.5E+01 | n | 3.7E+03 | n | 4.8E+02 | n | – |
| Methyl amyl ketone (2-heptanone) | 110-43-0 | 1.2E+00 | n | 1.2E+02 | n | 1.0E+06 | n >S | 1.4E+05 | n >S | 3.7E+00 | n | 3.7E+02 | n | 1.0E+06 | n >S | 2.0E+05 | n >S | – |
| Methyl chrysene, 1- | 3351-28-8 | 1.3E-01 | c >S | 1.3E+01 | c >S | 8.0E+05 | c >S | 1.0E+05 | c >S | 2.8E-01 | c >S | 2.8E+01 | c >S | 1.0E+06 | c >S | 1.7E+05 | c >S | – |
| Methyl chrysene, 2- | 3351-32-4 | 1.3E-01 | c >S | 1.3E+01 | c >S | 8.0E+05 | c >S | 1.0E+05 | c >S | 2.8E-01 | c >S | 2.8E+01 | c >S | 1.0E+06 | c >S | 1.7E+05 | c >S | – |
| Methyl chrysene, 6- | 1705-85-7 | 1.3E-02 | c >S | 1.3E+00 | c >S | 8.0E+04 | c >S | 1.0E+04 | c >S | 2.8E-02 | c >S | 2.8E+00 | c >S | 1.3E+05 | c >S | 1.7E+04 | c >S | – |
| Methyl cyclohexane | 108-87-2 | 1.2E+02 | n >S | 1.2E+04 | n >S | 1.4E+03 | n >S | 1.8E+02 | n >S | 3.7E+02 | n >S | 3.7E+04 | n >S | 2.0E+03 | n >S | 2.6E+02 | n >S | – |
| Methyl ethyl ketone (2-butanone) | 78-93-3 | 1.5E+01 | n | 1.5E+03 | n | 1.0E+06 | n >S | 6.2E+05 | n >S | 4.4E+01 | n | 4.4E+03 | n | 1.0E+06 | n >S | 8.7E+05 | n >S | – |
| Methyl iodide (iodomethane) | 74-88-4 | 3.4E-02 | n | 3.4E+00 | n | – | – | – | – | 1.0E-01 | n | 1.0E+01 | n | – | – | – | – | – |
| Methyl isobutyl ketone (4-methyl-2-pentanone) | 108-10-1 | 2.0E+00 | n | 2.0E+02 | n | 6.7E+05 | n >S | 8.7E+04 | n >S | 5.8E+00 | n | 5.8E+02 | n | 9.4E+05 | n >S | 1.2E+05 | n >S | – |
| Methyl mercury | 22967-92-6 | 2.4E-03 | n | 2.4E-01 | n | – | – | – | – | 7.3E-03 | n | 7.3E-01 | n | – | – | – | – | – |
| Methyl methacrylate | 80-62-6 | 3.4E+01 | n | 3.4E+03 | n | 7.9E+04 | n >S | 1.0E+04 | n | 1.0E+02 | n | 1.0E+04 | n | 1.1E+05 | n >S | 1.4E+04 | n | – |
| Methyl methanesulfonate | 66-27-3 | 9.2E-03 | c | 9.2E-01 | c | 1.7E+04 | c | 2.2E+03 | c | 2.1E-02 | c | 2.1E+00 | c | 2.8E+04 | c | 3.7E+03 | c | – |
| Methyl parathion | 298-00-0 | 6.1E-03 | n | 6.1E-01 | n | – | – | – | – | 1.8E-02 | n | 1.8E+00 | n | – | – | – | – | – |
| Methyl-1-butene, 2- | 563-46-2 | 1.5E+00 | n | 1.5E+02 | n >S | 7.8E+03 | n >S | 1.0E+03 | n >S | 4.4E+00 | n | 4.4E+02 | n >S | 1.1E+04 | n >S | 1.4E+03 | n >S | – |
| Methyl-1-propanal, 2- (isobutyraldehyde) | 78-84-2 | 9.8E-01 | n | 9.8E+01 | n | – | – | – | – | 2.9E+00 | n | 2.9E+02 | n | – | – | – | – | – |
| Methyl-2-butene, 2- | 513-35-9 | 1.5E+00 | n | 1.5E+02 | n | 1.5E+04 | n >S | 1.9E+03 | n >S | 4.4E+00 | n | 4.4E+02 | n >S | 2.1E+04 | n >S | 2.7E+03 | n >S | – |
| Methyl-2-pentenal, 2- | 623-36-9 | 4.8E-04 | c | 4.8E-02 | c | – | – | – | – | 1.1E-03 | c | 1.1E-01 | c | – | – | – | – | – |
| Methylcholanthrene, 3- | 56-49-5 | 4.1E-05 | c | 4.1E-03 | c >S | 4.1E+02 | c >S | 5.4E+01 | c >S | 9.3E-05 | c | 9.3E-03 | c >S | 7.0E+02 | c >S | 9.0E+01 | c >S | – |
| Methylene bromide (dibromomethane) | 74-95-3 | 1.2E-01 | c | 1.2E+01 | c | 2.4E+02 | n | 3.1E+01 | n | 2.7E-01 | c | 2.7E+01 | c | 3.3E+02 | n | 4.3E+01 | n | – |
| Methylene chloride (dichloromethane) | 75-09-2 | 5.0E-03 | m | 5.0E-01 | m | 2.1E+04 | c >S | 2.8E+03 | c | 5.0E-03 | m | 5.0E-01 | m | 3.6E+04 | c >S | 4.6E+03 | c | – |
| Methylene-bis (2-chloroaniline) 4,4'- | 101-14-4 | 9.1E-03 | c | 9.1E-01 | c | 2.0E+04 | c >S | 2.6E+03 | c >S | 2.0E-02 | c | 2.0E+00 | c | 3.3E+04 | c >S | 4.3E+03 | c >S | – |
| Methylmecury hydroxide | 1184-57-2 | 2.4E-03 | n | 2.4E-01 | n | – | – | – | – | 7.3E-03 | n | 7.3E-01 | n | – | – | – | – | – |

## Table 3
## Tier 1 Groundwater PCLs - Residential and Commercial/Industrial[1]

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | Residential | | | | | | | | Commercial/Industrial | | | | | | | | Secondary MCL[5] (mg/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | $^{GW}GW_{Ing}$[2] (mg/L) | note[4] | $^{GW}GW_{Class3}$[3] (mg/L) | note[4] | $^{Air}GW_{Inh-V}$ 0.5 acre source area (mg/L) | note[4] | $^{Air}GW_{Inh-V}$ 30 acre source area (mg/L) | note[4] | $^{GW}GW_{Ing}$[2] (mg/L) | note[4] | $^{GW}GW_{Class3}$[3] (mg/L) | note[4] | $^{Air}GW_{Inh-V}$ 0.5 acre source area (mg/L) | note[4] | $^{Air}GW_{Inh-V}$ 30 acre source area (mg/L) | note[4] | |
| Methylnaphthalene, 1- | 90-12-0 | 3.1E-02 | c | 3.1E+00 | c | – | – | – | – | 7.0E-02 | c | 7.0E+00 | c | – | – | – | – | – |
| Methylnaphthalene, 2- | 91-57-6 | 9.8E-02 | n | 9.8E+00 | n | – | – | – | – | 2.9E-01 | n | 2.9E+01 | n >S | – | – | – | – | – |
| Methylpyrrolidone, N- | 872-50-4 | 4.9E-01 | n | 4.9E+01 | n | – | – | – | – | 1.5E+00 | n | 1.5E+02 | n | – | – | – | – | – |
| Methylstyrene, alpha- | 98-83-9 | 2.0E-01 | n | 2.0E+01 | n | 6.6E+02 | n >S | 8.5E+01 | n >S | 6.1E-01 | n | 6.1E+01 | n | 9.2E+02 | n >S | 1.2E+02 | n >S | – |
| Methyltetrahydrofuran, 2- | 96-47-9 | 1.2E-01 | c | 1.2E+01 | c | 1.8E+03 | c | 2.3E+02 | c | 2.7E-01 | c | 2.7E+01 | c | 3.1E+03 | c | 3.9E+02 | c | – |
| Methyltetrahydropyran, 2- | 10141-72-7 | 1.2E-01 | c | 1.2E+01 | c | 2.1E+03 | c | 2.7E+02 | c | 2.7E-01 | c | 2.7E+01 | c | 3.6E+03 | c | 4.6E+02 | c | – |
| Metolachlor | 51218-45-2 | 3.7E+00 | n | 3.7E+02 | n | – | – | – | – | 1.1E+01 | n | 1.1E+03 | n >S | – | – | – | – | – |
| Metribuzin | 21087-64-9 | 6.1E-01 | n | 6.1E+01 | n | – | – | – | – | 1.8E+00 | n | 1.8E+02 | n | – | – | – | – | – |
| Mirex | 2385-85-5 | 4.9E-03 | n >S | 4.9E-01 | n >S | – | – | – | – | 1.5E-02 | n >S | 1.5E+00 | n >S | – | – | – | – | – |
| Molinate | 2212-67-1 | 4.9E-02 | n | 4.9E+00 | n | – | – | – | – | 1.5E-01 | n | 1.5E+01 | n | – | – | – | – | – |
| Molybdenum | 7439-98-7 | 1.2E-01 | n >S | 1.2E+01 | n >S | – | – | – | – | 3.7E-01 | n >S | 3.7E+01 | n >S | – | – | – | – | – |
| Monocrotophos | 2157-98-4 | 1.5E-02 | n | 1.5E+00 | n | – | – | – | – | 4.4E-02 | n | 4.4E+00 | n | – | – | – | – | – |
| Morpholine | 110-91-8 | 1.2E+04 | n | 1.0E+06 | n | – | – | – | – | 3.7E+04 | n | 1.0E+06 | n | – | – | – | – | – |
| Morpholine, N-butyl- | 1005-67-0 | 5.6E-02 | n | 5.6E+00 | n | – | – | – | – | 1.7E-01 | n | 1.7E+01 | n | – | – | – | – | – |
| MTBE (methyl tert-butyl ether)[5,8] | 1634-04-4 | 2.4E-01 | n | 2.4E+01 | n | 4.0E+03 | c | 5.2E+02 | c | 7.3E-01 | n | 7.3E+01 | n | 6.8E+03 | c | 8.8E+02 | c | 0.015 |
| Naled | 300-76-5 | 4.9E-02 | n | 4.9E+00 | n >S | – | – | – | – | 1.5E-01 | n | 1.5E+01 | n >S | – | – | – | – | – |
| Naphthalene | 91-20-3 | 4.9E-01 | n | 4.9E+01 | n >S | 3.2E+02 | n >S | 4.1E+01 | n >S | 1.5E+00 | n | 1.5E+02 | n >S | 4.4E+02 | n >S | 5.7E+01 | n >S | – |
| Naphthoquinone, 1,4- | 130-15-4 | 1.7E-01 | n | 1.7E+01 | n | – | – | – | – | 5.1E-01 | n | 5.1E+01 | n | – | – | – | – | – |
| Naphthylamine, 1- | 134-32-7 | 4.9E-01 | n | 4.9E+01 | n | – | – | – | – | 1.5E+00 | n | 1.5E+02 | n | – | – | – | – | – |
| Naphthylamine, 2- | 91-59-8 | 5.1E-04 | c | 5.1E-02 | c | – | – | – | – | 1.1E-03 | c | 1.1E-01 | c | – | – | – | – | – |
| Napropamide | 15299-99-7 | 2.4E+00 | n | 2.4E+02 | n >S | – | – | – | – | 7.3E+00 | n | 7.3E+02 | n >S | – | – | – | – | – |
| Neopentyl glycol | 126-30-7 | 7.3E+00 | n | 7.3E+02 | n | – | – | – | – | 2.2E+01 | n | 2.2E+03 | n | – | – | – | – | – |
| Nickel and compounds | 7440-02-0 | 4.9E-01 | n >S | 4.9E+01 | n >S | – | – | – | – | 1.5E+00 | n >S | 1.5E+02 | n >S | – | – | – | – | – |
| Nitrate-N[9] | 14797-55-8 | 1.0E+01 | m | 1.0E+03 | m | – | – | – | – | 1.0E+01 | m | 1.0E+03 | m | – | – | – | – | – |
| Nitrite-N[9] | 14797-65-0 | 1.0E+00 | m | 1.0E+02 | m | – | – | – | – | 1.0E+00 | m | 1.0E+02 | m | – | – | – | – | – |
| Nitroaniline, 2- | 88-74-4 | 7.3E-03 | n | 7.3E-01 | n | 4.0E+03 | n >S | 5.2E+02 | n | 2.2E-02 | n | 2.2E+00 | n | 5.6E+03 | n >S | 7.2E+02 | n | – |
| Nitroaniline, 3- | 99-09-2 | 7.3E-03 | n | 7.3E-01 | n | 4.7E+03 | n >S | 6.1E+02 | n >S | 2.2E-02 | n | 2.2E+00 | n | 6.6E+03 | n >S | 8.6E+02 | n >S | – |
| Nitroaniline, 4- | 100-01-6 | 4.6E-02 | c | 4.6E+00 | c | 1.4E+05 | n >S | 1.9E+04 | n >S | 1.0E-01 | c | 1.0E+01 | c | 2.0E+05 | n >S | 2.6E+04 | n >S | – |
| Nitrobenzene | 98-95-3 | 4.9E-02 | n | 4.9E+00 | n | 7.2E+02 | c | 9.3E+01 | c | 1.5E-01 | n | 1.5E+01 | n | 1.2E+03 | c | 1.6E+02 | c | – |
| Nitroglycerin | 55-63-0 | 2.4E-03 | n | 2.4E-01 | n | – | – | – | – | 7.3E-03 | n | 7.3E-01 | n | – | – | – | – | – |
| Nitrophenol, 2- | 88-75-5 | 4.9E-02 | n | 4.9E+00 | n | – | – | – | – | 1.5E-01 | n | 1.5E+01 | n | – | – | – | – | – |
| Nitrophenol, 3- | 554-84-7 | 4.9E-02 | n | 4.9E+00 | n | – | – | – | – | 1.5E-01 | n | 1.5E+01 | n | – | – | – | – | – |
| Nitrophenol, 4- | 100-02-7 | 4.9E-02 | n | 4.9E+00 | n | – | – | – | – | 1.5E-01 | n | 1.5E+01 | n | – | – | – | – | – |
| Nitropropane, 2- | 79-46-9 | 3.4E-03 | n | 3.4E-01 | n | 1.7E+00 | c | 2.2E-01 | c | 1.0E-02 | n | 1.0E+00 | n | 2.9E+00 | c | 3.8E-01 | c | – |
| Nitroquinoline-N-oxide, 4- | 56-57-5 | 9.7E-05 | c | 9.7E-03 | c | 1.1E+04 | c | 1.1E+04 | c | 2.2E-04 | c | 2.2E-02 | c | 1.9E+04 | c | 1.8E+04 | c | – |
| Nitrosodiethanolamine | 1116-54-7 | 3.3E-04 | c | 3.3E-02 | c | – | – | – | – | 7.3E-04 | c | 7.3E-02 | c | – | – | – | – | – |
| Nitrosodiethylamine, n- | 55-18-5 | 6.1E-06 | c | 6.1E-04 | c | 7.4E+00 | c | 9.5E-01 | c | 1.4E-05 | c | 1.4E-03 | c | 1.2E+01 | c | 1.6E+00 | c | – |
| Nitrosodimethylamine, n- | 62-75-9 | 1.8E-05 | c | 1.8E-03 | c | 2.0E+01 | c | 2.6E+00 | c | 4.0E-05 | c | 4.0E-03 | c | 3.4E+01 | c | 4.4E+00 | c | – |
| Nitrosodi-n-butylamine, n- | 924-16-3 | 1.7E-04 | c | 1.7E-02 | c | 4.7E+00 | c | 6.1E-01 | c | 3.8E-04 | c | 3.8E-02 | c | 7.9E+00 | c | 1.0E+00 | c | – |
| Nitrosodi-n-propylamine, n- | 621-64-7 | 1.3E-04 | c | 1.3E-02 | c | – | – | – | – | 2.9E-04 | c | 2.9E-02 | c | – | – | – | – | – |

## Table 3
## Tier 1 Groundwater PCLs - Residential and Commercial/Industrial[1]

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | Residential | | | | | | | | Commercial/Industrial | | | | | | | | Secondary MCL[5] (mg/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | $^{GW}GW_{Ing}$[2] (mg/L) | note[4] | $^{GW}GW_{Class3}$[3] (mg/L) | note[4] | $^{Air}GW_{Inh-V}$ 0.5 acre source area (mg/L) | note[4] | $^{Air}GW_{Inh-V}$ 30 acre source area (mg/L) | note[4] | $^{GW}GW_{Ing}$[2] (mg/L) | note[4] | $^{GW}GW_{Class3}$[3] (mg/L) | note[4] | $^{Air}GW_{Inh-V}$ 0.5 acre source area (mg/L) | note[4] | $^{Air}GW_{Inh-V}$ 30 acre source area (mg/L) | note[4] | |
| Nitrosodiphenylamine | 86-30-6 | 1.9E-01 | c | 1.9E+01 | c | – | – | – | – | 4.2E-01 | c | 4.2E+01 | c >S | – | – | – | – | – |
| Nitroso-methyl-ethyl-amine, n- | 10595-95-6 | 4.1E-05 | c | 4.1E-03 | c | – | – | – | – | 9.3E-05 | c | 9.3E-03 | c | – | – | – | – | – |
| Nitrosomorpholine, N- | 59-89-2 | 1.4E-04 | c | 1.4E-02 | c | 2.7E+02 | c | 3.6E+01 | c | 3.1E-04 | c | 3.1E-02 | c | 4.6E+02 | c | 6.0E+01 | c | – |
| Nitroso-n-ethylurea, n- | 759-73-9 | 6.5E-06 | c | 6.5E-04 | c | – | – | – | – | 1.5E-05 | c | 1.5E-03 | c | – | – | – | – | – |
| Nitrosopiperidine, N- | 100-75-4 | 9.7E-05 | c | 9.7E-03 | c | 1.6E+02 | c | 2.1E+01 | c | 2.2E-04 | c | 2.2E-02 | c | 2.8E+02 | c | 3.6E+01 | c | – |
| Nitrosopyrrolidine, n- | 930-55-2 | 4.3E-04 | c | 4.3E-02 | c | 9.6E+02 | c | 1.2E+02 | c | 9.7E-04 | c | 9.7E-02 | c | 1.6E+03 | c | 2.1E+02 | c | – |
| Nitrotoluene, m- | 99-08-1 | 2.4E-01 | n | 2.4E+01 | n | – | – | – | – | 7.3E-01 | n | 7.3E+01 | n | – | – | – | – | – |
| Nitrotoluene, o- | 88-72-2 | 4.1E-03 | c | 4.1E-01 | c | – | – | – | – | 9.3E-03 | c | 9.3E-01 | c | – | – | – | – | – |
| Nitrotoluene, p- | 99-99-0 | 5.7E-02 | c | 5.7E+00 | c | – | – | – | – | 1.3E-01 | c | 1.3E+01 | c | – | – | – | – | – |
| Nonachlor, cis- | 5103-73-1 | 2.6E-03 | c | 2.6E-01 | c >S | 7.7E+02 | c >S | 9.9E+01 | c >S | 5.8E-03 | c | 5.8E-01 | c >S | 1.3E+03 | c >S | 1.7E+02 | c >S | – |
| Nonachlor, trans- | 39765-80-5 | 2.6E-03 | c | 2.6E-01 | c >S | 7.7E+02 | c >S | 9.9E+01 | c >S | 5.8E-03 | c | 5.8E-01 | c >S | 1.3E+03 | c >S | 1.7E+02 | c >S | – |
| Nonanal | 124-19-6 | 4.9E+00 | n | 4.9E+02 | n >S | – | – | – | – | 1.5E+01 | n | 1.5E+03 | n >S | – | – | – | – | – |
| Nonene, 1-n | 124-11-8 | 2.4E+00 | n >S | 2.4E+02 | n >S | – | – | – | – | 7.3E+00 | n >S | 7.3E+02 | n >S | – | – | – | – | – |
| Nonylphenol, 4-n- | 104-40-5 | 2.4E+00 | n >S | 2.4E+02 | n >S | – | – | – | – | 7.3E+00 | n >S | 7.3E+02 | n >S | – | – | – | – | – |
| Nonylphenol ethoxylate | 9016-45-9 | 2.4E+00 | n >S | 2.4E+02 | n >S | – | – | – | – | 7.3E+00 | n >S | 7.3E+02 | n >S | – | – | – | – | – |
| Octamethylpyrophosphoramide | 152-16-9 | 4.9E-02 | n | 4.9E+00 | n | – | – | – | – | 1.5E-01 | n | 1.5E+01 | n | – | – | – | – | – |
| Octanone | 106-68-3 | 1.5E+00 | n | 1.5E+02 | n | 1.0E+06 | n >S | 6.2E+05 | n >S | 4.4E+00 | n | 4.4E+02 | n | 1.0E+06 | n >S | 8.7E+05 | n >S | – |
| Oxamyl | 23135-22-0 | 2.0E-01 | m | 2.0E+01 | m | – | – | – | – | 2.0E-01 | m | 2.0E+01 | m | – | – | – | – | – |
| Oxychlordane | 27304-13-8 | 2.6E-03 | c | 2.6E-01 | c >S | 7.7E+02 | c >S | 9.9E+01 | c >S | 5.8E-03 | c | 5.8E-01 | c >S | 1.3E+03 | c >S | 1.7E+02 | c >S | – |
| Paraquat | 1910-42-5 | 1.1E-01 | n | 1.1E+01 | n | – | – | – | – | 3.3E-01 | n | 3.3E+01 | n | – | – | – | – | – |
| Parathion (ethyl parathion) | 56-38-2 | 1.5E-01 | n | 1.5E+01 | n >S | – | – | – | – | 4.4E-01 | n | 4.4E+01 | n >S | – | – | – | – | – |
| Pebulate | 1114-71-2 | 1.2E+00 | n | 1.2E+02 | n >S | – | – | – | – | 3.7E+00 | n | 3.7E+02 | n >S | – | – | – | – | – |
| Pendimethalin | 40487-42-1 | 9.8E-01 | n >S | 9.8E+01 | n >S | – | – | – | – | 2.9E+00 | n >S | 2.9E+02 | n >S | – | – | – | – | – |
| Pentachlorobenzene | 608-93-5 | 2.0E-02 | n | 2.0E+00 | n >S | – | – | – | – | 5.8E-02 | n | 5.8E+00 | n >S | – | – | – | – | – |
| Pentachloroethane | 76-01-7 | 1.0E-02 | c | 1.0E+00 | c | 3.0E+02 | c | 3.8E+01 | c | 2.3E-02 | c | 2.3E+00 | c | 5.0E+02 | c | 6.4E+01 | c | – |
| Pentachloronitrobenzene | 82-68-8 | 3.5E-03 | c | 3.5E-01 | c >S | – | – | – | – | 7.9E-03 | c | 7.9E-01 | c >S | – | – | – | – | – |
| Pentachlorophenol | 87-86-5 | 1.0E-03 | m | 1.0E-01 | m | – | – | – | – | 1.0E-03 | m | 1.0E-01 | m | – | – | – | – | – |
| Pentadiene, 1,3-cis- | 1574-41-0 | 1.5E+00 | n | 1.5E+02 | n | 4.3E+04 | n >S | 5.6E+03 | n >S | 4.4E+00 | n | 4.4E+02 | n | 6.0E+04 | n >S | 7.8E+03 | n >S | – |
| Pentadiene, 1,3-trans- | 2004-70-8 | 1.5E+00 | n | 1.5E+02 | n | 7.6E+04 | n >S | 9.8E+03 | n >S | 4.4E+00 | n | 4.4E+02 | n | 1.1E+05 | n >S | 1.4E+04 | n >S | – |
| Pentaerythritol tetranitrate (PETN) | 78-11-5 | 4.9E-02 | n | 4.9E+00 | n | – | – | – | – | 1.5E-01 | n | 1.5E+01 | n | – | – | – | – | – |
| Pentane | 109-66-0 | 1.5E+00 | n | 1.5E+02 | n >S | 3.4E+02 | n >S | 4.4E+01 | n >S | 4.4E+00 | n | 4.4E+02 | n >S | 4.8E+02 | n >S | 6.2E+01 | n >S | – |
| Pentane, 2-methyl- | 107-83-5 | 1.5E+00 | n | 1.5E+02 | n >S | 1.7E+03 | n >S | 2.3E+02 | n >S | 4.4E+00 | n | 4.4E+02 | n >S | 2.4E+03 | n >S | 3.2E+02 | n >S | – |
| Pentane, 3-methyl- | 96-14-0 | 1.5E+00 | n | 1.5E+02 | n >S | 2.2E+03 | n >S | 2.9E+02 | n >S | 4.4E+00 | n | 4.4E+02 | n >S | 3.1E+03 | n >S | 4.0E+02 | n >S | – |
| Pentanediol, 1,5- | 111-29-5 | 1.2E+02 | n | 1.2E+04 | n | 1.0E+06 | n >S | 1.0E+06 | n >S | 3.7E+02 | n | 3.7E+04 | n | 1.0E+06 | n >S | 1.0E+06 | n >S | – |
| Pentanol, 1- | 71-41-0 | 8.1E-01 | n | 8.1E+01 | n | – | – | – | – | 2.4E+00 | n | 2.4E+02 | n | – | – | – | – | – |
| Pentanol, 4-methyl-2- | 108-11-2 | 6.4E-01 | n | 6.4E+01 | n | – | – | – | – | 1.9E+00 | n | 1.9E+02 | n | – | – | – | – | – |
| Pentanone, 2- | 107-87-9 | 9.8E-01 | n | 9.8E+01 | n | – | – | – | – | 2.9E+00 | n | 2.9E+02 | n | – | – | – | – | – |
| Pentene, 2- | 109-68-2 | 1.5E+00 | n | 1.5E+02 | n | 1.4E+04 | n >S | 1.8E+03 | n >S | 4.4E+00 | n | 4.4E+02 | n >S | 2.0E+04 | n >S | 2.5E+03 | n >S | – |
| Pentyne, 1- | 627-19-0 | 1.5E+00 | n | 1.5E+02 | n | 7.2E+04 | n >S | 9.3E+03 | n >S | 4.4E+00 | n | 4.4E+02 | n | 1.0E+05 | n >S | 1.3E+04 | n >S | – |
| Perchlorate | 14797-73-0 | 1.7E-02 | n | 1.7E+00 | n | – | – | – | – | 5.1E-02 | n | 5.1E+00 | n | – | – | – | – | – |

# Table 3
## Tier 1 Groundwater PCLs - Residential and Commercial/Industrial[1]

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | Residential | | | | | | | | Commercial/Industrial | | | | | | | | Secondary MCL[5] (mg/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | $^{GW}GW_{Ing}$[2] (mg/L) | note[4] | $^{GW}GW_{Class3}$[3] (mg/L) | note[4] | $^{Air}GW_{Inh-V}$ 0.5 acre source area (mg/L) | note[4] | $^{Air}GW_{Inh-V}$ 30 acre source area (mg/L) | note[4] | $^{GW}GW_{Ing}$[2] (mg/L) | note[4] | $^{GW}GW_{Class3}$[3] (mg/L) | note[4] | $^{Air}GW_{Inh-V}$ 0.5 acre source area (mg/L) | note[4] | $^{Air}GW_{Inh-V}$ 30 acre source area (mg/L) | note[4] | |
| Perfluorooctanoic sulfonic acid (1-Octanesulfonic acid, heptadecafluoro-1-) | 1763-23-1 | 5.6E-04 | n | 5.6E-02 | n | 1.8E+03 | n >S | 2.4E+02 | n | 1.7E-03 | n | 1.7E-01 | n | 2.6E+03 | n >S | 3.4E+02 | n | – |
| Perfluoroundecanoic acid (Undecanoic acid, uncosafluoro-) | 2058-94-8 | 2.9E-04 | n | 2.9E-02 | n | – | – | – | – | 8.8E-04 | n | 8.8E-02 | n | – | – | – | – | – |
| Perfluoropentanoic acid (Pentanoic acid, nonafluoro-) | 2706-90-3 | 9.3E-05 | n | 9.3E-03 | n | – | – | – | – | 2.8E-04 | n | 2.8E-02 | n | – | – | – | – | – |
| Perfluorohexanoic acid (Hexanoic acid, undecafluoro-) | 307-24-4 | 9.3E-05 | n | 9.3E-03 | n | – | – | – | – | 2.8E-04 | n | 2.8E-02 | n | – | – | – | – | – |
| Perfluorododecanoic acid (Dodecanoic acid, tricosafluoro-) | 307-55-1 | 2.9E-04 | n | 2.9E-02 | n | 5.5E+02 | n >S | 7.2E+01 | n >S | 8.8E-04 | n | 8.8E-02 | n >S | 7.8E+02 | n >S | 1.0E+02 | n >S | – |
| Perfluorooctanoic acid (Octanoic acid, pentadecafluoro-) | 335-67-1 | 2.9E-04 | n | 2.9E-02 | n | 9.0E+01 | n | 1.2E+01 | n | 8.8E-04 | n | 8.8E-02 | n | 1.3E+02 | n | 1.6E+01 | n | – |
| Perfluorodecanoic acid (Decanoic acid, nonadecafluoro-) | 335-76-2 | 3.7E-04 | n | 3.7E-02 | n | 1.3E+03 | n >S | 1.6E+02 | n >S | 1.1E-03 | n | 1.1E-01 | n | 1.8E+03 | n >S | 2.3E+02 | n >S | – |
| Perfluorodecane sulfonic acid (1-Decanesulfonic acid, heneicosafluoro-) | 335-77-3 | 2.9E-04 | n | 2.9E-02 | n | – | – | – | – | 8.8E-04 | n | 8.8E-02 | n >S | – | – | – | – | – |
| Perfluorohexane sulfonic acid (1-Hexanesulfonic acid, triddecafluoro-) | 355-46-4 | 9.3E-05 | n | 9.3E-03 | n | 2.9E+02 | n | 5.7E+01 | n | 2.8E-04 | n | 2.8E-02 | n | 4.0E+02 | n >S | 7.9E+01 | n | – |
| Perfluorobutyric acid (Butanoic acid, heptafluoro-) | 375-22-4 | 7.1E-02 | n | 7.1E+00 | n | 8.5E+05 | n >S | 7.1E+05 | n | 2.1E-01 | n | 2.1E+01 | n | 1.0E+06 | n >S | 1.0E+06 | n >S | – |
| Perfluorobutane sulfonic acid (1-Butanesulfonic acid, nonafluoro-) | 375-73-5 | 3.4E-02 | n | 3.4E+00 | n | 5.4E+05 | n >S | 4.7E+05 | n >S | 1.0E-01 | n | 1.0E+01 | n | 7.6E+05 | n >S | 6.5E+05 | n >S | – |
| Perfluoroheptanoic acid (Heptanoic acid, tridecafluoro-) | 375-85-9 | 5.6E-04 | n | 5.6E-02 | n | – | – | – | – | 1.7E-03 | n | 1.7E-01 | n | – | – | – | – | – |
| Perfluorononanoic acid (Nonanoic acid, heptadecafluoro-) | 375-95-1 | 2.9E-04 | n | 2.9E-02 | n | 6.5E+02 | n >S | 8.4E+01 | n >S | 8.8E-04 | n | 8.8E-02 | n | 9.1E+02 | n >S | 1.2E+02 | n >S | – |
| Perfluorotetradecanoic acid (Tetradecanoic acid, heptacosafluoro-) | 376-06-7 | 2.9E-04 | n | 2.9E-02 | n >S | – | – | – | – | 8.8E-04 | n | 8.8E-02 | n >S | – | – | – | – | – |
| Perfluorotridecanoic acid (Tridecanoic acid, pentacosafluoro-) | 72629-94-8 | 2.9E-04 | n | 2.9E-02 | n >S | – | – | – | – | 8.8E-04 | n | 8.8E-02 | n >S | – | – | – | – | – |
| Perfluorooctane sulfonamide (1-Octanesulfonamide, hetpadecafluoro-) | 754-91-6 | 2.9E-04 | n | 2.9E-02 | n | 5.3E-05 | n | 6.8E-06 | n | 8.8E-04 | n | 8.8E-02 | n >S | 7.4E-05 | n | 9.6E-06 | n | – |
| Perylene | 198-55-0 | 4.9E-01 | n >S | 4.9E+01 | n >S | – | – | – | – | 1.5E+00 | n >S | 1.5E+02 | n >S | – | – | – | – | – |
| Phenacetin | 62-44-2 | 4.1E-01 | c | 4.1E+01 | c | 1.0E+06 | c >S | 1.5E+05 | c >S | 9.3E-01 | c | 9.3E+01 | c | 1.0E+06 | c >S | 2.5E+05 | c >S | – |
| Phenanthrene | 85-01-8 | 7.3E-01 | n | 7.3E+01 | n >S | – | – | – | – | 2.2E+00 | n >S | 2.2E+02 | n >S | – | – | – | – | – |
| Phenanthridine | 229-87-8 | 7.3E-02 | n | 7.3E+00 | n | – | – | – | – | 2.2E-01 | n | 2.2E+01 | n | – | – | – | – | – |
| Phenol | 108-95-2 | 7.3E+00 | n | 7.3E+02 | n | 1.6E+05 | n >S | 2.1E+04 | n | 2.2E+01 | n | 2.2E+03 | n | 2.2E+05 | n >S | 2.9E+04 | n | – |
| Phenol, 4-tert-butyl- | 98-54-4 | 2.9E+00 | n | 2.9E+02 | n >S | – | – | – | – | 8.8E+00 | n | 8.8E+02 | n >S | – | – | – | – | – |
| Phenothiazine | 92-84-2 | 2.7E-02 | n >S | 2.7E+00 | n >S | – | – | – | – | 8.0E-02 | n >S | 8.0E+00 | n >S | – | – | – | – | – |
| Phenyl mercuric acetate | 62-38-4 | 2.0E-03 | n | 2.0E-01 | n | – | – | – | – | 5.8E-03 | n | 5.8E-01 | n | – | – | – | – | – |
| Phenylene diamine, m- | 108-45-2 | 1.5E-01 | n | 1.5E+01 | n | – | – | – | – | 4.4E-01 | n | 4.4E+01 | n | – | – | – | – | – |
| Phenylene diamine, p- | 106-50-3 | 4.6E+00 | n | 4.6E+02 | n | – | – | – | – | 1.4E+01 | n | 1.4E+03 | n | – | – | – | – | – |
| Phorate | 298-02-2 | 4.9E-03 | n | 4.9E-01 | n | – | – | – | – | 1.5E-02 | n | 1.5E+00 | n | – | – | – | – | – |
| Phosalone | 2310-17-0 | 4.9E-02 | n | 4.9E+00 | n | – | – | – | – | 1.5E-01 | n | 1.5E+01 | n | – | – | – | – | – |
| Phosdrin (mevinphos) | 7786-34-7 | 6.1E-04 | n | 6.1E-02 | n | – | – | – | – | 1.8E-03 | n | 1.8E-01 | n | – | – | – | – | – |
| Phosmet | 732-11-6 | 4.9E-01 | n | 4.9E+01 | n | – | – | – | – | 1.5E+00 | n | 1.5E+02 | n | – | – | – | – | – |
| Phosphine | 7803-51-2 | 7.3E-03 | n | 7.3E-01 | n | 2.9E-03 | n | 3.7E-04 | n | 2.2E-02 | n | 2.2E+00 | n | 4.0E-03 | n | 5.2E-04 | n | – |
| Phosphorotrithioic acid, S,S,S-tributyl ester | 78-48-8 | 1.1E-02 | c >S | 1.1E+00 | c >S | – | – | – | – | 2.4E-02 | c >S | 2.4E+00 | c >S | – | – | – | – | – |
| Phosphorus, total* | 7723-14-0 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – |
| Phosphorus, white | 7723-14-0 | 4.9E-04 | n | 4.9E-02 | n | – | – | – | – | 1.5E-03 | n | 1.5E-01 | n | – | – | – | – | – |
| Phthalic anhydride | 85-44-9 | 4.9E+01 | n | 4.9E+03 | n | 1.0E+06 | n >S | 4.0E+05 | n >S | 1.5E+02 | n | 1.5E+04 | n >S | 1.0E+06 | n >S | 5.6E+05 | n >S | – |
| Picloram | 1918-02-1 | 5.0E-01 | m | 5.0E+01 | m | – | – | – | – | 5.0E-01 | m | 5.0E+01 | m | – | – | – | – | – |
| Picoline, 2- (2-methylpyridine) | 109-06-8 | 2.2E-01 | n | 2.2E+01 | n | – | – | – | – | 6.6E-01 | n | 6.6E+01 | n | – | – | – | – | – |

## Table 3
## Tier 1 Groundwater PCLs - Residential and Commercial/Industrial[1]

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | Residential | | | | | | | | Commercial/Industrial | | | | | | | | Secondary MCL[5] (mg/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | $^{GW}GW_{Ing}$[2] (mg/L) | note[4] | $^{GW}GW_{Class3}$[3] (mg/L) | note[4] | $^{Air}GW_{Inh-V}$ 0.5 acre source area (mg/L) | note[4] | $^{Air}GW_{Inh-V}$ 30 acre source area (mg/L) | note[4] | $^{GW}GW_{Ing}$[2] (mg/L) | note[4] | $^{GW}GW_{Class3}$[3] (mg/L) | note[4] | $^{Air}GW_{Inh-V}$ 0.5 acre source area (mg/L) | note[4] | $^{Air}GW_{Inh-V}$ 30 acre source area (mg/L) | note[4] | |
| Polybrominated biphenyls (PBBs) | 67774-32-7 | 1.0E-04 | c | 1.0E-02 | c | – | – | – | – | 2.3E-04 | c | 2.3E-02 | c >S | – | – | – | – | – |
| Polychlorinated biphenyls (PCBs) | 1336-36-3 | 5.0E-04 | m | 5.0E-02 | m | 2.9E+00 | c >S | 3.8E-01 | c >S | 5.0E-04 | m | 5.0E-02 | m | 4.9E+00 | c >S | 6.4E-01 | c >S | – |
| Potassium* | 7440-09-7 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – |
| Primene | 68955-53-3 | 1.5E-01 | n | 1.5E+01 | n | – | – | – | – | 4.4E-01 | n | 4.4E+01 | n | – | – | – | – | – |
| Prometon (pramitol) | 1610-18-0 | 3.7E-01 | n | 3.7E+01 | n | – | – | – | – | 1.1E+00 | n | 1.1E+02 | n >S | – | – | – | – | – |
| Prometryn | 7287-19-6 | 9.8E-01 | n | 9.8E+01 | n >S | – | – | – | – | 2.9E+00 | n | 2.9E+02 | n >S | – | – | – | – | – |
| Pronamide | 23950-58-5 | 1.8E+00 | n | 1.8E+02 | n >S | – | – | – | – | 5.5E+00 | n | 5.5E+02 | n >S | – | – | – | – | – |
| Propanal (propionaldehyde) | 123-38-6 | 2.0E-01 | n | 2.0E+01 | n | 1.6E+03 | n | 2.1E+02 | n | 5.8E-01 | n | 5.8E+01 | n | 2.3E+03 | n | 3.0E+02 | n | – |
| Propane, 1-bromo- | 106-94-5 | 8.8E-01 | n | 8.8E+01 | n | – | – | – | – | 2.6E+00 | n | 2.6E+02 | n | – | – | – | – | – |
| Propanil | 709-98-8 | 1.2E-01 | n | 1.2E+01 | n | – | – | – | – | 3.7E-01 | n | 3.7E+01 | n | – | – | – | – | – |
| Propanoic acid (propionic acid) | 79-09-4 | 1.2E+01 | n | 1.2E+03 | n | – | – | – | – | 3.7E+01 | n | 3.7E+03 | n | – | – | – | – | – |
| Propanol, 1- | 71-23-8 | 4.9E+00 | n | 4.9E+02 | n | – | – | – | – | 1.5E+01 | n | 1.5E+03 | n | – | – | – | – | – |
| Propargite | 2312-35-8 | 4.9E-01 | n | 4.9E+01 | n >S | – | – | – | – | 1.5E+00 | n >S | 1.5E+02 | n >S | – | – | – | – | – |
| Propargyl alcohol | 107-19-7 | 4.9E-02 | n | 4.9E+00 | n | – | – | – | – | 1.5E-01 | n | 1.5E+01 | n | – | – | – | – | – |
| Propazine | 139-40-2 | 2.1E-02 | c | 2.1E+00 | c | – | – | – | – | 4.6E-02 | c | 4.6E+00 | c | – | – | – | – | – |
| Propham | 122-42-9 | 4.9E-01 | n | 4.9E+01 | n | – | – | – | – | 1.5E+00 | n | 1.5E+02 | n | – | – | – | – | – |
| Propionitrile (propane nitrile) | 107-12-0 | 9.8E-03 | n | 9.8E-01 | n | – | – | – | – | 2.9E-02 | n | 2.9E+00 | n | – | – | – | – | – |
| Propyl acetate, n- | 109-60-4 | 2.2E+00 | n | 2.2E+02 | n | – | – | – | – | 6.6E+00 | n | 6.6E+02 | n | – | – | – | – | – |
| Propylbenzene, n- | 103-65-1 | 9.8E-01 | n | 9.8E+01 | n >S | 6.0E+03 | n >S | 7.8E+02 | n >S | 2.9E+00 | n | 2.9E+02 | n >S | 8.5E+03 | n >S | 1.1E+03 | n >S | – |
| Propylene glycol | 57-55-6 | 4.9E+02 | n | 4.9E+04 | n | 5.0E+04 | n | 6.4E+03 | n | 1.5E+03 | n | 1.5E+05 | n >S | 7.0E+04 | n | 9.0E+03 | n | – |
| Propylene glycol monomethyl ether | 107-98-2 | 1.7E+01 | n | 1.7E+03 | n | 1.0E+06 | n >S | 1.0E+06 | n >S | 5.1E+01 | n | 5.1E+03 | n | 1.0E+06 | n >S | 1.0E+06 | n >S | – |
| Propylene oxide | 75-56-9 | 3.8E-03 | c | 3.8E-01 | c | 1.6E+03 | c | 2.0E+02 | c | 8.5E-03 | c | 8.5E-01 | c | 2.7E+03 | c | 3.4E+02 | c | – |
| Propylene tetramer | 6842-15-5 | 2.4E+00 | n >S | 2.4E+02 | n >S | 4.4E+01 | n >S | 5.7E+00 | n >S | 7.3E+00 | n >S | 7.3E+02 | n >S | 6.2E+01 | n >S | 8.0E+00 | n >S | – |
| Prothiofos (Tokuthion) | 34643-46-4 | 2.4E-03 | n | 2.4E-01 | n >S | – | – | – | – | 7.3E-03 | n >S | 7.3E-01 | n >S | – | – | – | – | – |
| Pyrene | 129-00-0 | 7.3E-01 | n >S | 7.3E+01 | n >S | – | – | – | – | 2.2E+00 | n >S | 2.2E+02 | n >S | – | – | – | – | – |
| Pyridine | 110-86-1 | 2.4E-02 | n | 2.4E+00 | n | – | – | – | – | 7.3E-02 | n | 7.3E+00 | n | – | – | – | – | – |
| Quinoline | 91-22-5 | 3.0E-04 | c | 3.0E-02 | c | – | – | – | – | 6.8E-04 | c | 6.8E-02 | c | – | – | – | – | – |
| Ronnel | 299-84-3 | 1.2E+00 | n | 1.2E+02 | n >S | – | – | – | – | 3.7E+00 | n >S | 3.7E+02 | n >S | – | – | – | – | – |
| Safrole | 94-59-7 | 4.1E-03 | c | 4.1E-01 | c | 1.9E+02 | c >S | 2.4E+01 | c | 9.3E-03 | c | 9.3E-01 | c | 3.2E+02 | c >S | 4.1E+01 | c | – |
| Selenium | 7782-49-2 | 5.0E-02 | m >S | 5.0E+00 | m >S | – | – | – | – | 5.0E-02 | m >S | 5.0E+00 | m >S | – | – | – | – | – |
| Selenourea | 630-10-4 | 1.2E-01 | n | 1.2E+01 | n | – | – | – | – | 3.7E-01 | n | 3.7E+01 | n | – | – | – | – | – |
| Silver | 7440-22-4 | 1.2E-01 | n >S | 1.2E+01 | n >S | – | – | – | – | 3.7E-01 | n >S | 3.7E+01 | n >S | – | – | – | – | 0.1 |
| Simazine | 122-34-9 | 4.0E-03 | m | 4.0E-01 | m | – | – | – | – | 4.0E-03 | m | 4.0E-01 | m | – | – | – | – | – |
| Sodium* | 7440-23-5 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – |
| Sodium hypochlorite | 7681-52-9 | 5.1E+00 | n | 5.1E+02 | n | – | – | – | – | 1.5E+01 | n | 1.5E+03 | n | – | – | – | – | – |
| Sodium polyacrylate | 9003-04-7 | 1.2E+01 | n | 1.2E+03 | n | 1.5E+04 | n | 2.0E+03 | n | 3.7E+01 | n | 3.7E+03 | n | 2.1E+04 | n | 2.7E+03 | n | – |
| Strontium | 7440-24-6 | 1.5E+01 | n | 1.5E+03 | n | – | – | – | – | 4.4E+01 | n | 4.4E+03 | n | – | – | – | – | – |
| Strychnine | 57-24-9 | 7.3E-03 | n | 7.3E-01 | n | – | – | – | – | 2.2E-02 | n | 2.2E+00 | n | – | – | – | – | – |
| Styrene | 100-42-5 | 1.0E-01 | m | 1.0E+01 | m | 1.5E+04 | n >S | 2.0E+03 | n >S | 1.0E-01 | m | 1.0E+01 | m | 2.1E+04 | n >S | 2.7E+03 | n >S | – |
| Sulfate* | 14808-79-8 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | 250 |

## Table 3
## Tier 1 Groundwater PCLs - Residential and Commercial/Industrial[1]

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | Residential | | | | | | | | Commercial/Industrial | | | | | | | | Secondary MCL[5] (mg/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | $^{GW}GW_{Ing}$[2] (mg/L) | note[4] | $^{GW}GW_{Class3}$[3] (mg/L) | note[4] | $^{Air}GW_{Inh-V}$ 0.5 acre source area (mg/L) | note[4] | $^{Air}GW_{Inh-V}$ 30 acre source area (mg/L) | note[4] | $^{GW}GW_{Ing}$[2] (mg/L) | note[4] | $^{GW}GW_{Class3}$[3] (mg/L) | note[4] | $^{Air}GW_{Inh-V}$ 0.5 acre source area (mg/L) | note[4] | $^{Air}GW_{Inh-V}$ 30 acre source area (mg/L) | note[4] | |
| Sulfide* | 18496-25-8 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – |
| Sulfolane | 126-33-0 | 3.2E-01 | n | 3.2E+01 | n | 1.3E+05 | n >S | 1.7E+04 | n >S | 9.5E-01 | n | 9.5E+01 | n | 1.8E+05 | n >S | 2.3E+04 | n >S | – |
| Sulfur* | 7704-34-9 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – |
| Sulprofos (Bolstar) | 35400-43-2 | 7.3E-02 | n >S | 7.3E+00 | n >S | – | – | – | – | 2.2E-01 | n >S | 2.2E+01 | n >S | – | – | – | – | – |
| Tebuconazole | 107534-96-3 | 7.3E-01 | n | 7.3E+01 | n >S | – | – | – | – | 2.2E+00 | n | 2.2E+02 | n >S | – | – | – | – | – |
| Tebuthiuron | 34014-18-1 | 1.7E+00 | n | 1.7E+02 | n | – | – | – | – | 5.1E+00 | n | 5.1E+02 | n | – | – | – | – | – |
| Terbufos | 13071-79-9 | 6.1E-04 | n | 6.1E-02 | n | – | – | – | – | 1.8E-03 | n | 1.8E-01 | n | – | – | – | – | – |
| Tert-amyl ethyl ether (TAEE) | 919-94-8 | 9.8E-01 | n | 9.8E+01 | n | – | – | – | – | 2.9E+00 | n | 2.9E+02 | n | – | – | – | – | – |
| Tert-amyl-methyl ether (TAME) | 994-05-8 | 9.8E-01 | n | 9.8E+01 | n | – | – | – | – | 2.9E+00 | n | 2.9E+02 | n | – | – | – | – | – |
| Tert-butyl alcohol (2-methyl-2-propanol) | 75-65-0 | 2.2E+00 | n | 2.2E+02 | n | – | – | – | – | 6.6E+00 | n | 6.6E+02 | n | – | – | – | – | – |
| Tetrachlorobenzene, 1,2,3,4- | 634-66-2 | 7.3E-03 | n | 7.3E-01 | n | – | – | – | – | 2.2E-02 | n | 2.2E+00 | n | – | – | – | – | – |
| Tetrachlorobenzene, 1,2,3,5- | 634-90-2 | 7.3E-03 | n | 7.3E-01 | n | – | – | – | – | 2.2E-02 | n | 2.2E+00 | n | – | – | – | – | – |
| Tetrachlorobenzene, 1,2,4,5- | 95-94-3 | 7.3E-03 | n | 7.3E-01 | n >S | – | – | – | – | 2.2E-02 | n | 2.2E+00 | n >S | – | – | – | – | – |
| Tetrachloroethane, 1,1,1,2- | 630-20-6 | 3.5E-02 | c | 3.5E+00 | c | 1.1E+02 | c | 1.4E+01 | c | 7.9E-02 | c | 7.9E+00 | c | 1.9E+02 | c | 2.4E+01 | c | – |
| Tetrachloroethane, 1,1,2,2- | 79-34-5 | 4.6E-03 | c | 4.6E-01 | c | – | – | – | – | 1.0E-02 | c | 1.0E+00 | c | – | – | – | – | – |
| Tetrachloroethylene | 127-18-4 | 5.0E-03 | m | 5.0E-01 | m | 5.0E+02 | c >S | 6.4E+01 | c | 5.0E-03 | m | 5.0E-01 | m | 8.4E+02 | c >S | 1.1E+02 | c | – |
| Tetrachlorophenol, 2,3,4,5- | 4901-51-3 | 7.3E-01 | n | 7.3E+01 | n | – | – | – | – | 2.2E+00 | n | 2.2E+02 | n | – | – | – | – | – |
| Tetrachlorophenol, 2,3,4,6- | 58-90-2 | 7.3E-01 | n | 7.3E+01 | n | – | – | – | – | 2.2E+00 | n | 2.2E+02 | n >S | – | – | – | – | – |
| Tetrachlorophenol, 2,3,5,6- | 935-95-5 | 7.3E-01 | n | 7.3E+01 | n >S | – | – | – | – | 2.2E+00 | n >S | 2.2E+02 | n >S | – | – | – | – | – |
| Tetrachlorvinphos (Stirophos) | 22248-79-9 | 1.0E+00 | n | 1.0E+02 | n >S | – | – | – | – | 3.1E+00 | n | 3.1E+02 | n >S | – | – | – | – | – |
| Tetradifon | 116-29-0 | 4.9E-01 | n | 4.9E+01 | n >S | – | – | – | – | 1.5E+00 | n >S | 1.5E+02 | n >S | – | – | – | – | – |
| Tetraethyl dithiopyrophosphate (sulfotep) | 3689-24-5 | 1.2E-02 | n | 1.2E+00 | n | – | – | – | – | 3.7E-02 | n | 3.7E+00 | n | – | – | – | – | – |
| Tetraethyl lead | 78-00-2 | 2.4E-06 | n | 2.4E-04 | n | – | – | – | – | 7.3E-06 | n | 7.3E-04 | n | – | – | – | – | – |
| Tetraethyl pyrophosphate (TEPP) | 107-49-3 | 2.7E-04 | n | 2.7E-02 | n | – | – | – | – | 8.0E-04 | n | 8.0E-02 | n | – | – | – | – | – |
| Tetraethylene glycol | 112-60-7 | 8.1E+00 | n | 8.1E+02 | n | – | – | – | – | 2.4E+01 | n | 2.4E+03 | n | – | – | – | – | – |
| Tetrahydrofuran | 109-99-9 | 1.2E-01 | c | 1.2E+01 | c | 2.2E+03 | c | 2.9E+02 | c | 2.7E-01 | c | 2.7E+01 | c | 3.7E+03 | c | 4.8E+02 | c | – |
| Tetrahydropyran | 142-68-7 | 1.2E-01 | c | 1.2E+01 | c | 2.6E+03 | c | 3.4E+02 | c | 2.7E-01 | c | 2.7E+01 | c | 4.4E+03 | c | 5.7E+02 | c | – |
| Tetraoxadodecane, 2,5,8,11- | 112-49-2 | 6.1E-01 | n | 6.1E+01 | n | – | – | – | – | 1.8E+00 | n | 1.8E+02 | n | – | – | – | – | – |
| Thallium | 7440-28-0 | 2.0E-03 | m | 2.0E-01 | m | – | – | – | – | 2.0E-03 | m | 2.0E-01 | m | – | – | – | – | – |
| Thiofanox | 39196-18-4 | 7.3E-03 | n | 7.3E-01 | n | – | – | – | – | 2.2E-02 | n | 2.2E+00 | n | – | – | – | – | – |
| Thionazin | 297-97-2 | 1.7E-03 | n | 1.7E-01 | n | – | – | – | – | 5.1E-03 | n | 5.1E-01 | n | – | – | – | – | – |
| Thiophanate-methyl | 23564-05-8 | 2.0E+00 | n | 2.0E+02 | n >S | – | – | – | – | 5.8E+00 | n >S | 5.8E+02 | n >S | – | – | – | – | – |
| Thiram | 137-26-8 | 1.2E-01 | n | 1.2E+01 | n | – | – | – | – | 3.7E-01 | n | 3.7E+01 | n >S | – | – | – | – | – |
| Tin | 7440-31-5 | 1.5E+01 | n >S | 1.5E+03 | n >S | – | – | – | – | 4.4E+01 | n >S | 4.4E+03 | n >S | – | – | – | – | – |
| Titanium | 7440-32-6 | 1.2E+02 | n >S | 1.2E+04 | n >S | – | – | – | – | 3.7E+02 | n >S | 3.7E+04 | n >S | – | – | – | – | – |
| Toluene | 108-88-3 | 1.0E+00 | m | 1.0E+02 | m | 6.4E+04 | n >S | 8.2E+03 | n >S | 1.0E+00 | m | 1.0E+02 | m | 8.9E+04 | n >S | 1.2E+04 | n >S | – |
| Toluene diisocyanate, 2,4/2,6- | 26471-62-5 | – | – | – | – | 1.8E+03 | n | 2.4E+02 | n | – | – | – | – | 2.6E+03 | n | 3.3E+02 | n | – |
| Toluenediamine, 2,4- | 95-80-7 | 2.9E-04 | c | 2.9E-02 | c | – | – | – | – | 6.4E-04 | c | 6.4E-02 | c | – | – | – | – | – |
| Toluenediamine, 2,6- | 823-40-5 | 7.3E-01 | n | 7.3E+01 | n | – | – | – | – | 2.2E+00 | n | 2.2E+02 | n | – | – | – | – | – |
| Toluidine, o- | 95-53-4 | 5.7E-02 | c | 5.7E+00 | c | 2.6E+03 | c | 3.4E+02 | c | 1.3E-01 | c | 1.3E+01 | c | 4.4E+03 | c | 5.7E+02 | c | – |

## Table 3
## Tier 1 Groundwater PCLs - Residential and Commercial/Industrial[1]

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | Residential | | | | | | | | Commercial/Industrial | | | | | | | | Secondary MCL[5] (mg/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | $^{GW}GW_{Ing}$[2] (mg/L) | note[4] | $^{GW}GW_{Class3}$[3] (mg/L) | note[4] | $^{Air}GW_{Inh-V}$ 0.5 acre source area (mg/L) | note[4] | $^{Air}GW_{Inh-V}$ 30 acre source area (mg/L) | note[4] | $^{GW}GW_{Ing}$[2] (mg/L) | note[4] | $^{GW}GW_{Class3}$[3] (mg/L) | note[4] | $^{Air}GW_{Inh-V}$ 0.5 acre source area (mg/L) | note[4] | $^{Air}GW_{Inh-V}$ 30 acre source area (mg/L) | note[4] | |
| Toluidine, p- | 106-49-0 | 3.0E-02 | c | 3.0E+00 | c | – | – | – | – | 6.8E-02 | c | 6.8E+00 | c | – | – | – | – | – |
| Toxaphene | 8001-35-2 | 3.0E-03 | m | 3.0E-01 | m | 1.8E+03 | c >S | 2.3E+02 | c >S | 3.0E-03 | m | 3.0E-01 | m | 3.0E+03 | c >S | 3.9E+02 | c >S | – |
| TPH, TX1005, C6-C12 | TPH-1005-1 | 9.8E-01 | n | 9.8E+01 | n >S | 1.8E+03 | n >S | 2.3E+02 | n >S | 2.9E+00 | n | 2.9E+02 | n >S | 2.5E+03 | n >S | 3.2E+02 | n >S | – |
| TPH, TX1005, >C12-C28 | TPH-1005-2 | 9.8E-01 | n | 9.8E+01 | n >S | 7.5E+03 | n >S | 9.7E+02 | n >S | 2.9E+00 | n | 2.9E+02 | n >S | 1.0E+04 | n >S | 1.4E+03 | n >S | – |
| TPH, TX1005, >C12-C35 | TPH-1005-3 | 9.8E-01 | n | 9.8E+01 | n >S | 7.5E+03 | n >S | 9.7E+02 | n >S | 2.9E+00 | n | 2.9E+02 | n >S | 1.0E+04 | n >S | 1.4E+03 | n >S | – |
| TPH, TX1005, >C28-C35 | TPH-1005-4 | 9.8E-01 | n | 9.8E+01 | n >S | 7.5E+03 | n >S | 9.7E+02 | n >S | 2.9E+00 | n | 2.9E+02 | n >S | 1.0E+04 | n >S | 1.4E+03 | n >S | – |
| TP Silvex, 2,4,5- | 93-72-1 | 5.0E-02 | m | 5.0E+00 | m | – | – | – | – | 5.0E-02 | m | 5.0E+00 | m | – | – | – | – | – |
| Triademenol | 55219-65-3 | 7.3E-01 | n | 7.3E+01 | n | – | – | – | – | 2.2E+00 | n | 2.2E+02 | n >S | – | – | – | – | – |
| Triallate | 2303-17-5 | 3.2E-01 | n | 3.2E+01 | n >S | – | – | – | – | 9.5E-01 | n | 9.5E+01 | n >S | – | – | – | – | – |
| Triaminotrinitrobenzene (TATB) | 3058-38-6 | 7.3E-02 | n | 7.3E+00 | n | – | – | – | – | 2.2E-01 | n | 2.2E+01 | n | – | – | – | – | – |
| Tributyltin oxide | 56-35-9 | 7.3E-03 | n | 7.3E-01 | n | – | – | – | – | 2.2E-02 | n | 2.2E+00 | n | – | – | – | – | – |
| Trichloro-1,2,2-trifluoroethane, 1,1,2- | 76-13-1 | 7.3E+02 | n >S | 7.3E+04 | n >S | 1.5E+03 | n >S | 2.0E+02 | n | 2.2E+03 | n >S | 2.2E+05 | n >S | 2.1E+03 | n >S | 2.8E+02 | n >S | – |
| Trichlorobenzene, 1,2,3- | 87-61-6 | 7.3E-02 | n | 7.3E+00 | n | 1.3E+02 | n >S | 1.7E+01 | n >S | 2.2E-01 | n | 2.2E+01 | n >S | 1.9E+02 | n >S | 2.4E+01 | n >S | – |
| Trichlorobenzene, 1,2,4- | 120-82-1 | 7.0E-02 | m | 7.0E+00 | m | 1.6E+02 | n >S | 2.0E+01 | n | 7.0E-02 | m | 7.0E+00 | m | 2.2E+02 | n >S | 2.8E+01 | n | – |
| Trichlorobenzene, 1,3,5- | 108-70-3 | 7.3E-02 | n | 7.3E+00 | n | 1.0E+02 | n >S | 1.3E+01 | n | 2.2E-01 | n | 2.2E+01 | n >S | 1.4E+02 | n >S | 1.8E+01 | n >S | – |
| Trichloroethane, 1,1,1- | 71-55-6 | 2.0E-01 | m | 2.0E+01 | m | 4.1E+04 | n >S | 5.2E+03 | n >S | 2.0E-01 | m | 2.0E+01 | m | 5.7E+04 | n >S | 7.3E+03 | n >S | – |
| Trichloroethane, 1,1,2- | 79-00-5 | 5.0E-03 | m | 5.0E-01 | m | 8.0E+01 | c | 1.0E+01 | c | 5.0E-03 | m | 5.0E-01 | m | 1.3E+02 | c | 1.7E+01 | c | – |
| Trichloroethylene | 79-01-6 | 5.0E-03 | m | 5.0E-01 | m | 2.4E+01 | n | 3.1E+00 | n | 5.0E-03 | m | 5.0E-01 | m | 3.3E+01 | n | 4.3E+00 | n | – |
| Trichlorofluoromethane | 75-69-4 | 7.3E+00 | n | 7.3E+02 | n | – | – | – | – | 2.2E+01 | n | 2.2E+03 | n >S | – | – | – | – | – |
| Trichloronate | 327-98-0 | 7.3E-02 | n | 7.3E+00 | n >S | – | – | – | – | 2.2E-01 | n | 2.2E+01 | n >S | – | – | – | – | – |
| Trichlorophenol, 2,3,4- | 15950-66-0 | 2.4E+00 | n | 2.4E+02 | n | – | – | – | – | 7.3E+00 | n | 7.3E+02 | n | – | – | – | – | – |
| Trichlorophenol, 2,3,5- | 933-78-8 | 2.4E+00 | n | 2.4E+02 | n | – | – | – | – | 7.3E+00 | n | 7.3E+02 | n | – | – | – | – | – |
| Trichlorophenol, 2,3,6- | 933-75-5 | 2.4E+00 | n | 2.4E+02 | n >S | – | – | – | – | 7.3E+00 | n | 7.3E+02 | n >S | – | – | – | – | – |
| Trichlorophenol, 2,4,5- | 95-95-4 | 2.4E+00 | n | 2.4E+02 | n | – | – | – | – | 7.3E+00 | n | 7.3E+02 | n | – | – | – | – | – |
| Trichlorophenol, 2,4,6- | 88-06-2 | 2.4E-02 | n | 2.4E+00 | n | 4.9E+04 | c >S | 6.4E+03 | c >S | 7.3E-02 | n | 7.3E+00 | n | 8.3E+04 | c >S | 1.1E+04 | c >S | – |
| Trichlorophenol, 3,4,5- | 609-19-8 | 2.4E+00 | n | 2.4E+02 | n | – | – | – | – | 7.3E+00 | n | 7.3E+02 | n | – | – | – | – | – |
| Trichlorophenoxyacetic acid, 2,4,5- | 93-76-5 | 2.4E-01 | n | 2.4E+01 | n | – | – | – | – | 7.3E-01 | n | 7.3E+01 | n | – | – | – | – | – |
| Trichloropropane, 1,1,2- | 598-77-6 | 1.2E-01 | n | 1.2E+01 | n | 2.7E+00 | n | 3.5E-01 | n | 3.7E-01 | n | 3.7E+01 | n | 3.8E+00 | n | 4.9E-01 | n | – |
| Trichloropropane, 1,2,3- | 96-18-4 | 3.0E-05 | c | 3.0E-03 | c | 3.2E+01 | n | 4.2E+00 | n | 6.8E-05 | c | 6.8E-03 | c | 4.5E+01 | n | 5.8E+00 | n | – |
| Triethanolamine | 102-71-6 | 4.9E+00 | n | 4.9E+02 | n | 1.0E+06 | n | 1.0E+06 | n | 1.5E+01 | n | 1.5E+03 | n | 1.0E+06 | n | 1.0E+06 | n | – |
| Triethylamine | 121-44-8 | – | – | – | – | 6.3E+02 | n | 8.1E+01 | n | – | – | – | – | 8.8E+02 | n | 1.1E+02 | n | – |
| Triethylene glycol | 112-27-6 | 4.9E+01 | n | 4.9E+03 | n | – | – | – | – | 1.5E+02 | n | 1.5E+04 | n | – | – | – | – | – |
| Triethylphosphorothioate, O, O, O- | 126-68-1 | 2.0E-04 | n | 2.0E-02 | n | – | – | – | – | 6.1E-04 | n | 6.1E-02 | n | – | – | – | – | – |
| Trifluralin | 1582-09-8 | 1.2E-01 | c | 1.2E+01 | c >S | – | – | – | – | 2.7E-01 | c | 2.7E+01 | c >S | – | – | – | – | – |
| Trimethylamine | 75-50-3 | – | – | – | – | 1.7E+03 | n | 2.2E+02 | n | – | – | – | – | 2.3E+03 | n | 3.0E+02 | n | – |
| Trimethylbenzene, 1,2,3- | 526-73-8 | 8.3E-01 | n | 8.3E+01 | n >S | 5.6E+03 | n >S | 7.3E+02 | n >S | 2.5E+00 | n | 2.5E+02 | n >S | 7.9E+03 | n >S | 1.0E+03 | n >S | – |
| Trimethylbenzene, 1,2,4- | 95-63-6 | 8.3E-01 | n | 8.3E+01 | n >S | 4.9E+03 | n >S | 6.3E+02 | n >S | 2.5E+00 | n | 2.5E+02 | n >S | 6.8E+03 | n >S | 8.8E+02 | n >S | – |
| Trimethylbenzene, 1,3,5- | 108-67-8 | 8.3E-01 | n | 8.3E+01 | n >S | 3.8E+03 | n >S | 4.9E+02 | n >S | 2.5E+00 | n | 2.5E+02 | n >S | 5.3E+03 | n >S | 6.8E+02 | n >S | – |
| Trinitrobenzene, 1,3,5- | 99-35-4 | 7.3E-01 | n | 7.3E+01 | n | – | – | – | – | 2.2E+00 | n | 2.2E+02 | n | – | – | – | – | – |
| Trinitrophenylmethylnitramine (tetryl; nitramine) | 479-45-8 | 4.9E-02 | n | 4.9E+00 | n | – | – | – | – | 1.5E-01 | n | 1.5E+01 | n | – | – | – | – | – |

# Table 3
## Tier 1 Groundwater PCLs - Residential and Commercial/Industrial[1]

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | Residential | | | | | | | | Commercial/Industrial | | | | | | | | Secondary MCL[5] (mg/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | $^{GW}GW_{Ing}$[2] (mg/L) | note[4] | $^{GW}GW_{Class3}$[3] (mg/L) | note[4] | $^{Air}GW_{Inh-V}$ 0.5 acre source area (mg/L) | note[4] | $^{Air}GW_{Inh-V}$ 30 acre source area (mg/L) | note[4] | $^{GW}GW_{Ing}$[2] (mg/L) | note[4] | $^{GW}GW_{Class3}$[3] (mg/L) | note[4] | $^{Air}GW_{Inh-V}$ 0.5 acre source area (mg/L) | note[4] | $^{Air}GW_{Inh-V}$ 30 acre source area (mg/L) | note[4] | |
| Trinitrotoluene, 2,4,6- | 118-96-7 | 1.2E-02 | n | 1.2E+00 | n | – | – | – | – | 3.7E-02 | n | 3.7E+00 | n | – | – | – | – | – |
| Tungsten (as sodium tungstate dihydride) | 7440-33-7 | 2.4E-02 | n | 2.4E+00 | n | – | – | – | – | 7.3E-02 | n | 7.3E+00 | n | – | – | – | – | – |
| Uranium (soluble salts) | 7440-61-1 | 3.0E-02 | m >S | 3.0E+00 | m >S | – | – | – | – | 3.0E-02 | m >S | 3.0E+00 | m >S | – | – | – | – | – |
| Valeric acid (pentanoic acid) | 109-52-4 | 1.2E+01 | n >S | 1.2E+03 | n >S | 2.0E+04 | n >S | 2.6E+03 | n >S | 3.7E+01 | n >S | 3.7E+03 | n >S | 2.8E+04 | n >S | 3.6E+03 | n >S | – |
| Vanadium | 7440-62-2 | 4.4E-02 | n >S | 4.4E+00 | n >S | – | – | – | – | 1.3E-01 | n >S | 1.3E+01 | n >S | – | – | – | – | – |
| Vernam | 1929-77-7 | 2.4E-02 | n | 2.4E+00 | n | – | – | – | – | 7.3E-02 | n | 7.3E+00 | n | – | – | – | – | – |
| Vinyl acetate | 108-05-4 | 2.4E+01 | n | 2.4E+03 | n | 1.4E+04 | n | 1.8E+03 | n | 7.3E+01 | n | 7.3E+03 | n | 2.0E+04 | n | 2.6E+03 | n | – |
| Vinyl chloride | 75-01-4 | 2.0E-03 | m | 2.0E-01 | m | 3.8E+00 | c | 4.9E-01 | c | 2.0E-03 | m | 2.0E-01 | m | 6.4E+00 | c | 8.3E-01 | c | – |
| Vinylcyclohexane | 695-12-5 | 1.2E+01 | n >S | 1.2E+03 | n >S | – | – | – | – | 3.7E+01 | n >S | 3.7E+03 | n >S | – | – | – | – | – |
| Warfarin | 81-81-2 | 7.3E-03 | n | 7.3E-01 | n | – | – | – | – | 2.2E-02 | n | 2.2E+00 | n | – | – | – | – | – |
| Xylene, m- | 108-38-3 | 1.0E+01 | m | 1.0E+03 | m >S | 1.1E+04 | n >S | 1.4E+03 | n >S | 1.0E+01 | m | 1.0E+03 | m >S | 1.5E+04 | n >S | 1.9E+03 | n >S | – |
| Xylene, o- | 95-47-6 | 1.0E+01 | m | 1.0E+03 | m >S | 7.6E+05 | n >S | 9.8E+04 | n >S | 1.0E+01 | m | 1.0E+03 | m >S | 1.0E+06 | n >S | 1.4E+05 | n >S | – |
| Xylene, p- | 106-42-3 | 1.0E+01 | m | 1.0E+03 | m >S | 9.4E+03 | n >S | 1.2E+03 | n >S | 1.0E+01 | m | 1.0E+03 | m >S | 1.3E+04 | n >S | 1.7E+03 | n >S | – |
| Xylenes | 1330-20-7 | 1.0E+01 | m | 1.0E+03 | m >S | 1.0E+04 | n >S | 1.3E+03 | n >S | 1.0E+01 | m | 1.0E+03 | m >S | 1.4E+04 | n >S | 1.9E+03 | n >S | – |
| Zinc | 7440-66-6 | 7.3E+00 | n >S | 7.3E+02 | n >S | – | – | – | – | 2.2E+01 | n >S | 2.2E+03 | n >S | – | – | – | – | 5 |
| 6 C aliphatics (TPH) (>53% n-hexane content) | NA | 1.5E+00 | n | 1.5E+02 | n >S | 1.1E+02 | n >S | 1.4E+01 | n | 4.4E+00 | n | 4.4E+02 | n >S | 1.5E+02 | n >S | 1.9E+01 | n | – |
| 6 C aliphatics (TPH) (<53% n-hexane content) | NA | 1.5E+00 | n | 1.5E+02 | n >S | 2.9E+03 | n >S | 3.8E+02 | n >S | 4.4E+00 | n | 4.4E+02 | n >S | 4.1E+03 | n >S | 5.3E+02 | n >S | – |
| >6-8 C aliphatics (TPH) (>53% n-hexane content) | NA | 1.5E+00 | n | 1.5E+02 | n >S | 7.1E+01 | n >S | 9.1E+00 | n >S | 4.4E+00 | n | 4.4E+02 | n >S | 9.9E+01 | n >S | 1.3E+01 | n >S | – |
| >6-8 C aliphatics (TPH) (<53% n-hexane content) | NA | 1.5E+00 | n | 1.5E+02 | n >S | 1.9E+03 | n >S | 2.5E+02 | n >S | 4.4E+00 | n | 4.4E+02 | n >S | 2.7E+03 | n >S | 3.5E+02 | n >S | – |
| >8-10 C aliphatics (TPH) | NA | 2.4E+00 | n >S | 2.4E+02 | n >S | 3.3E+01 | n >S | 4.3E+00 | n >S | 7.3E+00 | n >S | 7.3E+02 | n >S | 4.6E+01 | n >S | 6.0E+00 | n >S | – |
| >10-12 C aliphatics (TPH) | NA | 2.4E+00 | n >S | 2.4E+02 | n >S | 2.2E+01 | n >S | 2.8E+00 | n >S | 7.3E+00 | n >S | 7.3E+02 | n >S | 3.1E+01 | n >S | 4.0E+00 | n >S | – |
| >12-16 C aliphatics (TPH) | NA | 2.4E+00 | n >S | 2.4E+02 | n >S | 5.1E+00 | n >S | 6.6E-01 | n >S | 7.3E+00 | n >S | 7.3E+02 | n >S | 7.1E+00 | n >S | 9.2E-01 | n >S | – |
| >16-21 C aliphatics (TPH) | NA | 4.9E+01 | n >S | 4.9E+03 | n >S | – | – | – | – | 1.5E+02 | n >S | 1.5E+04 | n >S | – | – | – | – | – |
| >16-21 C aliphatics (TPH) (for transformer mineral oil releases only) | NA | 3.9E+01 | n >S | 3.9E+03 | n >S | – | – | – | – | 1.2E+02 | n >S | 1.2E+04 | n >S | – | – | – | – | – |
| >21-35 C aliphatics (TPH) | NA | 4.9E+01 | n >S | 4.9E+03 | n >S | – | – | – | – | 1.5E+02 | n >S | 1.5E+04 | n >S | – | – | – | – | – |
| >21-35 C aliphatics (TPH) (for transformer mineral oil releases only) | NA | 3.9E+01 | n >S | 3.9E+03 | n >S | – | – | – | – | 1.2E+02 | n >S | 1.2E+04 | n >S | – | – | – | – | – |
| >7-8 C aromatics (TPH) | NA | 2.4E+00 | n | 2.4E+02 | n | 2.9E+04 | n >S | 3.8E+03 | n >S | 7.3E+00 | n | 7.3E+02 | n >S | 4.1E+04 | n >S | 5.3E+03 | n >S | – |
| >8-10 C aromatics (TPH) | NA | 9.8E-01 | n | 9.8E+01 | n >S | 1.8E+03 | n >S | 2.3E+02 | n >S | 2.9E+00 | n | 2.9E+02 | n >S | 2.5E+03 | n >S | 3.2E+02 | n >S | – |
| >10-12 C aromatics (TPH) | NA | 9.8E-01 | n | 9.8E+01 | n >S | 4.3E+03 | n >S | 5.5E+02 | n >S | 2.9E+00 | n | 2.9E+02 | n >S | 6.0E+03 | n >S | 7.7E+02 | n >S | – |
| >12-16 C aromatics (TPH) | NA | 9.8E-01 | n | 9.8E+01 | n >S | 7.5E+03 | n >S | 9.7E+02 | n >S | 2.9E+00 | n | 2.9E+02 | n >S | 1.0E+04 | n >S | 1.4E+03 | n >S | – |
| >16-21 C aromatics (TPH) | NA | 7.3E-01 | n >S | 7.3E+01 | n >S | – | – | – | – | 2.2E+00 | n >S | 2.2E+02 | n >S | – | – | – | – | – |
| >21-35 C aromatics (TPH) | NA | 7.3E-01 | n >S | 7.3E+01 | n >S | – | – | – | – | 2.2E+00 | n >S | 2.2E+02 | n >S | – | – | – | – | – |
| Transformer Mineral Oil | NA | 1.3E+01 | n >S | 1.3E+03 | n >S | 5.6E+01 | n | 7.3E+00 | n | 4.0E+01 | n >S | 4.0E+03 | n >S | 7.9E+01 | n | 1.0E+01 | n | – |
| **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, the 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** based on primary MCLs when available

**3** 100 x $^{GW}GW_{Ing}$

# Table 3
## Tier 1 Groundwater PCLs - Residential and Commercial/Industrial[1]

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | Residential | | | | | | | | Commercial/Industrial | | | | | | | | Secondary MCL[5] (mg/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | $^{GW}GW_{Ing}$[2] (mg/L) | note[4] | $^{GW}GW_{Class3}$[3] (mg/L) | note[4] | $^{Air}GW_{Inh-V}$ 0.5 acre source area (mg/L) | note[4] | $^{Air}GW_{Inh-V}$ 30 acre source area (mg/L) | note[4] | $^{GW}GW_{Ing}$[2] (mg/L) | note[4] | $^{GW}GW_{Class3}$[3] (mg/L) | note[4] | $^{Air}GW_{Inh-V}$ 0.5 acre source area (mg/L) | note[4] | $^{Air}GW_{Inh-V}$ 30 acre source area (mg/L) | note[4] | |

**4** c = carcinogenic; n = noncarcinogenic; m = primary MCL-based; e = EPA Action Level-based; > S = solubility limit exceeded during calculation

**5** The Secondary MCL values for ammonia and MTBE are based on taste and odor.

**6** This chemical is one of four chemicals that make up total trihalomethanes (TTHMs). USEPA has established an MCL for TTHMs of 0.08 mg/L, so neither the individual concentration for any of these four chemicals can exceed the MCL, nor the total additive concentration of these four chemicals can exceed the MCL.

**7** Dibenz-a,h-anthracene does not have an MCL. However, the relative potency factor for dibenz-a,h-anthracene is equal to the potency factor for benzo-a-pyrene and is treated like benzo-a-pyrene for groundwater pathways.

**8** Persons must use the value provided in the "Secondary MCL" column of this table as the $^{GW}GW_{Ing}$ PCL for MTBE if the conditions described in §350.74(f)(3) exist.

**9** Please see the note on nitrate/nitrite in the "List of Updates" spreadsheet for March 31, 2017.

***** These compounds are not necessarily of concern from a human health standpoint, therefore calculation of human health-based values is not required. However, aesthetics and ecological criteria would still apply. See table entitled "Compounds for which Calculation of a Human Health PCL is Not Required" available on the TCEQ website at http://www.tceq.state.tx.us/remediation/trrp/trrp.html.

NA = not applicable

All values capped at 1E+06

This table shows the protective groundwater concentrations for residential and commercial industrial land with 0.5 acre and 30 acre source areas

end of worksheet

# Table 4
# Tier 1 Residential Total Soil Combined PCLs
**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | $^{Tot}Soil_{Comb}$ (includes inhalation, ingestion, dermal, and vegetable consumption pathways) | | | |
|---|---|---|---|---|---|
| | | 0.5 acre source area Carcinogenic (mg/kg) | 0.5 acre source area Noncarcinogenic (mg/kg) | 30 acre source area Carcinogenic (mg/kg) | 30 acre source area Noncarcinogenic (mg/kg) |
| Acenaphthene | 83-32-9 | – | 3.0E+03 | – | 3.0E+03 |
| Acenaphthylene | 208-96-8 | – | 3.8E+03 | – | 3.8E+03 |
| Acetaldehyde | 75-07-0 | 1.7E+02 | 1.4E+02 | 8.7E+01 | 7.3E+01 |
| Acetate, 2-ethoxyethanol | 111-15-9 | – | 3.5E+03 | – | 2.3E+03 |
| Acetate, isoamyl | 123-92-2 | – | 5.9E+03 | – | 5.9E+03 |
| Acetate, isobutyl | 110-19-0 | – | 3.9E+03 | – | 3.9E+03 |
| Acetate, sec-butyl | 105-46-4 | – | 3.9E+03 | – | 3.9E+03 |
| Acetic acid* | 64-19-7 | – | – | – | – |
| Acetone (2-propanone) | 67-64-1 | – | 6.6E+04 | – | 5.9E+04 |
| Acetone cyanohydrin | 75-86-5 | – | 1.9E+02 | – | 1.8E+02 |
| Acetonitrile | 75-05-8 | – | 8.7E+02 | – | 5.3E+02 |
| Acetophenone | 98-86-2 | – | 6.7E+03 | – | 6.7E+03 |
| Acetylaminofluorene, 2- | 53-96-3 | 1.2E+00 | – | 1.1E+00 | – |
| Acifluorfen, sodium | 62476-59-9 | – | 8.7E+02 | – | 8.7E+02 |
| Acridine | 260-94-6 | – | 2.0E+02 | – | 2.0E+02 |
| Acrolein | 107-02-8 | – | 3.2E+01 | – | 2.7E+01 |
| Acrylamide | 79-06-1 | 7.0E+00 | 1.1E+02 | 5.7E+00 | 9.8E+01 |
| Acrylic acid | 79-10-7 | – | 1.2E+02 | – | 6.2E+01 |
| Acrylonitrile | 107-13-1 | 3.6E+00 | 2.2E+01 | 2.2E+00 | 1.3E+01 |
| Adipic acid (hexanedioic acid) | 124-04-9 | – | 1.3E+05 | – | 1.3E+05 |
| Alachlor | 15972-60-8 | 5.9E+01 | 6.7E+02 | 5.9E+01 | 6.7E+02 |
| Aldicarb | 116-06-3 | – | 6.7E+01 | – | 6.7E+01 |
| Aldicarb sulfone | 1646-88-4 | – | 6.7E+01 | – | 6.7E+01 |
| Aldrin | 309-00-2 | 5.0E-02 | 5.9E-01 | 5.0E-02 | 5.9E-01 |
| Allyl alcohol | 107-18-6 | – | 5.6E+00 | – | 2.9E+00 |
| Allyl chloride | 107-05-1 | – | 1.5E+01 | – | 7.8E+00 |
| Aluminum | 7429-90-5 | – | 6.5E+04 | – | 6.4E+04 |
| Ametryn | 834-12-8 | – | 6.0E+02 | – | 6.0E+02 |
| Amino-2,6-dinitrotoluene, 4- | 19406-51-0 | 4.7E+02 | 1.1E+01 | 4.7E+02 | 1.1E+01 |
| Amino-4,6-dinitrotoluene, 2- | 35572-78-2 | 4.7E+02 | 1.1E+01 | 4.7E+02 | 1.1E+01 |
| Aminobiphenyl, 4- (1,1-biphenyl-4-amine) | 92-67-1 | 7.7E-01 | – | 7.7E-01 | – |
| Aminopyridine, 4- | 504-24-5 | – | 1.3E+00 | – | 1.3E+00 |
| Ammonia | 7664-41-7 | – | 4.9E+03 | – | 2.5E+03 |
| Ammonium polyphosphate* | 6833-79-9 | – | – | – | – |
| Ammonium salts* | AMMONIUM | – | – | – | – |
| Aniline | 62-53-3 | 8.2E+02 | 1.0E+02 | 8.2E+02 | 5.9E+01 |
| Anthracene | 120-12-7 | – | 1.8E+04 | – | 1.8E+04 |
| Anthraquinone, 9,10- | 84-65-1 | 1.2E+02 | 1.3E+03 | 1.2E+02 | 1.3E+03 |

# Table 4
# Tier 1 Residential Total Soil Combined PCLs
**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | $^{Tot}Soil_{Comb}$ (includes inhalation, ingestion, dermal, and vegetable consumption pathways) | | | |
|---|---|---|---|---|---|
| | | 0.5 acre source area Carcinogenic (mg/kg) | 0.5 acre source area Noncarcinogenic (mg/kg) | 30 acre source area Carcinogenic (mg/kg) | 30 acre source area Noncarcinogenic (mg/kg) |
| Antimony | 7440-36-0 | – | 1.5E+01 | – | 1.5E+01 |
| Aramite | 140-57-8 | 1.1E+02 | 2.4E+03 | 1.1E+02 | 2.4E+03 |
| Arsenic | 7440-38-2 | 3.4E+01 | 2.4E+01 | 3.4E+01 | 2.4E+01 |
| Arsine | 7784-42-1 | – | 7.7E-01 | – | 3.9E-01 |
| Atrazine | 1912-24-9 | 2.1E+01 | 2.3E+03 | 2.1E+01 | 2.3E+03 |
| Azinphos-methyl (guthion) | 86-50-0 | – | 1.0E+02 | – | 1.0E+02 |
| Azobenzene | 103-33-3 | 3.7E+01 | – | 3.6E+01 | – |
| Barium | 7440-39-3 | – | 8.1E+03 | – | 8.1E+03 |
| Bayleton | 43121-43-3 | – | 2.0E+03 | – | 2.0E+03 |
| Benefin (benfluralin) | 1861-40-1 | – | 1.9E+04 | – | 1.9E+04 |
| Benomyl | 17804-35-2 | – | 3.3E+03 | – | 3.3E+03 |
| Benz-a-anthracene | 56-55-3 | 4.1E+01 | – | 4.1E+01 | – |
| Benzaldehyde | 100-52-7 | – | 8.2E+03 | – | 8.2E+03 |
| Benzene | 71-43-2 | 1.2E+02 | 3.0E+02 | 6.9E+01 | 2.9E+02 |
| Benzenedicarbonitrile, 1,3- | 626-17-5 | – | 4.0E+02 | – | 4.0E+02 |
| Benzenedicarboxylic acid, 1,2-disodecyl ester | 26761-40-0 | – | 2.7E+03 | – | 2.6E+03 |
| Benzenethiol | 108-98-5 | – | 8.2E+01 | – | 8.2E+01 |
| Benzidine | 92-87-5 | 1.5E-02 | 2.0E+02 | 1.3E-02 | 2.0E+02 |
| Benzo-a-pyrene | 50-32-8 | 4.1E+00 | 1.4E+01 | 4.1E+00 | 1.2E+01 |
| Benzo-b-fluoranthene | 205-99-2 | 4.2E+01 | – | 4.1E+01 | – |
| Benzo-e-pyrene | 192-97-2 | – | 1.8E+03 | – | 1.8E+03 |
| Benzo-g,h,i-perylene | 191-24-2 | – | 1.8E+03 | – | 1.8E+03 |
| Benzoic acid | 65-85-0 | – | 2.7E+05 | – | 2.7E+05 |
| Benzo-j-fluoranthene | 205-82-3 | 3.9E+01 | – | 3.9E+01 | – |
| Benzo-k-fluoranthene | 207-08-9 | 4.2E+02 | – | 4.2E+02 | – |
| Benzophenone | 119-61-9 | – | 4.5E+02 | – | 4.5E+02 |
| Benzotrichloride | 98-07-7 | 3.6E-01 | – | 3.6E-01 | – |
| Benzoyl peroxide | 94-36-0 | – | 3.3E+03 | – | 3.3E+03 |
| Benzyl alcohol | 100-51-6 | – | 6.7E+03 | – | 6.7E+03 |
| Benzyl chloride | 100-44-7 | 3.6E+01 | 2.6E+01 | 3.6E+01 | 1.4E+01 |
| Benzyl dichloride | 98-87-3 | 2.8E+01 | 3.9E+01 | 2.8E+01 | 2.3E+01 |
| Beryllium | 7440-41-7 | 9.4E+03 | 3.8E+01 | 4.8E+03 | 3.8E+01 |
| Biphenyl, 1,1- | 92-52-4 | – | 1.2E+04 | – | 1.2E+04 |
| Biphenyl, 1,1'-, 2-phenoxy- | 6738-04-1 | – | 3.2E+03 | – | 3.2E+03 |
| Biquinoline, 2,2'- | 119-91-5 | – | 1.8E+02 | – | 1.8E+02 |
| Bis (2-chloroethoxy) methane | 111-91-1 | 3.1E+00 | 2.0E+02 | 2.5E+00 | 2.0E+02 |
| Bis (2-chloroethyl) ether | 111-44-4 | 2.2E+00 | – | 1.4E+00 | – |
| Bis (2-chloro-1-methyl) ether | 108-60-1 | 5.1E+01 | 2.7E+03 | 4.1E+01 | 2.7E+03 |

# Table 4
# Tier 1 Residential Total Soil Combined PCLs
**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | $^{Tot}Soil_{Comb}$ (includes inhalation, ingestion, dermal, and vegetable consumption pathways) | | | |
|---|---|---|---|---|---|
| | | 0.5 acre source area Carcinogenic (mg/kg) | 0.5 acre source area Noncarcinogenic (mg/kg) | 30 acre source area Carcinogenic (mg/kg) | 30 acre source area Noncarcinogenic (mg/kg) |
| Bis (2-chloromethyl) ether | 542-88-1 | 4.8E-03 | – | 2.7E-03 | – |
| Bis (2-ethyl-hexyl) phthalate | 117-81-7 | 4.3E+01 | 2.7E+02 | 4.3E+01 | 2.7E+02 |
| Bismuth | 7440-69-9 | – | 3.7E+04 | – | 3.7E+04 |
| Bisphenol A | 80-05-7 | – | 3.3E+03 | – | 3.3E+03 |
| Boron | 7440-42-8 | – | 1.6E+04 | – | 1.6E+04 |
| Bromacil | 314-40-9 | – | 6.7E+03 | – | 6.7E+03 |
| Bromo-2-chloroethane, 1- | 107-04-0 | – | 3.3E+03 | – | 3.3E+03 |
| Bromobenzene | 108-86-1 | – | 3.9E+02 | – | 2.8E+02 |
| Bromodichloromethane | 75-27-4 | 9.8E+01 | 1.6E+03 | 9.8E+01 | 1.6E+03 |
| Bromoform | 75-25-2 | 4.0E+02 | 1.6E+03 | 2.8E+02 | 1.6E+03 |
| Bromomethane | 74-83-9 | – | 4.6E+01 | – | 2.9E+01 |
| Bromophenyl phenylether, 4- | 101-55-3 | 2.8E-01 | – | 2.7E-01 | – |
| Butadiene, 1,3- | 106-99-0 | 7.2E+02 | 5.1E+02 | 3.7E+02 | 2.6E+02 |
| Butadiene, 2-methyl-1,3- (isoprene) | 78-79-5 | – | 4.8E+03 | – | 4.7E+03 |
| Butanal (butyraldehyde) | 123-72-8 | – | 1.2E+03 | – | 6.8E+02 |
| Butane, 2,3-dimethyl- | 79-29-8 | – | 4.8E+03 | – | 4.7E+03 |
| Butanoic acid (butyric acid) | 107-92-6 | – | 1.3E+02 | – | 6.6E+01 |
| Butanol, 2- | 78-92-2 | – | 1.5E+05 | – | 1.3E+05 |
| Butanol, 2-methyl-1- | 137-32-6 | – | 8.2E+02 | – | 8.2E+02 |
| Butanol, 2-methyl-2- | 75-85-4 | – | 8.2E+02 | – | 8.2E+02 |
| Butanol, n- | 71-36-3 | – | 8.2E+03 | – | 8.2E+03 |
| Butene, 1- | 106-98-9 | – | 4.6E+03 | – | 4.4E+03 |
| Butene, cis-2- | 590-18-1 | – | 4.1E+03 | – | 3.5E+03 |
| Butene, trans-2- | 624-64-6 | – | 4.1E+03 | – | 3.5E+03 |
| Butoxy ethanol, 2- (Ethylene glycol monobutyl ether; EGBE) | 111-76-2 | – | 6.5E+03 | – | 6.4E+03 |
| Butyl acetate | 123-86-4 | – | 1.0E+04 | – | 9.1E+03 |
| Butyl acrylate | 141-32-2 | – | 7.4E+02 | – | 7.4E+02 |
| Butyl benzyl phthalate | 85-68-7 | 1.6E+03 | 1.0E+04 | 1.6E+03 | 1.0E+04 |
| Butyl ether, n- (dibutyl ether) | 142-96-1 | – | 8.2E+03 | – | 8.2E+03 |
| Butyl methacrylate | 97-88-1 | – | 3.4E+03 | – | 3.4E+03 |
| Butylate | 2008-41-5 | – | 3.3E+03 | – | 3.3E+03 |
| Butylbenzene, n- | 104-51-8 | – | 3.3E+03 | – | 3.3E+03 |
| Butylbenzene, sec- | 135-98-8 | – | 3.3E+03 | – | 3.3E+03 |
| Butylbenzene, tert- | 98-06-6 | – | 3.3E+03 | – | 3.3E+03 |
| Cacodylic acid | 75-60-5 | – | 2.0E+02 | – | 2.0E+02 |
| Cadmium | 7440-43-9 | 4.6E+04 | 5.2E+01 | 2.4E+04 | 5.1E+01 |
| Calcium* | 7440-70-2 | – | – | – | – |
| Caprolactam | 105-60-2 | – | 3.3E+04 | – | 3.3E+04 |

# Table 4
# Tier 1 Residential Total Soil Combined PCLs
**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | $^{Tot}Soil_{Comb}$ (includes inhalation, ingestion, dermal, and vegetable consumption pathways) | | | |
|---|---|---|---|---|---|
| | | 0.5 acre source area Carcinogenic (mg/kg) | 0.5 acre source area Noncarcinogenic (mg/kg) | 30 acre source area Carcinogenic (mg/kg) | 30 acre source area Noncarcinogenic (mg/kg) |
| Captan | 133-06-2 | 1.3E+03 | 8.7E+03 | 1.3E+03 | 8.7E+03 |
| Carbaryl | 63-25-2 | – | 6.7E+03 | – | 6.7E+03 |
| Carbazole | 86-74-8 | 2.3E+02 | – | 2.3E+02 | – |
| Carbofuran | 1563-66-2 | – | 3.3E+02 | – | 3.3E+02 |
| Carbon disulfide | 75-15-0 | – | 4.6E+03 | – | 3.3E+03 |
| Carbon tetrachloride | 56-23-5 | 3.5E+01 | 2.7E+02 | 2.3E+01 | 2.3E+02 |
| Carbophenothion | 786-19-6 | – | 8.2E+02 | – | 8.2E+02 |
| Carbosulfan | 55285-14-8 | – | 4.3E+02 | – | 4.3E+02 |
| Carboxin | 5234-68-4 | – | 6.7E+03 | – | 6.7E+03 |
| Chloral | 75-87-6 | – | 8.2E+03 | – | 8.2E+03 |
| Chloral hydrate (1,1-ethanediol, 2,2,2-trichloro-) | 302-17-0 | – | 6.7E+03 | – | 6.7E+03 |
| Chloramben (amiben; 3-amino-2,5-dichlorobenzoic acid) | 133-90-4 | – | 1.0E+03 | – | 1.0E+03 |
| Chlordane (technical) | 12789-03-6 | 6.0E+00 | 2.0E+01 | 5.9E+00 | 2.0E+01 |
| Chlordane, cis- (alpha chlordane) | 5103-71-9 | 1.3E+01 | 3.2E+01 | 1.3E+01 | 3.2E+01 |
| Chlordane, trans- (gamma chordane) | 5103-74-2 | 7.4E+00 | 2.3E+01 | 7.3E+00 | 2.3E+01 |
| Chlorfenvinphos | 470-90-6 | – | 1.4E+01 | – | 9.6E+00 |
| Chloride* | 16887-00-6 | – | – | – | – |
| Chlorine | 7782-50-5 | – | 1.3E+02 | – | 6.8E+01 |
| Chloro-1,3-butadiene, 2- | 126-99-8 | 1.2E+00 | 3.1E+02 | 6.1E-01 | 1.6E+02 |
| Chloro-2-propanol, 1- | 127-00-4 | – | 1.6E+03 | – | 1.6E+03 |
| Chloro-3-methylphenol, 4- | 59-50-7 | – | 3.3E+02 | – | 3.3E+02 |
| Chloroaniline, p- | 106-47-8 | 2.3E+01 | 2.7E+02 | 2.3E+01 | 2.7E+02 |
| Chlorobenzene | 108-90-7 | – | 5.2E+02 | – | 3.2E+02 |
| Chlorobenzilate | 510-15-6 | 1.7E+01 | 1.3E+03 | 1.6E+01 | 1.3E+03 |
| Chlorobromomethane (bromochloromethane) | 74-97-5 | – | 3.3E+03 | – | 3.3E+03 |
| Chlorodifluoromethane | 75-45-6 | – | 7.7E+05 | – | 3.9E+05 |
| Chloroethane (ethyl chloride) | 75-00-3 | – | 2.7E+04 | – | 2.3E+04 |
| Chloroethanol, 2- | 107-07-3 | – | 1.6E+03 | – | 1.6E+03 |
| Chloroethoxy ethene, 2- (2-chloroethylvinylether) | 110-75-8 | 5.5E+00 | 4.5E+00 | 5.5E+00 | 2.3E+00 |
| Chloroform | 67-66-3 | 1.6E+01 | 5.3E+02 | 8.0E+00 | 4.0E+02 |
| Chlorohexane, 1- | 544-10-5 | – | 2.7E+03 | – | 2.3E+03 |
| Chloromethane (methyl chloride) | 74-87-3 | 1.4E+02 | 2.4E+02 | 8.4E+01 | 2.1E+02 |
| Chloronaphthalene, 1- (Chloronaphthalene, alpha-) | 90-13-1 | – | 4.6E+03 | – | 4.6E+03 |
| Chloronaphthalene, 2- (chloronaphthalene, beta) | 91-58-7 | – | 5.0E+03 | – | 5.0E+03 |
| Chloronitrobenzene, p- (1-chloro-4-nitrobenzene) | 100-00-5 | 7.5E+02 | 3.2E+01 | 7.5E+02 | 2.2E+01 |
| Chlorophenol, 2- | 95-57-8 | – | 4.1E+02 | – | 4.1E+02 |
| Chlorophenol, 3- | 108-43-0 | – | 3.3E+02 | – | 3.3E+02 |
| Chlorophenol, 4- | 106-48-9 | – | 3.3E+02 | – | 3.3E+02 |

# Table 4
# Tier 1 Residential Total Soil Combined PCLs
**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | $^{Tot}Soil_{Comb}$ (includes inhalation, ingestion, dermal, and vegetable consumption pathways) | | | |
|---|---|---|---|---|---|
| | | 0.5 acre source area Carcinogenic (mg/kg) | 0.5 acre source area Noncarcinogenic (mg/kg) | 30 acre source area Carcinogenic (mg/kg) | 30 acre source area Noncarcinogenic (mg/kg) |
| Chlorophenyl phenylether, 4- | 7005-72-3 | 1.6E-01 | – | 1.5E-01 | – |
| Chloropropane, 2- | 75-29-6 | – | 9.4E+02 | – | 6.0E+02 |
| Chlorothalonil | 1897-45-6 | 4.3E+02 | 1.0E+03 | 4.3E+02 | 1.0E+03 |
| Chlorotoluene, o- (2-chlorotoluene) | 95-49-8 | – | 1.2E+03 | – | 1.1E+03 |
| Chlorotoluene, p- (4-chlorotoluene) | 106-43-4 | – | 1.6E+03 | – | 1.6E+03 |
| Chlorpyrifos | 2921-88-2 | – | 1.3E+02 | – | 1.3E+02 |
| Chromium (III) | 16065-83-1 | – | 3.3E+04 | – | 2.7E+04 |
| Chromium (total) | 7440-47-3 | – | 3.3E+04 | – | 2.7E+04 |
| Chromium (VI) | 18540-29-9 | 9.8E+03 | 1.2E+02 | 5.1E+03 | 1.2E+02 |
| Chrysene | 218-01-9 | 4.1E+03 | – | 4.1E+03 | – |
| Cobalt | 7440-48-4 | 3.8E+03 | 6.8E+02 | 1.9E+03 | 6.8E+02 |
| Copolymer acrylamide | 69418-26-4 | – | 1.3E+01 | – | 1.3E+01 |
| Copper | 7440-50-8 | – | 1.3E+03 | – | 1.3E+03 |
| Coronene | 191-07-1 | – | 1.3E+02 | – | 1.3E+02 |
| Coumaphos | 56-72-4 | – | 4.3E+02 | – | 4.3E+02 |
| Cresol | 1319-77-3 | – | 3.3E+03 | – | 3.3E+03 |
| Cresol, m- (3-methylphenol) | 108-39-4 | – | 3.3E+03 | – | 3.3E+03 |
| Cresol, o- (2-methylphenol) | 95-48-7 | – | 3.3E+03 | – | 3.3E+03 |
| Cresol, p- (4-methylphenol) | 106-44-5 | – | 3.3E+02 | – | 3.3E+02 |
| Crotonaldehyde | 123-73-9 | 3.2E+00 | 8.2E+01 | 3.2E+00 | 8.2E+01 |
| Cumene (isopropylbenzene) | 98-82-8 | – | 4.3E+03 | – | 3.0E+03 |
| Cyanazine | 21725-46-2 | 5.6E+00 | 1.3E+02 | 5.6E+00 | 1.3E+02 |
| Cyanide | 57-12-5 | – | 4.5E+01 | – | 4.3E+01 |
| Cyanogen | 460-19-5 | – | 1.1E+01 | – | 5.9E+00 |
| Cycloate | 1134-23-2 | – | 3.7E+03 | – | 3.7E+03 |
| Cyclohexane | 110-82-7 | – | 7.5E+04 | – | 4.2E+04 |
| Cyclohexanol | 108-93-0 | – | 3.3E+05 | – | 3.3E+05 |
| Cyclohexanone | 108-94-1 | – | 3.2E+04 | – | 1.7E+04 |
| Cyclohexene, 1-methanol-3- | 1679-51-2 | – | 1.3E+03 | – | 1.3E+03 |
| Cyclohexene, 4-vinyl-1- | 100-40-3 | – | 1.3E+03 | – | 1.1E+03 |
| Cyclopentane | 287-92-3 | – | 4.8E+03 | – | 4.8E+03 |
| Cyclopentane, methyl- | 96-37-7 | – | 5.3E+03 | – | 4.0E+03 |
| Cyclopentene | 142-29-0 | – | 4.1E+05 | – | 4.1E+05 |
| Cyclotetramethylenetetranitramine (HMX) | 2691-41-0 | – | 1.6E+03 | – | 1.6E+03 |
| Cyclotrimethylenetrinitramine (RDX) | 121-82-4 | 5.9E+01 | 2.7E+02 | 5.9E+01 | 2.7E+02 |
| Cymene (isopropyltoluene) | 99-87-6 | – | 8.2E+03 | – | 8.2E+03 |
| Cymoxanil | 57966-95-7 | – | 8.7E+02 | – | 8.7E+02 |
| Dacthal (DCPA) | 1861-32-1 | – | 6.2E+02 | – | 6.2E+02 |

# Table 4
# Tier 1 Residential Total Soil Combined PCLs
**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | $^{Tot}Soil_{Comb}$ (includes inhalation, ingestion, dermal, and vegetable consumption pathways) | | | |
|---|---|---|---|---|---|
| | | 0.5 acre source area Carcinogenic (mg/kg) | 0.5 acre source area Noncarcinogenic (mg/kg) | 30 acre source area Carcinogenic (mg/kg) | 30 acre source area Noncarcinogenic (mg/kg) |
| Dalapon, sodium salt (2,2-dichloropropanoic acid) | 75-99-0 | – | 2.0E+03 | – | 2.0E+03 |
| DDD | 72-54-8 | 1.4E+01 | – | 1.4E+01 | – |
| DDE | 72-55-9 | 1.0E+01 | – | 1.0E+01 | – |
| DDT | 50-29-3 | 5.4E+00 | 1.9E+01 | 5.4E+00 | 1.9E+01 |
| Demeton | 8065-48-3 | – | 2.7E+00 | – | 2.7E+00 |
| Desethylatrazine | 6190-65-4 | – | 2.3E+03 | – | 2.3E+03 |
| Diacetone alcohol (4-hydroxy-4-methyl-2-pentanone) | 123-42-2 | – | 2.7E+03 | – | 2.7E+03 |
| Diallate | 2303-16-4 | 3.8E+01 | – | 3.8E+01 | – |
| Diazinon | 333-41-5 | – | 3.1E+01 | – | 2.1E+01 |
| Dibenz(a,h)acridine | 226-36-8 | 3.7E+00 | – | 3.7E+00 | – |
| Dibenz(a,j)acridine | 224-42-0 | 5.8E+00 | – | 5.8E+00 | – |
| Dibenz-a,h-anthracene | 53-70-3 | 4.0E+00 | – | 4.0E+00 | – |
| Dibenzo(a,e)pyrene | 192-65-4 | 6.1E-01 | – | 6.1E-01 | – |
| Dibenzo(a,h)pyrene | 189-64-0 | 6.1E-02 | – | 6.1E-02 | – |
| Dibenzo(a,i)pyrene | 189-55-9 | 6.1E-02 | – | 6.1E-02 | – |
| Dibenzofuran | 132-64-9 | – | 2.7E+02 | – | 2.7E+02 |
| Dibenzothiophene | 132-65-0 | – | 4.4E+02 | – | 4.4E+02 |
| Dibromo-3-chloropropane, 1,2- | 96-12-8 | 1.5E-01 | 5.0E+00 | 8.0E-02 | 3.2E+00 |
| Dibromochloromethane (chlorodibromomethane) | 124-48-1 | 7.2E+01 | 1.6E+03 | 7.2E+01 | 1.6E+03 |
| Dibromofluoromethane | 1868-53-7 | – | 1.6E+04 | – | 1.6E+04 |
| Dicamba | 1918-00-9 | – | 2.0E+03 | – | 2.0E+03 |
| Dichlormid | 37764-25-3 | – | 1.7E+03 | – | 1.7E+03 |
| Dichloro-2-butene, 1,4- | 764-41-0 | 2.0E-01 | – | 1.0E-01 | – |
| Dichloro-2-butene, 1,4- trans | 110-57-6 | 2.0E-01 | – | 1.1E-01 | – |
| Dichlorobenzene, 1,2- | 95-50-1 | – | 7.2E+02 | – | 3.9E+02 |
| Dichlorobenzene, 1,3- | 541-73-1 | – | 1.2E+02 | – | 6.2E+01 |
| Dichlorobenzene, 1,4- | 106-46-7 | 2.5E+02 | 1.2E+04 | 2.5E+02 | 6.1E+03 |
| Dichlorobenzidine, 3,3- | 91-94-1 | 1.0E+01 | – | 1.0E+01 | – |
| Dichlorobutane, 2,3- | 7581-97-7 | – | 9.5E+01 | – | 5.2E+01 |
| Dichlorodifluoromethane | 75-71-8 | – | 1.4E+03 | – | 7.5E+02 |
| Dichloroethane, 1,1- | 75-34-3 | – | 1.1E+04 | – | 8.8E+03 |
| Dichloroethane, 1,2- | 107-06-2 | 4.1E+01 | 6.1E+02 | 3.0E+01 | 3.3E+02 |
| Dichloroethylene, 1,1- | 75-35-4 | – | 2.3E+03 | – | 1.6E+03 |
| Dichloroethylene, cis-1,2- | 156-59-2 | – | 1.4E+02 | – | 1.2E+02 |
| Dichloroethylene, trans-1,2 | 156-60-5 | – | 5.9E+02 | – | 3.7E+02 |
| Dichlorofluoromethane | 75-43-4 | – | 1.6E+04 | – | 1.6E+04 |
| Dichlorophenol, 2,3- | 576-24-9 | – | 2.0E+02 | – | 2.0E+02 |
| Dichlorophenol, 2,4- | 120-83-2 | – | 2.0E+02 | – | 2.0E+02 |

# Table 4
# Tier 1 Residential Total Soil Combined PCLs
**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | $^{Tot}Soil_{Comb}$ (includes inhalation, ingestion, dermal, and vegetable consumption pathways) | | | |
|---|---|---|---|---|---|
| | | 0.5 acre source area Carcinogenic (mg/kg) | 0.5 acre source area Noncarcinogenic (mg/kg) | 30 acre source area Carcinogenic (mg/kg) | 30 acre source area Noncarcinogenic (mg/kg) |
| Dichlorophenol, 2,5- | 583-78-8 | – | 2.0E+02 | – | 2.0E+02 |
| Dichlorophenol, 2,6- | 87-65-0 | – | 6.7E+01 | – | 6.7E+01 |
| Dichlorophenol, 3,4- | 95-77-2 | – | 2.0E+02 | – | 2.0E+02 |
| Dichlorophenol, 3,5- | 591-35-5 | – | 2.0E+02 | – | 2.0E+02 |
| Dichlorophenoxy, 2,4- butyric acid, 4- (2,4-DB) | 94-82-6 | – | 5.3E+02 | – | 5.3E+02 |
| Dichlorophenoxyacetic acid, 2,4- (2,4-D) | 94-75-7 | – | 7.3E+02 | – | 7.3E+02 |
| Dichloroprop (2-(2,4-dichlorophenoxy) propanoic acid) | 120-36-5 | – | 6.7E+02 | – | 6.7E+02 |
| Dichloropropane, 1,2- | 78-87-5 | 1.2E+02 | 6.1E+01 | 9.0E+01 | 3.1E+01 |
| Dichloropropane, 1,3- | 142-28-9 | 3.6E+01 | 2.6E+02 | 2.6E+01 | 1.4E+02 |
| Dichloropropane, 2,2- | 594-20-7 | 8.9E+01 | 6.1E+01 | 8.9E+01 | 3.1E+01 |
| Dichloropropanol, 2,3- | 616-23-9 | – | 2.0E+02 | – | 2.0E+02 |
| Dichloropropene, 1,1- | 563-58-6 | 3.6E+01 | 2.7E+02 | 2.6E+01 | 1.5E+02 |
| Dichloropropene, 1,3- (mixed isomers) | 542-75-6 | 3.6E+01 | 2.7E+02 | 2.6E+01 | 1.5E+02 |
| Dichloropropene, cis 1,3- | 10061-01-5 | 1.1E+01 | 8.0E+00 | 1.1E+01 | 7.8E+00 |
| Dichloropropene, trans 1,3- | 10061-02-6 | 3.6E+01 | 2.7E+02 | 2.6E+01 | 1.5E+02 |
| Dichlorvos | 62-73-7 | 1.6E+01 | 3.3E+01 | 1.6E+01 | 3.3E+01 |
| Dicrotophos (bidrin) | 141-66-2 | – | 6.7E+00 | – | 6.7E+00 |
| Dicyclopentadiene | 77-73-6 | – | 6.6E+03 | – | 6.6E+03 |
| Dieldrin | 60-57-1 | 1.5E-01 | 2.2E+00 | 1.5E-01 | 2.2E+00 |
| Diethanolamine | 111-42-2 | – | 3.3E+01 | – | 3.3E+01 |
| Diethyldithiocarbamate, sodium salt | 148-18-5 | 2.2E+01 | 2.5E+03 | 2.2E+01 | 2.5E+03 |
| Diethyl phthalate | 84-66-2 | – | 5.3E+04 | – | 5.3E+04 |
| Diethylene glycol | 111-46-6 | – | 1.3E+05 | – | 1.3E+05 |
| Diethylene glycol monobutyl ether | 112-34-5 | – | 2.0E+01 | – | 1.0E+01 |
| Diethylhexyl adipate | 103-23-1 | 3.9E+03 | 4.0E+04 | 3.9E+03 | 4.0E+04 |
| Diethylstilbestrol | 56-53-1 | 7.1E-04 | – | 7.1E-04 | – |
| Diisobutylene (trimethyl-1-pentene, 2,4,4-) | 107-39-1 | – | 1.9E+03 | – | 1.2E+03 |
| Diisopropylbenzene, p- | 100-18-5 | – | 6.7E+02 | – | 6.7E+02 |
| Diisopropyl ether (2,2'-oxybis-propane) | 108-20-3 | – | 4.6E+03 | – | 3.3E+03 |
| Dimethenamid | 87674-68-8 | – | 1.0E+03 | – | 1.0E+03 |
| Dimethoate | 60-51-5 | – | 1.3E+01 | – | 1.3E+01 |
| Dimethoxybenzidine, 3,3'- | 119-90-4 | 3.4E+02 | – | 3.4E+02 | – |
| Dimethyl-2-nitrobenzene, 1,3- | 81-20-9 | – | 1.3E+02 | – | 1.2E+02 |
| Dimethyl-3-nitrobenzene, 1,2- | 83-41-0 | – | 1.3E+02 | – | 1.2E+02 |
| Dimethyl-4-nitrobenzene, 1-2- | 99-51-4 | – | 1.3E+02 | – | 1.2E+02 |
| Dimethyl-5-nitrobenzene, 1,3- | 99-12-7 | – | 1.3E+02 | – | 1.2E+02 |
| Dimethylphenethylamine, alpha, alpha- | 122-09-8 | – | 1.3E+02 | – | 1.3E+02 |
| Dimethyl phenol, 2,4- | 105-67-9 | – | 1.3E+03 | – | 1.3E+03 |

# Table 4
# Tier 1 Residential Total Soil Combined PCLs
**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | $^{Tot}Soil_{Comb}$ (includes inhalation, ingestion, dermal, and vegetable consumption pathways) | | | |
|---|---|---|---|---|---|
| | | 0.5 acre source area Carcinogenic (mg/kg) | 0.5 acre source area Noncarcinogenic (mg/kg) | 30 acre source area Carcinogenic (mg/kg) | 30 acre source area Noncarcinogenic (mg/kg) |
| Dimethylaminoazobenzene, p- | 60-11-7 | – | 6.4E-01 | – | 6.4E-01 |
| Dimethylbenz-a-anthracene, 7,12- | 57-97-6 | 1.7E-02 | – | 1.7E-02 | – |
| Dimethylbenzidine, 3,3'- | 119-93-7 | 4.3E-01 | – | 4.3E-01 | – |
| Dimethylformamide, N,N- | 68-12-2 | – | 2.3E+03 | – | 1.4E+03 |
| Dimethylnaphthalene, 1,3- | 575-41-7 | – | 2.3E+03 | – | 2.3E+03 |
| Dimethylphthalate | 131-11-3 | – | 5.3E+04 | – | 5.3E+04 |
| Di-n-butyl phthalate | 84-74-2 | – | 6.2E+03 | – | 6.2E+03 |
| Dinitro-2-methylphenol, 4,6- (dinitro-o-cresol, 4, 6-) | 534-52-1 | – | 6.7E+00 | – | 6.7E+00 |
| Dinitrobenzene, 1,3- (dinitrobenzene, 2,4-) | 99-65-0 | – | 6.7E+00 | – | 6.7E+00 |
| Dinitrobenzene, 1,4- | 100-25-4 | – | 6.7E+00 | – | 6.7E+00 |
| Dinitrophenol, 2,4- | 51-28-5 | – | 1.3E+02 | – | 1.3E+02 |
| Dinitrophenol, 2,5- | 329-71-5 | – | 1.3E+02 | – | 1.3E+02 |
| Dinitrotoluene, 2,4- | 121-14-2 | 6.9E+00 | 1.3E+02 | 6.9E+00 | 1.3E+02 |
| Dinitrotoluene, 2,6- | 606-20-2 | 6.9E+00 | 6.7E+01 | 6.9E+00 | 6.7E+01 |
| Di-n-octyl phthalate | 117-84-0 | – | 6.4E+02 | – | 6.4E+02 |
| Dinoseb | 88-85-7 | – | 6.7E+01 | – | 6.7E+01 |
| Dioxane 1,4- | 123-91-1 | 4.5E+01 | 1.6E+03 | 3.7E+01 | 1.2E+03 |
| Dioxin (as 2,3,7,8-TCDD toxicity equivalent quotients (TEQs)) | 1746-01-6 | – | – | – | – |
| Diphenyl ether | 101-84-8 | – | 3.8E+02 | – | 3.8E+02 |
| Diphenylamine | 122-39-4 | – | 1.7E+03 | – | 1.7E+03 |
| Diphenylhydrazine, 1,2- | 122-66-7 | 5.6E+00 | – | 5.4E+00 | – |
| Dipropylene glycol | 110-98-5 | – | 8.0E+03 | – | 8.0E+03 |
| Diquat | 85-00-7 | – | 1.5E+02 | – | 1.5E+02 |
| Disodium iminodiacetate (iminodiacetic acid, disodium salt) | 142-73-4 | – | 6.7E+02 | – | 6.7E+02 |
| Disulfoton | 298-04-4 | – | 2.7E+00 | – | 2.7E+00 |
| Diuron | 330-54-1 | – | 1.3E+02 | – | 1.3E+02 |
| Dodecylphenol, 4- | 104-43-8 | – | 3.3E+03 | – | 3.3E+03 |
| Endosulfan | 115-29-7 | – | 4.0E+02 | – | 4.0E+02 |
| Endosulfan I | 959-98-8 | – | 9.1E+01 | – | 9.1E+01 |
| Endosulfan II | 33213-65-9 | – | 2.7E+02 | – | 2.7E+02 |
| Endosulfan sulfate | 1031-07-8 | – | 3.8E+02 | – | 3.8E+02 |
| Endothall | 145-73-3 | – | 1.3E+03 | – | 1.3E+03 |
| Endrin | 72-20-8 | – | 9.0E+00 | – | 9.0E+00 |
| Endrin aldehyde | 7421-93-4 | – | 1.9E+01 | – | 1.9E+01 |
| Endrin ketone | 53494-70-5 | – | 1.9E+01 | – | 1.9E+01 |
| Epichlorohydrin | 106-89-8 | 2.8E+02 | 2.5E+01 | 1.8E+02 | 1.3E+01 |
| EPN (o-ethyl o-(4-nitrophenyl)phenylphosphonothioate) | 2104-64-5 | – | 6.7E-01 | – | 6.7E-01 |
| Esfenvalerate | 66230-04-4 | – | 7.4E+01 | – | 7.4E+01 |

# Table 4
# Tier 1 Residential Total Soil Combined PCLs
**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | $^{Tot}Soil_{Comb}$ (includes inhalation, ingestion, dermal, and vegetable consumption pathways) | | | |
|---|---|---|---|---|---|
| | | 0.5 acre source area Carcinogenic (mg/kg) | 0.5 acre source area Noncarcinogenic (mg/kg) | 30 acre source area Carcinogenic (mg/kg) | 30 acre source area Noncarcinogenic (mg/kg) |
| Ethalfluralin (sonolan) | 55283-68-6 | 4.7E+01 | 2.5E+03 | 4.7E+01 | 2.5E+03 |
| Ethanol | 64-17-5 | – | 1.0E+06 | – | 1.0E+06 |
| Ethanol, 2-amino- | 141-43-5 | – | 1.1E+02 | – | 1.1E+02 |
| Ethanol, 2-(2-aminoethoxy)- | 929-06-6 | – | 3.3E+01 | – | 3.3E+01 |
| Ethanol, 2-(2-ethoxyethoxy)- | 111-90-0 | – | 1.3E+05 | – | 1.3E+05 |
| Ethanol, 2-(methylamino)- | 109-83-1 | – | 9.1E+02 | – | 8.1E+02 |
| Ethion | 563-12-2 | – | 2.7E+01 | – | 2.7E+01 |
| Ethoprop | 13194-48-4 | 1.7E+02 | 6.7E+00 | 1.7E+02 | 6.7E+00 |
| Ethoxy ethanol, 2- | 110-80-5 | – | 5.7E+03 | – | 4.7E+03 |
| Ethyl acetate | 141-78-6 | – | 3.5E+03 | – | 1.8E+03 |
| Ethyl acrylate | 140-88-5 | 1.3E+02 | 1.5E+02 | 1.3E+02 | 9.6E+01 |
| Ethyl benzene | 100-41-4 | – | 6.4E+03 | – | 5.3E+03 |
| Ethyl dipropylthiocarbamate, S- | 759-94-4 | – | 1.7E+03 | – | 1.7E+03 |
| Ethyl ether | 60-29-7 | – | 1.6E+04 | – | 1.6E+04 |
| Ethyl methacrylate | 97-63-2 | – | 3.6E+03 | – | 2.4E+03 |
| Ethyl methanesulfonate | 62-50-0 | 3.4E+01 | – | 2.7E+01 | – |
| Ethyl tert-butyl ether (2-ethyl-2-ethoxypropane) | 637-92-3 | – | 8.0E+01 | – | 7.9E+01 |
| Ethyl-1-hexanol, 2- | 104-76-7 | – | 1.0E+04 | – | 1.0E+04 |
| Ethyl-2-hexenal, 2- | 645-62-5 | – | 1.2E+04 | – | 1.2E+04 |
| Ethyl-2-methyl benzene, 1- | 611-14-3 | – | 2.8E+03 | – | 2.1E+03 |
| Ethyl-4-methyl benzene, 1- | 622-96-8 | – | 2.6E+03 | – | 1.9E+03 |
| Ethylene* | 74-85-1 | – | – | – | – |
| Ethylene dibromide (dibromoethane, 1,2- ) | 106-93-4 | 2.5E+00 | 5.1E+02 | 2.1E+00 | 4.0E+02 |
| Ethylene glycol | 107-21-1 | – | 1.3E+05 | – | 1.3E+05 |
| Ethylene oxide | 75-21-8 | 2.6E+00 | – | 1.7E+00 | – |
| Ethylene thiourea | 96-45-7 | 4.3E+01 | 5.3E+00 | 4.3E+01 | 5.3E+00 |
| Ethylenediamine | 107-15-3 | – | 7.4E+03 | – | 7.4E+03 |
| Ethylenimine | 151-56-4 | 5.5E-02 | – | 3.9E-02 | – |
| Ethylhexyl acrylate, 2- | 103-11-7 | 9.8E+01 | – | 9.8E+01 | – |
| Famphur | 52-85-7 | – | 2.0E+00 | – | 2.0E+00 |
| Fensulfothion | 115-90-2 | – | 6.7E+01 | – | 6.7E+01 |
| Fenthion | 55-38-9 | – | 4.7E+00 | – | 4.7E+00 |
| Fenuron | 101-42-8 | – | 4.7E+03 | – | 4.7E+03 |
| Fluoranthene | 206-44-0 | – | 2.3E+03 | – | 2.3E+03 |
| Fluorene | 86-73-7 | – | 2.3E+03 | – | 2.3E+03 |
| Fluorine (soluble fluoride) | 7782-41-4 | – | 4.8E+03 | – | 4.8E+03 |
| Fluorochloridone | 61213-25-0 | – | 5.0E+02 | – | 5.0E+02 |
| Fonofos | 944-22-9 | – | 1.3E+02 | – | 1.3E+02 |

# Table 4
# Tier 1 Residential Total Soil Combined PCLs
**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | $^{Tot}Soil_{Comb}$ (includes inhalation, ingestion, dermal, and vegetable consumption pathways) | | | |
|---|---|---|---|---|---|
| | | 0.5 acre source area Carcinogenic (mg/kg) | 0.5 acre source area Noncarcinogenic (mg/kg) | 30 acre source area Carcinogenic (mg/kg) | 30 acre source area Noncarcinogenic (mg/kg) |
| Formaldehyde | 50-00-0 | — | 9.3E+02 | — | 4.9E+02 |
| Formic acid | 64-18-6 | — | 2.1E+02 | — | 1.1E+02 |
| Furan | 110-00-9 | — | 8.2E+01 | — | 8.2E+01 |
| Furfural | 98-01-1 | — | 2.5E+02 | — | 2.5E+02 |
| Glycidylaldehyde | 765-34-4 | — | 2.7E+01 | — | 2.3E+01 |
| Glyphosate | 1071-83-6 | — | 6.7E+03 | — | 6.7E+03 |
| Heptachlor | 76-44-8 | 1.3E-01 | 7.1E+00 | 1.3E-01 | 7.1E+00 |
| Heptachlor epoxide | 1024-57-3 | 2.4E-01 | 5.4E-01 | 2.4E-01 | 5.4E-01 |
| Heptane, n- | 142-82-5 | — | 4.7E+03 | — | 4.6E+03 |
| Heptanoic acid, n- | 111-14-8 | — | 1.2E+02 | — | 6.3E+01 |
| Hexachlorobenzene | 118-74-1 | 1.1E+00 | 2.9E+01 | 1.0E+00 | 2.9E+01 |
| Hexachlorobutadiene | 87-68-3 | 2.0E+01 | 6.7E+01 | 1.2E+01 | 6.7E+01 |
| Hexachlorocyclohexane, alpha (alpha-BHC) | 319-84-6 | 2.6E-01 | 2.7E+02 | 2.5E-01 | 2.7E+02 |
| Hexachlorocyclohexane, beta (beta-BHC) | 319-85-7 | 9.3E-01 | — | 9.2E-01 | — |
| Hexachlorocyclohexane, delta (delta-BHC) | 319-86-8 | 2.9E+00 | 2.2E+01 | 2.9E+00 | 2.2E+01 |
| Hexachlorocyclohexane, gamma (lindane; gamma-BHC) | 58-89-9 | 1.1E+00 | 9.2E+00 | 1.1E+00 | 9.2E+00 |
| Hexachlorocyclohexane, techn (technical-BHC) | 608-73-1 | 1.3E+00 | — | 1.3E+00 | — |
| Hexachlorocyclopentadiene | 77-47-4 | — | 1.4E+01 | — | 7.2E+00 |
| Hexachloroethane | 67-72-1 | 1.2E+02 | 4.6E+01 | 1.2E+02 | 4.6E+01 |
| Hexachlorophene | 70-30-4 | — | 2.0E+01 | — | 2.0E+01 |
| Hexachloropropylene | 1888-71-7 | 1.2E+02 | 4.6E+01 | 1.2E+02 | 4.6E+01 |
| Hexanal, 2-ethyl- | 123-05-7 | — | 1.0E+04 | — | 1.0E+04 |
| Hexane, n- | 110-54-3 | — | 3.3E+03 | — | 2.5E+03 |
| Hexanediamine, 1,6- | 124-09-4 | — | 3.3E+02 | — | 3.3E+02 |
| Hexanedinitrile | 111-69-3 | — | 8.5E+01 | — | 7.9E+01 |
| Hexanediol, 1,6- | 629-11-8 | — | 3.0E+05 | — | 2.8E+05 |
| Hexanoic acid | 142-62-1 | — | 1.3E+02 | — | 6.9E+01 |
| Hexanone, 2- | 591-78-6 | — | 2.7E+02 | — | 2.1E+02 |
| Hexazinone | 51235-04-2 | — | 2.2E+03 | — | 2.2E+03 |
| Hexene, 1- | 592-41-6 | — | 1.6E+03 | — | 8.4E+02 |
| Hexene, cis-2- | 7688-21-3 | — | 1.6E+03 | — | 8.4E+02 |
| Hexylene glycol (2-methyl-2,4-pentanediol) | 107-41-5 | — | 2.0E+04 | — | 2.0E+04 |
| Hydrazine | 302-01-2 | 3.8E-01 | 2.9E+00 | 2.1E-01 | 1.5E+00 |
| Hydrocaproic acid, 6- (6-hydroxyhexanoic acid) | 1191-25-9 | — | 1.6E+02 | — | 8.1E+01 |
| Hydrogen chloride (hydrochloric acid)* | 7647-01-0 | — | — | — | — |
| Hydroquinone | 123-31-9 | 7.8E+01 | 2.7E+03 | 7.8E+01 | 2.7E+03 |
| Indene | 95-13-6 | — | 1.0E+02 | — | 5.6E+01 |
| Indeno-1,2,3-cd-pyrene | 193-39-5 | 4.2E+01 | — | 4.2E+01 | — |

# Table 4
# Tier 1 Residential Total Soil Combined PCLs
**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | $^{Tot}Soil_{Comb}$ (includes inhalation, ingestion, dermal, and vegetable consumption pathways) | | | |
|---|---|---|---|---|---|
| | | 0.5 acre source area Carcinogenic (mg/kg) | 0.5 acre source area Noncarcinogenic (mg/kg) | 30 acre source area Carcinogenic (mg/kg) | 30 acre source area Noncarcinogenic (mg/kg) |
| Iron* | 7439-89-6 | – | – | – | – |
| Isoamyl alcohol | 123-51-3 | – | 4.1E+02 | – | 4.1E+02 |
| Isobutyl alcohol | 78-83-1 | – | 2.5E+04 | – | 2.5E+04 |
| Isobutylene (2-methyl-1-propene) | 115-11-7 | – | 3.0E+02 | – | 3.0E+02 |
| Isobutyric acid (2-methylpropanoic acid) | 79-31-2 | – | 3.3E+04 | – | 3.3E+04 |
| Isodecanol | 25339-17-7 | – | 7.1E+01 | – | 7.1E+01 |
| Isodrin | 465-73-6 | 2.7E-02 | 2.0E-01 | 2.7E-02 | 2.0E-01 |
| Isopentane | 78-78-4 | – | 4.8E+03 | – | 4.8E+03 |
| Isophorone | 78-59-1 | 4.9E+03 | 1.3E+04 | 4.9E+03 | 1.3E+04 |
| Isopropyl acetate | 108-21-4 | – | 5.7E+03 | – | 5.7E+03 |
| Isopropyl alcohol | 67-63-0 | – | 9.1E+03 | – | 4.8E+03 |
| Isosafrole | 120-58-1 | 1.7E+01 | – | 1.5E+01 | – |
| Kelthane (dicofol) | 115-32-2 | – | 2.7E+02 | – | 2.7E+02 |
| Kepone (chlordecone) | 143-50-0 | 3.6E-01 | 1.7E+01 | 3.5E-01 | 1.7E+01 |
| Lead (inorganic) | 7439-92-1 | – | – | – | – |
| Leptophos | 21609-90-5 | – | 1.6E-01 | – | 1.6E-01 |
| Limonene, d-* | 5989-27-5 | – | – | – | – |
| Lithium | 7439-93-2 | – | 1.3E+02 | – | 1.3E+02 |
| Magnesium* | 7439-95-4 | – | – | – | – |
| Malathion | 121-75-5 | – | 1.7E+02 | – | 9.6E+01 |
| Maleic anhydride | 108-31-6 | – | 6.7E+03 | – | 6.7E+03 |
| Maleic hydrazide | 123-33-1 | – | 3.3E+04 | – | 3.3E+04 |
| Malononitrile | 109-77-3 | – | 6.7E+00 | – | 6.7E+00 |
| Mancozeb | 8018-01-7 | – | 2.0E+03 | – | 2.0E+03 |
| Manganese | 7439-96-5 | – | 3.9E+03 | – | 3.9E+03 |
| MCPA (4-(chloro-2-methylphenoxy) acetic acid) | 94-74-6 | – | 3.3E+01 | – | 3.3E+01 |
| MCPP (2-(4-chloro-2-methylphenoxy) propanoic acid) | 93-65-2 | – | 6.7E+01 | – | 6.7E+01 |
| Mercury (pH = 4.9)[1] | 7439-97-6 | – | 3.6E+00 | – | 2.1E+00 |
| Mercury (pH=6.8)[1] | 7439-97-6A | – | 8.3E+00 | – | 5.5E+00 |
| Merphos | 150-50-5 | – | 2.0E+00 | – | 2.0E+00 |
| Methacrylic acid (2-methyl-2-propenoic acid) | 79-41-4 | – | 8.2E+02 | – | 8.2E+02 |
| Methacrylonitrile | 126-98-7 | – | 5.1E+02 | – | 2.8E+02 |
| Methanol | 67-56-1 | – | 1.1E+05 | – | 8.3E+04 |
| Methapyrilene | 91-80-5 | 1.0E+00 | – | 1.0E+00 | – |
| Methomyl | 16752-77-5 | – | 1.7E+03 | – | 1.7E+03 |
| Methoxychlor | 72-43-5 | – | 2.7E+02 | – | 2.7E+02 |
| Methoxyethanol, 2- | 109-86-4 | – | 2.7E+02 | – | 1.5E+02 |
| Methyl acetate (acetic acid, methyl ester) | 79-20-9 | – | 8.2E+04 | – | 8.2E+04 |

# Table 4
# Tier 1 Residential Total Soil Combined PCLs
**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | $^{Tot}Soil_{Comb}$ (includes inhalation, ingestion, dermal, and vegetable consumption pathways) | | | |
|---|---|---|---|---|---|
| | | 0.5 acre source area Carcinogenic (mg/kg) | 0.5 acre source area Noncarcinogenic (mg/kg) | 30 acre source area Carcinogenic (mg/kg) | 30 acre source area Noncarcinogenic (mg/kg) |
| Methyl acrylate | 96-33-3 | – | 1.1E+02 | – | 8.0E+01 |
| Methyl amyl ketone (2-heptanone) | 110-43-0 | – | 3.9E+03 | – | 3.8E+03 |
| Methyl chrysene, 1- | 3351-28-8 | 5.8E+02 | – | 5.8E+02 | – |
| Methyl chrysene, 2- | 3351-32-4 | 5.8E+02 | – | 5.8E+02 | – |
| Methyl chrysene, 6- | 1705-85-7 | 5.7E+01 | – | 5.7E+01 | – |
| Methyl cyclohexane | 108-87-2 | – | 4.1E+04 | – | 2.2E+04 |
| Methyl ethyl ketone (2-butanone) | 78-93-3 | – | 4.0E+04 | – | 3.3E+04 |
| Methyl iodide (iodomethane) | 74-88-4 | – | 1.1E+02 | – | 1.1E+02 |
| Methyl isobutyl ketone (4-methyl-2-pentanone) | 108-10-1 | – | 5.9E+03 | – | 5.4E+03 |
| Methyl mercury | 22967-92-6 | – | 8.0E+00 | – | 8.0E+00 |
| Methyl methacrylate | 80-62-6 | – | 9.8E+03 | – | 5.3E+03 |
| Methyl methanesulfonate | 66-27-3 | 3.3E+01 | – | 2.6E+01 | – |
| Methyl parathion | 298-00-0 | – | 1.7E+01 | – | 1.7E+01 |
| Methyl-1-butene, 2- | 563-46-2 | – | 4.8E+03 | – | 4.7E+03 |
| Methyl-1-propanal, 2- (isobutyraldehyde) | 78-84-2 | – | 3.3E+03 | – | 3.3E+03 |
| Methyl-2-butene, 2- | 513-35-9 | – | 4.8E+03 | – | 4.7E+03 |
| Methyl-2-pentenal, 2- | 623-36-9 | 3.2E+00 | – | 3.2E+00 | – |
| Methylcholanthrene, 3- | 56-49-5 | 1.9E-01 | – | 1.9E-01 | – |
| Methylene bromide (dibromomethane) | 74-95-3 | 8.1E+02 | 8.1E+01 | 8.1E+02 | 4.2E+01 |
| Methylene chloride (dichloromethane) | 75-09-2 | 1.1E+04 | 1.6E+03 | 5.9E+03 | 1.5E+03 |
| Methylene-bis (2-chloroaniline) 4,4'- | 101-14-4 | 4.6E+01 | 1.3E+02 | 4.5E+01 | 1.3E+02 |
| Methylmecury hydroxide | 1184-57-2 | – | 6.7E+00 | – | 6.7E+00 |
| Methylnaphthalene, 1- | 90-12-0 | 1.5E+02 | 4.4E+03 | 1.5E+02 | 4.4E+03 |
| Methylnaphthalene, 2- | 91-57-6 | – | 2.5E+02 | – | 2.5E+02 |
| Methylpyrrolidone, N- | 872-50-4 | – | 1.3E+03 | – | 1.3E+03 |
| Methylstyrene, alpha- | 98-83-9 | – | 2.8E+02 | – | 1.8E+02 |
| Methyltetrahydrofuran, 2- | 96-47-9 | 1.5E+02 | 1.6E+04 | 8.6E+01 | 1.6E+04 |
| Methyltetrahydropyran, 2- | 10141-72-7 | 1.7E+02 | 1.6E+04 | 9.8E+01 | 1.6E+04 |
| Metolachlor | 51218-45-2 | – | 1.0E+04 | – | 1.0E+04 |
| Metribuzin | 21087-64-9 | – | 1.7E+03 | – | 1.7E+03 |
| Mirex | 2385-85-5 | – | 1.3E+01 | – | 1.3E+01 |
| Molinate | 2212-67-1 | – | 1.3E+02 | – | 1.3E+02 |
| Molybdenum | 7439-98-7 | – | 1.6E+02 | – | 1.6E+02 |
| Monocrotophos | 2157-98-4 | – | 4.0E+01 | – | 4.0E+01 |
| Morpholine | 110-91-8 | – | 1.0E+06 | – | 1.0E+06 |
| Morpholine, N-butyl- | 1005-67-0 | – | 1.5E+02 | – | 1.5E+02 |
| MTBE (methyl tert-butyl ether) | 1634-04-4 | 9.8E+02 | 8.0E+02 | 5.9E+02 | 7.9E+02 |
| Naled | 300-76-5 | – | 1.3E+02 | – | 1.3E+02 |

# Table 4
# Tier 1 Residential Total Soil Combined PCLs
**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | $^{Tot}Soil_{Comb}$ (includes inhalation, ingestion, dermal, and vegetable consumption pathways) | | | |
|---|---|---|---|---|---|
| | | 0.5 acre source area Carcinogenic (mg/kg) | 0.5 acre source area Noncarcinogenic (mg/kg) | 30 acre source area Carcinogenic (mg/kg) | 30 acre source area Noncarcinogenic (mg/kg) |
| Naphthalene | 91-20-3 | – | 2.2E+02 | – | 1.2E+02 |
| Naphthoquinone, 1,4- | 130-15-4 | – | 4.7E+02 | – | 4.7E+02 |
| Naphthylamine, 1- | 134-32-7 | – | 1.3E+03 | – | 1.3E+03 |
| Naphthylamine, 2- | 91-59-8 | 2.6E+00 | – | 2.6E+00 | – |
| Napropamide | 15299-99-7 | – | 6.7E+03 | – | 6.7E+03 |
| Neopentyl glycol | 126-30-7 | – | 2.0E+04 | – | 2.0E+04 |
| Nickel and compounds | 7440-02-0 | 1.3E+05 | 8.4E+02 | 6.8E+04 | 8.4E+02 |
| Nitrate-N | 14797-55-8 | – | 1.3E+05 | – | 1.3E+05 |
| Nitrite-N | 14797-65-0 | – | 8.0E+03 | – | 8.0E+03 |
| Nitroaniline, 2- | 88-74-4 | – | 1.4E+01 | – | 1.1E+01 |
| Nitroaniline, 3- | 99-09-2 | 1.2E+02 | 1.5E+01 | 1.2E+02 | 1.2E+01 |
| Nitroaniline, 4- | 100-01-6 | 2.3E+02 | 2.2E+02 | 2.3E+02 | 1.9E+02 |
| Nitrobenzene | 98-95-3 | 6.6E+01 | 1.2E+02 | 3.4E+01 | 1.1E+02 |
| Nitroglycerin | 55-63-0 | 2.8E+02 | 6.7E+00 | 2.8E+02 | 6.7E+00 |
| Nitrophenol, 2- | 88-75-5 | – | 1.3E+02 | – | 1.3E+02 |
| Nitrophenol, 3- | 554-84-7 | – | 1.3E+02 | – | 1.3E+02 |
| Nitrophenol, 4- | 100-02-7 | – | 1.3E+02 | – | 1.3E+02 |
| Nitropropane, 2- | 79-46-9 | 1.3E-01 | 1.1E+01 | 6.8E-02 | 1.1E+01 |
| Nitroquinoline-N-oxide, 4- | 56-57-5 | 4.0E-01 | – | 3.3E-01 | – |
| Nitrosodiethanolamine | 1116-54-7 | 1.7E+00 | – | 1.7E+00 | – |
| Nitrosodiethylamine, n- | 55-18-5 | 2.5E-02 | – | 1.8E-02 | – |
| Nitrosodimethylamine, n- | 62-75-9 | 7.4E-02 | 5.8E-01 | 5.5E-02 | 5.2E-01 |
| Nitrosodi-n-butylamine, n- | 924-16-3 | 4.7E-01 | – | 3.3E-01 | – |
| Nitrosodi-n-propylamine, n- | 621-64-7 | 4.0E-01 | – | 4.0E-01 | – |
| Nitrosodiphenylamine | 86-30-6 | 5.7E+02 | – | 5.7E+02 | – |
| Nitroso-methyl-ethyl-amine, n- | 10595-95-6 | 2.8E-01 | – | 2.8E-01 | – |
| Nitrosomorpholine, N- | 59-89-2 | 5.0E-01 | – | 3.9E-01 | – |
| Nitroso-n-ethylurea, n- | 759-73-9 | 3.4E-02 | – | 3.4E-02 | – |
| Nitrosopiperidine, N- | 100-75-4 | 3.6E-01 | – | 2.9E-01 | – |
| Nitrosopyrrolidine, n- | 930-55-2 | 1.6E+00 | – | 1.3E+00 | – |
| Nitrotoluene, m- | 99-08-1 | – | 6.7E+02 | – | 6.7E+02 |
| Nitrotoluene, o- | 88-72-2 | 2.1E+01 | 6.0E+01 | 2.1E+01 | 6.0E+01 |
| Nitrotoluene, p- | 99-99-0 | 2.9E+02 | 2.7E+02 | 2.9E+02 | 2.7E+02 |
| Nonachlor, cis- | 5103-73-1 | 5.6E+00 | 1.9E+01 | 5.6E+00 | 1.9E+01 |
| Nonachlor, trans- | 39765-80-5 | 5.6E+00 | 1.9E+01 | 5.6E+00 | 1.9E+01 |
| Nonanal | 124-19-6 | – | 1.3E+04 | – | 1.3E+04 |
| Nonene, 1-n | 124-11-8 | – | 8.2E+03 | – | 8.2E+03 |
| Nonylphenol, 4-n- | 104-40-5 | – | 6.5E+03 | – | 6.5E+03 |

# Table 4
# Tier 1 Residential Total Soil Combined PCLs
**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | $^{Tot}Soil_{Comb}$ (includes inhalation, ingestion, dermal, and vegetable consumption pathways) | | | |
|---|---|---|---|---|---|
| | | 0.5 acre source area Carcinogenic (mg/kg) | 0.5 acre source area Noncarcinogenic (mg/kg) | 30 acre source area Carcinogenic (mg/kg) | 30 acre source area Noncarcinogenic (mg/kg) |
| Nonylphenol ethoxylate | 9016-45-9 | — | 6.5E+03 | — | 6.5E+03 |
| Octamethylpyrophosphoramide | 152-16-9 | — | 1.3E+02 | — | 1.3E+02 |
| Octanone | 106-68-3 | — | 4.9E+03 | — | 4.9E+03 |
| Oxamyl | 23135-22-0 | — | 1.7E+03 | — | 1.7E+03 |
| Oxychlordane | 27304-13-8 | 5.6E+00 | 1.9E+01 | 5.6E+00 | 1.9E+01 |
| Paraquat | 1910-42-5 | — | 3.0E+02 | — | 3.0E+02 |
| Parathion (ethyl parathion) | 56-38-2 | — | 4.0E+02 | — | 4.0E+02 |
| Pebulate | 1114-71-2 | — | 3.3E+03 | — | 3.3E+03 |
| Pendimethalin | 40487-42-1 | — | 2.5E+03 | — | 2.5E+03 |
| Pentachlorobenzene | 608-93-5 | — | 5.3E+01 | — | 5.3E+01 |
| Pentachloroethane | 76-01-7 | 3.9E+01 | 2.5E+03 | 2.8E+01 | 2.5E+03 |
| Pentachloronitrobenzene | 82-68-8 | 1.0E+01 | 1.4E+02 | 1.0E+01 | 1.4E+02 |
| Pentachlorophenol | 87-86-5 | 7.3E-01 | 3.6E+01 | 7.3E-01 | 3.6E+01 |
| Pentadiene, 1,3-cis- | 1574-41-0 | — | 4.8E+03 | — | 4.7E+03 |
| Pentadiene, 1,3-trans- | 2004-70-8 | — | 4.8E+03 | — | 4.7E+03 |
| Pentaerythritol tetranitrate (PETN) | 78-11-5 | — | 1.3E+02 | — | 1.3E+02 |
| Pentane | 109-66-0 | — | 4.8E+03 | — | 4.8E+03 |
| Pentane, 2-methyl- | 107-83-5 | — | 4.8E+03 | — | 4.7E+03 |
| Pentane, 3-methyl- | 96-14-0 | — | 4.8E+03 | — | 4.7E+03 |
| Pentanediol, 1,5- | 111-29-5 | — | 3.0E+05 | — | 2.7E+05 |
| Pentanol, 1- | 71-41-0 | — | 2.7E+03 | — | 2.7E+03 |
| Pentanol, 4-methyl-2- | 108-11-2 | — | 2.1E+03 | — | 2.1E+03 |
| Pentanone, 2- | 107-87-9 | — | 3.3E+03 | — | 3.3E+03 |
| Pentene, 2- | 109-68-2 | — | 4.8E+03 | — | 4.7E+03 |
| Pentyne, 1- | 627-19-0 | — | 4.8E+03 | — | 4.7E+03 |
| Perchlorate | 14797-73-0 | — | 5.1E+01 | — | 5.1E+01 |
| Perfluorooctanoic sulfonic acid (1-Octanesulfonic acid, heptadecafluoro-1-) | 1763-23-1 | — | 1.5E+00 | — | 1.5E+00 |
| Perfluoroundecanoic acid (Undecanoic acid, uncosafluoro-) | 2058-94-8 | — | 8.0E-01 | — | 8.0E-01 |
| Perfluoropentanoic acid (Pentanoic acid, nonafluoro-) | 2706-90-3 | — | 2.5E-01 | — | 2.5E-01 |
| Perfluorohexanoic acid (Hexanoic acid, undecafluoro-) | 307-24-4 | — | 2.5E-01 | — | 2.5E-01 |
| Perfluorododecanoic acid (Dodecanoic acid, tricosafluoro-) | 307-55-1 | — | 7.9E-01 | — | 7.8E-01 |
| Perfluorooctanoic acid (Octanoic acid, pentadecafluoro-) | 335-67-1 | — | 6.0E-01 | — | 4.9E-01 |
| Perfluorodecanoic acid (Decanoic acid, nonadecafluoro-) | 335-76-2 | — | 9.9E-01 | — | 9.8E-01 |
| Perfluorodecane sulfonic acid (1-Decanesulfonic acid, heneicosafluoro-) | 335-77-3 | — | 8.0E-01 | — | 8.0E-01 |
| Perfluorohexane sulfonic acid (1-Hexanesulfonic acid, triddecafluoro-) | 355-46-4 | — | 2.5E-01 | — | 2.4E-01 |
| Perfluorobutyric acid (Butanoic acid, heptafluoro-) | 375-22-4 | — | 1.8E+02 | — | 1.6E+02 |

# Table 4
# Tier 1 Residential Total Soil Combined PCLs
**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | $^{Tot}Soil_{Comb}$ (includes inhalation, ingestion, dermal, and vegetable consumption pathways) | | | |
|---|---|---|---|---|---|
| | | 0.5 acre source area Carcinogenic (mg/kg) | 0.5 acre source area Noncarcinogenic (mg/kg) | 30 acre source area Carcinogenic (mg/kg) | 30 acre source area Noncarcinogenic (mg/kg) |
| Perfluorobutane sulfonic acid (1-Butanesulfonic acid, nonafluoro-) | 375-73-5 | – | 8.6E+01 | – | 8.0E+01 |
| Perfluoroheptanoic acid (Heptanoic acid, tridecafluoro-) | 375-85-9 | – | 1.5E+00 | – | 1.5E+00 |
| Perfluorononanoic acid (Nonanoic acid, heptadecafluoro-) | 375-95-1 | – | 7.6E-01 | – | 7.3E-01 |
| Perfluorotetradecanoic acid (Tetradecanoic acid, heptacosafluoro-) | 376-06-7 | – | 5.1E-01 | – | 5.1E-01 |
| Perfluorotridecanoic acid (Tridecanoic acid, pentacosafluoro-) | 72629-94-8 | – | 6.1E-01 | – | 6.1E-01 |
| Perfluorooctane sulfonamide (1-Octanesulfonamide, hetpadecafluoro-) | 754-91-6 | – | 5.8E-02 | – | 3.1E-02 |
| Perylene | 198-55-0 | – | 1.3E+03 | – | 1.3E+03 |
| Phenacetin | 62-44-2 | 1.8E+03 | – | 1.5E+03 | – |
| Phenanthrene | 85-01-8 | – | 1.7E+03 | – | 1.7E+03 |
| Phenanthridine | 229-87-8 | – | 2.0E+02 | – | 2.0E+02 |
| Phenol | 108-95-2 | – | 1.8E+03 | – | 9.5E+02 |
| Phenol, 4-tert-butyl- | 98-54-4 | – | 8.0E+03 | – | 8.0E+03 |
| Phenothiazine | 92-84-2 | – | 6.3E+01 | – | 6.3E+01 |
| Phenyl mercuric acetate | 62-38-4 | – | 5.3E+00 | – | 5.3E+00 |
| Phenylene diamine, m- | 108-45-2 | – | 4.0E+02 | – | 4.0E+02 |
| Phenylene diamine, p- | 106-50-3 | – | 1.3E+04 | – | 1.3E+04 |
| Phorate | 298-02-2 | – | 1.3E+01 | – | 1.3E+01 |
| Phosalone | 2310-17-0 | – | 1.3E+02 | – | 1.3E+02 |
| Phosdrin (mevinphos) | 7786-34-7 | – | 1.7E+00 | – | 1.7E+00 |
| Phosmet | 732-11-6 | – | 1.3E+03 | – | 1.3E+03 |
| Phosphine | 7803-51-2 | – | 3.8E+00 | – | 2.1E+00 |
| Phosphorotrithioic acid, S,S,S-tributyl ester | 78-48-8 | 5.2E+01 | 6.4E+01 | 5.2E+01 | 6.4E+01 |
| Phosphorus, total* | 7723-14-0 | – | – | – | – |
| Phosphorus, white | 7723-14-0 | – | 1.5E+00 | – | 1.5E+00 |
| Phthalic anhydride | 85-44-9 | – | 3.6E+04 | – | 2.1E+04 |
| Picloram | 1918-02-1 | – | 4.7E+03 | – | 4.7E+03 |
| Picoline, 2- (2-methylpyridine) | 109-06-8 | – | 7.4E+02 | – | 7.4E+02 |
| Polybrominated biphenyls (PBBs) | 67774-32-7 | 9.7E-03 | 1.6E-02 | 9.7E-03 | 1.6E-02 |
| Polychlorinated biphenyls (PCBs) | 1336-36-3 | 1.8E+00 | 1.1E+00 | 1.7E+00 | 1.1E+00 |
| Potassium* | 7440-09-7 | – | – | – | – |
| Primene | 68955-53-3 | – | 3.6E+02 | – | 3.6E+02 |
| Prometon (pramitol) | 1610-18-0 | – | 1.0E+03 | – | 1.0E+03 |
| Prometryn | 7287-19-6 | – | 2.7E+03 | – | 2.7E+03 |
| Pronamide | 23950-58-5 | – | 5.0E+03 | – | 5.0E+03 |
| Propanal (propionaldehyde) | 123-38-6 | – | 1.0E+02 | – | 5.8E+01 |
| Propane, 1-bromo- | 106-94-5 | – | 2.9E+03 | – | 2.9E+03 |
| Propanil | 709-98-8 | – | 3.3E+02 | – | 3.3E+02 |

# Table 4
# Tier 1 Residential Total Soil Combined PCLs
**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | $^{Tot}Soil_{Comb}$ (includes inhalation, ingestion, dermal, and vegetable consumption pathways) | | | |
|---|---|---|---|---|---|
| | | 0.5 acre source area Carcinogenic (mg/kg) | 0.5 acre source area Noncarcinogenic (mg/kg) | 30 acre source area Carcinogenic (mg/kg) | 30 acre source area Noncarcinogenic (mg/kg) |
| Propanoic acid (propionic acid) | 79-09-4 | – | 4.1E+04 | – | 4.1E+04 |
| Propanol, 1- | 71-23-8 | – | 1.6E+04 | – | 1.6E+04 |
| Propargite | 2312-35-8 | – | 1.3E+03 | – | 1.3E+03 |
| Propargyl alcohol | 107-19-7 | – | 1.6E+02 | – | 1.6E+02 |
| Propazine | 139-40-2 | 1.1E+02 | 1.3E+03 | 1.1E+02 | 1.3E+03 |
| Propham | 122-42-9 | – | 1.3E+03 | – | 1.3E+03 |
| Propionitrile (propane nitrile) | 107-12-0 | – | 3.3E+01 | – | 3.3E+01 |
| Propyl acetate, n- | 109-60-4 | – | 7.4E+03 | – | 7.4E+03 |
| Propylbenzene, n- | 103-65-1 | – | 2.2E+03 | – | 1.6E+03 |
| Propylene glycol | 57-55-6 | – | 3.7E+02 | – | 1.9E+02 |
| Propylene glycol monomethyl ether | 107-98-2 | – | 4.6E+04 | – | 3.9E+04 |
| Propylene oxide | 75-56-9 | 2.0E+01 | 4.6E+02 | 1.7E+01 | 2.4E+02 |
| Propylene tetramer | 6842-15-5 | – | 4.6E+03 | – | 3.6E+03 |
| Prothiofos (Tokuthion) | 34643-46-4 | – | 6.6E+00 | – | 6.6E+00 |
| Pyrene | 129-00-0 | – | 1.7E+03 | – | 1.7E+03 |
| Pyridine | 110-86-1 | – | 8.2E+01 | – | 8.2E+01 |
| Quinoline | 91-22-5 | 1.6E+00 | – | 1.6E+00 | – |
| Ronnel | 299-84-3 | – | 2.3E+03 | – | 2.3E+03 |
| Safrole | 94-59-7 | 1.6E+01 | – | 1.3E+01 | – |
| Selenium | 7782-49-2 | – | 3.1E+02 | – | 3.1E+02 |
| Selenourea | 630-10-4 | – | 4.1E+02 | – | 4.1E+02 |
| Silver | 7440-22-4 | – | 9.7E+01 | – | 9.7E+01 |
| Simazine | 122-34-9 | 3.9E+01 | 3.3E+02 | 3.9E+01 | 3.3E+02 |
| Sodium* | 7440-23-5 | – | – | – | – |
| Sodium hypochlorite | 7681-52-9 | – | 1.5E+04 | – | 1.4E+04 |
| Sodium polyacrylate | 9003-04-7 | – | 1.2E+02 | – | 6.2E+01 |
| Strontium | 7440-24-6 | – | 4.4E+04 | – | 4.4E+04 |
| Strychnine | 57-24-9 | – | 2.0E+01 | – | 2.0E+01 |
| Styrene | 100-42-5 | – | 6.7E+03 | – | 4.3E+03 |
| Sulfate* | 14808-79-8 | – | – | – | – |
| Sulfide* | 18496-25-8 | – | – | – | – |
| Sulfolane | 126-33-0 | – | 4.3E+02 | – | 2.9E+02 |
| Sulfur* | 7704-34-9 | – | – | – | – |
| Sulprofos (Bolstar) | 35400-43-2 | – | 2.0E+02 | – | 2.0E+02 |
| Tebuconazole | 107534-96-3 | – | 2.0E+03 | – | 2.0E+03 |
| Tebuthiuron | 34014-18-1 | – | 4.7E+03 | – | 4.7E+03 |
| Terbufos | 13071-79-9 | – | 1.7E+00 | – | 1.7E+00 |
| Tert-amyl ethyl ether (TAEE) | 919-94-8 | – | 3.3E+03 | – | 3.3E+03 |

# Table 4
# Tier 1 Residential Total Soil Combined PCLs
**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | $^{Tot}Soil_{Comb}$ (includes inhalation, ingestion, dermal, and vegetable consumption pathways) | | | |
|---|---|---|---|---|---|
| | | 0.5 acre source area Carcinogenic (mg/kg) | 0.5 acre source area Noncarcinogenic (mg/kg) | 30 acre source area Carcinogenic (mg/kg) | 30 acre source area Noncarcinogenic (mg/kg) |
| Tert-amyl-methyl ether (TAME) | 994-05-8 | – | 3.3E+03 | – | 3.3E+03 |
| Tert-butyl alcohol (2-methyl-2-propanol) | 75-65-0 | – | 7.4E+03 | – | 7.4E+03 |
| Tetrachlorobenzene, 1,2,3,4- | 634-66-2 | – | 2.0E+01 | – | 2.0E+01 |
| Tetrachlorobenzene, 1,2,3,5- | 634-90-2 | – | 1.3E+01 | – | 1.3E+01 |
| Tetrachlorobenzene, 1,2,4,5- | 95-94-3 | – | 2.0E+01 | – | 2.0E+01 |
| Tetrachloroethane, 1,1,1,2- | 630-20-6 | 6.5E+01 | 2.5E+03 | 3.9E+01 | 2.5E+03 |
| Tetrachloroethane, 1,1,2,2- | 79-34-5 | 3.0E+01 | 1.6E+03 | 3.0E+01 | 1.6E+03 |
| Tetrachloroethylene | 127-18-4 | 7.1E+02 | 1.3E+03 | 4.2E+02 | 1.1E+03 |
| Tetrachlorophenol, 2,3,4,5- | 4901-51-3 | – | 4.0E+02 | – | 4.0E+02 |
| Tetrachlorophenol, 2,3,4,6- | 58-90-2 | – | 1.8E+02 | – | 1.8E+02 |
| Tetrachlorophenol, 2,3,5,6- | 935-95-5 | – | 2.3E+01 | – | 2.3E+01 |
| Tetrachlorvinphos (Stirophos) | 22248-79-9 | – | 2.6E+03 | – | 2.6E+03 |
| Tetradifon | 116-29-0 | – | 1.0E+03 | – | 1.0E+03 |
| Tetraethyl dithiopyrophosphate (sulfotep) | 3689-24-5 | – | 3.3E+01 | – | 3.3E+01 |
| Tetraethyl lead | 78-00-2 | – | 6.7E-03 | – | 6.7E-03 |
| Tetraethyl pyrophosphate (TEPP) | 107-49-3 | – | 7.3E-01 | – | 7.3E-01 |
| Tetraethylene glycol | 112-60-7 | – | 2.2E+04 | – | 2.2E+04 |
| Tetrahydrofuran | 109-99-9 | 1.5E+02 | 2.2E+04 | 8.6E+01 | 1.3E+04 |
| Tetrahydropyran | 142-68-7 | 1.6E+02 | 1.6E+04 | 9.2E+01 | 1.6E+04 |
| Tetraoxadodecane, 2,5,8,11- | 112-49-2 | – | 1.7E+03 | – | 1.7E+03 |
| Thallium | 7440-28-0 | – | 5.3E+00 | – | 5.3E+00 |
| Thiofanox | 39196-18-4 | – | 2.0E+01 | – | 2.0E+01 |
| Thionazin | 297-97-2 | – | 4.7E+00 | – | 4.7E+00 |
| Thiophanate-methyl | 23564-05-8 | – | 5.3E+03 | – | 5.3E+03 |
| Thiram | 137-26-8 | – | 3.3E+02 | – | 3.3E+02 |
| Tin | 7440-31-5 | – | 3.5E+04 | – | 3.5E+04 |
| Titanium | 7440-32-6 | – | 2.2E+05 | – | 2.2E+05 |
| Toluene | 108-88-3 | – | 5.9E+03 | – | 5.4E+03 |
| Toluene diisocyanate, 2,4/2,6- | 26471-62-5 | – | 1.5E+02 | – | 7.5E+01 |
| Toluenediamine, 2,4- | 95-80-7 | 1.5E+00 | – | 1.5E+00 | – |
| Toluenediamine, 2,6- | 823-40-5 | – | 2.0E+03 | – | 2.0E+03 |
| Toluidine, o- | 95-53-4 | 4.7E+01 | – | 3.5E+01 | – |
| Toluidine, p- | 106-49-0 | 7.1E+01 | – | 7.1E+01 | – |
| Toxaphene | 8001-35-2 | 1.2E+00 | 9.0E+00 | 1.2E+00 | 9.0E+00 |
| TPH, TX1005, C6-C12 | TPH-1005-1 | – | 1.6E+03 | – | 1.1E+03 |
| TPH, TX1005, >C12-C28 | TPH-1005-2 | – | 2.3E+03 | – | 2.0E+03 |
| TPH, TX1005, >C12-C35 | TPH-1005-3 | – | 2.3E+03 | – | 2.0E+03 |
| TPH, TX1005, >C28-C35 | TPH-1005-4 | – | 2.3E+03 | – | 2.0E+03 |

# Table 4
# Tier 1 Residential Total Soil Combined PCLs
**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | $^{Tot}Soil_{Comb}$ (includes inhalation, ingestion, dermal, and vegetable consumption pathways) | | | |
|---|---|---|---|---|---|
| | | 0.5 acre source area Carcinogenic (mg/kg) | 0.5 acre source area Noncarcinogenic (mg/kg) | 30 acre source area Carcinogenic (mg/kg) | 30 acre source area Noncarcinogenic (mg/kg) |
| TP Silvex, 2,4,5- | 93-72-1 | — | 5.3E+02 | — | 5.3E+02 |
| Triademenol | 55219-65-3 | — | 2.0E+03 | — | 2.0E+03 |
| Triallate | 2303-17-5 | — | 3.2E+02 | — | 3.2E+02 |
| Triaminotrinitrobenzene (TATB) | 3058-38-6 | — | 2.0E+02 | — | 2.0E+02 |
| Tributyltin oxide | 56-35-9 | — | 2.0E+01 | — | 2.0E+01 |
| Trichloro-1,2,2-trifluoroethane, 1,1,2- | 76-13-1 | — | 7.4E+04 | — | 3.9E+04 |
| Trichlorobenzene, 1,2,3- | 87-61-6 | — | 1.2E+02 | — | 8.7E+01 |
| Trichlorobenzene, 1,2,4- | 120-82-1 | 1.6E+02 | 1.2E+02 | 1.6E+02 | 7.0E+01 |
| Trichlorobenzene, 1,3,5- | 108-70-3 | — | 7.8E+01 | — | 4.9E+01 |
| Trichloroethane, 1,1,1- | 71-55-6 | — | 5.3E+04 | — | 3.2E+04 |
| Trichloroethane, 1,1,2- | 79-00-5 | 1.8E+01 | 3.3E+02 | 1.0E+01 | 3.3E+02 |
| Trichloroethylene | 79-01-6 | 5.3E+01 | 1.8E+01 | 3.4E+01 | 1.1E+01 |
| Trichlorofluoromethane | 75-69-4 | — | 2.5E+04 | — | 2.5E+04 |
| Trichloronate | 327-98-0 | — | 1.4E+02 | — | 1.4E+02 |
| Trichlorophenol, 2,3,4- | 15950-66-0 | — | 6.7E+03 | — | 6.7E+03 |
| Trichlorophenol, 2,3,5- | 933-78-8 | — | 6.7E+03 | — | 6.7E+03 |
| Trichlorophenol, 2,3,6- | 933-75-5 | — | 5.3E+02 | — | 5.3E+02 |
| Trichlorophenol, 2,4,5- | 95-95-4 | — | 6.7E+03 | — | 6.7E+03 |
| Trichlorophenol, 2,4,6- | 88-06-2 | 3.5E+02 | 6.7E+01 | 3.0E+02 | 6.7E+01 |
| Trichlorophenol, 3,4,5- | 609-19-8 | — | 6.7E+03 | — | 6.7E+03 |
| Trichlorophenoxyacetic acid, 2,4,5- | 93-76-5 | — | 6.7E+02 | — | 6.7E+02 |
| Trichloropropane, 1,1,2- | 598-77-6 | — | 4.6E+00 | — | 2.4E+00 |
| Trichloropropane, 1,2,3- | 96-18-4 | 2.0E-01 | 1.3E+01 | 2.0E-01 | 7.0E+00 |
| Triethanolamine | 102-71-6 | — | 3.0E+03 | — | 1.7E+03 |
| Triethylamine | 121-44-8 | — | 1.1E+02 | — | 5.5E+01 |
| Triethylene glycol | 112-27-6 | — | 1.3E+05 | — | 1.3E+05 |
| Triethylphosphorothioate, O, O, O- | 126-68-1 | — | 5.5E-01 | — | 5.5E-01 |
| Trifluralin | 1582-09-8 | 2.7E+02 | 3.0E+02 | 2.7E+02 | 3.0E+02 |
| Trimethylamine | 75-50-3 | — | 1.5E+02 | — | 7.6E+01 |
| Trimethylbenzene, 1,2,3- | 526-73-8 | — | 1.6E+03 | — | 1.1E+03 |
| Trimethylbenzene, 1,2,4- | 95-63-6 | — | 1.6E+03 | — | 1.2E+03 |
| Trimethylbenzene, 1,3,5- | 108-67-8 | — | 1.5E+03 | — | 1.1E+03 |
| Trinitrobenzene, 1,3,5- | 99-35-4 | — | 2.0E+03 | — | 2.0E+03 |
| Trinitrophenylmethylnitramine (tetryl; nitramine) | 479-45-8 | — | 1.5E+02 | — | 1.5E+02 |
| Trinitrotoluene, 2,4,6- | 118-96-7 | 1.6E+02 | 3.3E+01 | 1.6E+02 | 3.3E+01 |
| Tungsten (as sodium tungstate dihydride) | 7440-33-7 | — | 7.3E+01 | — | 7.3E+01 |
| Uranium (soluble salts) | 7440-61-1 | — | 2.2E+02 | — | 2.2E+02 |
| Valeric acid (pentanoic acid) | 109-52-4 | — | 1.3E+02 | — | 6.8E+01 |

# Table 4
# Tier 1 Residential Total Soil Combined PCLs
## Last Revised: November 8, 2019

| Chemical of Concern | CAS | $^{Tot}Soil_{Comb}$ (includes inhalation, ingestion, dermal, and vegetable consumption pathways) | | | |
|---|---|---|---|---|---|
| | | 0.5 acre source area Carcinogenic (mg/kg) | 0.5 acre source area Noncarcinogenic (mg/kg) | 30 acre source area Carcinogenic (mg/kg) | 30 acre source area Noncarcinogenic (mg/kg) |
| Vanadium | 7440-62-2 | – | 7.6E+01 | – | 7.5E+01 |
| Vernam | 1929-77-7 | – | 6.7E+01 | – | 6.7E+01 |
| Vinyl acetate | 108-05-4 | – | 3.0E+03 | – | 1.5E+03 |
| Vinyl chloride | 75-01-4 | 3.7E+00 | 1.9E+02 | 3.4E+00 | 1.6E+02 |
| Vinylcyclohexane | 695-12-5 | – | 4.1E+04 | – | 4.1E+04 |
| Warfarin | 81-81-2 | – | 2.0E+01 | – | 2.0E+01 |
| Xylene, m- | 108-38-3 | – | 8.9E+03 | – | 4.7E+03 |
| Xylene, o- | 95-47-6 | – | 4.8E+04 | – | 2.9E+04 |
| Xylene, p- | 106-42-3 | – | 8.9E+03 | – | 4.7E+03 |
| Xylenes | 1330-20-7 | – | 6.0E+03 | – | 3.7E+03 |
| Zinc | 7440-66-6 | – | 9.9E+03 | – | 9.9E+03 |
| 6 C aliphatics (TPH) (>53% n-hexane content) | NA | – | 3.3E+03 | – | 2.5E+03 |
| 6 C aliphatics (TPH) (<53% n-hexane content) | NA | – | 4.8E+03 | – | 4.8E+03 |
| >6-8 C aliphatics (TPH) (>53% n-hexane content) | NA | – | 3.3E+03 | – | 2.5E+03 |
| >6-8 C aliphatics (TPH) (<53% n-hexane content) | NA | – | 4.8E+03 | – | 4.8E+03 |
| >8-10 C aliphatics (TPH) | NA | – | 4.0E+03 | – | 2.7E+03 |
| >10-12 C aliphatics (TPH) | NA | – | 3.6E+03 | – | 2.5E+03 |
| >12-16 C aliphatics (TPH) | NA | – | 4.3E+03 | – | 3.2E+03 |
| >16-21 C aliphatics (TPH) | NA | – | 1.3E+05 | – | 1.3E+05 |
| >16-21 C aliphatics (TPH) (for transformer mineral oil releases only) | NA | – | 1.1E+05 | – | 1.1E+05 |
| >21-35 C aliphatics (TPH) | NA | – | 1.3E+05 | – | 1.3E+05 |
| >21-35 C aliphatics (TPH) (for transformer mineral oil releases only) | NA | – | 1.1E+05 | – | 1.1E+05 |
| >7-8 C aromatics (TPH) | NA | – | 6.4E+03 | – | 5.3E+03 |
| >8-10 C aromatics (TPH) | NA | – | 1.6E+03 | – | 1.1E+03 |
| >10-12 C aromatics (TPH) | NA | – | 1.9E+03 | – | 1.5E+03 |
| >12-16 C aromatics (TPH) | NA | – | 2.3E+03 | – | 2.0E+03 |
| >16-21 C aromatics (TPH) | NA | – | 2.0E+03 | – | 2.0E+03 |
| >21-35 C aromatics (TPH) | NA | – | 2.0E+03 | – | 2.0E+03 |

**Footnotes**

**1** Site-specific PCLs for mercury may vary based on the pH-dependent Kd value (see Figure:30 TAC §350.73(f)(1)(C)).

***** These compounds are not necessarily of concern from a human health standpoint, therefore calculation of human health-based values is not required. However, aesthetics and ecological criteria would still apply. See table entitled "Compounds for which Calculation of a Human Health PCL is Not Required" available on the TCEQ website at http://www.tceq.state.tx.us/remediation/trrp/trrp.html.

NA = not applicable

All values capped at 1E+06

This table shows the Total Soil Combined protective concentration levels for Residential land with both carcinogenic and non-carcinogenic values depicted.

end of worksheet

# Table 5
# Tier 1 Commercial/Industrial Total Soil Combined PCLs
**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | $^{Tot}Soil_{Comb}$ (includes inhalation, ingestion, and dermal pathways) | | | |
|---|---|---|---|---|---|
| | | 0.5 acre source area Carcinogenic (mg/kg) | 0.5 acre source area Noncarcinogenic (mg/kg) | 30 acre source area Carcinogenic (mg/kg) | 30 acre source area Noncarcinogenic (mg/kg) |
| Acenaphthene | 83-32-9 | – | 3.7E+04 | – | 3.7E+04 |
| Acenaphthylene | 208-96-8 | – | 3.7E+04 | – | 3.7E+04 |
| Acetaldehyde | 75-07-0 | 2.9E+02 | 2.0E+02 | 1.5E+02 | 1.0E+02 |
| Acetate, 2-ethoxyethanol | 111-15-9 | – | 7.8E+03 | – | 4.2E+03 |
| Acetate, isoamyl | 123-92-2 | – | 7.4E+04 | – | 7.4E+04 |
| Acetate, isobutyl | 110-19-0 | – | 4.9E+04 | – | 4.9E+04 |
| Acetate, sec-butyl | 105-46-4 | – | 4.9E+04 | – | 4.9E+04 |
| Acetic acid* | 64-19-7 | – | – | – | – |
| Acetone (2-propanone) | 67-64-1 | – | 4.4E+05 | – | 2.9E+05 |
| Acetone cyanohydrin | 75-86-5 | – | 1.5E+03 | – | 1.2E+03 |
| Acetonitrile | 75-05-8 | – | 1.7E+03 | – | 9.1E+02 |
| Acetophenone | 98-86-2 | – | 6.8E+04 | – | 6.8E+04 |
| Acetylaminofluorene, 2- | 53-96-3 | 4.3E+00 | – | 3.8E+00 | – |
| Acifluorfen, sodium | 62476-59-9 | – | 8.9E+03 | – | 8.9E+03 |
| Acridine | 260-94-6 | – | 2.0E+03 | – | 2.0E+03 |
| Acrolein | 107-02-8 | – | 1.5E+02 | – | 9.0E+01 |
| Acrylamide | 79-06-1 | 2.1E+01 | 5.8E+02 | 1.5E+01 | 3.7E+02 |
| Acrylic acid | 79-10-7 | – | 1.7E+02 | – | 8.7E+01 |
| Acrylonitrile | 107-13-1 | 7.6E+00 | 4.1E+01 | 4.2E+00 | 2.2E+01 |
| Adipic acid (hexanedioic acid) | 124-04-9 | – | 1.0E+06 | – | 1.0E+06 |
| Alachlor | 15972-60-8 | 2.4E+02 | 6.8E+03 | 2.4E+02 | 6.8E+03 |
| Aldicarb | 116-06-3 | – | 6.8E+02 | – | 6.8E+02 |
| Aldicarb sulfone | 1646-88-4 | – | 6.8E+02 | – | 6.8E+02 |
| Aldrin | 309-00-2 | 1.0E+00 | 2.0E+01 | 9.7E-01 | 2.0E+01 |
| Allyl alcohol | 107-18-6 | – | 8.0E+00 | – | 4.1E+00 |
| Allyl chloride | 107-05-1 | – | 2.1E+01 | – | 1.1E+01 |
| Aluminum | 7429-90-5 | – | 6.2E+05 | – | 5.7E+05 |
| Ametryn | 834-12-8 | – | 6.1E+03 | – | 6.1E+03 |
| Amino-2,6-dinitrotoluene, 4- | 19406-51-0 | 1.9E+03 | 1.1E+02 | 1.9E+03 | 1.1E+02 |
| Amino-4,6-dinitrotoluene, 2- | 35572-78-2 | 1.9E+03 | 1.1E+02 | 1.9E+03 | 1.1E+02 |
| Aminobiphenyl, 4- (1,1-biphenyl-4-amine) | 92-67-1 | 3.1E+00 | – | 3.1E+00 | – |
| Aminopyridine, 4- | 504-24-5 | – | 1.4E+01 | – | 1.4E+01 |
| Ammonia | 7664-41-7 | – | 6.9E+03 | – | 3.5E+03 |
| Ammonium polyphosphate* | 6833-79-9 | – | – | – | – |
| Ammonium salts* | AMMONIUM | – | – | – | – |
| Aniline | 62-53-3 | 3.3E+03 | 1.8E+02 | 3.3E+03 | 9.3E+01 |
| Anthracene | 120-12-7 | – | 1.9E+05 | – | 1.9E+05 |
| Anthraquinone, 9,10- | 84-65-1 | 4.9E+02 | 1.4E+04 | 4.9E+02 | 1.4E+04 |
| Antimony | 7440-36-0 | – | 3.1E+02 | – | 3.1E+02 |

# Table 5
# Tier 1 Commercial/Industrial Total Soil Combined PCLs
**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | $^{Tot}Soil_{Comb}$ (includes inhalation, ingestion, and dermal pathways) | | | |
|---|---|---|---|---|---|
| | | 0.5 acre source area Carcinogenic (mg/kg) | 0.5 acre source area Noncarcinogenic (mg/kg) | 30 acre source area Carcinogenic (mg/kg) | 30 acre source area Noncarcinogenic (mg/kg) |
| Aramite | 140-57-8 | 7.6E+02 | 3.4E+04 | 7.6E+02 | 3.4E+04 |
| Arsenic | 7440-38-2 | 2.0E+02 | 3.3E+02 | 2.0E+02 | 3.3E+02 |
| Arsine | 7784-42-1 | – | 1.1E+00 | – | 5.5E-01 |
| Atrazine | 1912-24-9 | 8.6E+01 | 2.4E+04 | 8.6E+01 | 2.4E+04 |
| Azinphos-methyl (guthion) | 86-50-0 | – | 1.0E+03 | – | 1.0E+03 |
| Azobenzene | 103-33-3 | 1.6E+02 | – | 1.5E+02 | – |
| Barium | 7440-39-3 | – | 1.2E+05 | – | 1.2E+05 |
| Bayleton | 43121-43-3 | – | 2.0E+04 | – | 2.0E+04 |
| Benefin (benfluralin) | 1861-40-1 | – | 2.0E+05 | – | 2.0E+05 |
| Benomyl | 17804-35-2 | – | 3.4E+04 | – | 3.4E+04 |
| Benz-a-anthracene | 56-55-3 | 1.7E+02 | – | 1.7E+02 | – |
| Benzaldehyde | 100-52-7 | – | 1.0E+05 | – | 1.0E+05 |
| Benzene | 71-43-2 | 2.4E+02 | 2.4E+03 | 1.3E+02 | 1.8E+03 |
| Benzenedicarbonitrile, 1,3- | 626-17-5 | – | 4.1E+03 | – | 4.1E+03 |
| Benzenedicarboxylic acid, 1,2-disodecyl ester | 26761-40-0 | – | 2.7E+04 | – | 2.7E+04 |
| Benzenethiol | 108-98-5 | – | 1.0E+03 | – | 1.0E+03 |
| Benzidine | 92-87-5 | 4.7E-02 | 2.0E+03 | 3.3E-02 | 2.0E+03 |
| Benzo-a-pyrene | 50-32-8 | 1.7E+01 | 5.9E+01 | 1.7E+01 | 3.6E+01 |
| Benzo-b-fluoranthene | 205-99-2 | 1.7E+02 | – | 1.7E+02 | – |
| Benzo-e-pyrene | 192-97-2 | – | 1.9E+04 | – | 1.9E+04 |
| Benzo-g,h,i-perylene | 191-24-2 | – | 1.9E+04 | – | 1.9E+04 |
| Benzoic acid | 65-85-0 | – | 1.0E+06 | – | 1.0E+06 |
| Benzo-j-fluoranthene | 205-82-3 | 1.7E+02 | – | 1.7E+02 | – |
| Benzo-k-fluoranthene | 207-08-9 | 1.7E+03 | – | 1.7E+03 | – |
| Benzophenone | 119-61-9 | – | 4.6E+03 | – | 4.6E+03 |
| Benzotrichloride | 98-07-7 | 1.5E+00 | – | 1.5E+00 | – |
| Benzoyl peroxide | 94-36-0 | – | 3.4E+04 | – | 3.4E+04 |
| Benzyl alcohol | 100-51-6 | – | 6.8E+04 | – | 6.8E+04 |
| Benzyl chloride | 100-44-7 | 1.7E+02 | 4.2E+01 | 1.7E+02 | 2.2E+01 |
| Benzyl dichloride | 98-87-3 | 1.1E+02 | 7.3E+01 | 1.1E+02 | 3.9E+01 |
| Beryllium | 7440-41-7 | 1.6E+04 | 2.5E+02 | 8.1E+03 | 2.5E+02 |
| Biphenyl, 1,1- | 92-52-4 | – | 8.5E+04 | – | 8.5E+04 |
| Biphenyl, 1,1'-, 2-phenoxy- | 6738-04-1 | – | 3.4E+04 | – | 3.4E+04 |
| Biquinoline, 2,2'- | 119-91-5 | – | 2.0E+03 | – | 2.0E+03 |
| Bis (2-chloroethoxy) methane | 111-91-1 | 9.1E+00 | 2.0E+03 | 6.2E+00 | 2.0E+03 |
| Bis (2-chloroethyl) ether | 111-44-4 | 4.9E+00 | – | 2.8E+00 | – |
| Bis (2-chloro-1-methyl) ether | 108-60-1 | 1.5E+02 | 2.7E+04 | 1.1E+02 | 2.7E+04 |
| Bis (2-chloromethyl) ether | 542-88-1 | 9.0E-03 | – | 4.8E-03 | – |
| Bis (2-ethyl-hexyl) phthalate | 117-81-7 | 5.6E+02 | 5.6E+03 | 5.6E+02 | 5.6E+03 |

# Table 5
# Tier 1 Commercial/Industrial Total Soil Combined PCLs
**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | $^{Tot}Soil_{Comb}$ (includes inhalation, ingestion, and dermal pathways) | | | |
|---|---|---|---|---|---|
| | | 0.5 acre source area Carcinogenic (mg/kg) | 0.5 acre source area Noncarcinogenic (mg/kg) | 30 acre source area Carcinogenic (mg/kg) | 30 acre source area Noncarcinogenic (mg/kg) |
| Bismuth | 7440-69-9 | — | 4.1E+05 | — | 4.1E+05 |
| Bisphenol A | 80-05-7 | — | 3.4E+04 | — | 3.4E+04 |
| Boron | 7440-42-8 | — | 1.9E+05 | — | 1.9E+05 |
| Bromacil | 314-40-9 | — | 6.8E+04 | — | 6.8E+04 |
| Bromo-2-chloroethane, 1- | 107-04-0 | — | 4.1E+04 | — | 4.1E+04 |
| Bromobenzene | 108-86-1 | — | 1.2E+03 | — | 6.4E+02 |
| Bromodichloromethane | 75-27-4 | 4.6E+02 | 2.0E+04 | 4.6E+02 | 2.0E+04 |
| Bromoform | 75-25-2 | 1.0E+03 | 2.0E+04 | 6.0E+02 | 2.0E+04 |
| Bromomethane | 74-83-9 | — | 1.0E+02 | — | 5.3E+01 |
| Bromophenyl phenylether, 4- | 101-55-3 | 1.2E+00 | — | 1.1E+00 | — |
| Butadiene, 1,3- | 106-99-0 | 1.2E+03 | 7.1E+02 | 6.2E+02 | 3.6E+02 |
| Butadiene, 2-methyl-1,3- (isoprene) | 78-79-5 | — | 5.3E+04 | — | 4.7E+04 |
| Butanal (butyraldehyde) | 123-72-8 | — | 2.1E+03 | — | 1.1E+03 |
| Butane, 2,3-dimethyl- | 79-29-8 | — | 5.3E+04 | — | 4.7E+04 |
| Butanoic acid (butyric acid) | 107-92-6 | — | 1.8E+02 | — | 9.3E+01 |
| Butanol, 2- | 78-92-2 | — | 1.0E+06 | — | 6.8E+05 |
| Butanol, 2-methyl-1- | 137-32-6 | — | 1.0E+04 | — | 1.0E+04 |
| Butanol, 2-methyl-2- | 75-85-4 | — | 1.0E+04 | — | 1.0E+04 |
| Butanol, n- | 71-36-3 | — | 1.0E+05 | — | 1.0E+05 |
| Butene, 1- | 106-98-9 | — | 4.0E+04 | — | 3.0E+04 |
| Butene, cis-2- | 590-18-1 | — | 2.2E+04 | — | 1.4E+04 |
| Butene, trans-2- | 624-64-6 | — | 2.2E+04 | — | 1.4E+04 |
| Butoxy ethanol, 2- (Ethylene glycol monobutyl ether; EGBE) | 111-76-2 | — | 5.8E+04 | — | 5.2E+04 |
| Butyl acetate | 123-86-4 | — | 6.4E+04 | — | 4.2E+04 |
| Butyl acrylate | 141-32-2 | — | 9.2E+03 | — | 9.2E+03 |
| Butyl benzyl phthalate | 85-68-7 | 1.0E+04 | 1.4E+05 | 1.0E+04 | 1.4E+05 |
| Butyl ether, n- (dibutyl ether) | 142-96-1 | — | 1.0E+05 | — | 1.0E+05 |
| Butyl methacrylate | 97-88-1 | — | 2.6E+04 | — | 2.6E+04 |
| Butylate | 2008-41-5 | — | 3.4E+04 | — | 3.4E+04 |
| Butylbenzene, n- | 104-51-8 | — | 3.4E+04 | — | 3.4E+04 |
| Butylbenzene, sec- | 135-98-8 | — | 4.1E+04 | — | 4.1E+04 |
| Butylbenzene, tert- | 98-06-6 | — | 4.1E+04 | — | 4.1E+04 |
| Cacodylic acid | 75-60-5 | — | 2.0E+03 | — | 2.0E+03 |
| Cadmium | 7440-43-9 | 7.7E+04 | 8.1E+02 | 4.0E+04 | 7.7E+02 |
| Calcium* | 7440-70-2 | — | — | — | — |
| Caprolactam | 105-60-2 | — | 3.4E+05 | — | 3.4E+05 |
| Captan | 133-06-2 | 5.5E+03 | 8.9E+04 | 5.5E+03 | 8.9E+04 |
| Carbaryl | 63-25-2 | — | 6.8E+04 | — | 6.8E+04 |
| Carbazole | 86-74-8 | 9.5E+02 | — | 9.5E+02 | — |

# Table 5
# Tier 1 Commercial/Industrial Total Soil Combined PCLs
**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | $^{Tot}Soil_{Comb}$ (includes inhalation, ingestion, and dermal pathways) | | | |
|---|---|---|---|---|---|
| | | 0.5 acre source area Carcinogenic (mg/kg) | 0.5 acre source area Noncarcinogenic (mg/kg) | 30 acre source area Carcinogenic (mg/kg) | 30 acre source area Noncarcinogenic (mg/kg) |
| Carbofuran | 1563-66-2 | — | 3.4E+03 | — | 3.4E+03 |
| Carbon disulfide | 75-15-0 | — | 1.3E+04 | — | 7.2E+03 |
| Carbon tetrachloride | 56-23-5 | 8.1E+01 | 1.4E+03 | 4.6E+01 | 8.7E+02 |
| Carbophenothion | 786-19-6 | — | 8.9E+03 | — | 8.9E+03 |
| Carbosulfan | 55285-14-8 | — | 6.8E+03 | — | 6.8E+03 |
| Carboxin | 5234-68-4 | — | 6.8E+04 | — | 6.8E+04 |
| Chloral | 75-87-6 | — | 1.0E+05 | — | 1.0E+05 |
| Chloral hydrate (1,1-ethanediol, 2,2,2-trichloro-) | 302-17-0 | — | 6.8E+04 | — | 6.8E+04 |
| Chloramben (amiben; 3-amino-2,5-dichlorobenzoic acid) | 133-90-4 | — | 1.0E+04 | — | 1.0E+04 |
| Chlordane (technical) | 12789-03-6 | 6.6E+01 | 3.9E+02 | 6.4E+01 | 3.7E+02 |
| Chlordane, cis- (alpha chlordane) | 5103-71-9 | 5.4E+01 | 3.3E+02 | 5.4E+01 | 3.3E+02 |
| Chlordane, trans- (gamma chordane) | 5103-74-2 | 5.3E+01 | 3.1E+02 | 5.1E+01 | 2.9E+02 |
| Chlorfenvinphos | 470-90-6 | — | 3.9E+01 | — | 2.1E+01 |
| Chloride* | 16887-00-6 | — | — | — | — |
| Chlorine | 7782-50-5 | — | 1.9E+02 | — | 9.6E+01 |
| Chloro-1,3-butadiene, 2- | 126-99-8 | 2.0E+00 | 4.3E+02 | 1.0E+00 | 2.2E+02 |
| Chloro-2-propanol, 1- | 127-00-4 | — | 2.0E+04 | — | 2.0E+04 |
| Chloro-3-methylphenol, 4- | 59-50-7 | — | 3.4E+03 | — | 3.4E+03 |
| Chloroaniline, p- | 106-47-8 | 9.5E+01 | 2.7E+03 | 9.5E+01 | 2.7E+03 |
| Chlorobenzene | 108-90-7 | — | 1.0E+03 | — | 5.4E+02 |
| Chlorobenzilate | 510-15-6 | 6.3E+01 | 1.4E+04 | 5.7E+01 | 1.4E+04 |
| Chlorobromomethane (bromochloromethane) | 74-97-5 | — | 4.1E+04 | — | 4.1E+04 |
| Chlorodifluoromethane | 75-45-6 | — | 1.0E+06 | — | 5.5E+05 |
| Chloroethane (ethyl chloride) | 75-00-3 | — | 1.4E+05 | — | 8.7E+04 |
| Chloroethanol, 2- | 107-07-3 | — | 2.0E+04 | — | 2.0E+04 |
| Chloroethoxy ethene, 2- (2-chloroethylvinylether) | 110-75-8 | 2.6E+01 | 6.4E+00 | 2.6E+01 | 3.3E+00 |
| Chloroform | 67-66-3 | 2.6E+01 | 1.7E+03 | 1.3E+01 | 9.7E+02 |
| Chlorohexane, 1- | 544-10-5 | — | 1.4E+04 | — | 8.7E+03 |
| Chloromethane (methyl chloride) | 74-87-3 | 2.9E+02 | 1.3E+03 | 1.6E+02 | 7.8E+02 |
| Chloronaphthalene, 1- (Chloronaphthalene, alpha-) | 90-13-1 | — | 5.0E+04 | — | 5.0E+04 |
| Chloronaphthalene, 2- (chloronaphthalene, beta) | 91-58-7 | — | 5.0E+04 | — | 5.0E+04 |
| Chloronitrobenzene, p- (1-chloro-4-nitrobenzene) | 100-00-5 | 3.0E+03 | 7.8E+01 | 3.0E+03 | 4.2E+01 |
| Chlorophenol, 2- | 95-57-8 | — | 5.1E+03 | — | 5.1E+03 |
| Chlorophenol, 3- | 108-43-0 | — | 3.4E+03 | — | 3.4E+03 |
| Chlorophenol, 4- | 106-48-9 | — | 3.4E+03 | — | 3.4E+03 |
| Chlorophenyl phenylether, 4- | 7005-72-3 | 9.8E-01 | — | 8.0E-01 | — |
| Chloropropane, 2- | 75-29-6 | — | 2.0E+03 | — | 1.1E+03 |
| Chlorothalonil | 1897-45-6 | 1.7E+03 | 1.0E+04 | 1.7E+03 | 1.0E+04 |
| Chlorotoluene, o- (2-chlorotoluene) | 95-49-8 | — | 7.8E+03 | — | 5.6E+03 |

# Table 5
# Tier 1 Commercial/Industrial Total Soil Combined PCLs
**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | $^{Tot}Soil_{Comb}$ (includes inhalation, ingestion, and dermal pathways) | | | |
|---|---|---|---|---|---|
| | | 0.5 acre source area Carcinogenic (mg/kg) | 0.5 acre source area Noncarcinogenic (mg/kg) | 30 acre source area Carcinogenic (mg/kg) | 30 acre source area Noncarcinogenic (mg/kg) |
| Chlorotoluene, p- (4-chlorotoluene) | 106-43-4 | — | 2.0E+04 | — | 2.0E+04 |
| Chlorpyrifos | 2921-88-2 | — | 2.0E+03 | — | 2.0E+03 |
| Chromium (III) | 16065-83-1 | — | 1.2E+05 | — | 7.5E+04 |
| Chromium (total) | 7440-47-3 | — | 1.2E+05 | — | 7.5E+04 |
| Chromium (VI) | 18540-29-9 | 1.6E+04 | 1.0E+03 | 8.5E+03 | 1.0E+03 |
| Chrysene | 218-01-9 | 1.7E+04 | — | 1.7E+04 | — |
| Cobalt | 7440-48-4 | 6.3E+03 | 8.7E+03 | 3.3E+03 | 8.0E+03 |
| Copolymer acrylamide | 69418-26-4 | — | 1.4E+02 | — | 1.4E+02 |
| Copper | 7440-50-8 | — | 9.4E+04 | — | 9.4E+04 |
| Coronene | 191-07-1 | — | 1.4E+03 | — | 1.4E+03 |
| Coumaphos | 56-72-4 | — | 4.8E+03 | — | 4.8E+03 |
| Cresol | 1319-77-3 | — | 3.4E+04 | — | 3.4E+04 |
| Cresol, m- (3-methylphenol) | 108-39-4 | — | 3.4E+04 | — | 3.4E+04 |
| Cresol, o- (2-methylphenol) | 95-48-7 | — | 3.4E+04 | — | 3.4E+04 |
| Cresol, p- (4-methylphenol) | 106-44-5 | — | 3.4E+03 | — | 3.4E+03 |
| Crotonaldehyde | 123-73-9 | 1.5E+01 | 1.0E+03 | 1.5E+01 | 1.0E+03 |
| Cumene (isopropylbenzene) | 98-82-8 | — | 1.1E+04 | — | 6.3E+03 |
| Cyanazine | 21725-46-2 | 2.3E+01 | 1.4E+03 | 2.3E+01 | 1.4E+03 |
| Cyanide | 57-12-5 | — | 3.7E+02 | — | 2.8E+02 |
| Cyanogen | 460-19-5 | — | 1.7E+01 | — | 8.8E+00 |
| Cycloate | 1134-23-2 | — | 3.7E+04 | — | 3.7E+04 |
| Cyclohexane | 110-82-7 | — | 1.3E+05 | — | 6.5E+04 |
| Cyclohexanol | 108-93-0 | — | 1.0E+06 | — | 1.0E+06 |
| Cyclohexanone | 108-94-1 | — | 4.9E+04 | — | 2.5E+04 |
| Cyclohexene, 1-methanol-3- | 1679-51-2 | — | 1.4E+04 | — | 1.4E+04 |
| Cyclohexene, 4-vinyl-1- | 100-40-3 | — | 5.4E+03 | — | 3.1E+03 |
| Cyclopentane | 287-92-3 | — | 5.5E+04 | — | 5.0E+04 |
| Cyclopentane, methyl- | 96-37-7 | — | 1.8E+04 | — | 1.0E+04 |
| Cyclopentene | 142-29-0 | — | 1.0E+06 | — | 1.0E+06 |
| Cyclotetramethylenetetranitramine (HMX) | 2691-41-0 | — | 1.2E+04 | — | 1.2E+04 |
| Cyclotrimethylenetrinitramine (RDX) | 121-82-4 | 2.4E+02 | 2.7E+03 | 2.4E+02 | 2.7E+03 |
| Cymene (isopropyltoluene) | 99-87-6 | — | 1.0E+05 | — | 1.0E+05 |
| Cymoxanil | 57966-95-7 | — | 8.9E+03 | — | 8.9E+03 |
| Dacthal (DCPA) | 1861-32-1 | — | 6.8E+03 | — | 6.8E+03 |
| Dalapon, sodium salt (2,2-dichloropropanoic acid) | 75-99-0 | — | 2.0E+04 | — | 2.0E+04 |
| DDD | 72-54-8 | 1.0E+02 | — | 1.0E+02 | — |
| DDE | 72-55-9 | 7.3E+01 | — | 7.3E+01 | — |
| DDT | 50-29-3 | 7.1E+01 | 4.4E+02 | 6.8E+01 | 4.4E+02 |
| Demeton | 8065-48-3 | — | 2.7E+01 | — | 2.7E+01 |

# Table 5
# Tier 1 Commercial/Industrial Total Soil Combined PCLs
**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | $^{Tot}Soil_{Comb}$ (includes inhalation, ingestion, and dermal pathways) | | | |
|---|---|---|---|---|---|
| | | 0.5 acre source area Carcinogenic (mg/kg) | 0.5 acre source area Noncarcinogenic (mg/kg) | 30 acre source area Carcinogenic (mg/kg) | 30 acre source area Noncarcinogenic (mg/kg) |
| Desethylatrazine | 6190-65-4 | — | 2.4E+04 | — | 2.4E+04 |
| Diacetone alcohol (4-hydroxy-4-methyl-2-pentanone) | 123-42-2 | — | 2.7E+04 | — | 2.7E+04 |
| Diallate | 2303-16-4 | 3.1E+02 | — | 3.1E+02 | — |
| Diazinon | 333-41-5 | — | 7.9E+01 | — | 4.3E+01 |
| Dibenz(a,h)acridine | 226-36-8 | 1.6E+01 | — | 1.6E+01 | — |
| Dibenz(a,j)acridine | 224-42-0 | 2.4E+01 | — | 2.4E+01 | — |
| Dibenz-a,h-anthracene | 53-70-3 | 1.7E+01 | — | 1.7E+01 | — |
| Dibenzo(a,e)pyrene | 192-65-4 | 2.6E+00 | — | 2.6E+00 | — |
| Dibenzo(a,h)pyrene | 189-64-0 | 2.6E-01 | — | 2.6E-01 | — |
| Dibenzo(a,i)pyrene | 189-55-9 | 2.6E-01 | — | 2.6E-01 | — |
| Dibenzofuran | 132-64-9 | — | 2.7E+03 | — | 2.7E+03 |
| Dibenzothiophene | 132-65-0 | — | 3.8E+03 | — | 3.8E+03 |
| Dibromo-3-chloropropane, 1,2- | 96-12-8 | 2.6E-01 | 1.0E+01 | 1.4E-01 | 5.6E+00 |
| Dibromochloromethane (chlorodibromomethane) | 124-48-1 | 3.4E+02 | 2.0E+04 | 3.4E+02 | 2.0E+04 |
| Dibromofluoromethane | 1868-53-7 | — | 2.0E+05 | — | 2.0E+05 |
| Dicamba | 1918-00-9 | — | 2.0E+04 | — | 2.0E+04 |
| Dichlormid | 37764-25-3 | — | 1.7E+04 | — | 1.7E+04 |
| Dichloro-2-butene, 1,4- | 764-41-0 | 3.3E-01 | — | 1.7E-01 | — |
| Dichloro-2-butene, 1,4- trans | 110-57-6 | 3.4E-01 | — | 1.8E-01 | — |
| Dichlorobenzene, 1,2- | 95-50-1 | — | 1.1E+03 | — | 5.7E+02 |
| Dichlorobenzene, 1,3- | 541-73-1 | — | 1.7E+02 | — | 8.8E+01 |
| Dichlorobenzene, 1,4- | 106-46-7 | 1.2E+03 | 1.6E+04 | 1.2E+03 | 8.5E+03 |
| Dichlorobenzidine, 3,3- | 91-94-1 | 4.2E+01 | — | 4.2E+01 | — |
| Dichlorobutane, 2,3- | 7581-97-7 | — | 1.5E+02 | — | 7.7E+01 |
| Dichlorodifluoromethane | 75-71-8 | — | 2.1E+03 | — | 1.1E+03 |
| Dichloroethane, 1,1- | 75-34-3 | — | 4.1E+04 | — | 2.3E+04 |
| Dichloroethane, 1,2- | 107-06-2 | 1.1E+02 | 9.3E+02 | 7.1E+01 | 4.8E+02 |
| Dichloroethylene, 1,1- | 75-35-4 | — | 6.4E+03 | — | 3.5E+03 |
| Dichloroethylene, cis-1,2- | 156-59-2 | — | 7.9E+02 | — | 5.0E+02 |
| Dichloroethylene, trans-1,2 | 156-60-5 | — | 1.2E+03 | — | 6.4E+02 |
| Dichlorofluoromethane | 75-43-4 | — | 2.0E+05 | — | 2.0E+05 |
| Dichlorophenol, 2,3- | 576-24-9 | — | 2.0E+03 | — | 2.0E+03 |
| Dichlorophenol, 2,4- | 120-83-2 | — | 2.0E+03 | — | 2.0E+03 |
| Dichlorophenol, 2,5- | 583-78-8 | — | 2.0E+03 | — | 2.0E+03 |
| Dichlorophenol, 2,6- | 87-65-0 | — | 6.8E+02 | — | 6.8E+02 |
| Dichlorophenol, 3,4- | 95-77-2 | — | 2.0E+03 | — | 2.0E+03 |
| Dichlorophenol, 3,5- | 591-35-5 | — | 2.0E+03 | — | 2.0E+03 |
| Dichlorophenoxy, 2,4- butyric acid, 4- (2,4-DB) | 94-82-6 | — | 5.5E+03 | — | 5.5E+03 |
| Dichlorophenoxyacetic acid, 2,4- (2,4-D) | 94-75-7 | — | 8.2E+03 | — | 8.2E+03 |

# Table 5
# Tier 1 Commercial/Industrial Total Soil Combined PCLs
**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | $^{Tot}Soil_{Comb}$ (includes inhalation, ingestion, and dermal pathways) | | | |
|---|---|---|---|---|---|
| | | 0.5 acre source area Carcinogenic (mg/kg) | 0.5 acre source area Noncarcinogenic (mg/kg) | 30 acre source area Carcinogenic (mg/kg) | 30 acre source area Noncarcinogenic (mg/kg) |
| Dichloroprop (2-(2,4-dichlorophenoxy) propanoic acid) | 120-36-5 | – | 6.8E+03 | – | 6.8E+03 |
| Dichloropropane, 1,2- | 78-87-5 | 3.5E+02 | 8.6E+01 | 2.3E+02 | 4.4E+01 |
| Dichloropropane, 1,3- | 142-28-9 | 9.9E+01 | 4.2E+02 | 6.1E+01 | 2.2E+02 |
| Dichloropropane, 2,2- | 594-20-7 | 4.2E+02 | 8.6E+01 | 4.2E+02 | 4.4E+01 |
| Dichloropropanol, 2,3- | 616-23-9 | – | 2.0E+03 | – | 2.0E+03 |
| Dichloropropene, 1,1- | 563-58-6 | 9.9E+01 | 4.2E+02 | 6.1E+01 | 2.2E+02 |
| Dichloropropene, 1,3- (mixed isomers) | 542-75-6 | 9.9E+01 | 4.2E+02 | 6.1E+01 | 2.2E+02 |
| Dichloropropene, cis 1,3- | 10061-01-5 | 5.3E+01 | 8.3E+01 | 5.3E+01 | 7.0E+01 |
| Dichloropropene, trans 1,3- | 10061-02-6 | 9.9E+01 | 4.2E+02 | 6.1E+01 | 2.2E+02 |
| Dichlorvos | 62-73-7 | 6.6E+01 | 3.4E+02 | 6.6E+01 | 3.4E+02 |
| Dicrotophos (bidrin) | 141-66-2 | – | 6.8E+01 | – | 6.8E+01 |
| Dicyclopentadiene | 77-73-6 | – | 8.2E+04 | – | 8.2E+04 |
| Dieldrin | 60-57-1 | 1.2E+00 | 3.4E+01 | 1.1E+00 | 3.4E+01 |
| Diethanolamine | 111-42-2 | – | 3.2E+02 | – | 3.0E+02 |
| Diethyldithiocarbamate, sodium salt | 148-18-5 | 1.1E+02 | 3.1E+04 | 1.1E+02 | 3.1E+04 |
| Diethyl phthalate | 84-66-2 | – | 5.5E+05 | – | 5.5E+05 |
| Diethylene glycol | 111-46-6 | – | 1.0E+06 | – | 1.0E+06 |
| Diethylene glycol monobutyl ether | 112-34-5 | – | 2.8E+01 | – | 1.5E+01 |
| Diethylhexyl adipate | 103-23-1 | 1.6E+04 | 4.1E+05 | 1.6E+04 | 4.1E+05 |
| Diethylstilbestrol | 56-53-1 | 4.1E-03 | – | 4.1E-03 | – |
| Diisobutylene (trimethyl-1-pentene, 2,4,4-) | 107-39-1 | – | 4.0E+03 | – | 2.1E+03 |
| Diisopropylbenzene, p- | 100-18-5 | – | 6.8E+03 | – | 6.8E+03 |
| Diisopropyl ether (2,2'-oxybis-propane) | 108-20-3 | – | 1.3E+04 | – | 7.2E+03 |
| Dimethenamid | 87674-68-8 | – | 1.0E+04 | – | 1.0E+04 |
| Dimethoate | 60-51-5 | – | 1.4E+02 | – | 1.4E+02 |
| Dimethoxybenzidine, 3,3'- | 119-90-4 | 1.4E+03 | – | 1.4E+03 | – |
| Dimethyl-2-nitrobenzene, 1,3- | 81-20-9 | – | 1.0E+03 | – | 8.1E+02 |
| Dimethyl-3-nitrobenzene, 1,2- | 83-41-0 | – | 9.7E+02 | – | 7.7E+02 |
| Dimethyl-4-nitrobenzene, 1-2- | 99-51-4 | – | 9.8E+02 | – | 7.8E+02 |
| Dimethyl-5-nitrobenzene, 1,3- | 99-12-7 | – | 9.4E+02 | – | 7.3E+02 |
| Dimethylphenethylamine, alpha, alpha- | 122-09-8 | – | 1.4E+03 | – | 1.4E+03 |
| Dimethyl phenol, 2,4- | 105-67-9 | – | 1.4E+04 | – | 1.4E+04 |
| Dimethylaminoazobenzene, p- | 60-11-7 | – | 6.8E+00 | – | 6.8E+00 |
| Dimethylbenz-a-anthracene, 7,12- | 57-97-6 | 6.9E-02 | – | 6.9E-02 | – |
| Dimethylbenzidine, 3,3'- | 119-93-7 | 1.7E+00 | – | 1.7E+00 | – |
| Dimethylformamide, N,N- | 68-12-2 | – | 4.3E+03 | – | 2.3E+03 |
| Dimethylnaphthalene, 1,3- | 575-41-7 | – | 2.5E+04 | – | 2.5E+04 |
| Dimethylphthalate | 131-11-3 | – | 5.5E+05 | – | 5.5E+05 |
| Di-n-butyl phthalate | 84-74-2 | – | 6.8E+04 | – | 6.8E+04 |

# Table 5
# Tier 1 Commercial/Industrial Total Soil Combined PCLs
**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | $^{Tot}Soil_{Comb}$ (includes inhalation, ingestion, and dermal pathways) | | | |
|---|---|---|---|---|---|
| | | 0.5 acre source area Carcinogenic (mg/kg) | 0.5 acre source area Noncarcinogenic (mg/kg) | 30 acre source area Carcinogenic (mg/kg) | 30 acre source area Noncarcinogenic (mg/kg) |
| Dinitro-2-methylphenol, 4,6- (dinitro-o-cresol, 4, 6-) | 534-52-1 | – | 6.8E+01 | – | 6.8E+01 |
| Dinitrobenzene, 1,3- (dinitrobenzene, 2,4-) | 99-65-0 | – | 6.8E+01 | – | 6.8E+01 |
| Dinitrobenzene, 1,4- | 100-25-4 | – | 6.8E+01 | – | 6.8E+01 |
| Dinitrophenol, 2,4- | 51-28-5 | – | 1.4E+03 | – | 1.4E+03 |
| Dinitrophenol, 2,5- | 329-71-5 | – | 1.4E+03 | – | 1.4E+03 |
| Dinitrotoluene, 2,4- | 121-14-2 | 2.8E+01 | 1.4E+03 | 2.8E+01 | 1.4E+03 |
| Dinitrotoluene, 2,6- | 606-20-2 | 2.8E+01 | 6.8E+02 | 2.8E+01 | 6.8E+02 |
| Di-n-octyl phthalate | 117-84-0 | – | 6.8E+03 | – | 6.8E+03 |
| Dinoseb | 88-85-7 | – | 6.8E+02 | – | 6.8E+02 |
| Dioxane 1,4- | 123-91-1 | 1.5E+02 | 5.0E+03 | 1.0E+02 | 2.8E+03 |
| Dioxin (as 2,3,7,8-TCDD toxicity equivalent quotients (TEQs)) | 1746-01-6 | – | – | – | – |
| Diphenyl ether | 101-84-8 | – | 4.2E+03 | – | 4.2E+03 |
| Diphenylamine | 122-39-4 | – | 1.7E+04 | – | 1.7E+04 |
| Diphenylhydrazine, 1,2- | 122-66-7 | 2.2E+01 | – | 2.0E+01 | – |
| Dipropylene glycol | 110-98-5 | – | 8.2E+04 | – | 8.2E+04 |
| Diquat | 85-00-7 | – | 1.5E+03 | – | 1.5E+03 |
| Disodium iminodiacetate (iminodiacetic acid, disodium salt) | 142-73-4 | – | 6.8E+03 | – | 6.8E+03 |
| Disulfoton | 298-04-4 | – | 2.7E+01 | – | 2.7E+01 |
| Diuron | 330-54-1 | – | 1.4E+03 | – | 1.4E+03 |
| Dodecylphenol, 4- | 104-43-8 | – | 3.4E+04 | – | 3.4E+04 |
| Endosulfan | 115-29-7 | – | 4.1E+03 | – | 4.1E+03 |
| Endosulfan I | 959-98-8 | – | 1.4E+03 | – | 1.4E+03 |
| Endosulfan II | 33213-65-9 | – | 4.1E+03 | – | 4.1E+03 |
| Endosulfan sulfate | 1031-07-8 | – | 4.1E+03 | – | 4.1E+03 |
| Endothall | 145-73-3 | – | 1.4E+04 | – | 1.4E+04 |
| Endrin | 72-20-8 | – | 2.0E+02 | – | 2.0E+02 |
| Endrin aldehyde | 7421-93-4 | – | 2.0E+02 | – | 2.0E+02 |
| Endrin ketone | 53494-70-5 | – | 2.0E+02 | – | 2.0E+02 |
| Epichlorohydrin | 106-89-8 | 6.6E+02 | 3.7E+01 | 3.8E+02 | 1.9E+01 |
| EPN (o-ethyl o-(4-nitrophenyl)phenylphosphonothioate) | 2104-64-5 | – | 6.8E+00 | – | 6.8E+00 |
| Esfenvalerate | 66230-04-4 | – | 1.4E+03 | – | 1.4E+03 |
| Ethalfluralin (sonolan) | 55283-68-6 | 2.1E+02 | 2.7E+04 | 2.1E+02 | 2.7E+04 |
| Ethanol | 64-17-5 | – | 1.0E+06 | – | 1.0E+06 |
| Ethanol, 2-amino- | 141-43-5 | – | 9.0E+02 | – | 7.5E+02 |
| Ethanol, 2-(2-aminoethoxy)- | 929-06-6 | – | 3.4E+02 | – | 3.4E+02 |
| Ethanol, 2-(2-ethoxyethoxy)- | 111-90-0 | – | 1.0E+06 | – | 1.0E+06 |
| Ethanol, 2-(methylamino)- | 109-83-1 | – | 4.9E+03 | – | 3.3E+03 |
| Ethion | 563-12-2 | – | 3.4E+02 | – | 3.4E+02 |
| Ethoprop | 13194-48-4 | 6.8E+02 | 6.8E+01 | 6.8E+02 | 6.8E+01 |

# Table 5
# Tier 1 Commercial/Industrial Total Soil Combined PCLs
**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | $^{Tot}Soil_{Comb}$ (includes inhalation, ingestion, and dermal pathways) | | | |
|---|---|---|---|---|---|
| | | 0.5 acre source area Carcinogenic (mg/kg) | 0.5 acre source area Noncarcinogenic (mg/kg) | 30 acre source area Carcinogenic (mg/kg) | 30 acre source area Noncarcinogenic (mg/kg) |
| Ethoxy ethanol, 2- | 110-80-5 | — | 2.5E+04 | — | 1.5E+04 |
| Ethyl acetate | 141-78-6 | — | 5.1E+03 | — | 2.6E+03 |
| Ethyl acrylate | 140-88-5 | 6.0E+02 | 3.2E+02 | 6.0E+02 | 1.7E+02 |
| Ethyl benzene | 100-41-4 | — | 2.9E+04 | — | 1.7E+04 |
| Ethyl dipropylthiocarbamate, S- | 759-94-4 | — | 1.7E+04 | — | 1.7E+04 |
| Ethyl ether | 60-29-7 | — | 2.0E+05 | — | 2.0E+05 |
| Ethyl methacrylate | 97-63-2 | — | 8.9E+03 | — | 4.8E+03 |
| Ethyl methanesulfonate | 62-50-0 | 9.8E+01 | — | 6.7E+01 | — |
| Ethyl tert-butyl ether (2-ethyl-2-ethoxypropane) | 637-92-3 | — | 8.8E+02 | — | 7.8E+02 |
| Ethyl-1-hexanol, 2- | 104-76-7 | — | 1.0E+05 | — | 1.0E+05 |
| Ethyl-2-hexenal, 2- | 645-62-5 | — | 1.5E+05 | — | 1.5E+05 |
| Ethyl-2-methyl benzene, 1- | 611-14-3 | — | 9.6E+03 | — | 5.4E+03 |
| Ethyl-4-methyl benzene, 1- | 622-96-8 | — | 8.4E+03 | — | 4.7E+03 |
| Ethylene* | 74-85-1 | — | — | — | — |
| Ethylene dibromide (dibromoethane, 1,2- ) | 106-93-4 | 8.7E+00 | 1.9E+03 | 6.3E+00 | 1.1E+03 |
| Ethylene glycol | 107-21-1 | — | 1.0E+06 | — | 1.0E+06 |
| Ethylene oxide | 75-21-8 | 6.2E+00 | — | 3.6E+00 | — |
| Ethylene thiourea | 96-45-7 | 1.7E+02 | 5.5E+01 | 1.7E+02 | 5.5E+01 |
| Ethylenediamine | 107-15-3 | — | 9.2E+04 | — | 9.2E+04 |
| Ethylenimine | 151-56-4 | 1.5E-01 | — | 9.0E-02 | — |
| Ethylhexyl acrylate, 2- | 103-11-7 | 4.0E+02 | — | 4.0E+02 | — |
| Famphur | 52-85-7 | — | 2.0E+01 | — | 2.0E+01 |
| Fensulfothion | 115-90-2 | — | 6.8E+02 | — | 6.8E+02 |
| Fenthion | 55-38-9 | — | 4.8E+01 | — | 4.8E+01 |
| Fenuron | 101-42-8 | — | 4.8E+04 | — | 4.8E+04 |
| Fluoranthene | 206-44-0 | — | 2.5E+04 | — | 2.5E+04 |
| Fluorene | 86-73-7 | — | 2.5E+04 | — | 2.5E+04 |
| Fluorine (soluble fluoride) | 7782-41-4 | — | 5.8E+04 | — | 5.8E+04 |
| Fluorochloridone | 61213-25-0 | — | 5.1E+03 | — | 5.1E+03 |
| Fonofos | 944-22-9 | — | 1.4E+03 | — | 1.4E+03 |
| Formaldehyde | 50-00-0 | — | 1.4E+03 | — | 7.1E+02 |
| Formic acid | 64-18-6 | — | 3.0E+02 | — | 1.5E+02 |
| Furan | 110-00-9 | — | 1.0E+03 | — | 1.0E+03 |
| Furfural | 98-01-1 | — | 3.1E+03 | — | 3.1E+03 |
| Glycidylaldehyde | 765-34-4 | — | 1.4E+02 | — | 8.5E+01 |
| Glyphosate | 1071-83-6 | — | 6.8E+04 | — | 6.8E+04 |
| Heptachlor | 76-44-8 | 3.3E+00 | 3.4E+02 | 2.8E+00 | 3.4E+02 |
| Heptachlor epoxide | 1024-57-3 | 2.0E+00 | 8.9E+00 | 1.9E+00 | 8.9E+00 |
| Heptane, n- | 142-82-5 | — | 4.7E+04 | — | 3.8E+04 |

# Table 5
# Tier 1 Commercial/Industrial Total Soil Combined PCLs
**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | $^{Tot}Soil_{Comb}$ (includes inhalation, ingestion, and dermal pathways) | | | |
|---|---|---|---|---|---|
| | | 0.5 acre source area Carcinogenic (mg/kg) | 0.5 acre source area Noncarcinogenic (mg/kg) | 30 acre source area Carcinogenic (mg/kg) | 30 acre source area Noncarcinogenic (mg/kg) |
| Heptanoic acid, n- | 111-14-8 | — | 1.7E+02 | — | 8.8E+01 |
| Hexachlorobenzene | 118-74-1 | 8.7E+00 | 5.5E+02 | 6.9E+00 | 5.5E+02 |
| Hexachlorobutadiene | 87-68-3 | 4.1E+01 | 6.8E+02 | 2.3E+01 | 6.8E+02 |
| Hexachlorocyclohexane, alpha (alpha-BHC) | 319-84-6 | 3.3E+00 | 6.8E+03 | 2.9E+00 | 6.8E+03 |
| Hexachlorocyclohexane, beta (beta-BHC) | 319-85-7 | 1.2E+01 | — | 1.1E+01 | — |
| Hexachlorocyclohexane, delta (delta-BHC) | 319-86-8 | 1.2E+01 | 2.6E+02 | 1.2E+01 | 2.6E+02 |
| Hexachlorocyclohexane, gamma (lindane; gamma-BHC) | 58-89-9 | 1.8E+01 | 2.6E+02 | 1.8E+01 | 2.6E+02 |
| Hexachlorocyclohexane, techn (technical-BHC) | 608-73-1 | 1.2E+01 | — | 1.1E+01 | — |
| Hexachlorocyclopentadiene | 77-47-4 | — | 2.0E+01 | — | 1.0E+01 |
| Hexachloroethane | 67-72-1 | 4.8E+02 | 4.5E+02 | 4.8E+02 | 4.2E+02 |
| Hexachlorophene | 70-30-4 | — | 2.0E+02 | — | 2.0E+02 |
| Hexachloropropylene | 1888-71-7 | 4.8E+02 | 4.5E+02 | 4.8E+02 | 4.2E+02 |
| Hexanal, 2-ethyl- | 123-05-7 | — | 1.0E+05 | — | 1.0E+05 |
| Hexane, n- | 110-54-3 | — | 1.2E+04 | — | 6.6E+03 |
| Hexanediamine, 1,6- | 124-09-4 | — | 3.4E+03 | — | 3.4E+03 |
| Hexanedinitrile | 111-69-3 | — | 5.6E+02 | — | 4.1E+02 |
| Hexanediol, 1,6- | 629-11-8 | — | 1.0E+06 | — | 1.0E+06 |
| Hexanoic acid | 142-62-1 | — | 1.9E+02 | — | 9.8E+01 |
| Hexanone, 2- | 591-78-6 | — | 9.4E+02 | — | 5.3E+02 |
| Hexazinone | 51235-04-2 | — | 2.2E+04 | — | 2.2E+04 |
| Hexene, 1- | 592-41-6 | — | 2.3E+03 | — | 1.2E+03 |
| Hexene, cis-2- | 7688-21-3 | — | 2.3E+03 | — | 1.2E+03 |
| Hexylene glycol (2-methyl-2,4-pentanediol) | 107-41-5 | — | 2.0E+05 | — | 2.0E+05 |
| Hydrazine | 302-01-2 | 7.2E-01 | 4.1E+00 | 3.8E-01 | 2.1E+00 |
| Hydrocaproic acid, 6- (6-hydroxyhexanoic acid) | 1191-25-9 | — | 2.2E+02 | — | 1.2E+02 |
| Hydrogen chloride (hydrochloric acid)* | 7647-01-0 | — | — | — | — |
| Hydroquinone | 123-31-9 | 3.2E+02 | 2.7E+04 | 3.2E+02 | 2.7E+04 |
| Indene | 95-13-6 | — | 1.6E+02 | — | 8.0E+01 |
| Indeno-1,2,3-cd-pyrene | 193-39-5 | 1.7E+02 | — | 1.7E+02 | — |
| Iron* | 7439-89-6 | — | — | — | — |
| Isoamyl alcohol | 123-51-3 | — | 5.1E+03 | — | 5.1E+03 |
| Isobutyl alcohol | 78-83-1 | — | 3.1E+05 | — | 3.1E+05 |
| Isobutylene (2-methyl-1-propene) | 115-11-7 | — | 3.8E+03 | — | 3.8E+03 |
| Isobutyric acid (2-methylpropanoic acid) | 79-31-2 | — | 3.4E+05 | — | 3.4E+05 |
| Isodecanol | 25339-17-7 | — | 1.1E+03 | — | 1.1E+03 |
| Isodrin | 465-73-6 | 1.1E-01 | 2.0E+00 | 1.0E-01 | 2.0E+00 |
| Isopentane | 78-78-4 | — | 5.5E+04 | — | 5.0E+04 |
| Isophorone | 78-59-1 | 2.0E+04 | 1.4E+05 | 2.0E+04 | 1.4E+05 |
| Isopropyl acetate | 108-21-4 | — | 7.2E+04 | — | 7.2E+04 |

# Table 5
# Tier 1 Commercial/Industrial Total Soil Combined PCLs
**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | $^{Tot}Soil_{Comb}$ (includes inhalation, ingestion, and dermal pathways) | | | |
|---|---|---|---|---|---|
| | | 0.5 acre source area Carcinogenic (mg/kg) | 0.5 acre source area Noncarcinogenic (mg/kg) | 30 acre source area Carcinogenic (mg/kg) | 30 acre source area Noncarcinogenic (mg/kg) |
| Isopropyl alcohol | 67-63-0 | – | 1.3E+04 | – | 6.9E+03 |
| Isosafrole | 120-58-1 | 5.5E+01 | – | 4.1E+01 | – |
| Kelthane (dicofol) | 115-32-2 | – | 4.1E+03 | – | 4.1E+03 |
| Kepone (chlordecone) | 143-50-0 | 1.9E+00 | 2.0E+02 | 1.8E+00 | 2.0E+02 |
| Lead (inorganic) | 7439-92-1 | – | – | – | – |
| Leptophos | 21609-90-5 | – | 3.2E+00 | – | 3.0E+00 |
| Limonene, d-* | 5989-27-5 | – | – | – | – |
| Lithium | 7439-93-2 | – | 1.9E+03 | – | 1.9E+03 |
| Magnesium* | 7439-95-4 | – | – | – | – |
| Malathion | 121-75-5 | – | 2.8E+02 | – | 1.4E+02 |
| Maleic anhydride | 108-31-6 | – | 6.8E+04 | – | 6.8E+04 |
| Maleic hydrazide | 123-33-1 | – | 3.4E+05 | – | 3.4E+05 |
| Malononitrile | 109-77-3 | – | 6.8E+01 | – | 6.8E+01 |
| Mancozeb | 8018-01-7 | – | 2.0E+04 | – | 2.0E+04 |
| Manganese | 7439-96-5 | – | 7.3E+04 | – | 6.9E+04 |
| MCPA (4-(chloro-2-methylphenoxy) acetic acid) | 94-74-6 | – | 3.4E+02 | – | 3.4E+02 |
| MCPP (2-(4-chloro-2-methylphenoxy) propanoic acid) | 93-65-2 | – | 6.8E+02 | – | 6.8E+02 |
| Mercury (pH = 4.9)[1] | 7439-97-6 | – | 6.2E+00 | – | 3.3E+00 |
| Mercury (pH=6.8)[1] | 7439-97-6A | – | 1.9E+01 | – | 1.1E+01 |
| Merphos | 150-50-5 | – | 2.0E+01 | – | 2.0E+01 |
| Methacrylic acid (2-methyl-2-propenoic acid) | 79-41-4 | – | 1.0E+04 | – | 1.0E+04 |
| Methacrylonitrile | 126-98-7 | – | 8.0E+02 | – | 4.2E+02 |
| Methanol | 67-56-1 | – | 3.7E+05 | – | 2.1E+05 |
| Methapyrilene | 91-80-5 | 4.1E+00 | – | 4.1E+00 | – |
| Methomyl | 16752-77-5 | – | 1.7E+04 | – | 1.7E+04 |
| Methoxychlor | 72-43-5 | – | 3.4E+03 | – | 3.4E+03 |
| Methoxyethanol, 2- | 109-86-4 | – | 4.2E+02 | – | 2.2E+02 |
| Methyl acetate (acetic acid, methyl ester) | 79-20-9 | – | 1.0E+06 | – | 1.0E+06 |
| Methyl acrylate | 96-33-3 | – | 3.6E+02 | – | 2.0E+02 |
| Methyl amyl ketone (2-heptanone) | 110-43-0 | – | 3.8E+04 | – | 3.1E+04 |
| Methyl chrysene, 1- | 3351-28-8 | 2.4E+03 | – | 2.4E+03 | – |
| Methyl chrysene, 2- | 3351-32-4 | 2.4E+03 | – | 2.4E+03 | – |
| Methyl chrysene, 6- | 1705-85-7 | 2.4E+02 | – | 2.4E+02 | – |
| Methyl cyclohexane | 108-87-2 | – | 6.4E+04 | – | 3.3E+04 |
| Methyl ethyl ketone (2-butanone) | 78-93-3 | – | 1.9E+05 | – | 1.2E+05 |
| Methyl iodide (iodomethane) | 74-88-4 | – | 1.4E+03 | – | 1.4E+03 |
| Methyl isobutyl ketone (4-methyl-2-pentanone) | 108-10-1 | – | 4.1E+04 | – | 2.8E+04 |
| Methyl mercury | 22967-92-6 | – | 9.7E+01 | – | 9.7E+01 |
| Methyl methacrylate | 80-62-6 | – | 1.5E+04 | – | 7.7E+03 |

# Table 5
# Tier 1 Commercial/Industrial Total Soil Combined PCLs
**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | $^{Tot}Soil_{Comb}$ (includes inhalation, ingestion, and dermal pathways) | | | |
|---|---|---|---|---|---|
| | | 0.5 acre source area Carcinogenic (mg/kg) | 0.5 acre source area Noncarcinogenic (mg/kg) | 30 acre source area Carcinogenic (mg/kg) | 30 acre source area Noncarcinogenic (mg/kg) |
| Methyl methanesulfonate | 66-27-3 | 9.5E+01 | – | 6.4E+01 | – |
| Methyl parathion | 298-00-0 | – | 1.7E+02 | – | 1.7E+02 |
| Methyl-1-butene, 2- | 563-46-2 | – | 5.3E+04 | – | 4.7E+04 |
| Methyl-1-propanal, 2- (isobutyraldehyde) | 78-84-2 | – | 4.1E+04 | – | 4.1E+04 |
| Methyl-2-butene, 2- | 513-35-9 | – | 5.3E+04 | – | 4.7E+04 |
| Methyl-2-pentenal, 2- | 623-36-9 | 1.5E+01 | – | 1.5E+01 | – |
| Methylcholanthrene, 3- | 56-49-5 | 7.9E-01 | – | 7.9E-01 | – |
| Methylene bromide (dibromomethane) | 74-95-3 | 3.8E+03 | 1.1E+02 | 3.8E+03 | 5.9E+01 |
| Methylene chloride (dichloromethane) | 75-09-2 | 2.0E+04 | 1.2E+04 | 1.1E+04 | 8.6E+03 |
| Methylene-bis (2-chloroaniline) 4,4'- | 101-14-4 | 1.8E+02 | 1.4E+03 | 1.8E+02 | 1.4E+03 |
| Methylmecury hydroxide | 1184-57-2 | – | 6.8E+01 | – | 6.8E+01 |
| Methylnaphthalene, 1- | 90-12-0 | 6.0E+02 | 4.3E+04 | 6.0E+02 | 4.3E+04 |
| Methylnaphthalene, 2- | 91-57-6 | – | 2.5E+03 | – | 2.5E+03 |
| Methylpyrrolidone, N- | 872-50-4 | – | 1.4E+04 | – | 1.4E+04 |
| Methylstyrene, alpha- | 98-83-9 | – | 6.3E+02 | – | 3.3E+02 |
| Methyltetrahydrofuran, 2- | 96-47-9 | 2.9E+02 | 2.0E+05 | 1.6E+02 | 2.0E+05 |
| Methyltetrahydropyran, 2- | 10141-72-7 | 3.3E+02 | 2.0E+05 | 1.8E+02 | 2.0E+05 |
| Metolachlor | 51218-45-2 | – | 1.0E+05 | – | 1.0E+05 |
| Metribuzin | 21087-64-9 | – | 1.7E+04 | – | 1.7E+04 |
| Mirex | 2385-85-5 | – | 1.4E+02 | – | 1.4E+02 |
| Molinate | 2212-67-1 | – | 1.4E+03 | – | 1.4E+03 |
| Molybdenum | 7439-98-7 | – | 4.5E+03 | – | 4.5E+03 |
| Monocrotophos | 2157-98-4 | – | 4.1E+02 | – | 4.1E+02 |
| Morpholine | 110-91-8 | – | 1.0E+06 | – | 1.0E+06 |
| Morpholine, N-butyl- | 1005-67-0 | – | 1.6E+03 | – | 1.6E+03 |
| MTBE (methyl tert-butyl ether) | 1634-04-4 | 2.0E+03 | 8.8E+03 | 1.1E+03 | 7.8E+03 |
| Naled | 300-76-5 | – | 1.4E+03 | – | 1.4E+03 |
| Naphthalene | 91-20-3 | – | 3.6E+02 | – | 1.9E+02 |
| Naphthoquinone, 1,4- | 130-15-4 | – | 4.8E+03 | – | 4.8E+03 |
| Naphthylamine, 1- | 134-32-7 | – | 1.4E+04 | – | 1.4E+04 |
| Naphthylamine, 2- | 91-59-8 | 1.1E+01 | – | 1.1E+01 | – |
| Napropamide | 15299-99-7 | – | 6.8E+04 | – | 6.8E+04 |
| Neopentyl glycol | 126-30-7 | – | 2.0E+05 | – | 2.0E+05 |
| Nickel and compounds | 7440-02-0 | 2.2E+05 | 8.8E+03 | 1.1E+05 | 8.6E+03 |
| Nitrate-N | 14797-55-8 | – | 1.0E+06 | – | 1.0E+06 |
| Nitrite-N | 14797-65-0 | – | 9.7E+04 | – | 9.7E+04 |
| Nitroaniline, 2- | 88-74-4 | – | 5.0E+01 | – | 2.9E+01 |
| Nitroaniline, 3- | 99-09-2 | 5.0E+02 | 5.9E+01 | 5.0E+02 | 3.6E+01 |
| Nitroaniline, 4- | 100-01-6 | 9.5E+02 | 1.0E+03 | 9.5E+02 | 6.6E+02 |

# Table 5
# Tier 1 Commercial/Industrial Total Soil Combined PCLs
**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | $^{Tot}Soil_{Comb}$ (includes inhalation, ingestion, and dermal pathways) | | | |
|---|---|---|---|---|---|
| | | 0.5 acre source area Carcinogenic (mg/kg) | 0.5 acre source area Noncarcinogenic (mg/kg) | 30 acre source area Carcinogenic (mg/kg) | 30 acre source area Noncarcinogenic (mg/kg) |
| Nitrobenzene | 98-95-3 | 1.1E+02 | 7.0E+02 | 5.7E+01 | 4.8E+02 |
| Nitroglycerin | 55-63-0 | 1.1E+03 | 6.8E+01 | 1.1E+03 | 6.8E+01 |
| Nitrophenol, 2- | 88-75-5 | – | 1.4E+03 | – | 1.4E+03 |
| Nitrophenol, 3- | 554-84-7 | – | 1.4E+03 | – | 1.4E+03 |
| Nitrophenol, 4- | 100-02-7 | – | 1.4E+03 | – | 1.4E+03 |
| Nitropropane, 2- | 79-46-9 | 2.2E-01 | 1.1E+02 | 1.1E-01 | 8.7E+01 |
| Nitroquinoline-N-oxide, 4- | 56-57-5 | 1.2E+00 | – | 9.0E-01 | – |
| Nitrosodiethanolamine | 1116-54-7 | 6.8E+00 | – | 6.8E+00 | – |
| Nitrosodiethylamine, n- | 55-18-5 | 7.0E-02 | – | 4.4E-02 | – |
| Nitrosodimethylamine, n- | 62-75-9 | 2.1E-01 | 3.6E+00 | 1.3E-01 | 2.4E+00 |
| Nitrosodi-n-butylamine, n- | 924-16-3 | 1.2E+00 | – | 7.1E-01 | – |
| Nitrosodi-n-propylamine, n- | 621-64-7 | 1.4E+00 | – | 1.4E+00 | – |
| Nitrosodiphenylamine | 86-30-6 | 1.9E+03 | – | 1.9E+03 | – |
| Nitroso-methyl-ethyl-amine, n- | 10595-95-6 | 1.3E+00 | – | 1.3E+00 | – |
| Nitrosomorpholine, N- | 59-89-2 | 1.4E+00 | – | 9.7E-01 | – |
| Nitroso-n-ethylurea, n- | 759-73-9 | 1.4E-01 | – | 1.4E-01 | – |
| Nitrosopiperidine, N- | 100-75-4 | 1.1E+00 | – | 7.4E-01 | – |
| Nitrosopyrrolidine, n- | 930-55-2 | 4.7E+00 | – | 3.2E+00 | – |
| Nitrotoluene, m- | 99-08-1 | – | 6.8E+03 | – | 6.8E+03 |
| Nitrotoluene, o- | 88-72-2 | 8.7E+01 | 6.1E+02 | 8.7E+01 | 6.1E+02 |
| Nitrotoluene, p- | 99-99-0 | 1.2E+03 | 2.7E+03 | 1.2E+03 | 2.7E+03 |
| Nonachlor, cis- | 5103-73-1 | 5.3E+01 | 3.2E+02 | 5.2E+01 | 3.0E+02 |
| Nonachlor, trans- | 39765-80-5 | 5.3E+01 | 3.2E+02 | 5.2E+01 | 3.0E+02 |
| Nonanal | 124-19-6 | – | 1.4E+05 | – | 1.4E+05 |
| Nonene, 1-n | 124-11-8 | – | 1.0E+05 | – | 1.0E+05 |
| Nonylphenol, 4-n- | 104-40-5 | – | 6.8E+04 | – | 6.8E+04 |
| Nonylphenol ethoxylate | 9016-45-9 | – | 6.8E+04 | – | 6.8E+04 |
| Octamethylpyrophosphoramide | 152-16-9 | – | 1.4E+03 | – | 1.4E+03 |
| Octanone | 106-68-3 | – | 5.8E+04 | – | 5.6E+04 |
| Oxamyl | 23135-22-0 | – | 1.7E+04 | – | 1.7E+04 |
| Oxychlordane | 27304-13-8 | 5.3E+01 | 3.2E+02 | 5.2E+01 | 3.0E+02 |
| Paraquat | 1910-42-5 | – | 3.1E+03 | – | 3.1E+03 |
| Parathion (ethyl parathion) | 56-38-2 | – | 4.1E+03 | – | 4.1E+03 |
| Pebulate | 1114-71-2 | – | 3.4E+04 | – | 3.4E+04 |
| Pendimethalin | 40487-42-1 | – | 2.7E+04 | – | 2.7E+04 |
| Pentachlorobenzene | 608-93-5 | – | 5.5E+02 | – | 5.5E+02 |
| Pentachloroethane | 76-01-7 | 1.1E+02 | 3.1E+04 | 6.5E+01 | 3.1E+04 |
| Pentachloronitrobenzene | 82-68-8 | 7.3E+01 | 2.0E+03 | 7.3E+01 | 2.0E+03 |
| Pentachlorophenol | 87-86-5 | 3.2E+01 | 2.3E+03 | 3.2E+01 | 2.3E+03 |

# Table 5
# Tier 1 Commercial/Industrial Total Soil Combined PCLs
**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | $^{Tot}Soil_{Comb}$ (includes inhalation, ingestion, and dermal pathways) | | | |
|---|---|---|---|---|---|
| | | 0.5 acre source area Carcinogenic (mg/kg) | 0.5 acre source area Noncarcinogenic (mg/kg) | 30 acre source area Carcinogenic (mg/kg) | 30 acre source area Noncarcinogenic (mg/kg) |
| Pentadiene, 1,3-cis- | 1574-41-0 | — | 5.3E+04 | — | 4.7E+04 |
| Pentadiene, 1,3-trans- | 2004-70-8 | — | 5.3E+04 | — | 4.7E+04 |
| Pentaerythritol tetranitrate (PETN) | 78-11-5 | — | 1.4E+03 | — | 1.4E+03 |
| Pentane | 109-66-0 | — | 5.5E+04 | — | 5.0E+04 |
| Pentane, 2-methyl- | 107-83-5 | — | 5.3E+04 | — | 4.7E+04 |
| Pentane, 3-methyl- | 96-14-0 | — | 5.3E+04 | — | 4.7E+04 |
| Pentanediol, 1,5- | 111-29-5 | — | 1.0E+06 | — | 1.0E+06 |
| Pentanol, 1- | 71-41-0 | — | 3.4E+04 | — | 3.4E+04 |
| Pentanol, 4-methyl-2- | 108-11-2 | — | 2.7E+04 | — | 2.7E+04 |
| Pentanone, 2- | 107-87-9 | — | 4.1E+04 | — | 4.1E+04 |
| Pentene, 2- | 109-68-2 | — | 5.3E+04 | — | 4.7E+04 |
| Pentyne, 1- | 627-19-0 | — | 5.3E+04 | — | 4.7E+04 |
| Perchlorate | 14797-73-0 | — | 5.7E+02 | — | 5.7E+02 |
| Perfluorooctanoic sulfonic acid (1-Octanesulfonic acid, heptadecafluoro-1-) | 1763-23-1 | — | 1.5E+01 | — | 1.4E+01 |
| Perfluoroundecanoic acid (Undecanoic acid, uncosafluoro-) | 2058-94-8 | — | 8.2E+00 | — | 8.2E+00 |
| Perfluoropentanoic acid (Pentanoic acid, nonafluoro-) | 2706-90-3 | — | 2.6E+00 | — | 2.6E+00 |
| Perfluorohexanoic acid (Hexanoic acid, undecafluoro-) | 307-24-4 | — | 2.6E+00 | — | 2.6E+00 |
| Perfluorododecanoic acid (Dodecanoic acid, tricosafluoro-) | 307-55-1 | — | 7.5E+00 | — | 7.0E+00 |
| Perfluorooctanoic acid (Octanoic acid, pentadecafluoro-) | 335-67-1 | — | 2.4E+00 | — | 1.4E+00 |
| Perfluorodecanoic acid (Decanoic acid, nonadecafluoro-) | 335-76-2 | — | 9.4E+00 | — | 8.8E+00 |
| Perfluorodecane sulfonic acid (1-Decanesulfonic acid, heneicosafluoro-) | 335-77-3 | — | 8.2E+00 | — | 8.2E+00 |
| Perfluorohexane sulfonic acid (1-Hexanesulfonic acid, triddecafluoro-) | 355-46-4 | — | 2.2E+00 | — | 2.0E+00 |
| Perfluorobutyric acid (Butanoic acid, heptafluoro-) | 375-22-4 | — | 1.1E+03 | — | 8.2E+02 |
| Perfluorobutane sulfonic acid (1-Butanesulfonic acid, nonafluoro-) | 375-73-5 | — | 6.0E+02 | — | 4.4E+02 |
| Perfluoroheptanoic acid (Heptanoic acid, tridecafluoro-) | 375-85-9 | — | 1.6E+01 | — | 1.6E+01 |
| Perfluorononanoic acid (Nonanoic acid, heptadecafluoro-) | 375-95-1 | — | 6.1E+00 | — | 4.9E+00 |
| Perfluorotetradecanoic acid (Tetradecanoic acid, heptacosafluoro-) | 376-06-7 | — | 8.2E+00 | — | 8.2E+00 |
| Perfluorotridecanoic acid (Tridecanoic acid, pentacosafluoro-) | 72629-94-8 | — | 8.2E+00 | — | 8.2E+00 |
| Perfluorooctane sulfonamide (1-Octanesulfonamide, hetpadecafluoro-) | 754-91-6 | — | 8.7E-02 | — | 4.5E-02 |
| Perylene | 198-55-0 | — | 1.4E+04 | — | 1.4E+04 |
| Phenacetin | 62-44-2 | 5.9E+03 | — | 4.5E+03 | — |
| Phenanthrene | 85-01-8 | — | 1.9E+04 | — | 1.9E+04 |
| Phenanthridine | 229-87-8 | — | 2.0E+03 | — | 2.0E+03 |
| Phenol | 108-95-2 | — | 2.7E+03 | — | 1.4E+03 |
| Phenol, 4-tert-butyl- | 98-54-4 | — | 8.2E+04 | — | 8.2E+04 |
| Phenothiazine | 92-84-2 | — | 7.5E+02 | — | 7.5E+02 |

# Table 5
# Tier 1 Commercial/Industrial Total Soil Combined PCLs
**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | $^{Tot}Soil_{Comb}$ (includes inhalation, ingestion, and dermal pathways) | | | |
|---|---|---|---|---|---|
| | | 0.5 acre source area Carcinogenic (mg/kg) | 0.5 acre source area Noncarcinogenic (mg/kg) | 30 acre source area Carcinogenic (mg/kg) | 30 acre source area Noncarcinogenic (mg/kg) |
| Phenyl mercuric acetate | 62-38-4 | — | 5.5E+01 | — | 5.5E+01 |
| Phenylene diamine, m- | 108-45-2 | — | 4.1E+03 | — | 4.1E+03 |
| Phenylene diamine, p- | 106-50-3 | — | 1.3E+05 | — | 1.3E+05 |
| Phorate | 298-02-2 | — | 1.4E+02 | — | 1.4E+02 |
| Phosalone | 2310-17-0 | — | 1.4E+03 | — | 1.4E+03 |
| Phosdrin (mevinphos) | 7786-34-7 | — | 1.7E+01 | — | 1.7E+01 |
| Phosmet | 732-11-6 | — | 1.4E+04 | — | 1.4E+04 |
| Phosphine | 7803-51-2 | — | 6.3E+00 | — | 3.3E+00 |
| Phosphorotrithioic acid, S,S,S-tributyl ester | 78-48-8 | 2.3E+02 | 6.8E+02 | 2.3E+02 | 6.8E+02 |
| Phosphorus, total* | 7723-14-0 | — | — | — | — |
| Phosphorus, white | 7723-14-0 | — | 1.6E+01 | — | 1.6E+01 |
| Phthalic anhydride | 85-44-9 | — | 6.6E+04 | — | 3.5E+04 |
| Picloram | 1918-02-1 | — | 4.8E+04 | — | 4.8E+04 |
| Picoline, 2- (2-methylpyridine) | 109-06-8 | — | 9.2E+03 | — | 9.2E+03 |
| Polybrominated biphenyls (PBBs) | 67774-32-7 | 2.1E+00 | 4.8E+00 | 2.1E+00 | 4.8E+00 |
| Polychlorinated biphenyls (PCBs) | 1336-36-3 | 7.7E+00 | 1.2E+01 | 7.1E+00 | 1.2E+01 |
| Potassium* | 7440-09-7 | — | — | — | — |
| Primene | 68955-53-3 | — | 4.1E+03 | — | 4.1E+03 |
| Prometon (pramitol) | 1610-18-0 | — | 1.0E+04 | — | 1.0E+04 |
| Prometryn | 7287-19-6 | — | 2.7E+04 | — | 2.7E+04 |
| Pronamide | 23950-58-5 | — | 5.1E+04 | — | 5.1E+04 |
| Propanal (propionaldehyde) | 123-38-6 | — | 1.7E+02 | — | 8.7E+01 |
| Propane, 1-bromo- | 106-94-5 | — | 3.7E+04 | — | 3.7E+04 |
| Propanil | 709-98-8 | — | 3.4E+03 | — | 3.4E+03 |
| Propanoic acid (propionic acid) | 79-09-4 | — | 5.1E+05 | — | 5.1E+05 |
| Propanol, 1- | 71-23-8 | — | 2.0E+05 | — | 2.0E+05 |
| Propargite | 2312-35-8 | — | 1.4E+04 | — | 1.4E+04 |
| Propargyl alcohol | 107-19-7 | — | 2.0E+03 | — | 2.0E+03 |
| Propazine | 139-40-2 | 4.3E+02 | 1.4E+04 | 4.3E+02 | 1.4E+04 |
| Propham | 122-42-9 | — | 1.4E+04 | — | 1.4E+04 |
| Propionitrile (propane nitrile) | 107-12-0 | — | 4.1E+02 | — | 4.1E+02 |
| Propyl acetate, n- | 109-60-4 | — | 9.2E+04 | — | 9.2E+04 |
| Propylbenzene, n- | 103-65-1 | — | 7.3E+03 | — | 4.1E+03 |
| Propylene glycol | 57-55-6 | — | 5.1E+02 | — | 2.6E+02 |
| Propylene glycol monomethyl ether | 107-98-2 | — | 2.2E+05 | — | 1.3E+05 |
| Propylene oxide | 75-56-9 | 6.9E+01 | 6.4E+02 | 4.9E+01 | 3.3E+02 |
| Propylene tetramer | 6842-15-5 | — | 1.6E+04 | — | 9.5E+03 |
| Prothiofos (Tokuthion) | 34643-46-4 | — | 6.8E+01 | — | 6.8E+01 |
| Pyrene | 129-00-0 | — | 1.9E+04 | — | 1.9E+04 |

# Table 5
# Tier 1 Commercial/Industrial Total Soil Combined PCLs
**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | $^{Tot}Soil_{Comb}$ (includes inhalation, ingestion, and dermal pathways) | | | |
|---|---|---|---|---|---|
| | | 0.5 acre source area Carcinogenic (mg/kg) | 0.5 acre source area Noncarcinogenic (mg/kg) | 30 acre source area Carcinogenic (mg/kg) | 30 acre source area Noncarcinogenic (mg/kg) |
| Pyridine | 110-86-1 | – | 1.0E+03 | – | 1.0E+03 |
| Quinoline | 91-22-5 | 6.4E+00 | – | 6.4E+00 | – |
| Ronnel | 299-84-3 | – | 3.4E+04 | – | 3.4E+04 |
| Safrole | 94-59-7 | 4.9E+01 | – | 3.5E+01 | – |
| Selenium | 7782-49-2 | – | 4.9E+03 | – | 4.9E+03 |
| Selenourea | 630-10-4 | – | 5.1E+03 | – | 5.1E+03 |
| Silver | 7440-22-4 | – | 2.3E+03 | – | 2.3E+03 |
| Simazine | 122-34-9 | 1.6E+02 | 3.4E+03 | 1.6E+02 | 3.4E+03 |
| Sodium* | 7440-23-5 | – | – | – | – |
| Sodium hypochlorite | 7681-52-9 | – | 1.2E+05 | – | 9.6E+04 |
| Sodium polyacrylate | 9003-04-7 | – | 1.7E+02 | – | 8.7E+01 |
| Strontium | 7440-24-6 | – | 4.9E+05 | – | 4.9E+05 |
| Strychnine | 57-24-9 | – | 2.0E+02 | – | 2.0E+02 |
| Styrene | 100-42-5 | – | 1.5E+04 | – | 7.8E+03 |
| Sulfate* | 14808-79-8 | – | – | – | – |
| Sulfide* | 18496-25-8 | – | – | – | – |
| Sulfolane | 126-33-0 | – | 1.1E+03 | – | 5.8E+02 |
| Sulfur* | 7704-34-9 | – | – | – | – |
| Sulprofos (Bolstar) | 35400-43-2 | – | 2.0E+03 | – | 2.0E+03 |
| Tebuconazole | 107534-96-3 | – | 2.0E+04 | – | 2.0E+04 |
| Tebuthiuron | 34014-18-1 | – | 4.8E+04 | – | 4.8E+04 |
| Terbufos | 13071-79-9 | – | 1.7E+01 | – | 1.7E+01 |
| Tert-amyl ethyl ether (TAEE) | 919-94-8 | – | 4.1E+04 | – | 4.1E+04 |
| Tert-amyl-methyl ether (TAME) | 994-05-8 | – | 4.1E+04 | – | 4.1E+04 |
| Tert-butyl alcohol (2-methyl-2-propanol) | 75-65-0 | – | 9.2E+04 | – | 9.2E+04 |
| Tetrachlorobenzene, 1,2,3,4- | 634-66-2 | – | 2.0E+02 | – | 2.0E+02 |
| Tetrachlorobenzene, 1,2,3,5- | 634-90-2 | – | 2.0E+02 | – | 2.0E+02 |
| Tetrachlorobenzene, 1,2,4,5- | 95-94-3 | – | 2.0E+02 | – | 2.0E+02 |
| Tetrachloroethane, 1,1,1,2- | 630-20-6 | 1.3E+02 | 3.1E+04 | 7.3E+01 | 3.1E+04 |
| Tetrachloroethane, 1,1,2,2- | 79-34-5 | 1.4E+02 | 2.0E+04 | 1.4E+02 | 2.0E+04 |
| Tetrachloroethylene | 127-18-4 | 1.4E+03 | 5.8E+03 | 7.7E+02 | 3.4E+03 |
| Tetrachlorophenol, 2,3,4,5- | 4901-51-3 | – | 2.0E+04 | – | 2.0E+04 |
| Tetrachlorophenol, 2,3,4,6- | 58-90-2 | – | 2.0E+04 | – | 2.0E+04 |
| Tetrachlorophenol, 2,3,5,6- | 935-95-5 | – | 2.0E+04 | – | 2.0E+04 |
| Tetrachlorvinphos (Stirophos) | 22248-79-9 | – | 2.9E+04 | – | 2.9E+04 |
| Tetradifon | 116-29-0 | – | 1.4E+04 | – | 1.4E+04 |
| Tetraethyl dithiopyrophosphate (sulfotep) | 3689-24-5 | – | 3.4E+02 | – | 3.4E+02 |
| Tetraethyl lead | 78-00-2 | – | 6.8E-02 | – | 6.8E-02 |
| Tetraethyl pyrophosphate (TEPP) | 107-49-3 | – | 7.5E+00 | – | 7.5E+00 |

# Table 5
# Tier 1 Commercial/Industrial Total Soil Combined PCLs
**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | $^{Tot}Soil_{Comb}$ (includes inhalation, ingestion, and dermal pathways) | | | |
|---|---|---|---|---|---|
| | | 0.5 acre source area Carcinogenic (mg/kg) | 0.5 acre source area Noncarcinogenic (mg/kg) | 30 acre source area Carcinogenic (mg/kg) | 30 acre source area Noncarcinogenic (mg/kg) |
| Tetraethylene glycol | 112-60-7 | – | 2.2E+05 | – | 2.2E+05 |
| Tetrahydrofuran | 109-99-9 | 2.9E+02 | 4.1E+04 | 1.6E+02 | 2.2E+04 |
| Tetrahydropyran | 142-68-7 | 3.1E+02 | 2.0E+05 | 1.7E+02 | 2.0E+05 |
| Tetraoxadodecane, 2,5,8,11- | 112-49-2 | – | 1.7E+04 | – | 1.7E+04 |
| Thallium | 7440-28-0 | – | 6.5E+01 | – | 6.5E+01 |
| Thiofanox | 39196-18-4 | – | 2.0E+02 | – | 2.0E+02 |
| Thionazin | 297-97-2 | – | 4.8E+01 | – | 4.8E+01 |
| Thiophanate-methyl | 23564-05-8 | – | 5.5E+04 | – | 5.5E+04 |
| Thiram | 137-26-8 | – | 3.4E+03 | – | 3.4E+03 |
| Tin | 7440-31-5 | – | 4.1E+05 | – | 4.1E+05 |
| Titanium | 7440-32-6 | – | 1.0E+06 | – | 1.0E+06 |
| Toluene | 108-88-3 | – | 4.2E+04 | – | 2.9E+04 |
| Toluene diisocyanate, 2,4/2,6- | 26471-62-5 | – | 2.0E+02 | – | 1.0E+02 |
| Toluenediamine, 2,4- | 95-80-7 | 6.0E+00 | – | 6.0E+00 | – |
| Toluenediamine, 2,6- | 823-40-5 | – | 2.0E+04 | – | 2.0E+04 |
| Toluidine, o- | 95-53-4 | 1.1E+02 | – | 7.6E+01 | – |
| Toluidine, p- | 106-49-0 | 2.3E+02 | – | 2.3E+02 | – |
| Toxaphene | 8001-35-2 | 1.7E+01 | 2.1E+02 | 1.7E+01 | 2.1E+02 |
| TPH, TX1005, C6-C12 | TPH-1005-1 | – | 3.9E+03 | – | 2.1E+03 |
| TPH, TX1005, >C12-C28 | TPH-1005-2 | – | 1.2E+04 | – | 7.8E+03 |
| TPH, TX1005, >C12-C35 | TPH-1005-3 | – | 1.2E+04 | – | 7.8E+03 |
| TPH, TX1005, >C28-C35 | TPH-1005-4 | – | 1.2E+04 | – | 7.8E+03 |
| TP Silvex, 2,4,5- | 93-72-1 | – | 5.5E+03 | – | 5.5E+03 |
| Triademenol | 55219-65-3 | – | 2.0E+04 | – | 2.0E+04 |
| Triallate | 2303-17-5 | – | 8.9E+03 | – | 8.9E+03 |
| Triaminotrinitrobenzene (TATB) | 3058-38-6 | – | 2.0E+03 | – | 2.0E+03 |
| Tributyltin oxide | 56-35-9 | – | 2.0E+02 | – | 2.0E+02 |
| Trichloro-1,2,2-trifluoroethane, 1,1,2- | 76-13-1 | – | 1.1E+05 | – | 5.5E+04 |
| Trichlorobenzene, 1,2,3- | 87-61-6 | – | 3.5E+02 | – | 2.0E+02 |
| Trichlorobenzene, 1,2,4- | 120-82-1 | 6.6E+02 | 2.0E+02 | 6.6E+02 | 1.1E+02 |
| Trichlorobenzene, 1,3,5- | 108-70-3 | – | 1.6E+02 | – | 8.7E+01 |
| Trichloroethane, 1,1,1- | 71-55-6 | – | 1.0E+05 | – | 5.5E+04 |
| Trichloroethane, 1,1,2- | 79-00-5 | 3.5E+01 | 4.1E+03 | 1.9E+01 | 4.1E+03 |
| Trichloroethylene | 79-01-6 | 1.2E+02 | 4.0E+01 | 6.7E+01 | 2.1E+01 |
| Trichlorofluoromethane | 75-69-4 | – | 3.1E+05 | – | 3.1E+05 |
| Trichloronate | 327-98-0 | – | 2.0E+03 | – | 2.0E+03 |
| Trichlorophenol, 2,3,4- | 15950-66-0 | – | 6.8E+04 | – | 6.8E+04 |
| Trichlorophenol, 2,3,5- | 933-78-8 | – | 6.8E+04 | – | 6.8E+04 |
| Trichlorophenol, 2,3,6- | 933-75-5 | – | 6.8E+04 | – | 6.8E+04 |

# Table 5
# Tier 1 Commercial/Industrial Total Soil Combined PCLs
**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | $^{Tot}Soil_{Comb}$ (includes inhalation, ingestion, and dermal pathways) | | | |
|---|---|---|---|---|---|
| | | 0.5 acre source area Carcinogenic (mg/kg) | 0.5 acre source area Noncarcinogenic (mg/kg) | 30 acre source area Carcinogenic (mg/kg) | 30 acre source area Noncarcinogenic (mg/kg) |
| Trichlorophenol, 2,4,5- | 95-95-4 | — | 6.8E+04 | — | 6.8E+04 |
| Trichlorophenol, 2,4,6- | 88-06-2 | 1.1E+03 | 6.8E+02 | 8.6E+02 | 6.8E+02 |
| Trichlorophenol, 3,4,5- | 609-19-8 | — | 6.8E+04 | — | 6.8E+04 |
| Trichlorophenoxyacetic acid, 2,4,5- | 93-76-5 | — | 6.8E+03 | — | 6.8E+03 |
| Trichloropropane, 1,1,2- | 598-77-6 | — | 6.4E+00 | — | 3.3E+00 |
| Trichloropropane, 1,2,3- | 96-18-4 | 9.5E-01 | 1.9E+01 | 9.5E-01 | 1.0E+01 |
| Triethanolamine | 102-71-6 | — | 5.2E+03 | — | 2.7E+03 |
| Triethylamine | 121-44-8 | — | 1.5E+02 | — | 7.7E+01 |
| Triethylene glycol | 112-27-6 | — | 1.0E+06 | — | 1.0E+06 |
| Triethylphosphorothioate, O, O, O- | 126-68-1 | — | 5.7E+00 | — | 5.7E+00 |
| Trifluralin | 1582-09-8 | 2.5E+03 | 5.1E+03 | 2.5E+03 | 5.1E+03 |
| Trimethylamine | 75-50-3 | — | 2.1E+02 | — | 1.1E+02 |
| Trimethylbenzene, 1,2,3- | 526-73-8 | — | 4.4E+03 | — | 2.4E+03 |
| Trimethylbenzene, 1,2,4- | 95-63-6 | — | 4.9E+03 | — | 2.7E+03 |
| Trimethylbenzene, 1,3,5- | 108-67-8 | — | 4.3E+03 | — | 2.3E+03 |
| Trinitrobenzene, 1,3,5- | 99-35-4 | — | 2.0E+04 | — | 2.0E+04 |
| Trinitrophenylmethylnitramine (tetryl; nitramine) | 479-45-8 | — | 1.6E+03 | — | 1.6E+03 |
| Trinitrotoluene, 2,4,6- | 118-96-7 | 6.4E+02 | 3.4E+02 | 6.4E+02 | 3.4E+02 |
| Tungsten (as sodium tungstate dihydride) | 7440-33-7 | — | 8.2E+02 | — | 8.2E+02 |
| Uranium (soluble salts) | 7440-61-1 | — | 2.8E+03 | — | 2.6E+03 |
| Valeric acid (pentanoic acid) | 109-52-4 | — | 1.8E+02 | — | 9.5E+01 |
| Vanadium | 7440-62-2 | — | 6.2E+02 | — | 6.1E+02 |
| Vernam | 1929-77-7 | — | 6.8E+02 | — | 6.8E+02 |
| Vinyl acetate | 108-05-4 | — | 4.3E+03 | — | 2.2E+03 |
| Vinyl chloride | 75-01-4 | 1.5E+01 | 9.1E+02 | 1.3E+01 | 5.5E+02 |
| Vinylcyclohexane | 695-12-5 | — | 5.1E+05 | — | 5.1E+05 |
| Warfarin | 81-81-2 | — | 2.0E+02 | — | 2.0E+02 |
| Xylene, m- | 108-38-3 | — | 1.3E+04 | — | 6.7E+03 |
| Xylene, o- | 95-47-6 | — | 9.1E+04 | — | 4.8E+04 |
| Xylene, p- | 106-42-3 | — | 1.3E+04 | — | 6.7E+03 |
| Xylenes | 1330-20-7 | — | 1.2E+04 | — | 6.5E+03 |
| Zinc | 7440-66-6 | — | 2.5E+05 | — | 2.5E+05 |
| 6 C aliphatics (TPH) (>53% n-hexane content) | NA | — | 1.2E+04 | — | 6.6E+03 |
| 6 C aliphatics (TPH) (<53% n-hexane content) | NA | — | 5.3E+04 | — | 4.7E+04 |
| >6-8 C aliphatics (TPH) (>53% n-hexane content) | NA | — | 1.2E+04 | — | 6.6E+03 |
| >6-8 C aliphatics (TPH) (<53% n-hexane content) | NA | — | 5.3E+04 | — | 4.7E+04 |
| >8-10 C aliphatics (TPH) | NA | — | 9.7E+03 | — | 5.2E+03 |
| >10-12 C aliphatics (TPH) | NA | — | 9.3E+03 | — | 5.1E+03 |
| >12-16 C aliphatics (TPH) | NA | — | 1.4E+04 | — | 7.7E+03 |

# Table 5
# Tier 1 Commercial/Industrial Total Soil Combined PCLs
## Last Revised: November 8, 2019

| Chemical of Concern | CAS | $^{Tot}Soil_{Comb}$ (includes inhalation, ingestion, and dermal pathways) | | | |
|---|---|---|---|---|---|
| | | 0.5 acre source area Carcinogenic (mg/kg) | 0.5 acre source area Noncarcinogenic (mg/kg) | 30 acre source area Carcinogenic (mg/kg) | 30 acre source area Noncarcinogenic (mg/kg) |
| >16-21 C aliphatics (TPH) | NA | — | 1.0E+06 | — | 1.0E+06 |
| >16-21 C aliphatics (TPH) (for transformer mineral oil releases only) | NA | — | 1.0E+06 | — | 1.0E+06 |
| >21-35 C aliphatics (TPH) | NA | — | 1.0E+06 | — | 1.0E+06 |
| >21-35 C aliphatics (TPH) (for transformer mineral oil releases only) | NA | — | 1.0E+06 | — | 1.0E+06 |
| >7-8 C aromatics (TPH) | NA | — | 2.9E+04 | — | 1.7E+04 |
| >8-10 C aromatics (TPH) | NA | — | 3.9E+03 | — | 2.1E+03 |
| >10-12 C aromatics (TPH) | NA | — | 6.9E+03 | — | 4.0E+03 |
| >12-16 C aromatics (TPH) | NA | — | 1.2E+04 | — | 7.8E+03 |
| >16-21 C aromatics (TPH) | NA | — | 2.0E+04 | — | 2.0E+04 |
| >21-35 C aromatics (TPH) | NA | — | 2.0E+04 | — | 2.0E+04 |

**Footnotes**

**1** Site-specific PCLs for mercury may vary based on the pH-dependent Kd value (see Figure:30 TAC §350.73(f)(1)(C)).

***** These compounds are not necessarily of concern from a human health standpoint, therefore calculation of human health-based values is not required. However, aesthetics and ecological criteria would still apply. See table entitled "Compounds for which Calculation of a Human Health PCL is Not Required" available on the TCEQ website at http://www.tceq.state.tx.us/remediation/trrp/trrp.html.

NA = not applicable

All values capped at 1E+06

This table shows the total soil combined protective concentration levels for commercial industrial land with both carcinogenic and non-carcinogenic values depicted.

end of worksheet

# Table 6
# Tier 1 Individual Residential Soil PCLs

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | Carcinogenic | | | | | | | Noncarcinogenic | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | $^{Air}Soil_{Inh\text{-}VP}$ 0.5 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}VP}$ 30 acre source area (mg/kg) | $^{Soil}Soil_{Ing}$ (mg/kg) | $^{Soil}Soil_{Derm}$ (mg/kg) | $^{Veg}Soil_{Ing}$ (mg/kg) | $^{Air}Soil_{Inh\text{-}V}$[1] 0.5 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}V}$[1] 30 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}VP}$ 0.5 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}VP}$ 30 acre source area (mg/kg) | $^{Soil}Soil_{Ing}$ (mg/kg) | $^{Soil}Soil_{Derm}$ (mg/kg) | $^{Veg}Soil_{Ing}$ (mg/kg) | $^{Air}Soil_{Inh\text{-}V}$[1] 0.5 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}V}$[1] 30 acre source area (mg/kg) |
| Acenaphthene | 83-32-9 | – | – | – | – | – | – | – | – | – | 4.9E+03 | 1.6E+04 | 1.4E+04 | – | – |
| Acenaphthylene | 208-96-8 | – | – | – | – | – | – | – | – | – | 4.9E+03 | 1.6E+04 | – | – | – |
| Acetaldehyde | 75-07-0 | 1.7E+02 | 8.7E+01 | – | – | – | 1.7E+02 | 8.7E+01 | 1.4E+02 | 7.4E+01 | 8.2E+03 | – | – | 1.4E+02 | 7.4E+01 |
| Acetate, 2-ethoxyethanol | 111-15-9 | – | – | – | – | – | – | – | 6.0E+03 | 3.1E+03 | 8.2E+03 | – | – | 6.0E+03 | 3.1E+03 |
| Acetate, isoamyl | 123-92-2 | – | – | – | – | – | – | – | – | – | 5.9E+03 | – | – | – | – |
| Acetate, isobutyl | 110-19-0 | – | – | – | – | – | – | – | – | – | 3.9E+03 | – | – | – | – |
| Acetate, sec-butyl | 105-46-4 | – | – | – | – | – | – | – | – | – | 3.9E+03 | – | – | – | – |
| Acetic acid* | 64-19-7 | – | – | – | – | – | – | – | – | – | – | – | – | – | – |
| Acetone (2-propanone) | 67-64-1 | – | – | – | – | – | – | – | 6.0E+05 | 3.1E+05 | 7.4E+04 | – | – | 6.0E+05 | 3.1E+05 |
| Acetone cyanohydrin | 75-86-5 | – | – | – | – | – | – | – | 4.3E+03 | 2.2E+03 | 2.5E+02 | 1.1E+03 | – | 4.3E+03 | 2.2E+03 |
| Acetonitrile | 75-05-8 | – | – | – | – | – | – | – | 1.3E+03 | 6.7E+02 | 2.6E+03 | – | – | 1.3E+03 | 6.7E+02 |
| Acetophenone | 98-86-2 | – | – | – | – | – | – | – | – | – | 8.2E+03 | 3.6E+04 | – | – | – |
| Acetylaminofluorene, 2- | 53-96-3 | 1.9E+01 | 9.5E+00 | 1.6E+00 | 5.5E+00 | – | 1.9E+01 | 9.5E+00 | – | – | – | – | – | – | – |
| Acifluorfen, sodium | 62476-59-9 | – | – | – | – | – | – | – | – | – | 1.1E+03 | 4.6E+03 | – | – | – |
| Acridine | 260-94-6 | – | – | – | – | – | – | – | – | – | 2.5E+02 | 1.1E+03 | – | – | – |
| Acrolein | 107-02-8 | – | – | – | – | – | – | – | 1.5E+02 | 7.8E+01 | 4.1E+01 | – | – | 1.5E+02 | 7.8E+01 |
| Acrylamide | 79-06-1 | 2.8E+01 | 1.4E+01 | 1.2E+01 | 4.2E+01 | – | 2.8E+01 | 1.4E+01 | 7.2E+02 | 3.7E+02 | 1.6E+02 | 7.1E+02 | – | 7.2E+02 | 3.7E+02 |
| Acrylic acid | 79-10-7 | – | – | – | – | – | – | – | 1.2E+02 | 6.2E+01 | 4.1E+04 | – | – | 1.2E+02 | 6.2E+01 |
| Acrylonitrile | 107-13-1 | 5.3E+00 | 2.7E+00 | 1.1E+01 | – | – | 5.3E+00 | 2.7E+00 | 3.1E+01 | 1.6E+01 | 8.2E+01 | – | – | 3.1E+01 | 1.6E+01 |
| Adipic acid (hexanedioic acid) | 124-04-9 | – | – | – | – | – | – | – | – | – | 1.6E+05 | 7.1E+05 | – | – | – |
| Alachlor | 15972-60-8 | – | – | 7.6E+01 | 2.6E+02 | – | – | – | – | – | 8.2E+02 | 3.6E+03 | – | – | – |
| Aldicarb | 116-06-3 | – | – | – | – | – | – | – | – | – | 8.2E+01 | 3.6E+02 | – | – | – |
| Aldicarb sulfone | 1646-88-4 | – | – | – | – | – | – | – | – | – | 8.2E+01 | 3.6E+02 | – | – | – |
| Aldrin | 309-00-2 | 8.3E+00 | 4.3E+00 | 3.6E-01 | 1.2E+00 | 6.2E-02 | 8.3E+00 | 4.3E+00 | – | – | 2.5E+00 | 1.1E+01 | 8.4E-01 | – | – |
| Allyl alcohol | 107-18-6 | – | – | – | – | – | – | – | 5.7E+00 | 2.9E+00 | 4.1E+02 | – | – | 5.7E+00 | 2.9E+00 |
| Allyl chloride | 107-05-1 | – | – | – | – | – | – | – | 1.5E+01 | 7.9E+00 | 8.2E+02 | – | – | 1.5E+01 | 7.9E+00 |
| Aluminum | 7429-90-5 | – | – | – | – | – | – | – | 1.0E+06 | 1.0E+06 | 8.2E+04 | 3.6E+05 | 1.0E+06 | – | – |
| Ametryn | 834-12-8 | – | – | – | – | – | – | – | – | – | 7.4E+02 | 3.2E+03 | – | – | – |
| Amino-2,6-dinitrotoluene, 4- | 19406-51-0 | – | – | 6.1E+02 | 2.1E+03 | – | – | – | – | – | 1.4E+01 | 5.9E+01 | – | – | – |
| Amino-4,6-dinitrotoluene, 2- | 35572-78-2 | – | – | 6.1E+02 | 2.1E+03 | – | – | – | – | – | 1.4E+01 | 5.9E+01 | – | – | – |
| Aminobiphenyl, 4- (1,1-biphenyl-4-amine) | 92-67-1 | – | – | 1.0E+00 | 3.4E+00 | – | – | – | – | – | – | – | – | – | – |
| Aminopyridine, 4- | 504-24-5 | – | – | – | – | – | – | – | – | – | 1.6E+00 | 7.1E+00 | – | – | – |
| Ammonia | 7664-41-7 | – | – | – | – | – | – | – | 4.9E+03 | 2.5E+03 | – | – | – | 4.9E+03 | 2.5E+03 |
| Ammonium polyphosphate* | 6833-79-9 | – | – | – | – | – | – | – | – | – | – | – | – | – | – |
| Ammonium salts* | AMMONIUM | – | – | – | – | – | – | – | – | – | – | – | – | – | – |
| Aniline | 62-53-3 | – | – | 1.1E+03 | 3.6E+03 | – | – | – | 1.3E+02 | 6.7E+01 | 5.7E+02 | 2.5E+03 | – | 1.3E+02 | 6.7E+01 |
| Anthracene | 120-12-7 | – | – | – | – | – | – | – | – | – | 2.5E+04 | 8.2E+04 | 2.9E+05 | – | – |
| Anthraquinone, 9,10- | 84-65-1 | – | – | 1.6E+02 | 5.3E+02 | – | – | – | – | – | 1.6E+03 | 7.1E+03 | – | – | – |
| Antimony | 7440-36-0 | – | – | – | – | – | – | – | – | – | 3.3E+01 | 2.1E+02 | 3.2E+01 | – | – |
| Aramite | 140-57-8 | 1.0E+06 | 1.0E+06 | 2.4E+02 | 8.3E+02 | 2.7E+02 | – | – | – | – | 4.1E+03 | 1.8E+04 | 8.9E+03 | – | – |
| Arsenic | 7440-38-2 | 1.5E+05 | 7.7E+04 | 5.2E+01 | 4.6E+02 | 1.3E+02 | – | – | – | – | 3.1E+01 | 3.6E+02 | 1.5E+02 | – | – |
| Arsine | 7784-42-1 | – | – | – | – | – | – | – | 7.7E-01 | 3.9E-01 | – | – | – | 7.7E-01 | 3.9E-01 |
| Atrazine | 1912-24-9 | – | – | 2.7E+01 | 9.4E+01 | – | – | – | – | – | 2.9E+03 | 1.2E+04 | – | – | – |

# Table 6
# Tier 1 Individual Residential Soil PCLs

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | Carcinogenic | | | | | | | Noncarcinogenic | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | $^{Air}Soil_{Inh\text{-}VP}$ 0.5 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}VP}$ 30 acre source area (mg/kg) | $^{Soil}Soil_{Ing}$ (mg/kg) | $^{Soil}Soil_{Derm}$ (mg/kg) | $^{Veg}Soil_{Ing}$ (mg/kg) | $^{Air}Soil_{Inh\text{-}V}$[1] 0.5 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}V}$[1] 30 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}VP}$ 0.5 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}VP}$ 30 acre source area (mg/kg) | $^{Soil}Soil_{Ing}$ (mg/kg) | $^{Soil}Soil_{Derm}$ (mg/kg) | $^{Veg}Soil_{Ing}$ (mg/kg) | $^{Air}Soil_{Inh\text{-}V}$[1] 0.5 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}V}$[1] 30 acre source area (mg/kg) |
| Azinphos-methyl (guthion) | 86-50-0 | – | – | – | – | – | – | – | – | – | 1.2E+02 | 5.3E+02 | – | – | – |
| Azobenzene | 103-33-3 | 1.4E+03 | 7.1E+02 | 5.5E+01 | 1.9E+02 | 3.5E+02 | 1.4E+03 | 7.1E+02 | – | – | – | – | – | – | – |
| Barium | 7440-39-3 | – | – | – | – | – | – | – | – | – | 1.6E+04 | 5.0E+04 | 2.4E+04 | – | – |
| Bayleton | 43121-43-3 | – | – | – | – | – | – | – | – | – | 2.5E+03 | 1.1E+04 | – | – | – |
| Benefin (benfluralin) | 1861-40-1 | – | – | – | – | – | – | – | – | – | 2.5E+04 | 1.1E+05 | 4.2E+05 | – | – |
| Benomyl | 17804-35-2 | – | – | – | – | – | – | – | – | – | 4.1E+03 | 1.8E+04 | – | – | – |
| Benz-a-anthracene | 56-55-3 | 5.4E+03 | 2.8E+03 | 6.1E+01 | 1.6E+02 | 6.8E+02 | 5.5E+03 | 2.8E+03 | – | – | – | – | – | – | – |
| Benzaldehyde | 100-52-7 | – | – | – | – | – | – | – | – | – | 8.2E+03 | – | – | – | – |
| Benzene | 71-43-2 | 1.6E+02 | 8.4E+01 | 4.0E+02 | – | – | 1.6E+02 | 8.4E+01 | 4.3E+03 | 2.2E+03 | 3.3E+02 | – | – | 4.3E+03 | 2.2E+03 |
| Benzenedicarbonitrile, 1,3- | 626-17-5 | – | – | – | – | – | – | – | – | – | 4.9E+02 | 2.1E+03 | – | – | – |
| Benzenedicarboxylic acid, 1,2-disodecyl ester | 26761-40-0 | – | – | – | – | – | – | – | 1.0E+06 | 1.0E+06 | 3.3E+03 | 1.4E+04 | 6.6E+05 | 1.0E+06 | 1.0E+06 |
| Benzenethiol | 108-98-5 | – | – | – | – | – | – | – | – | – | 8.2E+01 | – | – | – | – |
| Benzidine | 92-87-5 | 6.3E-02 | 3.2E-02 | 2.6E-02 | 9.0E-02 | – | 6.3E-02 | 3.2E-02 | – | – | 2.5E+02 | 1.1E+03 | – | – | – |
| Benzo-a-pyrene | 50-32-8 | 1.2E+03 | 6.2E+02 | 6.1E+00 | 1.6E+01 | 6.5E+01 | 1.2E+03 | 6.4E+02 | 6.2E+01 | 3.2E+01 | 2.5E+01 | 8.2E+01 | 5.2E+02 | 6.4E+01 | 3.3E+01 |
| Benzo-b-fluoranthene | 205-99-2 | 8.8E+03 | 4.5E+03 | 6.1E+01 | 1.6E+02 | 8.2E+02 | 9.0E+03 | 4.6E+03 | – | – | – | – | – | – | – |
| Benzo-e-pyrene | 192-97-2 | – | – | – | – | – | – | – | – | – | 2.5E+03 | 8.2E+03 | 7.4E+04 | – | – |
| Benzo-g,h,i-perylene | 191-24-2 | – | – | – | – | – | – | – | – | – | 2.5E+03 | 8.2E+03 | 3.0E+04 | – | – |
| Benzoic acid | 65-85-0 | – | – | – | – | – | – | – | – | – | 3.3E+05 | 1.0E+06 | – | – | – |
| Benzo-j-fluoranthene | 205-82-3 | 4.7E+03 | 2.4E+03 | 6.1E+01 | 1.6E+02 | 3.6E+02 | 4.7E+03 | 2.4E+03 | – | – | – | – | – | – | – |
| Benzo-k-fluoranthene | 207-08-9 | 2.1E+05 | 1.1E+05 | 6.1E+02 | 1.6E+03 | 8.4E+03 | 2.2E+05 | 1.1E+05 | – | – | – | – | – | – | – |
| Benzophenone | 119-61-9 | – | – | – | – | – | – | – | – | – | 5.5E+02 | 2.4E+03 | – | – | – |
| Benzotrichloride | 98-07-7 | – | – | 4.7E-01 | 1.6E+00 | – | – | – | – | – | – | – | – | – | – |
| Benzoyl peroxide | 94-36-0 | – | – | – | – | – | – | – | – | – | 4.1E+03 | 1.8E+04 | – | – | – |
| Benzyl alcohol | 100-51-6 | – | – | – | – | – | – | – | – | – | 8.2E+03 | 3.6E+04 | – | – | – |
| Benzyl chloride | 100-44-7 | – | – | 3.6E+01 | – | – | – | – | 3.1E+01 | 1.6E+01 | 1.6E+02 | – | – | 3.1E+01 | 1.6E+01 |
| Benzyl dichloride | 98-87-3 | – | – | 3.6E+01 | 1.2E+02 | – | – | – | 5.5E+01 | 2.8E+01 | 1.6E+02 | 7.1E+02 | – | 5.5E+01 | 2.8E+01 |
| Beryllium | 7440-41-7 | 9.4E+03 | 4.8E+03 | – | – | – | – | – | 1.9E+04 | 1.0E+04 | 1.6E+02 | 5.0E+01 | 3.1E+03 | – | – |
| Biphenyl, 1,1- | 92-52-4 | – | – | – | – | – | – | – | – | – | 4.1E+04 | 1.8E+04 | – | – | – |
| Biphenyl, 1,1'-, 2-phenoxy- | 6738-04-1 | – | – | – | – | – | – | – | – | – | 4.1E+03 | 1.8E+04 | 1.0E+05 | – | – |
| Biquinoline, 2,2'- | 119-91-5 | – | – | – | – | – | – | – | – | – | 2.5E+02 | 1.1E+03 | 1.9E+03 | – | – |
| Bis (2-chloroethoxy) methane | 111-91-1 | 1.1E+01 | 5.8E+00 | 5.5E+00 | 1.9E+01 | – | 1.1E+01 | 5.8E+00 | – | – | 2.5E+02 | 1.1E+03 | – | – | – |
| Bis (2-chloroethyl) ether | 111-44-4 | 3.6E+00 | 1.8E+00 | 5.5E+00 | – | – | 3.6E+00 | 1.8E+00 | – | – | – | – | – | – | – |
| Bis (2-chloro-1-methyl) ether | 108-60-1 | 2.1E+02 | 1.1E+02 | 8.7E+01 | 3.0E+02 | – | 2.1E+02 | 1.1E+02 | – | – | 3.3E+03 | 1.4E+04 | – | – | – |
| Bis (2-chloromethyl) ether | 542-88-1 | 5.8E-03 | 3.0E-03 | 2.8E-02 | – | – | 5.8E-03 | 3.0E-03 | – | – | – | – | – | – | – |
| Bis (2-ethyl-hexyl) phthalate | 117-81-7 | – | – | 4.3E+02 | 2.8E+02 | 5.8E+01 | – | – | – | – | 1.6E+03 | 1.4E+03 | 4.3E+02 | – | – |
| Bismuth | 7440-69-9 | – | – | – | – | – | – | – | – | – | 4.1E+04 | 3.6E+05 | – | – | – |
| Bisphenol A | 80-05-7 | – | – | – | – | – | – | – | – | – | 4.1E+03 | 1.8E+04 | – | – | – |
| Boron | 7440-42-8 | – | – | – | – | – | – | – | 1.0E+06 | 1.0E+06 | 1.6E+04 | 7.1E+05 | – | – | – |
| Bromacil | 314-40-9 | – | – | – | – | – | – | – | – | – | 8.2E+03 | 3.6E+04 | – | – | – |
| Bromo-2-chloroethane, 1- | 107-04-0 | – | – | – | – | – | – | – | – | – | 3.3E+03 | – | – | – | – |
| Bromobenzene | 108-86-1 | – | – | – | – | – | – | – | 9.7E+02 | 5.0E+02 | 6.6E+02 | – | – | 9.7E+02 | 5.0E+02 |
| Bromodichloromethane | 75-27-4 | – | – | 9.8E+01 | – | – | – | – | – | – | 1.6E+03 | – | – | – | – |
| Bromoform | 75-25-2 | 8.4E+02 | 4.3E+02 | 7.7E+02 | – | – | 8.4E+02 | 4.3E+02 | – | – | 1.6E+03 | – | – | – | – |

# Table 6
# Tier 1 Individual Residential Soil PCLs

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | Carcinogenic | | | | | | | Noncarcinogenic | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | $^{Air}Soil_{Inh\text{-}VP}$ 0.5 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}VP}$ 30 acre source area (mg/kg) | $^{Soil}Soil_{Ing}$ (mg/kg) | $^{Soil}Soil_{Derm}$ (mg/kg) | $^{Veg}Soil_{Ing}$ (mg/kg) | $^{Air}Soil_{Inh\text{-}V}$[1] 0.5 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}V}$[1] 30 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}VP}$ 0.5 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}VP}$ 30 acre source area (mg/kg) | $^{Soil}Soil_{Ing}$ (mg/kg) | $^{Soil}Soil_{Derm}$ (mg/kg) | $^{Veg}Soil_{Ing}$ (mg/kg) | $^{Air}Soil_{Inh\text{-}V}$[1] 0.5 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}V}$[1] 30 acre source area (mg/kg) |
| Bromomethane | 74-83-9 | – | – | – | – | – | – | – | 7.7E+01 | 3.9E+01 | 1.1E+02 | – | – | 7.7E+01 | 3.9E+01 |
| Bromophenyl phenylether, 4- | 101-55-3 | 9.7E+00 | 5.0E+00 | 4.0E-01 | 1.4E+00 | 3.0E+00 | 9.8E+00 | 5.0E+00 | – | – | – | – | – | – | – |
| Butadiene, 1,3- | 106-99-0 | 7.2E+02 | 3.7E+02 | – | – | – | 7.2E+02 | 3.7E+02 | 5.1E+02 | 2.6E+02 | – | – | – | 5.1E+02 | 2.6E+02 |
| Butadiene, 2-methyl-1,3- (isoprene) | 78-79-5 | – | – | – | – | – | – | – | 2.8E+05 | 1.4E+05 | 4.9E+03 | – | – | 2.8E+05 | 1.4E+05 |
| Butanal (butyraldehyde) | 123-72-8 | – | – | – | – | – | – | – | 1.5E+03 | 7.9E+02 | 4.9E+03 | – | – | 1.5E+03 | 7.9E+02 |
| Butane, 2,3-dimethyl- | 79-29-8 | – | – | – | – | – | – | – | 2.8E+05 | 1.4E+05 | 4.9E+03 | – | – | 2.8E+05 | 1.4E+05 |
| Butanoic acid (butyric acid) | 107-92-6 | – | – | – | – | – | – | – | 1.3E+02 | 6.6E+01 | 4.1E+04 | 1.8E+05 | – | 1.3E+02 | 6.6E+01 |
| Butanol, 2- | 78-92-2 | – | – | – | – | – | – | – | 1.0E+06 | 7.2E+05 | 1.6E+05 | – | – | 1.0E+06 | 7.2E+05 |
| Butanol, 2-methyl-1- | 137-32-6 | – | – | – | – | – | – | – | – | – | 8.2E+02 | – | – | – | – |
| Butanol, 2-methyl-2- | 75-85-4 | – | – | – | – | – | – | – | – | – | 8.2E+02 | – | – | – | – |
| Butanol, n- | 71-36-3 | – | – | – | – | – | – | – | – | – | 8.2E+03 | – | – | – | – |
| Butene, 1- | 106-98-9 | – | – | – | – | – | – | – | 8.1E+04 | 4.2E+04 | 4.9E+03 | – | – | 8.1E+04 | 4.2E+04 |
| Butene, cis-2- | 590-18-1 | – | – | – | – | – | – | – | 2.5E+04 | 1.3E+04 | 4.9E+03 | – | – | 2.5E+04 | 1.3E+04 |
| Butene, trans-2- | 624-64-6 | – | – | – | – | – | – | – | 2.5E+04 | 1.3E+04 | 4.9E+03 | – | – | 2.5E+04 | 1.3E+04 |
| Butoxy ethanol, 2- (Ethylene glycol monobutyl ether; EGBE) | 111-76-2 | – | – | – | – | – | – | – | 2.9E+05 | 1.5E+05 | 8.2E+03 | 3.6E+04 | – | 2.9E+05 | 1.5E+05 |
| Butyl acetate | 123-86-4 | – | – | – | – | – | – | – | 8.4E+04 | 4.3E+04 | 1.1E+04 | – | – | 8.4E+04 | 4.3E+04 |
| Butyl acrylate | 141-32-2 | – | – | – | – | – | – | – | – | – | 7.4E+02 | – | – | – | – |
| Butyl benzyl phthalate | 85-68-7 | – | – | 3.2E+03 | 1.1E+04 | 4.6E+03 | – | – | – | – | 1.6E+04 | 7.1E+04 | 4.7E+04 | – | – |
| Butyl ether, n- (dibutyl ether) | 142-96-1 | – | – | – | – | – | – | – | – | – | 8.2E+03 | – | – | – | – |
| Butyl methacrylate | 97-88-1 | – | – | – | – | – | – | – | – | – | 7.4E+03 | 6.4E+03 | – | – | – |
| Butylate | 2008-41-5 | – | – | – | – | – | – | – | – | – | 4.1E+03 | 1.8E+04 | – | – | – |
| Butylbenzene, n- | 104-51-8 | – | – | – | – | – | – | – | – | – | 4.1E+03 | 1.8E+04 | – | – | – |
| Butylbenzene, sec- | 135-98-8 | – | – | – | – | – | – | – | – | – | 3.3E+03 | – | – | – | – |
| Butylbenzene, tert- | 98-06-6 | – | – | – | – | – | – | – | – | – | 3.3E+03 | – | – | – | – |
| Cacodylic acid | 75-60-5 | – | – | – | – | – | – | – | – | – | 2.5E+02 | 1.1E+03 | – | – | – |
| Cadmium | 7440-43-9 | 4.6E+04 | 2.4E+04 | – | – | – | – | – | 1.1E+04 | 5.5E+03 | 2.6E+02 | 2.3E+03 | 6.7E+01 | – | – |
| Calcium* | 7440-70-2 | – | – | – | – | – | – | – | – | – | – | – | – | – | – |
| Caprolactam | 105-60-2 | – | – | – | – | – | – | – | – | – | 4.1E+04 | 1.8E+05 | – | – | – |
| Captan | 133-06-2 | – | – | 1.7E+03 | 5.9E+03 | – | – | – | – | – | 1.1E+04 | 4.6E+04 | – | – | – |
| Carbaryl | 63-25-2 | – | – | – | – | – | – | – | – | – | 8.2E+03 | 3.6E+04 | – | – | – |
| Carbazole | 86-74-8 | – | – | 3.0E+02 | 1.0E+03 | – | – | – | – | – | – | – | – | – | – |
| Carbofuran | 1563-66-2 | – | – | – | – | – | – | – | – | – | 4.1E+02 | 1.8E+03 | – | – | – |
| Carbon disulfide | 75-15-0 | – | – | – | – | – | – | – | 1.1E+04 | 5.5E+03 | 8.2E+03 | – | – | 1.1E+04 | 5.5E+03 |
| Carbon tetrachloride | 56-23-5 | 6.0E+01 | 3.1E+01 | 8.7E+01 | – | – | 6.0E+01 | 3.1E+01 | 1.5E+03 | 7.9E+02 | 3.3E+02 | – | – | 1.5E+03 | 7.9E+02 |
| Carbophenothion | 786-19-6 | – | – | – | – | – | – | – | – | – | 1.1E+03 | 4.6E+03 | 1.6E+04 | – | – |
| Carbosulfan | 55285-14-8 | – | – | – | – | – | – | – | – | – | 8.2E+02 | 3.6E+03 | 1.2E+03 | – | – |
| Carboxin | 5234-68-4 | – | – | – | – | – | – | – | – | – | 8.2E+03 | 3.6E+04 | – | – | – |
| Chloral | 75-87-6 | – | – | – | – | – | – | – | – | – | 8.2E+03 | – | – | – | – |
| Chloral hydrate (1,1-ethanediol, 2,2,2-trichloro-) | 302-17-0 | – | – | – | – | – | – | – | – | – | 8.2E+03 | 3.6E+04 | – | – | – |
| Chloramben (amiben; 3-amino-2,5-dichlorobenzoic acid) | 133-90-4 | – | – | – | – | – | – | – | – | – | 1.2E+03 | 5.3E+03 | – | – | – |
| Chlordane (technical) | 12789-03-6 | 1.2E+03 | 6.4E+02 | 1.7E+01 | 1.5E+02 | 9.7E+00 | 1.2E+03 | 6.4E+02 | 3.7E+03 | 1.9E+03 | 4.1E+01 | 4.4E+02 | 4.6E+01 | 3.7E+03 | 1.9E+03 |
| Chlordane, cis- (alpha chlordane) | 5103-71-9 | 4.0E+03 | 2.1E+03 | 1.7E+01 | 5.9E+01 | 3.0E+02 | 4.1E+03 | 2.1E+03 | 1.2E+04 | 6.2E+03 | 4.1E+01 | 1.8E+02 | 1.4E+03 | 1.2E+04 | 6.3E+03 |
| Chlordane, trans- (gamma chordane) | 5103-74-2 | 9.6E+02 | 5.0E+02 | 1.7E+01 | 5.9E+01 | 1.7E+01 | 9.7E+02 | 5.0E+02 | 2.9E+03 | 1.5E+03 | 4.1E+01 | 1.8E+02 | 7.8E+01 | 2.9E+03 | 1.5E+03 |

# Table 6
# Tier 1 Individual Residential Soil PCLs

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | Carcinogenic | | | | | | | Noncarcinogenic | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | $^{Air}Soil_{Inh\text{-}VP}$ 0.5 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}VP}$ 30 acre source area (mg/kg) | $^{Soil}Soil_{Ing}$ (mg/kg) | $^{Soil}Soil_{Derm}$ (mg/kg) | $^{Veg}Soil_{Ing}$ (mg/kg) | $^{Air}Soil_{Inh\text{-}V}$[1] 0.5 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}V}$[1] 30 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}VP}$ 0.5 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}VP}$ 30 acre source area (mg/kg) | $^{Soil}Soil_{Ing}$ (mg/kg) | $^{Soil}Soil_{Derm}$ (mg/kg) | $^{Veg}Soil_{Ing}$ (mg/kg) | $^{Air}Soil_{Inh\text{-}V}$[1] 0.5 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}V}$[1] 30 acre source area (mg/kg) |
| Chlorfenvinphos | 470-90-6 | – | – | – | – | – | – | – | 3.1E+01 | 1.6E+01 | 5.7E+01 | 2.5E+02 | 5.2E+01 | 3.1E+01 | 1.6E+01 |
| Chloride* | 16887-00-6 | – | – | – | – | – | – | – | – | – | – | – | – | – | – |
| Chlorine | 7782-50-5 | – | – | – | – | – | – | – | 1.3E+02 | 6.9E+01 | 8.2E+03 | 7.1E+04 | – | 1.3E+02 | 6.9E+01 |
| Chloro-1,3-butadiene, 2- | 126-99-8 | 1.2E+00 | 6.1E-01 | – | – | – | 1.2E+00 | 6.1E-01 | 3.1E+02 | 1.6E+02 | – | – | – | 3.1E+02 | 1.6E+02 |
| Chloro-2-propanol, 1- | 127-00-4 | – | – | – | – | – | – | – | – | – | 1.6E+03 | – | – | – | – |
| Chloro-3-methylphenol, 4- | 59-50-7 | – | – | – | – | – | – | – | – | – | 4.1E+02 | 1.8E+03 | – | – | – |
| Chloroaniline, p- | 106-47-8 | – | – | 3.0E+01 | 1.0E+02 | – | – | – | – | – | 3.3E+02 | 1.4E+03 | – | – | – |
| Chlorobenzene | 108-90-7 | – | – | – | – | – | – | – | 7.7E+02 | 3.9E+02 | 1.6E+03 | – | – | 7.7E+02 | 3.9E+02 |
| Chlorobenzilate | 510-15-6 | 3.5E+02 | 1.8E+02 | 2.2E+01 | 7.7E+01 | – | 3.5E+02 | 1.8E+02 | – | – | 1.6E+03 | 7.1E+03 | – | – | – |
| Chlorobromomethane (bromochloromethane) | 74-97-5 | – | – | – | – | – | – | – | – | – | 3.3E+03 | – | – | – | – |
| Chlorodifluoromethane | 75-45-6 | – | – | – | – | – | – | – | 7.7E+05 | 3.9E+05 | – | – | – | 7.7E+05 | 3.9E+05 |
| Chloroethane (ethyl chloride) | 75-00-3 | – | – | – | – | – | – | – | 1.5E+05 | 7.9E+04 | 3.3E+04 | – | – | 1.5E+05 | 7.9E+04 |
| Chloroethanol, 2- | 107-07-3 | – | – | – | – | – | – | – | – | – | 1.6E+03 | – | – | – | – |
| Chloroethoxy ethene, 2- (2-chloroethylvinylether) | 110-75-8 | – | – | 5.5E+00 | – | – | – | – | 4.6E+00 | 2.4E+00 | 1.6E+02 | – | – | 4.6E+00 | 2.4E+00 |
| Chloroform | 67-66-3 | 1.6E+01 | 8.0E+00 | – | – | – | 1.6E+01 | 8.0E+00 | 1.5E+03 | 7.7E+02 | 8.2E+02 | – | – | 1.5E+03 | 7.7E+02 |
| Chlorohexane, 1- | 544-10-5 | – | – | – | – | – | – | – | 1.5E+04 | 7.9E+03 | 3.3E+03 | – | – | 1.5E+04 | 7.9E+03 |
| Chloromethane (methyl chloride) | 74-87-3 | 2.0E+02 | 1.0E+02 | 4.7E+02 | – | – | 2.0E+02 | 1.0E+02 | 1.4E+03 | 7.1E+02 | 2.9E+02 | – | – | 1.4E+03 | 7.1E+02 |
| Chloronaphthalene, 1- (Chloronaphthalene, alpha-) | 90-13-1 | – | – | – | – | – | – | – | – | – | 6.6E+03 | 2.2E+04 | 5.2E+04 | – | – |
| Chloronaphthalene, 2- (chloronaphthalene, beta) | 91-58-7 | – | – | – | – | – | – | – | – | – | 6.6E+03 | 2.2E+04 | – | – | – |
| Chloronitrobenzene, p- (1-chloro-4-nitrobenzene) | 100-00-5 | – | – | 9.6E+02 | 3.3E+03 | – | – | – | 6.3E+01 | 3.2E+01 | 8.2E+01 | 3.6E+02 | – | 6.3E+01 | 3.2E+01 |
| Chlorophenol, 2- | 95-57-8 | – | – | – | – | – | – | – | – | – | 4.1E+02 | – | – | – | – |
| Chlorophenol, 3- | 108-43-0 | – | – | – | – | – | – | – | – | – | 4.1E+02 | 1.8E+03 | – | – | – |
| Chlorophenol, 4- | 106-48-9 | – | – | – | – | – | – | – | – | – | 4.1E+02 | 1.8E+03 | – | – | – |
| Chlorophenyl phenylether, 4- | 7005-72-3 | 2.5E+00 | 1.3E+00 | 4.0E-01 | 1.4E+00 | 3.9E-01 | 2.5E+00 | 1.3E+00 | – | – | – | – | – | – | – |
| Chloropropane, 2- | 75-29-6 | – | – | – | – | – | – | – | 1.5E+03 | 7.9E+02 | 2.5E+03 | – | – | 1.5E+03 | 7.9E+02 |
| Chlorothalonil | 1897-45-6 | – | – | 5.5E+02 | 1.9E+03 | – | – | – | – | – | 1.2E+03 | 5.3E+03 | – | – | – |
| Chlorotoluene, o- (2-chlorotoluene) | 95-49-8 | – | – | – | – | – | – | – | 1.3E+04 | 6.8E+03 | 1.6E+03 | 7.1E+03 | – | 1.3E+04 | 6.8E+03 |
| Chlorotoluene, p- (4-chlorotoluene) | 106-43-4 | – | – | – | – | – | – | – | – | – | 1.6E+03 | – | – | – | – |
| Chlorpyrifos | 2921-88-2 | – | – | – | – | – | – | – | – | – | 2.5E+02 | 1.1E+03 | 3.6E+02 | – | – |
| Chromium (III) | 16065-83-1 | – | – | – | – | – | – | – | 1.4E+05 | 7.0E+04 | 1.2E+05 | 6.9E+04 | 1.0E+06 | – | – |
| Chromium (total) | 7440-47-3 | – | – | – | – | – | – | – | 1.4E+05 | 7.0E+04 | 1.2E+05 | 6.9E+04 | 1.0E+06 | – | – |
| Chromium (VI) | 18540-29-9 | 9.8E+03 | 5.1E+03 | – | – | – | – | – | 2.1E+05 | 1.1E+05 | 2.5E+02 | 2.7E+02 | 2.9E+03 | – | – |
| Chrysene | 218-01-9 | 8.5E+05 | 4.4E+05 | 6.1E+03 | 1.6E+04 | 5.9E+04 | 8.7E+05 | 4.5E+05 | – | – | – | – | – | – | – |
| Cobalt | 7440-48-4 | 3.8E+03 | 1.9E+03 | – | – | – | – | – | 6.1E+04 | 3.1E+04 | 8.2E+02 | 3.6E+04 | 5.0E+03 | – | – |
| Copolymer acrylamide | 69418-26-4 | – | – | – | – | – | – | – | – | – | 1.6E+01 | 7.1E+01 | – | – | – |
| Copper | 7440-50-8 | – | – | – | – | – | – | – | – | – | 7.9E+03 | 3.4E+05 | 1.6E+03 | – | – |
| Coronene | 191-07-1 | – | – | – | – | – | – | – | – | – | 1.6E+02 | 7.1E+02 | 7.6E+03 | – | – |
| Coumaphos | 56-72-4 | – | – | – | – | – | – | – | – | – | 5.7E+02 | 2.5E+03 | 5.3E+03 | – | – |
| Cresol | 1319-77-3 | – | – | – | – | – | – | – | – | – | 4.1E+03 | 1.8E+04 | – | – | – |
| Cresol, m- (3-methylphenol) | 108-39-4 | – | – | – | – | – | – | – | – | – | 4.1E+03 | 1.8E+04 | – | – | – |
| Cresol, o- (2-methylphenol) | 95-48-7 | – | – | – | – | – | – | – | – | – | 4.1E+03 | 1.8E+04 | – | – | – |
| Cresol, p- (4-methylphenol) | 106-44-5 | – | – | – | – | – | – | – | – | – | 4.1E+02 | 1.8E+03 | – | – | – |
| Crotonaldehyde | 123-73-9 | – | – | 3.2E+00 | – | – | – | – | – | – | 8.2E+01 | – | – | – | – |

# Table 6
# Tier 1 Individual Residential Soil PCLs

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | Carcinogenic | | | | | | | Noncarcinogenic | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | $^{Air}Soil_{Inh\text{-}VP}$ 0.5 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}VP}$ 30 acre source area (mg/kg) | $^{Soil}Soil_{Ing}$ (mg/kg) | $^{Soil}Soil_{Derm}$ (mg/kg) | $^{Veg}Soil_{Ing}$ (mg/kg) | $^{Air}Soil_{Inh\text{-}V}$[1] 0.5 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}V}$[1] 30 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}VP}$ 0.5 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}VP}$ 30 acre source area (mg/kg) | $^{Soil}Soil_{Ing}$ (mg/kg) | $^{Soil}Soil_{Derm}$ (mg/kg) | $^{Veg}Soil_{Ing}$ (mg/kg) | $^{Air}Soil_{Inh\text{-}V}$[1] 0.5 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}V}$[1] 30 acre source area (mg/kg) |
| Cumene (isopropylbenzene) | 98-82-8 | – | – | – | – | – | – | – | 9.2E+03 | 4.8E+03 | 8.2E+03 | – | – | 9.2E+03 | 4.8E+03 |
| Cyanazine | 21725-46-2 | – | – | 7.2E+00 | 2.5E+01 | – | – | – | – | – | 1.6E+02 | 7.1E+02 | – | – | – |
| Cyanide | 57-12-5 | – | – | – | – | – | – | – | 7.2E+02 | 3.7E+02 | 4.9E+01 | 2.1E+03 | – | 7.2E+02 | 3.7E+02 |
| Cyanogen | 460-19-5 | – | – | – | – | – | – | – | 1.2E+01 | 6.3E+00 | 8.2E+01 | – | – | 1.2E+01 | 6.3E+00 |
| Cycloate | 1134-23-2 | – | – | – | – | – | – | – | – | – | 4.5E+03 | 2.0E+04 | – | – | – |
| Cyclohexane | 110-82-7 | – | – | – | – | – | – | – | 9.2E+04 | 4.7E+04 | 4.1E+05 | – | – | 9.2E+04 | 4.7E+04 |
| Cyclohexanol | 108-93-0 | – | – | – | – | – | – | – | – | – | 4.1E+05 | 1.0E+06 | – | – | – |
| Cyclohexanone | 108-94-1 | – | – | – | – | – | – | – | 3.5E+04 | 1.8E+04 | 4.1E+05 | – | – | 3.5E+04 | 1.8E+04 |
| Cyclohexene, 1-methanol-3- | 1679-51-2 | – | – | – | – | – | – | – | – | – | 1.6E+03 | 7.1E+03 | – | – | – |
| Cyclohexene, 4-vinyl-1- | 100-40-3 | – | – | – | – | – | – | – | 5.1E+03 | 2.6E+03 | 1.8E+03 | – | – | 5.1E+03 | 2.6E+03 |
| Cyclopentane | 287-92-3 | – | – | – | – | – | – | – | 3.7E+05 | 1.9E+05 | 4.9E+03 | – | – | 3.7E+05 | 1.9E+05 |
| Cyclopentane, methyl- | 96-37-7 | – | – | – | – | – | – | – | 1.5E+04 | 7.9E+03 | 8.2E+03 | – | – | 1.5E+04 | 7.9E+03 |
| Cyclopentene | 142-29-0 | – | – | – | – | – | – | – | – | – | 4.1E+05 | – | – | – | – |
| Cyclotetramethylenetetranitramine (HMX) | 2691-41-0 | – | – | – | – | – | – | – | – | – | 4.1E+03 | 2.7E+03 | – | – | – |
| Cyclotrimethylenetrinitramine (RDX) | 121-82-4 | – | – | 7.6E+01 | 2.6E+02 | – | – | – | – | – | 3.3E+02 | 1.4E+03 | – | – | – |
| Cymene (isopropyltoluene) | 99-87-6 | – | – | – | – | – | – | – | – | – | 8.2E+03 | – | – | – | – |
| Cymoxanil | 57966-95-7 | – | – | – | – | – | – | – | – | – | 1.1E+03 | 4.6E+03 | – | – | – |
| Dacthal (DCPA) | 1861-32-1 | – | – | – | – | – | – | – | – | – | 8.2E+02 | 3.6E+03 | 1.0E+04 | – | – |
| Dalapon, sodium salt (2,2-dichloropropanoic acid) | 75-99-0 | – | – | – | – | – | – | – | – | – | 2.5E+03 | 1.1E+04 | – | – | – |
| DDD | 72-54-8 | – | – | 2.5E+01 | 2.9E+02 | 3.7E+01 | – | – | – | – | – | – | – | – | – |
| DDE | 72-55-9 | – | – | 1.8E+01 | 2.0E+02 | 2.7E+01 | – | – | – | – | – | – | – | – | – |
| DDT | 50-29-3 | 1.2E+03 | 6.2E+02 | 1.8E+01 | 2.0E+02 | 8.1E+00 | 1.2E+03 | 6.2E+02 | – | – | 4.1E+01 | 5.9E+02 | 3.7E+01 | – | – |
| Demeton | 8065-48-3 | – | – | – | – | – | – | – | – | – | 3.3E+00 | 1.4E+01 | – | – | – |
| Desethylatrazine | 6190-65-4 | – | – | – | – | – | – | – | – | – | 2.9E+03 | 1.2E+04 | – | – | – |
| Diacetone alcohol (4-hydroxy-4-methyl-2-pentanone) | 123-42-2 | – | – | – | – | – | – | – | – | – | 3.3E+03 | 1.4E+04 | – | – | – |
| Diallate | 2303-16-4 | – | – | 1.0E+02 | 3.4E+02 | 7.6E+01 | – | – | – | – | – | – | – | – | – |
| Diazinon | 333-41-5 | – | – | – | – | – | – | – | 6.5E+01 | 3.3E+01 | 7.4E+01 | 3.2E+02 | – | 6.5E+01 | 3.3E+01 |
| Dibenz(a,h)acridine | 226-36-8 | 1.4E+04 | 7.4E+03 | 5.1E+00 | 1.7E+01 | 6.6E+01 | 1.5E+04 | 7.9E+03 | – | – | – | – | – | – | – |
| Dibenz(a,j)acridine | 224-42-0 | 1.9E+04 | 1.0E+04 | 8.3E+00 | 2.2E+01 | 1.4E+02 | 2.1E+04 | 1.1E+04 | – | – | – | – | – | – | – |
| Dibenz-a,h-anthracene | 53-70-3 | 2.7E+03 | 1.4E+03 | 6.1E+00 | 1.6E+01 | 4.6E+01 | 2.9E+03 | 1.5E+03 | – | – | – | – | – | – | – |
| Dibenzo(a,e)pyrene | 192-65-4 | 5.6E+03 | 2.9E+03 | 8.3E-01 | 2.8E+00 | 1.1E+01 | 7.2E+03 | 3.7E+03 | – | – | – | – | – | – | – |
| Dibenzo(a,h)pyrene | 189-64-0 | 5.5E+02 | 2.8E+02 | 8.3E-02 | 2.8E-01 | 1.1E+00 | 7.0E+02 | 3.6E+02 | – | – | – | – | – | – | – |
| Dibenzo(a,i)pyrene | 189-55-9 | 5.5E+02 | 2.8E+02 | 8.3E-02 | 2.8E-01 | 1.1E+00 | 7.0E+02 | 3.6E+02 | – | – | – | – | – | – | – |
| Dibenzofuran | 132-64-9 | – | – | – | – | – | – | – | – | – | 3.3E+02 | 1.4E+03 | – | – | – |
| Dibenzothiophene | 132-65-0 | – | – | – | – | – | – | – | – | – | 8.2E+02 | 1.1E+03 | 8.8E+03 | – | – |
| Dibromo-3-chloropropane, 1,2- | 96-12-8 | 1.6E-01 | 8.1E-02 | 7.6E+00 | 2.6E+01 | – | 1.6E-01 | 8.1E-02 | 8.1E+00 | 4.2E+00 | 1.6E+01 | 7.1E+01 | – | 8.1E+00 | 4.2E+00 |
| Dibromochloromethane (chlorodibromomethane) | 124-48-1 | – | – | 7.2E+01 | – | – | – | – | – | – | 1.6E+03 | – | – | – | – |
| Dibromofluoromethane | 1868-53-7 | – | – | – | – | – | – | – | – | – | 1.6E+04 | – | – | – | – |
| Dicamba | 1918-00-9 | – | – | – | – | – | – | – | – | – | 2.5E+03 | 1.1E+04 | – | – | – |
| Dichlormid | 37764-25-3 | – | – | – | – | – | – | – | – | – | 2.0E+03 | 8.9E+03 | – | – | – |
| Dichloro-2-butene, 1,4- | 764-41-0 | 2.0E-01 | 1.0E-01 | – | – | – | 2.0E-01 | 1.0E-01 | – | – | – | – | – | – | – |
| Dichloro-2-butene, 1,4- trans | 110-57-6 | 2.0E-01 | 1.1E-01 | – | – | – | 2.0E-01 | 1.1E-01 | – | – | – | – | – | – | – |
| Dichlorobenzene, 1,2- | 95-50-1 | – | – | – | – | – | – | – | 8.0E+02 | 4.1E+02 | 7.4E+03 | – | – | 8.0E+02 | 4.1E+02 |

# Table 6
# Tier 1 Individual Residential Soil PCLs

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | Carcinogenic | | | | | | | Noncarcinogenic | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | $^{Air}Soil_{Inh\text{-}VP}$ 0.5 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}VP}$ 30 acre source area (mg/kg) | $^{Soil}Soil_{Ing}$ (mg/kg) | $^{Soil}Soil_{Derm}$ (mg/kg) | $^{Veg}Soil_{Ing}$ (mg/kg) | $^{Air}Soil_{Inh\text{-}V}$[1] 0.5 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}V}$[1] 30 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}VP}$ 0.5 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}VP}$ 30 acre source area (mg/kg) | $^{Soil}Soil_{Ing}$ (mg/kg) | $^{Soil}Soil_{Derm}$ (mg/kg) | $^{Veg}Soil_{Ing}$ (mg/kg) | $^{Air}Soil_{Inh\text{-}V}$[1] 0.5 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}V}$[1] 30 acre source area (mg/kg) |
| Dichlorobenzene, 1,3- | 541-73-1 | – | – | – | – | – | – | – | 1.2E+02 | 6.3E+01 | 2.5E+03 | – | – | 1.2E+02 | 6.3E+01 |
| Dichlorobenzene, 1,4- | 106-46-7 | – | – | 2.5E+02 | – | – | – | – | 1.2E+04 | 6.1E+03 | – | – | – | 1.2E+04 | 6.1E+03 |
| Dichlorobenzidine, 3,3- | 91-94-1 | – | – | 1.3E+01 | 4.6E+01 | – | – | – | – | – | – | – | – | – | – |
| Dichlorobutane, 2,3- | 7581-97-7 | – | – | – | – | – | – | – | 1.1E+02 | 5.5E+01 | 8.2E+02 | – | – | 1.1E+02 | 5.5E+01 |
| Dichlorodifluoromethane | 75-71-8 | – | – | – | – | – | – | – | 1.5E+03 | 7.9E+02 | 1.6E+04 | – | – | 1.5E+03 | 7.9E+02 |
| Dichloroethane, 1,1- | 75-34-3 | – | – | – | – | – | – | – | 3.7E+04 | 1.9E+04 | 1.6E+04 | – | – | 3.7E+04 | 1.9E+04 |
| Dichloroethane, 1,2- | 107-06-2 | 1.1E+02 | 5.4E+01 | 6.7E+01 | – | – | 1.1E+02 | 5.4E+01 | 6.8E+02 | 3.5E+02 | 6.4E+03 | – | – | 6.8E+02 | 3.5E+02 |
| Dichloroethylene, 1,1- | 75-35-4 | – | – | – | – | – | – | – | 5.2E+03 | 2.7E+03 | 4.1E+03 | – | – | 5.2E+03 | 2.7E+03 |
| Dichloroethylene, cis-1,2- | 156-59-2 | – | – | – | – | – | – | – | 9.2E+02 | 4.7E+02 | 1.6E+02 | – | – | 9.2E+02 | 4.7E+02 |
| Dichloroethylene, trans-1,2 | 156-60-5 | – | – | – | – | – | – | – | 9.2E+02 | 4.7E+02 | 1.6E+03 | – | – | 9.2E+02 | 4.7E+02 |
| Dichlorofluoromethane | 75-43-4 | – | – | – | – | – | – | – | – | – | 1.6E+04 | – | – | – | – |
| Dichlorophenol, 2,3- | 576-24-9 | – | – | – | – | – | – | – | – | – | 2.5E+02 | 1.1E+03 | – | – | – |
| Dichlorophenol, 2,4- | 120-83-2 | – | – | – | – | – | – | – | – | – | 2.5E+02 | 1.1E+03 | – | – | – |
| Dichlorophenol, 2,5- | 583-78-8 | – | – | – | – | – | – | – | – | – | 2.5E+02 | 1.1E+03 | – | – | – |
| Dichlorophenol, 2,6- | 87-65-0 | – | – | – | – | – | – | – | – | – | 8.2E+01 | 3.6E+02 | – | – | – |
| Dichlorophenol, 3,4- | 95-77-2 | – | – | – | – | – | – | – | – | – | 2.5E+02 | 1.1E+03 | – | – | – |
| Dichlorophenol, 3,5- | 591-35-5 | – | – | – | – | – | – | – | – | – | 2.5E+02 | 1.1E+03 | – | – | – |
| Dichlorophenoxy, 2,4- butyric acid, 4- (2,4-DB) | 94-82-6 | – | – | – | – | – | – | – | – | – | 6.6E+02 | 2.8E+03 | – | – | – |
| Dichlorophenoxyacetic acid, 2,4- (2,4-D) | 94-75-7 | – | – | – | – | – | – | – | – | – | 8.2E+02 | 7.1E+03 | – | – | – |
| Dichloroprop (2-(2,4-dichlorophenoxy) propanoic acid) | 120-36-5 | – | – | – | – | – | – | – | – | – | 8.2E+02 | 3.6E+03 | – | – | – |
| Dichloropropane, 1,2- | 78-87-5 | 3.9E+02 | 2.0E+02 | 1.6E+02 | – | – | 3.9E+02 | 2.0E+02 | 6.1E+01 | 3.2E+01 | 1.1E+04 | – | – | 6.1E+01 | 3.2E+01 |
| Dichloropropane, 1,3- | 142-28-9 | 9.0E+01 | 4.6E+01 | 6.1E+01 | – | – | 9.0E+01 | 4.6E+01 | 3.1E+02 | 1.6E+02 | 1.6E+03 | – | – | 3.1E+02 | 1.6E+02 |
| Dichloropropane, 2,2- | 594-20-7 | – | – | 8.9E+01 | – | – | – | – | 6.1E+01 | 3.2E+01 | 7.4E+03 | – | – | 6.1E+01 | 3.2E+01 |
| Dichloropropanol, 2,3- | 616-23-9 | – | – | – | – | – | – | – | – | – | 2.5E+02 | 1.1E+03 | – | – | – |
| Dichloropropene, 1,1- | 563-58-6 | 9.0E+01 | 4.6E+01 | 6.1E+01 | – | – | 9.0E+01 | 4.6E+01 | 3.1E+02 | 1.6E+02 | 2.5E+03 | – | – | 3.1E+02 | 1.6E+02 |
| Dichloropropene, 1,3- (mixed isomers) | 542-75-6 | 9.0E+01 | 4.6E+01 | 6.1E+01 | – | – | 9.0E+01 | 4.6E+01 | 3.1E+02 | 1.6E+02 | 2.5E+03 | – | – | 3.1E+02 | 1.6E+02 |
| Dichloropropene, cis 1,3- | 10061-01-5 | – | – | 1.1E+01 | – | – | – | – | 3.1E+02 | 1.6E+02 | 8.2E+00 | – | – | 3.1E+02 | 1.6E+02 |
| Dichloropropene, trans 1,3- | 10061-02-6 | 9.0E+01 | 4.6E+01 | 6.1E+01 | – | – | 9.0E+01 | 4.6E+01 | 3.1E+02 | 1.6E+02 | 2.5E+03 | – | – | 3.1E+02 | 1.6E+02 |
| Dichlorvos | 62-73-7 | – | – | 2.1E+01 | 7.2E+01 | – | – | – | 3.4E+05 | 1.8E+05 | 4.1E+01 | 1.8E+02 | – | 1.0E+06 | 6.2E+05 |
| Dicrotophos (bidrin) | 141-66-2 | – | – | – | – | – | – | – | – | – | 8.2E+00 | 3.6E+01 | – | – | – |
| Dicyclopentadiene | 77-73-6 | – | – | – | – | – | – | – | – | – | 6.6E+03 | – | – | – | – |
| Dieldrin | 60-57-1 | 3.2E+01 | 1.6E+01 | 3.8E-01 | 1.3E+00 | 2.9E-01 | 3.2E+01 | 1.6E+01 | – | – | 4.1E+00 | 1.8E+01 | 6.3E+00 | – | – |
| Diethanolamine | 111-42-2 | – | – | – | – | – | – | – | 3.5E+03 | 1.8E+03 | 4.1E+01 | 1.8E+02 | – | 3.5E+03 | 1.8E+03 |
| Diethyldithiocarbamate, sodium salt | 148-18-5 | – | – | 2.2E+01 | – | – | – | – | – | – | 2.5E+03 | – | – | – | – |
| Diethyl phthalate | 84-66-2 | – | – | – | – | – | – | – | – | – | 6.6E+04 | 2.8E+05 | – | – | – |
| Diethylene glycol | 111-46-6 | – | – | – | – | – | – | – | – | – | 1.6E+05 | 7.1E+05 | – | – | – |
| Diethylene glycol monobutyl ether | 112-34-5 | – | – | – | – | – | – | – | 2.0E+01 | 1.0E+01 | 2.5E+03 | 1.1E+04 | – | 2.0E+01 | 1.0E+01 |
| Diethylhexyl adipate | 103-23-1 | – | – | 5.1E+03 | 1.7E+04 | – | – | – | – | – | 4.9E+04 | 2.1E+05 | – | – | – |
| Diethylstilbestrol | 56-53-1 | – | – | 1.3E-03 | 4.4E-03 | 2.5E-03 | – | – | – | – | – | – | – | – | – |
| Diisobutylene (trimethyl-1-pentene, 2,4,4-) | 107-39-1 | – | – | – | – | – | – | – | 3.1E+03 | 1.6E+03 | 4.9E+03 | – | – | 3.1E+03 | 1.6E+03 |
| Diisopropylbenzene, p- | 100-18-5 | – | – | – | – | – | – | – | – | – | 8.2E+02 | 3.6E+03 | – | – | – |
| Diisopropyl ether (2,2'-oxybis-propane) | 108-20-3 | – | – | – | – | – | – | – | 1.1E+04 | 5.5E+03 | 8.2E+03 | – | – | 1.1E+04 | 5.5E+03 |
| Dimethenamid | 87674-68-8 | – | – | – | – | – | – | – | – | – | 1.2E+03 | 5.3E+03 | – | – | – |

# Table 6
# Tier 1 Individual Residential Soil PCLs

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | Carcinogenic | | | | | | | Noncarcinogenic | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | $^{Air}Soil_{Inh\text{-}VP}$ 0.5 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}VP}$ 30 acre source area (mg/kg) | $^{Soil}Soil_{Ing}$ (mg/kg) | $^{Soil}Soil_{Derm}$ (mg/kg) | $^{Veg}Soil_{Ing}$ (mg/kg) | $^{Air}Soil_{Inh\text{-}V}$[1] 0.5 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}V}$[1] 30 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}VP}$ 0.5 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}VP}$ 30 acre source area (mg/kg) | $^{Soil}Soil_{Ing}$ (mg/kg) | $^{Soil}Soil_{Derm}$ (mg/kg) | $^{Veg}Soil_{Ing}$ (mg/kg) | $^{Air}Soil_{Inh\text{-}V}$[1] 0.5 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}V}$[1] 30 acre source area (mg/kg) |
| Dimethoate | 60-51-5 | – | – | – | – | – | – | – | – | – | 1.6E+01 | 7.1E+01 | – | – | – |
| Dimethoxybenzidine, 3,3'- | 119-90-4 | – | – | 4.3E+02 | 1.5E+03 | – | – | – | – | – | – | – | – | – | – |
| Dimethyl-2-nitrobenzene, 1,3- | 81-20-9 | – | – | – | – | – | – | – | 2.7E+03 | 1.4E+03 | 1.6E+02 | 7.1E+02 | – | 2.8E+03 | 1.4E+03 |
| Dimethyl-3-nitrobenzene, 1,2- | 83-41-0 | – | – | – | – | – | – | – | 2.4E+03 | 1.2E+03 | 1.6E+02 | 7.1E+02 | – | 2.4E+03 | 1.2E+03 |
| Dimethyl-4-nitrobenzene, 1-2- | 99-51-4 | – | – | – | – | – | – | – | 2.5E+03 | 1.3E+03 | 1.6E+02 | 7.1E+02 | – | 2.5E+03 | 1.3E+03 |
| Dimethyl-5-nitrobenzene, 1,3- | 99-12-7 | – | – | – | – | – | – | – | 2.2E+03 | 1.1E+03 | 1.6E+02 | 7.1E+02 | – | 2.2E+03 | 1.1E+03 |
| Dimethylphenethylamine, alpha, alpha- | 122-09-8 | – | – | – | – | – | – | – | – | – | 1.6E+02 | 7.1E+02 | – | – | – |
| Dimethyl phenol, 2,4- | 105-67-9 | – | – | – | – | – | – | – | – | – | 1.6E+03 | 7.1E+03 | – | – | – |
| Dimethylaminoazobenzene, p- | 60-11-7 | – | – | – | – | – | – | – | – | – | 8.2E-01 | 3.6E+00 | 1.5E+01 | – | – |
| Dimethylbenz-a-anthracene, 7,12- | 57-97-6 | 1.2E+02 | 6.3E+01 | 2.4E-02 | 6.4E-02 | 3.7E-01 | 1.4E+02 | 7.3E+01 | – | – | – | – | – | – | – |
| Dimethylbenzidine, 3,3'- | 119-93-7 | – | – | 5.5E-01 | 1.9E+00 | – | – | – | – | – | – | – | – | – | – |
| Dimethylformamide, N,N- | 68-12-2 | – | – | – | – | – | – | – | 3.2E+03 | 1.6E+03 | 8.2E+03 | – | – | 3.2E+03 | 1.6E+03 |
| Dimethylnaphthalene, 1,3- | 575-41-7 | – | – | – | – | – | – | – | – | – | 3.3E+03 | 1.1E+04 | 3.1E+04 | – | – |
| Dimethylphthalate | 131-11-3 | – | – | – | – | – | – | – | – | – | 6.6E+04 | 2.8E+05 | – | – | – |
| Di-n-butyl phthalate | 84-74-2 | – | – | – | – | – | – | – | – | – | 8.2E+03 | 3.6E+04 | 8.7E+04 | – | – |
| Dinitro-2-methylphenol, 4,6- (dinitro-o-cresol, 4, 6-) | 534-52-1 | – | – | – | – | – | – | – | – | – | 8.2E+00 | 3.6E+01 | – | – | – |
| Dinitrobenzene, 1,3- (dinitrobenzene, 2,4-) | 99-65-0 | – | – | – | – | – | – | – | – | – | 8.2E+00 | 3.6E+01 | – | – | – |
| Dinitrobenzene, 1,4- | 100-25-4 | – | – | – | – | – | – | – | – | – | 8.2E+00 | 3.6E+01 | – | – | – |
| Dinitrophenol, 2,4- | 51-28-5 | – | – | – | – | – | – | – | – | – | 1.6E+02 | 7.1E+02 | – | – | – |
| Dinitrophenol, 2,5- | 329-71-5 | – | – | – | – | – | – | – | – | – | 1.6E+02 | 7.1E+02 | – | – | – |
| Dinitrotoluene, 2,4- | 121-14-2 | – | – | 8.9E+00 | 3.1E+01 | – | – | – | – | – | 1.6E+02 | 7.1E+02 | – | – | – |
| Dinitrotoluene, 2,6- | 606-20-2 | – | – | 8.9E+00 | 3.1E+01 | – | – | – | – | – | 8.2E+01 | 3.6E+02 | – | – | – |
| Di-n-octyl phthalate | 117-84-0 | – | – | – | – | – | – | – | – | – | 8.2E+02 | 3.6E+03 | 2.0E+04 | – | – |
| Dinoseb | 88-85-7 | – | – | – | – | – | – | – | – | – | 8.2E+01 | 3.6E+02 | – | – | – |
| Dioxane 1,4- | 123-91-1 | 1.8E+02 | 9.3E+01 | 6.1E+01 | – | – | 1.8E+02 | 9.3E+01 | 4.2E+03 | 2.2E+03 | 2.5E+03 | – | – | 4.2E+03 | 2.2E+03 |
| Dioxin (as 2,3,7,8-TCDD toxicity equivalent quotients (TEQs)) | 1746-01-6 | – | – | – | – | – | – | – | – | – | – | – | – | – | – |
| Diphenyl ether | 101-84-8 | – | – | – | – | – | – | – | – | – | 5.1E+02 | 2.2E+03 | 4.5E+03 | – | – |
| Diphenylamine | 122-39-4 | – | – | – | – | – | – | – | – | – | 2.0E+03 | 8.9E+03 | – | – | – |
| Diphenylhydrazine, 1,2- | 122-66-7 | 1.4E+02 | 7.2E+01 | 7.6E+00 | 2.6E+01 | – | 1.4E+02 | 7.2E+01 | – | – | – | – | – | – | – |
| Dipropylene glycol | 110-98-5 | – | – | – | – | – | – | – | – | – | 9.8E+03 | 4.3E+04 | – | – | – |
| Diquat | 85-00-7 | – | – | – | – | – | – | – | – | – | 1.8E+02 | 7.8E+02 | – | – | – |
| Disodium iminodiacetate (iminodiacetic acid, disodium salt) | 142-73-4 | – | – | – | – | – | – | – | – | – | 8.2E+02 | 3.6E+03 | – | – | – |
| Disulfoton | 298-04-4 | – | – | – | – | – | – | – | – | – | 3.3E+00 | 1.4E+01 | – | – | – |
| Diuron | 330-54-1 | – | – | – | – | – | – | – | – | – | 1.6E+02 | 7.1E+02 | – | – | – |
| Dodecylphenol, 4- | 104-43-8 | – | – | – | – | – | – | – | – | – | 4.1E+03 | 1.8E+04 | 3.9E+05 | – | – |
| Endosulfan | 115-29-7 | – | – | – | – | – | – | – | – | – | 4.9E+02 | 2.1E+03 | – | – | – |
| Endosulfan I | 959-98-8 | – | – | – | – | – | – | – | – | – | 1.6E+02 | 7.1E+02 | 2.9E+02 | – | – |
| Endosulfan II | 33213-65-9 | – | – | – | – | – | – | – | – | – | 4.9E+02 | 2.1E+03 | 8.6E+02 | – | – |
| Endosulfan sulfate | 1031-07-8 | – | – | – | – | – | – | – | – | – | 4.9E+02 | 2.1E+03 | 1.0E+04 | – | – |
| Endothall | 145-73-3 | – | – | – | – | – | – | – | – | – | 1.6E+03 | 7.1E+03 | – | – | – |
| Endrin | 72-20-8 | – | – | – | – | – | – | – | – | – | 2.5E+01 | 1.1E+02 | 1.6E+01 | – | – |
| Endrin aldehyde | 7421-93-4 | – | – | – | – | – | – | – | – | – | 2.5E+01 | 1.1E+02 | 6.5E+02 | – | – |
| Endrin ketone | 53494-70-5 | – | – | – | – | – | – | – | – | – | 2.5E+01 | 1.1E+02 | 3.8E+02 | – | – |

# Table 6
# Tier 1 Individual Residential Soil PCLs

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | Carcinogenic | | | | | | | Noncarcinogenic | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | $^{Air}Soil_{Inh\text{-}VP}$ 0.5 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}VP}$ 30 acre source area (mg/kg) | $^{Soil}Soil_{Ing}$ (mg/kg) | $^{Soil}Soil_{Derm}$ (mg/kg) | $^{Veg}Soil_{Ing}$ (mg/kg) | $^{Air}Soil_{Inh\text{-}V}$[1] 0.5 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}V}$[1] 30 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}VP}$ 0.5 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}VP}$ 30 acre source area (mg/kg) | $^{Soil}Soil_{Ing}$ (mg/kg) | $^{Soil}Soil_{Derm}$ (mg/kg) | $^{Veg}Soil_{Ing}$ (mg/kg) | $^{Air}Soil_{Inh\text{-}V}$[1] 0.5 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}V}$[1] 30 acre source area (mg/kg) |
| Epichlorohydrin | 106-89-8 | 5.1E+02 | 2.6E+02 | 6.1E+02 | – | – | 5.1E+02 | 2.6E+02 | 2.6E+01 | 1.4E+01 | 4.9E+02 | – | – | 2.6E+01 | 1.4E+01 |
| EPN (o-ethyl o-(4-nitrophenyl)phenylphosphonothioate) | 2104-64-5 | – | – | – | – | – | – | – | – | – | 8.2E-01 | 3.6E+00 | – | – | – |
| Esfenvalerate | 66230-04-4 | – | – | – | – | – | – | – | – | – | 1.6E+02 | 7.1E+02 | 1.7E+02 | – | – |
| Ethalfluralin (sonolan) | 55283-68-6 | – | – | 6.8E+01 | 2.3E+02 | 4.5E+02 | – | – | – | – | 3.3E+03 | 1.4E+04 | 4.3E+04 | – | – |
| Ethanol | 64-17-5 | – | – | – | – | – | – | – | – | – | 1.0E+06 | – | – | – | – |
| Ethanol, 2-amino- | 141-43-5 | – | – | – | – | – | – | – | 2.9E+03 | 1.5E+03 | 1.4E+02 | 6.0E+02 | – | 2.9E+03 | 1.5E+03 |
| Ethanol, 2-(2-aminoethoxy)- | 929-06-6 | – | – | – | – | – | – | – | – | – | 4.1E+01 | 1.8E+02 | – | – | – |
| Ethanol, 2-(2-ethoxyethoxy)- | 111-90-0 | – | – | – | – | – | – | – | – | – | 1.6E+05 | 7.1E+05 | – | – | – |
| Ethanol, 2-(methylamino)- | 109-83-1 | – | – | – | – | – | – | – | 6.4E+03 | 3.3E+03 | 1.3E+03 | 5.7E+03 | – | 6.4E+03 | 3.3E+03 |
| Ethion | 563-12-2 | – | – | – | – | – | – | – | – | – | 4.1E+01 | 1.8E+02 | 1.6E+02 | – | – |
| Ethoprop | 13194-48-4 | – | – | 2.2E+02 | 7.4E+02 | – | – | – | – | – | 8.2E+00 | 3.6E+01 | – | – | – |
| Ethoxy ethanol, 2- | 110-80-5 | – | – | – | – | – | – | – | 2.5E+04 | 1.3E+04 | 7.4E+03 | – | – | 2.5E+04 | 1.3E+04 |
| Ethyl acetate | 141-78-6 | – | – | – | – | – | – | – | 3.7E+03 | 1.9E+03 | 7.4E+04 | – | – | 3.7E+03 | 1.9E+03 |
| Ethyl acrylate | 140-88-5 | – | – | 1.3E+02 | – | – | – | – | 2.4E+02 | 1.2E+02 | 4.1E+02 | – | – | 2.4E+02 | 1.2E+02 |
| Ethyl benzene | 100-41-4 | – | – | – | – | – | – | – | 2.9E+04 | 1.5E+04 | 8.2E+03 | – | – | 2.9E+04 | 1.5E+04 |
| Ethyl dipropylthiocarbamate, S- | 759-94-4 | – | – | – | – | – | – | – | – | – | 2.0E+03 | 8.9E+03 | – | – | – |
| Ethyl ether | 60-29-7 | – | – | – | – | – | – | – | – | – | 1.6E+04 | – | – | – | – |
| Ethyl methacrylate | 97-63-2 | – | – | – | – | – | – | – | 7.1E+03 | 3.6E+03 | 7.4E+03 | – | – | 7.1E+03 | 3.6E+03 |
| Ethyl methanesulfonate | 62-50-0 | 1.2E+02 | 6.1E+01 | 6.1E+01 | 2.1E+02 | – | 1.2E+02 | 6.1E+01 | – | – | – | – | – | – | – |
| Ethyl tert-butyl ether (2-ethyl-2-ethoxypropane) | 637-92-3 | – | – | – | – | – | – | – | 4.6E+03 | 2.4E+03 | 8.2E+01 | – | – | 4.6E+03 | 2.4E+03 |
| Ethyl-1-hexanol, 2- | 104-76-7 | – | – | – | – | – | – | – | – | – | 1.2E+04 | 5.3E+04 | – | – | – |
| Ethyl-2-hexenal, 2- | 645-62-5 | – | – | – | – | – | – | – | – | – | 1.2E+04 | – | – | – | – |
| Ethyl-2-methyl benzene, 1- | 611-14-3 | – | – | – | – | – | – | – | 8.4E+03 | 4.3E+03 | 4.1E+03 | – | – | 8.4E+03 | 4.3E+03 |
| Ethyl-4-methyl benzene, 1- | 622-96-8 | – | – | – | – | – | – | – | 7.2E+03 | 3.7E+03 | 4.1E+03 | – | – | 7.2E+03 | 3.7E+03 |
| Ethylene* | 74-85-1 | – | – | – | – | – | – | – | – | – | – | – | – | – | – |
| Ethylene dibromide (dibromoethane, 1,2- ) | 106-93-4 | 1.3E+01 | 6.8E+00 | 3.0E+00 | – | – | 1.3E+01 | 6.8E+00 | 1.7E+03 | 8.6E+02 | 7.4E+02 | – | – | 1.7E+03 | 8.6E+02 |
| Ethylene glycol | 107-21-1 | – | – | – | – | – | – | – | – | – | 1.6E+05 | 7.1E+05 | – | – | – |
| Ethylene oxide | 75-21-8 | 4.7E+00 | 2.4E+00 | 6.0E+00 | – | – | 4.7E+00 | 2.4E+00 | – | – | – | – | – | – | – |
| Ethylene thiourea | 96-45-7 | – | – | 5.5E+01 | 1.9E+02 | – | – | – | – | – | 6.6E+00 | 2.8E+01 | – | – | – |
| Ethylenediamine | 107-15-3 | – | – | – | – | – | – | – | – | – | 7.4E+03 | – | – | – | – |
| Ethylenimine | 151-56-4 | 1.3E-01 | 6.8E-02 | 9.3E-02 | – | – | 1.3E-01 | 6.8E-02 | – | – | – | – | – | – | – |
| Ethylhexyl acrylate, 2- | 103-11-7 | – | – | 1.3E+02 | 4.3E+02 | – | – | – | – | – | – | – | – | – | – |
| Famphur | 52-85-7 | – | – | – | – | – | – | – | – | – | 2.5E+00 | 1.1E+01 | – | – | – |
| Fensulfothion | 115-90-2 | – | – | – | – | – | – | – | – | – | 8.2E+01 | 3.6E+02 | – | – | – |
| Fenthion | 55-38-9 | – | – | – | – | – | – | – | – | – | 5.7E+00 | 2.5E+01 | – | – | – |
| Fenuron | 101-42-8 | – | – | – | – | – | – | – | – | – | 5.7E+03 | 2.5E+04 | – | – | – |
| Fluoranthene | 206-44-0 | – | – | – | – | – | – | – | – | – | 3.3E+03 | 1.1E+04 | 2.9E+04 | – | – |
| Fluorene | 86-73-7 | – | – | – | – | – | – | – | – | – | 3.3E+03 | 1.1E+04 | 2.2E+04 | – | – |
| Fluorine (soluble fluoride) | 7782-41-4 | – | – | – | – | – | – | – | 1.0E+06 | 1.0E+06 | 4.9E+03 | 2.1E+05 | – | – | – |
| Fluorochloridone | 61213-25-0 | – | – | – | – | – | – | – | – | – | 6.1E+02 | 2.7E+03 | – | – | – |
| Fonofos | 944-22-9 | – | – | – | – | – | – | – | – | – | 1.6E+02 | 7.1E+02 | – | – | – |
| Formaldehyde | 50-00-0 | – | – | – | – | – | – | – | 9.9E+02 | 5.1E+02 | 1.6E+04 | – | – | 9.9E+02 | 5.1E+02 |
| Formic acid | 64-18-6 | – | – | – | – | – | – | – | 2.1E+02 | 1.1E+02 | 7.4E+04 | – | – | 2.1E+02 | 1.1E+02 |

# Table 6
# Tier 1 Individual Residential Soil PCLs

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | Carcinogenic | | | | | | | Noncarcinogenic | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | $^{Air}Soil_{Inh\text{-}VP}$ 0.5 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}VP}$ 30 acre source area (mg/kg) | $^{Soil}Soil_{Ing}$ (mg/kg) | $^{Soil}Soil_{Derm}$ (mg/kg) | $^{Veg}Soil_{Ing}$ (mg/kg) | $^{Air}Soil_{Inh\text{-}V}$[1] 0.5 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}V}$[1] 30 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}VP}$ 0.5 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}VP}$ 30 acre source area (mg/kg) | $^{Soil}Soil_{Ing}$ (mg/kg) | $^{Soil}Soil_{Derm}$ (mg/kg) | $^{Veg}Soil_{Ing}$ (mg/kg) | $^{Air}Soil_{Inh\text{-}V}$[1] 0.5 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}V}$[1] 30 acre source area (mg/kg) |
| Furan | 110-00-9 | – | – | – | – | – | – | – | – | – | 8.2E+01 | – | – | – | – |
| Furfural | 98-01-1 | – | – | – | – | – | – | – | – | – | 2.5E+02 | – | – | – | – |
| Glycidylaldehyde | 765-34-4 | – | – | – | – | – | – | – | 1.5E+02 | 7.7E+01 | 3.3E+01 | – | – | 1.5E+02 | 7.7E+01 |
| Glyphosate | 1071-83-6 | – | – | – | – | – | – | – | – | – | 8.2E+03 | 3.6E+04 | – | – | – |
| Heptachlor | 76-44-8 | 9.1E+00 | 4.7E+00 | 1.3E+00 | 4.6E+00 | 1.5E-01 | 9.1E+00 | 4.7E+00 | – | – | 4.1E+01 | 1.8E+02 | 9.0E+00 | – | – |
| Heptachlor epoxide | 1024-57-3 | 2.4E+01 | 1.2E+01 | 6.7E-01 | 2.3E+00 | 4.5E-01 | 2.4E+01 | 1.2E+01 | – | – | 1.1E+00 | 4.6E+00 | 1.4E+00 | – | – |
| Heptane, n- | 142-82-5 | – | – | – | – | – | – | – | 1.4E+05 | 7.1E+04 | 4.9E+03 | – | – | 1.4E+05 | 7.1E+04 |
| Heptanoic acid, n- | 111-14-8 | – | – | – | – | – | – | – | 1.2E+02 | 6.3E+01 | 4.1E+04 | 1.8E+05 | – | 1.2E+02 | 6.3E+01 |
| Hexachlorobenzene | 118-74-1 | 1.9E+01 | 9.8E+00 | 3.8E+00 | 1.3E+01 | 1.9E+00 | 1.9E+01 | 9.8E+00 | – | – | 6.6E+01 | 2.8E+02 | 6.4E+01 | – | – |
| Hexachlorobutadiene | 87-68-3 | 2.9E+01 | 1.5E+01 | 7.8E+01 | 2.7E+02 | – | 2.9E+01 | 1.5E+01 | – | – | 8.2E+01 | 3.6E+02 | – | – | – |
| Hexachlorocyclohexane, alpha (alpha-BHC) | 319-84-6 | 1.4E+01 | 7.2E+00 | 9.6E-01 | 8.2E+00 | 3.7E-01 | 1.4E+01 | 7.2E+00 | – | – | 6.6E+02 | 7.1E+03 | 5.0E+02 | – | – |
| Hexachlorocyclohexane, beta (beta-BHC) | 319-85-7 | 7.2E+01 | 3.7E+01 | 3.4E+00 | 2.9E+01 | 1.4E+00 | 7.2E+01 | 3.7E+01 | – | – | – | – | – | – | – |
| Hexachlorocyclohexane, delta (delta-BHC) | 319-86-8 | 1.0E+02 | 5.2E+01 | 3.4E+00 | 2.9E+01 | – | 1.0E+02 | 5.2E+01 | – | – | 2.5E+01 | 2.7E+02 | – | – | – |
| Hexachlorocyclohexane, gamma (lindane; gamma-BHC) | 58-89-9 | – | – | 4.7E+00 | 4.0E+01 | 1.5E+00 | – | – | – | – | 2.5E+01 | 2.7E+02 | 1.6E+01 | – | – |
| Hexachlorocyclohexane, techn (technical-BHC) | 608-73-1 | 8.9E+01 | 4.6E+01 | 3.4E+00 | 2.9E+01 | 2.4E+00 | 8.9E+01 | 4.6E+01 | – | – | – | – | – | – | – |
| Hexachlorocyclopentadiene | 77-47-4 | – | – | – | – | – | – | – | 1.4E+01 | 7.3E+00 | 4.9E+02 | 2.1E+03 | – | 1.4E+01 | 7.3E+00 |
| Hexachloroethane | 67-72-1 | – | – | 1.5E+02 | 5.2E+02 | – | – | – | 4.9E+03 | 2.5E+03 | 5.7E+01 | 2.5E+02 | – | 5.0E+03 | 2.5E+03 |
| Hexachlorophene | 70-30-4 | – | – | – | – | – | – | – | – | – | 2.5E+01 | 1.1E+02 | 2.6E+03 | – | – |
| Hexachloropropylene | 1888-71-7 | – | – | 1.5E+02 | 5.2E+02 | – | – | – | 5.1E+03 | 2.6E+03 | 5.7E+01 | 2.5E+02 | – | 5.1E+03 | 2.6E+03 |
| Hexanal, 2-ethyl- | 123-05-7 | – | – | – | – | – | – | – | – | – | 1.2E+04 | 5.3E+04 | – | – | – |
| Hexane, n- | 110-54-3 | – | – | – | – | – | – | – | 1.0E+04 | 5.3E+03 | 4.9E+03 | – | – | 1.0E+04 | 5.3E+03 |
| Hexanediamine, 1,6- | 124-09-4 | – | – | – | – | – | – | – | – | – | 4.1E+02 | 1.8E+03 | – | – | – |
| Hexanedinitrile | 111-69-3 | – | – | – | – | – | – | – | 9.8E+02 | 5.1E+02 | 1.1E+02 | 5.0E+02 | – | 9.8E+02 | 5.1E+02 |
| Hexanediol, 1,6- | 629-11-8 | – | – | – | – | – | – | – | 1.0E+06 | 1.0E+06 | 4.1E+05 | 1.0E+06 | – | 1.0E+06 | 1.0E+06 |
| Hexanoic acid | 142-62-1 | – | – | – | – | – | – | – | 1.4E+02 | 7.0E+01 | 5.2E+03 | 2.3E+04 | – | 1.4E+02 | 7.0E+01 |
| Hexanone, 2- | 591-78-6 | – | – | – | – | – | – | – | 8.3E+02 | 4.2E+02 | 4.1E+02 | – | – | 8.3E+02 | 4.2E+02 |
| Hexazinone | 51235-04-2 | – | – | – | – | – | – | – | – | – | 2.7E+03 | 1.2E+04 | – | – | – |
| Hexene, 1- | 592-41-6 | – | – | – | – | – | – | – | 1.7E+03 | 8.7E+02 | 2.7E+04 | – | – | 1.7E+03 | 8.7E+02 |
| Hexene, cis-2- | 7688-21-3 | – | – | – | – | – | – | – | 1.7E+03 | 8.7E+02 | 2.7E+04 | – | – | 1.7E+03 | 8.7E+02 |
| Hexylene glycol (2-methyl-2,4-pentanediol) | 107-41-5 | – | – | – | – | – | – | – | – | – | 2.5E+04 | 1.1E+05 | – | – | – |
| Hydrazine | 302-01-2 | 4.6E-01 | 2.4E-01 | 2.0E+00 | – | – | 4.6E-01 | 2.4E-01 | 2.9E+00 | 1.5E+00 | – | – | – | 2.9E+00 | 1.5E+00 |
| Hydrocaproic acid, 6- (6-hydroxyhexanoic acid) | 1191-25-9 | – | – | – | – | – | – | – | 1.6E+02 | 8.3E+01 | 5.2E+03 | 2.3E+04 | – | 1.6E+02 | 8.3E+01 |
| Hydrogen chloride (hydrochloric acid)* | 7647-01-0 | – | – | – | – | – | – | – | – | – | – | – | – | – | – |
| Hydroquinone | 123-31-9 | – | – | 1.0E+02 | 3.5E+02 | – | – | – | – | – | 3.3E+03 | 1.4E+04 | – | – | – |
| Indene | 95-13-6 | – | – | – | – | – | – | – | 1.1E+02 | 5.8E+01 | 1.6E+03 | – | – | 1.1E+02 | 5.8E+01 |
| Indeno-1,2,3-cd-pyrene | 193-39-5 | 3.4E+04 | 1.7E+04 | 6.1E+01 | 1.6E+02 | 8.3E+02 | 3.7E+04 | 1.9E+04 | – | – | – | – | – | – | – |
| Iron* | 7439-89-6 | – | – | – | – | – | – | – | – | – | – | – | – | – | – |
| Isoamyl alcohol | 123-51-3 | – | – | – | – | – | – | – | – | – | 4.1E+02 | – | – | – | – |
| Isobutyl alcohol | 78-83-1 | – | – | – | – | – | – | – | – | – | 2.5E+04 | – | – | – | – |
| Isobutylene (2-methyl-1-propene) | 115-11-7 | – | – | – | – | – | – | – | 1.0E+06 | 8.7E+05 | 3.0E+02 | – | – | 1.0E+06 | 8.7E+05 |
| Isobutyric acid (2-methylpropanoic acid) | 79-31-2 | – | – | – | – | – | – | – | – | – | 4.1E+04 | 1.8E+05 | – | – | – |
| Isodecanol | 25339-17-7 | – | – | – | – | – | – | – | – | – | 1.3E+02 | 5.7E+02 | 2.1E+02 | – | – |
| Isodrin | 465-73-6 | 1.7E+00 | 8.9E-01 | 3.6E-02 | 1.2E-01 | – | 1.7E+00 | 9.0E-01 | – | – | 2.5E-01 | 1.1E+00 | – | – | – |

# Table 6
# Tier 1 Individual Residential Soil PCLs

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | Carcinogenic | | | | | | | Noncarcinogenic | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | $^{Air}Soil_{Inh\text{-}VP}$ 0.5 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}VP}$ 30 acre source area (mg/kg) | $^{Soil}Soil_{Ing}$ (mg/kg) | $^{Soil}Soil_{Derm}$ (mg/kg) | $^{Veg}Soil_{Ing}$ (mg/kg) | $^{Air}Soil_{Inh\text{-}V}$[1] 0.5 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}V}$[1] 30 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}VP}$ 0.5 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}VP}$ 30 acre source area (mg/kg) | $^{Soil}Soil_{Ing}$ (mg/kg) | $^{Soil}Soil_{Derm}$ (mg/kg) | $^{Veg}Soil_{Ing}$ (mg/kg) | $^{Air}Soil_{Inh\text{-}V}$[1] 0.5 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}V}$[1] 30 acre source area (mg/kg) |
| Isopentane | 78-78-4 | – | – | – | – | – | – | – | 3.7E+05 | 1.9E+05 | 4.9E+03 | – | – | 3.7E+05 | 1.9E+05 |
| Isophorone | 78-59-1 | – | – | 6.4E+03 | 2.2E+04 | – | – | – | – | – | 1.6E+04 | 7.1E+04 | – | – | – |
| Isopropyl acetate | 108-21-4 | – | – | – | – | – | – | – | – | – | 5.7E+03 | – | – | – | – |
| Isopropyl alcohol | 67-63-0 | – | – | – | – | – | – | – | 9.7E+03 | 5.0E+03 | 1.6E+05 | – | – | 9.7E+03 | 5.0E+03 |
| Isosafrole | 120-58-1 | 9.1E+01 | 4.7E+01 | 2.8E+01 | 9.4E+01 | – | 9.1E+01 | 4.7E+01 | – | – | – | – | – | – | – |
| Kelthane (dicofol) | 115-32-2 | – | – | – | – | – | – | – | – | – | 4.9E+02 | 2.1E+03 | 8.2E+02 | – | – |
| Kepone (chlordecone) | 143-50-0 | 4.8E+01 | 2.5E+01 | 6.1E-01 | 2.1E+00 | 1.5E+00 | 4.9E+01 | 2.5E+01 | – | – | 2.5E+01 | 1.1E+02 | 1.2E+02 | – | – |
| Lead (inorganic) | 7439-92-1 | – | – | – | – | – | – | – | – | – | – | – | – | – | – |
| Leptophos | 21609-90-5 | – | – | – | – | – | – | – | 3.3E+01 | 1.7E+01 | 4.1E-01 | 1.8E+00 | 3.1E-01 | 3.3E+01 | 1.7E+01 |
| Limonene, d-* | 5989-27-5 | – | – | – | – | – | – | – | – | – | – | – | – | – | – |
| Lithium | 7439-93-2 | – | – | – | – | – | – | – | – | – | 1.6E+02 | 7.1E+03 | 6.0E+02 | – | – |
| Magnesium* | 7439-95-4 | – | – | – | – | – | – | – | – | – | – | – | – | – | – |
| Malathion | 121-75-5 | – | – | – | – | – | – | – | 2.0E+02 | 1.0E+02 | 1.6E+03 | 7.1E+03 | – | 2.0E+02 | 1.0E+02 |
| Maleic anhydride | 108-31-6 | – | – | – | – | – | – | – | – | – | 8.2E+03 | 3.6E+04 | – | – | – |
| Maleic hydrazide | 123-33-1 | – | – | – | – | – | – | – | – | – | 4.1E+04 | 1.8E+05 | – | – | – |
| Malononitrile | 109-77-3 | – | – | – | – | – | – | – | – | – | 8.2E+00 | 3.6E+01 | – | – | – |
| Mancozeb | 8018-01-7 | – | – | – | – | – | – | – | – | – | 2.5E+03 | 1.1E+04 | – | – | – |
| Manganese | 7439-96-5 | – | – | – | – | – | – | – | 8.1E+05 | 4.2E+05 | 1.1E+04 | 3.0E+04 | 7.6E+03 | – | – |
| MCPA (4-(chloro-2-methylphenoxy) acetic acid) | 94-74-6 | – | – | – | – | – | – | – | – | – | 4.1E+01 | 1.8E+02 | – | – | – |
| MCPP (2-(4-chloro-2-methylphenoxy) propanoic acid) | 93-65-2 | – | – | – | – | – | – | – | – | – | 8.2E+01 | 3.6E+02 | – | – | – |
| Mercury (pH = 4.9)[2] | 7439-97-6 | – | – | – | – | – | – | – | 4.6E+00 | 2.4E+00 | 2.5E+01 | 7.5E+01 | 3.6E+02 | 4.6E+00 | 2.4E+00 |
| Mercury (pH=6.8)[2] | 7439-97-6A | – | – | – | – | – | – | – | 1.6E+01 | 8.0E+00 | 2.5E+01 | 7.5E+01 | 3.6E+02 | 1.6E+01 | 8.0E+00 |
| Merphos | 150-50-5 | – | – | – | – | – | – | – | – | – | 2.5E+00 | 1.1E+01 | – | – | – |
| Methacrylic acid (2-methyl-2-propenoic acid) | 79-41-4 | – | – | – | – | – | – | – | – | – | 8.2E+02 | – | – | – | – |
| Methacrylonitrile | 126-98-7 | – | – | – | – | – | – | – | 5.8E+02 | 3.0E+02 | 4.1E+03 | – | – | 5.8E+02 | 3.0E+02 |
| Methanol | 67-56-1 | – | – | – | – | – | – | – | 3.3E+05 | 1.7E+05 | 1.6E+05 | – | – | 3.3E+05 | 1.7E+05 |
| Methapyrilene | 91-80-5 | – | – | 1.3E+00 | 4.4E+00 | – | – | – | – | – | – | – | – | – | – |
| Methomyl | 16752-77-5 | – | – | – | – | – | – | – | – | – | 2.0E+03 | 8.9E+03 | – | – | – |
| Methoxychlor | 72-43-5 | – | – | – | – | – | – | – | – | – | 4.1E+02 | 1.8E+03 | 1.5E+03 | – | – |
| Methoxyethanol, 2- | 109-86-4 | – | – | – | – | – | – | – | 3.1E+02 | 1.6E+02 | 2.2E+03 | – | – | 3.1E+02 | 1.6E+02 |
| Methyl acetate (acetic acid, methyl ester) | 79-20-9 | – | – | – | – | – | – | – | – | – | 8.2E+04 | – | – | – | – |
| Methyl acrylate | 96-33-3 | – | – | – | – | – | – | – | 3.1E+02 | 1.6E+02 | 1.6E+02 | – | – | 3.1E+02 | 1.6E+02 |
| Methyl amyl ketone (2-heptanone) | 110-43-0 | – | – | – | – | – | – | – | 1.1E+05 | 5.7E+04 | 4.1E+03 | – | – | 1.1E+05 | 5.7E+04 |
| Methyl chrysene, 1- | 3351-28-8 | 1.0E+06 | 1.0E+06 | 8.3E+02 | 2.2E+03 | 1.3E+04 | 1.0E+06 | 1.0E+06 | – | – | – | – | – | – | – |
| Methyl chrysene, 2- | 3351-32-4 | 1.0E+06 | 1.0E+06 | 8.3E+02 | 2.2E+03 | 1.3E+04 | 1.0E+06 | 1.0E+06 | – | – | – | – | – | – | – |
| Methyl chrysene, 6- | 1705-85-7 | 2.1E+05 | 1.1E+05 | 8.3E+01 | 2.2E+02 | 1.0E+03 | 2.3E+05 | 1.2E+05 | – | – | – | – | – | – | – |
| Methyl cyclohexane | 108-87-2 | – | – | – | – | – | – | – | 4.6E+04 | 2.4E+04 | 4.1E+05 | – | – | 4.6E+04 | 2.4E+04 |
| Methyl ethyl ketone (2-butanone) | 78-93-3 | – | – | – | – | – | – | – | 2.0E+05 | 1.0E+05 | 4.9E+04 | – | – | 2.0E+05 | 1.0E+05 |
| Methyl iodide (iodomethane) | 74-88-4 | – | – | – | – | – | – | – | – | – | 1.1E+02 | – | – | – | – |
| Methyl isobutyl ketone (4-methyl-2-pentanone) | 108-10-1 | – | – | – | – | – | – | – | 5.8E+04 | 3.0E+04 | 6.6E+03 | – | – | 5.8E+04 | 3.0E+04 |
| Methyl mercury | 22967-92-6 | – | – | – | – | – | – | – | – | – | 8.2E+00 | 3.6E+02 | – | – | – |
| Methyl methacrylate | 80-62-6 | – | – | – | – | – | – | – | 1.1E+04 | 5.5E+03 | 1.1E+05 | – | – | 1.1E+04 | 5.5E+03 |
| Methyl methanesulfonate | 66-27-3 | 1.1E+02 | 5.7E+01 | 6.1E+01 | 2.1E+02 | – | 1.1E+02 | 5.7E+01 | – | – | – | – | – | – | – |

# Table 6
# Tier 1 Individual Residential Soil PCLs

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | Carcinogenic | | | | | | | Noncarcinogenic | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | $^{Air}Soil_{Inh\text{-}VP}$ 0.5 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}VP}$ 30 acre source area (mg/kg) | $^{Soil}Soil_{Ing}$ (mg/kg) | $^{Soil}Soil_{Derm}$ (mg/kg) | $^{Veg}Soil_{Ing}$ (mg/kg) | $^{Air}Soil_{Inh\text{-}V}$[1] 0.5 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}V}$[1] 30 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}VP}$ 0.5 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}VP}$ 30 acre source area (mg/kg) | $^{Soil}Soil_{Ing}$ (mg/kg) | $^{Soil}Soil_{Derm}$ (mg/kg) | $^{Veg}Soil_{Ing}$ (mg/kg) | $^{Air}Soil_{Inh\text{-}V}$[1] 0.5 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}V}$[1] 30 acre source area (mg/kg) |
| Methyl parathion | 298-00-0 | – | – | – | – | – | – | – | – | – | 2.0E+01 | 8.9E+01 | – | – | – |
| Methyl-1-butene, 2- | 563-46-2 | – | – | – | – | – | – | – | 2.8E+05 | 1.4E+05 | 4.9E+03 | – | – | 2.8E+05 | 1.4E+05 |
| Methyl-1-propanal, 2- (isobutyraldehyde) | 78-84-2 | – | – | – | – | – | – | – | – | – | 3.3E+03 | – | – | – | – |
| Methyl-2-butene, 2- | 513-35-9 | – | – | – | – | – | – | – | 2.8E+05 | 1.4E+05 | 4.9E+03 | – | – | 2.8E+05 | 1.4E+05 |
| Methyl-2-pentenal, 2- | 623-36-9 | – | – | 3.2E+00 | – | – | – | – | – | – | – | – | – | – | – |
| Methylcholanthrene, 3- | 56-49-5 | 1.5E+03 | 7.8E+02 | 2.8E-01 | 7.3E-01 | 5.0E+00 | 1.8E+03 | 9.0E+02 | – | – | – | – | – | – | – |
| Methylene bromide (dibromomethane) | 74-95-3 | – | – | 8.1E+02 | – | – | – | – | 8.2E+01 | 4.2E+01 | 4.9E+03 | – | – | 8.2E+01 | 4.2E+01 |
| Methylene chloride (dichloromethane) | 75-09-2 | 1.3E+04 | 6.6E+03 | 6.2E+04 | – | – | 1.3E+04 | 6.6E+03 | 2.0E+04 | 1.0E+04 | 1.7E+03 | – | – | 2.0E+04 | 1.0E+04 |
| Methylene-bis (2-chloroaniline) 4,4'- | 101-14-4 | 2.7E+03 | 1.4E+03 | 6.1E+01 | 2.1E+02 | – | 2.7E+03 | 1.4E+03 | – | – | 1.6E+02 | 7.1E+02 | – | – | – |
| Methylmecury hydroxide | 1184-57-2 | – | – | – | – | – | – | – | – | – | 8.2E+00 | 3.6E+01 | – | – | – |
| Methylnaphthalene, 1- | 90-12-0 | – | – | 2.1E+02 | 5.5E+02 | – | – | – | – | – | 5.7E+03 | 1.9E+04 | – | – | – |
| Methylnaphthalene, 2- | 91-57-6 | – | – | – | – | – | – | – | – | – | 3.3E+02 | 1.1E+03 | – | – | – |
| Methylpyrrolidone, N- | 872-50-4 | – | – | – | – | – | – | – | – | – | 1.6E+03 | 7.1E+03 | – | – | – |
| Methylstyrene, alpha- | 98-83-9 | – | – | – | – | – | – | – | 4.8E+02 | 2.5E+02 | 6.8E+02 | – | – | 4.8E+02 | 2.5E+02 |
| Methyltetrahydrofuran, 2- | 96-47-9 | 1.9E+02 | 9.7E+01 | 8.0E+02 | – | – | 1.9E+02 | 9.7E+01 | – | – | 1.6E+04 | – | – | – | – |
| Methyltetrahydropyran, 2- | 10141-72-7 | 2.2E+02 | 1.1E+02 | 8.0E+02 | – | – | 2.2E+02 | 1.1E+02 | – | – | 1.6E+04 | – | – | – | – |
| Metolachlor | 51218-45-2 | – | – | – | – | – | – | – | – | – | 1.2E+04 | 5.3E+04 | – | – | – |
| Metribuzin | 21087-64-9 | – | – | – | – | – | – | – | – | – | 2.0E+03 | 8.9E+03 | – | – | – |
| Mirex | 2385-85-5 | – | – | – | – | – | – | – | – | – | 1.6E+01 | 7.1E+01 | – | – | – |
| Molinate | 2212-67-1 | – | – | – | – | – | – | – | – | – | 1.6E+02 | 7.1E+02 | – | – | – |
| Molybdenum | 7439-98-7 | – | – | – | – | – | – | – | – | – | 4.1E+02 | 6.8E+03 | 2.6E+02 | – | – |
| Monocrotophos | 2157-98-4 | – | – | – | – | – | – | – | – | – | 4.9E+01 | 2.1E+02 | – | – | – |
| Morpholine | 110-91-8 | – | – | – | – | – | – | – | – | – | 1.0E+06 | – | – | – | – |
| Morpholine, N-butyl- | 1005-67-0 | – | – | – | – | – | – | – | – | – | 1.9E+02 | 8.2E+02 | – | – | – |
| MTBE (methyl tert-butyl ether) | 1634-04-4 | 1.4E+03 | 7.1E+02 | 3.4E+03 | – | – | 1.4E+03 | 7.1E+02 | 4.6E+04 | 2.4E+04 | 8.2E+02 | – | – | 4.6E+04 | 2.4E+04 |
| Naled | 300-76-5 | – | – | – | – | – | – | – | – | – | 1.6E+02 | 7.1E+02 | – | – | – |
| Naphthalene | 91-20-3 | – | – | – | – | – | – | – | 2.7E+02 | 1.4E+02 | 1.6E+03 | 5.5E+03 | – | 2.7E+02 | 1.4E+02 |
| Naphthoquinone, 1,4- | 130-15-4 | – | – | – | – | – | – | – | – | – | 5.7E+02 | 2.5E+03 | – | – | – |
| Naphthylamine, 1- | 134-32-7 | – | – | – | – | – | – | – | – | – | 1.6E+03 | 7.1E+03 | – | – | – |
| Naphthylamine, 2- | 91-59-8 | – | – | 3.4E+00 | 1.2E+01 | – | – | – | – | – | – | – | – | – | – |
| Napropamide | 15299-99-7 | – | – | – | – | – | – | – | – | – | 8.2E+03 | 3.6E+04 | – | – | – |
| Neopentyl glycol | 126-30-7 | – | – | – | – | – | – | – | – | – | 2.5E+04 | 1.1E+05 | – | – | – |
| Nickel and compounds | 7440-02-0 | 1.3E+05 | 6.8E+04 | – | – | – | – | – | 2.2E+05 | 1.1E+05 | 1.6E+03 | 2.8E+03 | 4.6E+03 | – | – |
| Nitrate-N | 14797-55-8 | – | – | – | – | – | – | – | – | – | 1.3E+05 | 1.0E+06 | – | – | – |
| Nitrite-N | 14797-65-0 | – | – | – | – | – | – | – | – | – | 8.2E+03 | 3.6E+05 | – | – | – |
| Nitroaniline, 2- | 88-74-4 | – | – | – | – | – | – | – | 4.8E+01 | 2.4E+01 | 2.5E+01 | 1.1E+02 | – | 4.8E+01 | 2.4E+01 |
| Nitroaniline, 3- | 99-09-2 | – | – | 1.6E+02 | 5.5E+02 | – | – | – | 6.0E+01 | 3.1E+01 | 2.5E+01 | 1.1E+02 | – | 6.0E+01 | 3.1E+01 |
| Nitroaniline, 4- | 100-01-6 | – | – | 3.0E+02 | 1.0E+03 | – | – | – | 1.2E+03 | 6.2E+02 | 3.3E+02 | 1.4E+03 | – | 1.2E+03 | 6.2E+02 |
| Nitrobenzene | 98-95-3 | 6.6E+01 | 3.4E+01 | – | – | – | 6.6E+01 | 3.4E+01 | 1.0E+03 | 5.2E+02 | 1.6E+02 | 7.1E+02 | – | 1.0E+03 | 5.2E+02 |
| Nitroglycerin | 55-63-0 | – | – | 3.6E+02 | 1.2E+03 | – | – | – | – | – | 8.2E+00 | 3.6E+01 | – | – | – |
| Nitrophenol, 2- | 88-75-5 | – | – | – | – | – | – | – | – | – | 1.6E+02 | 7.1E+02 | – | – | – |
| Nitrophenol, 3- | 554-84-7 | – | – | – | – | – | – | – | – | – | 1.6E+02 | 7.1E+02 | – | – | – |
| Nitrophenol, 4- | 100-02-7 | – | – | – | – | – | – | – | – | – | 1.6E+02 | 7.1E+02 | – | – | – |

# Table 6
# Tier 1 Individual Residential Soil PCLs

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | Carcinogenic | | | | | | | Noncarcinogenic | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | $^{Air}Soil_{Inh\text{-}VP}$ 0.5 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}VP}$ 30 acre source area (mg/kg) | $^{Soil}Soil_{Ing}$ (mg/kg) | $^{Soil}Soil_{Derm}$ (mg/kg) | $^{Veg}Soil_{Ing}$ (mg/kg) | $^{Air}Soil_{Inh\text{-}V}$[1] 0.5 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}V}$[1] 30 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}VP}$ 0.5 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}VP}$ 30 acre source area (mg/kg) | $^{Soil}Soil_{Ing}$ (mg/kg) | $^{Soil}Soil_{Derm}$ (mg/kg) | $^{Veg}Soil_{Ing}$ (mg/kg) | $^{Air}Soil_{Inh\text{-}V}$[1] 0.5 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}V}$[1] 30 acre source area (mg/kg) |
| Nitropropane, 2- | 79-46-9 | 1.3E-01 | 6.8E-02 | – | – | – | 1.3E-01 | 6.8E-02 | 3.1E+02 | 1.6E+02 | 1.1E+01 | – | – | 3.1E+02 | 1.6E+02 |
| Nitroquinoline-N-oxide, 4- | 56-57-5 | 1.9E+00 | 9.7E-01 | 6.5E-01 | 2.2E+00 | – | 1.9E+00 | 9.7E-01 | – | – | – | – | – | – | – |
| Nitrosodiethanolamine | 1116-54-7 | – | – | 2.2E+00 | 7.4E+00 | – | – | – | – | – | – | – | – | – | – |
| Nitrosodiethylamine, n- | 55-18-5 | 6.6E-02 | 3.4E-02 | 4.0E-02 | – | – | 6.6E-02 | 3.4E-02 | – | – | – | – | – | – | – |
| Nitrosodimethylamine, n- | 62-75-9 | 2.0E-01 | 1.0E-01 | 1.2E-01 | – | – | 2.0E-01 | 1.0E-01 | 4.7E+00 | 2.4E+00 | 6.6E-01 | – | – | 4.7E+00 | 2.4E+00 |
| Nitrosodi-n-butylamine, n- | 924-16-3 | 1.0E+00 | 5.3E-01 | 1.1E+00 | 3.8E+00 | – | 1.0E+00 | 5.3E-01 | – | – | – | – | – | – | – |
| Nitrosodi-n-propylamine, n- | 621-64-7 | – | – | 8.7E-01 | 7.4E-01 | – | – | – | – | – | – | – | – | – | – |
| Nitrosodiphenylamine | 86-30-6 | – | – | 1.2E+03 | 1.1E+03 | – | – | – | – | – | – | – | – | – | – |
| Nitroso-methyl-ethyl-amine, n- | 10595-95-6 | – | – | 2.8E-01 | – | – | – | – | – | – | – | – | – | – | – |
| Nitrosomorpholine, N- | 59-89-2 | 1.7E+00 | 8.8E-01 | 9.1E-01 | 3.1E+00 | – | 1.7E+00 | 8.8E-01 | – | – | – | – | – | – | – |
| Nitroso-n-ethylurea, n- | 759-73-9 | – | – | 4.3E-02 | 1.5E-01 | – | – | – | – | – | – | – | – | – | – |
| Nitrosopiperidine, N- | 100-75-4 | 1.3E+00 | 6.9E-01 | 6.5E-01 | 2.2E+00 | – | 1.3E+00 | 6.9E-01 | – | – | – | – | – | – | – |
| Nitrosopyrrolidine, n- | 930-55-2 | 5.8E+00 | 3.0E+00 | 2.9E+00 | 9.9E+00 | – | 5.8E+00 | 3.0E+00 | – | – | – | – | – | – | – |
| Nitrotoluene, m- | 99-08-1 | – | – | – | – | – | – | – | – | – | 8.2E+02 | 3.6E+03 | – | – | – |
| Nitrotoluene, o- | 88-72-2 | – | – | 2.8E+01 | 9.4E+01 | – | – | – | – | – | 7.4E+01 | 3.2E+02 | – | – | – |
| Nitrotoluene, p- | 99-99-0 | – | – | 3.8E+02 | 1.3E+03 | – | – | – | – | – | 3.3E+02 | 1.4E+03 | – | – | – |
| Nonachlor, cis- | 5103-73-1 | 1.2E+03 | 6.4E+02 | 1.7E+01 | 5.9E+01 | 9.7E+00 | 1.2E+03 | 6.4E+02 | 3.7E+03 | 1.9E+03 | 4.1E+01 | 1.8E+02 | 4.6E+01 | 3.7E+03 | 1.9E+03 |
| Nonachlor, trans- | 39765-80-5 | 1.2E+03 | 6.4E+02 | 1.7E+01 | 5.9E+01 | 9.7E+00 | 1.2E+03 | 6.4E+02 | 3.7E+03 | 1.9E+03 | 4.1E+01 | 1.8E+02 | 4.6E+01 | 3.7E+03 | 1.9E+03 |
| Nonanal | 124-19-6 | – | – | – | – | – | – | – | – | – | 1.6E+04 | 7.1E+04 | – | – | – |
| Nonene, 1-n | 124-11-8 | – | – | – | – | – | – | – | – | – | 8.2E+03 | – | – | – | – |
| Nonylphenol, 4-n- | 104-40-5 | – | – | – | – | – | – | – | – | – | 8.2E+03 | 3.6E+04 | 2.8E+05 | – | – |
| Nonylphenol ethoxylate | 9016-45-9 | – | – | – | – | – | – | – | – | – | 8.2E+03 | 3.6E+04 | 2.9E+05 | – | – |
| Octamethylpyrophosphoramide | 152-16-9 | – | – | – | – | – | – | – | – | – | 1.6E+02 | 7.1E+02 | – | – | – |
| Octanone | 106-68-3 | – | – | – | – | – | – | – | 9.0E+05 | 4.6E+05 | 4.9E+03 | – | – | 9.0E+05 | 4.6E+05 |
| Oxamyl | 23135-22-0 | – | – | – | – | – | – | – | – | – | 2.0E+03 | 8.9E+03 | – | – | – |
| Oxychlordane | 27304-13-8 | 1.2E+03 | 6.4E+02 | 1.7E+01 | 5.9E+01 | 9.7E+00 | 1.2E+03 | 6.4E+02 | 3.7E+03 | 1.9E+03 | 4.1E+01 | 1.8E+02 | 4.6E+01 | 3.7E+03 | 1.9E+03 |
| Paraquat | 1910-42-5 | – | – | – | – | – | – | – | – | – | 3.7E+02 | 1.6E+03 | – | – | – |
| Parathion (ethyl parathion) | 56-38-2 | – | – | – | – | – | – | – | – | – | 4.9E+02 | 2.1E+03 | – | – | – |
| Pebulate | 1114-71-2 | – | – | – | – | – | – | – | – | – | 4.1E+03 | 1.8E+04 | – | – | – |
| Pendimethalin | 40487-42-1 | – | – | – | – | – | – | – | – | – | 3.3E+03 | 1.4E+04 | 5.1E+04 | – | – |
| Pentachlorobenzene | 608-93-5 | – | – | – | – | – | – | – | – | – | 6.6E+01 | 2.8E+02 | – | – | – |
| Pentachloroethane | 76-01-7 | 9.4E+01 | 4.8E+01 | 6.7E+01 | – | – | 9.4E+01 | 4.8E+01 | – | – | 2.5E+03 | – | – | – | – |
| Pentachloronitrobenzene | 82-68-8 | – | – | 2.3E+01 | 8.0E+01 | 2.3E+01 | – | – | – | – | 2.5E+02 | 1.1E+03 | 4.8E+02 | – | – |
| Pentachlorophenol | 87-86-5 | – | – | 1.5E+01 | 2.1E+01 | 7.9E-01 | – | – | – | – | 4.1E+02 | 7.1E+02 | 4.2E+01 | – | – |
| Pentadiene, 1,3-cis- | 1574-41-0 | – | – | – | – | – | – | – | 2.8E+05 | 1.4E+05 | 4.9E+03 | – | – | 2.8E+05 | 1.4E+05 |
| Pentadiene, 1,3-trans- | 2004-70-8 | – | – | – | – | – | – | – | 2.8E+05 | 1.4E+05 | 4.9E+03 | – | – | 2.8E+05 | 1.4E+05 |
| Pentaerythritol tetranitrate (PETN) | 78-11-5 | – | – | – | – | – | – | – | – | – | 1.6E+02 | 7.1E+02 | – | – | – |
| Pentane | 109-66-0 | – | – | – | – | – | – | – | 3.7E+05 | 1.9E+05 | 4.9E+03 | – | – | 3.7E+05 | 1.9E+05 |
| Pentane, 2-methyl- | 107-83-5 | – | – | – | – | – | – | – | 2.8E+05 | 1.4E+05 | 4.9E+03 | – | – | 2.8E+05 | 1.4E+05 |
| Pentane, 3-methyl- | 96-14-0 | – | – | – | – | – | – | – | 2.8E+05 | 1.4E+05 | 4.9E+03 | – | – | 2.8E+05 | 1.4E+05 |
| Pentanediol, 1,5- | 111-29-5 | – | – | – | – | – | – | – | 1.0E+06 | 1.0E+06 | 4.1E+05 | 1.0E+06 | – | 1.0E+06 | 1.0E+06 |
| Pentanol, 1- | 71-41-0 | – | – | – | – | – | – | – | – | – | 2.7E+03 | – | – | – | – |
| Pentanol, 4-methyl-2- | 108-11-2 | – | – | – | – | – | – | – | – | – | 2.1E+03 | – | – | – | – |

# Table 6
# Tier 1 Individual Residential Soil PCLs

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | Carcinogenic | | | | | | | Noncarcinogenic | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | $^{Air}Soil_{Inh\text{-}VP}$ 0.5 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}VP}$ 30 acre source area (mg/kg) | $^{Soil}Soil_{Ing}$ (mg/kg) | $^{Soil}Soil_{Derm}$ (mg/kg) | $^{Veg}Soil_{Ing}$ (mg/kg) | $^{Air}Soil_{Inh\text{-}V}$[1] 0.5 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}V}$[1] 30 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}VP}$ 0.5 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}VP}$ 30 acre source area (mg/kg) | $^{Soil}Soil_{Ing}$ (mg/kg) | $^{Soil}Soil_{Derm}$ (mg/kg) | $^{Veg}Soil_{Ing}$ (mg/kg) | $^{Air}Soil_{Inh\text{-}V}$[1] 0.5 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}V}$[1] 30 acre source area (mg/kg) |
| Pentanone, 2- | 107-87-9 | – | – | – | – | – | – | – | – | – | 3.3E+03 | – | – | – | – |
| Pentene, 2- | 109-68-2 | – | – | – | – | – | – | – | 2.8E+05 | 1.4E+05 | 4.9E+03 | – | – | 2.8E+05 | 1.4E+05 |
| Pentyne, 1- | 627-19-0 | – | – | – | – | – | – | – | 2.8E+05 | 1.4E+05 | 4.9E+03 | – | – | 2.8E+05 | 1.4E+05 |
| Perchlorate | 14797-73-0 | – | – | – | – | – | – | – | – | – | 5.7E+01 | 5.0E+02 | – | – | – |
| Perfluorooctanoic sulfonic acid (1-Octanesulfonic acid, heptadecafluoro-1-) | 1763-23-1 | – | – | – | – | – | – | – | 1.5E+02 | 7.9E+01 | 1.9E+00 | 8.2E+00 | – | 1.5E+02 | 8.0E+01 |
| Perfluoroundecanoic acid (Undecanoic acid, uncosafluoro-) | 2058-94-8 | – | – | – | – | – | – | – | – | – | 9.8E-01 | 4.3E+00 | – | – | – |
| Perfluoropentanoic acid (Pentanoic acid, nonafluoro-) | 2706-90-3 | – | – | – | – | – | – | – | – | – | 3.1E-01 | 1.4E+00 | – | – | – |
| Perfluorohexanoic acid (Hexanoic acid, undecafluoro-) | 307-24-4 | – | – | – | – | – | – | – | – | – | 3.1E-01 | 1.4E+00 | – | – | – |
| Perfluorododecanoic acid (Dodecanoic acid, tricosafluoro-) | 307-55-1 | – | – | – | – | – | – | – | 6.9E+01 | 3.6E+01 | 9.8E-01 | 4.3E+00 | – | 6.9E+01 | 3.6E+01 |
| Perfluorooctanoic acid (Octanoic acid, pentadecafluoro-) | 335-67-1 | – | – | – | – | – | – | – | 2.4E+00 | 1.2E+00 | 9.8E-01 | 4.3E+00 | – | 2.4E+00 | 1.2E+00 |
| Perfluorodecanoic acid (Decanoic acid, nonadecafluoro-) | 335-76-2 | – | – | – | – | – | – | – | 8.6E+01 | 4.4E+01 | 1.2E+00 | 5.3E+00 | – | 8.6E+01 | 4.4E+01 |
| Perfluorodecane sulfonic acid (1-Decanesulfonic acid, heneicosafluoro-) | 335-77-3 | – | – | – | – | – | – | – | – | – | 9.8E-01 | 4.3E+00 | – | – | – |
| Perfluorohexane sulfonic acid (1-Hexanesulfonic acid, triddecafluoro-) | 355-46-4 | – | – | – | – | – | – | – | 1.1E+01 | 5.8E+00 | 3.1E-01 | 1.4E+00 | – | 1.1E+01 | 5.8E+00 |
| Perfluorobutyric acid (Butanoic acid, heptafluoro-) | 375-22-4 | – | – | – | – | – | – | – | 2.0E+03 | 1.0E+03 | 2.4E+02 | 1.0E+03 | – | 2.0E+03 | 1.0E+03 |
| Perfluorobutane sulfonic acid (1-Butanesulfonic acid, nonafluoro-) | 375-73-5 | – | – | – | – | – | – | – | 1.1E+03 | 5.8E+02 | 1.1E+02 | 5.0E+02 | – | 1.1E+03 | 5.8E+02 |
| Perfluoroheptanoic acid (Heptanoic acid, tridecafluoro-) | 375-85-9 | – | – | – | – | – | – | – | – | – | 1.9E+00 | 8.2E+00 | – | – | – |
| Perfluorononanoic acid (Nonanoic acid, heptadecafluoro-) | 375-95-1 | – | – | – | – | – | – | – | 1.7E+01 | 8.9E+00 | 9.8E-01 | 4.3E+00 | – | 1.7E+01 | 8.9E+00 |
| Perfluorotetradecanoic acid (Tetradecanoic acid, heptacosafluoro-) | 376-06-7 | – | – | – | – | – | – | – | – | – | 9.8E-01 | 4.3E+00 | 1.4E+00 | – | – |
| Perfluorotridecanoic acid (Tridecanoic acid, pentacosafluoro-) | 72629-94-8 | – | – | – | – | – | – | – | – | – | 9.8E-01 | 4.3E+00 | 2.5E+00 | – | – |
| Perfluorooctane sulfonamide (1-Octanesulfonamide, hetpadecafluoro-) | 754-91-6 | – | – | – | – | – | – | – | 6.3E-02 | 3.2E-02 | 9.8E-01 | 4.3E+00 | – | 6.3E-02 | 3.2E-02 |
| Perylene | 198-55-0 | – | – | – | – | – | – | – | – | – | 1.6E+03 | 7.1E+03 | 4.9E+04 | – | – |
| Phenacetin | 62-44-2 | 1.1E+04 | 5.6E+03 | 2.8E+03 | 9.4E+03 | – | 1.1E+04 | 5.6E+03 | – | – | – | – | – | – | – |
| Phenanthrene | 85-01-8 | – | – | – | – | – | – | – | – | – | 2.5E+03 | 8.2E+03 | 1.7E+04 | – | – |
| Phenanthridine | 229-87-8 | – | – | – | – | – | – | – | – | – | 2.5E+02 | 1.1E+03 | – | – | – |
| Phenol | 108-95-2 | – | – | – | – | – | – | – | 1.9E+03 | 1.0E+03 | 2.5E+04 | 1.1E+05 | – | 1.9E+03 | 1.0E+03 |
| Phenol, 4-tert-butyl- | 98-54-4 | – | – | – | – | – | – | – | – | – | 9.8E+03 | 4.3E+04 | – | – | – |
| Phenothiazine | 92-84-2 | – | – | – | – | – | – | – | – | – | 9.0E+01 | 3.9E+02 | 4.4E+02 | – | – |
| Phenyl mercuric acetate | 62-38-4 | – | – | – | – | – | – | – | – | – | 6.6E+00 | 2.8E+01 | – | – | – |
| Phenylene diamine, m- | 108-45-2 | – | – | – | – | – | – | – | – | – | 4.9E+02 | 2.1E+03 | – | – | – |
| Phenylene diamine, p- | 106-50-3 | – | – | – | – | – | – | – | – | – | 1.6E+04 | 6.8E+04 | – | – | – |
| Phorate | 298-02-2 | – | – | – | – | – | – | – | – | – | 1.6E+01 | 7.1E+01 | – | – | – |
| Phosalone | 2310-17-0 | – | – | – | – | – | – | – | – | – | 1.6E+02 | 7.1E+02 | – | – | – |
| Phosdrin (mevinphos) | 7786-34-7 | – | – | – | – | – | – | – | – | – | 2.0E+00 | 8.9E+00 | – | – | – |
| Phosmet | 732-11-6 | – | – | – | – | – | – | – | – | – | 1.6E+03 | 7.1E+03 | – | – | – |
| Phosphine | 7803-51-2 | – | – | – | – | – | – | – | 4.6E+00 | 2.4E+00 | 2.5E+01 | 2.1E+02 | – | 4.6E+00 | 2.4E+00 |
| Phosphorotrithioic acid, S,S,S-tributyl ester | 78-48-8 | – | – | 7.2E+01 | 2.5E+02 | 8.1E+02 | – | – | – | – | 8.2E+01 | 3.6E+02 | 1.8E+03 | – | – |
| Phosphorus, total* | 7723-14-0 | – | – | – | – | – | – | – | – | – | – | – | – | – | – |
| Phosphorus, white | 7723-14-0 | – | – | – | – | – | – | – | – | – | 1.6E+00 | 1.4E+01 | – | – | – |
| Phthalic anhydride | 85-44-9 | – | – | – | – | – | – | – | 5.0E+04 | 2.6E+04 | 1.6E+05 | 7.1E+05 | – | 5.0E+04 | 2.6E+04 |
| Picloram | 1918-02-1 | – | – | – | – | – | – | – | – | – | 5.7E+03 | 2.5E+04 | – | – | – |

# Table 6
# Tier 1 Individual Residential Soil PCLs

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | Carcinogenic | | | | | | | Noncarcinogenic | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | $^{Air}Soil_{Inh\text{-}VP}$ 0.5 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}VP}$ 30 acre source area (mg/kg) | $^{Soil}Soil_{Ing}$ (mg/kg) | $^{Soil}Soil_{Derm}$ (mg/kg) | $^{Veg}Soil_{Ing}$ (mg/kg) | $^{Air}Soil_{Inh\text{-}V}$[1] 0.5 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}V}$[1] 30 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}VP}$ 0.5 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}VP}$ 30 acre source area (mg/kg) | $^{Soil}Soil_{Ing}$ (mg/kg) | $^{Soil}Soil_{Derm}$ (mg/kg) | $^{Veg}Soil_{Ing}$ (mg/kg) | $^{Air}Soil_{Inh\text{-}V}$[1] 0.5 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}V}$[1] 30 acre source area (mg/kg) |
| Picoline, 2- (2-methylpyridine) | 109-06-8 | – | – | – | – | – | – | – | – | – | 7.4E+02 | – | – | – | – |
| Polybrominated biphenyls (PBBs) | 67774-32-7 | – | – | 6.8E-01 | 2.3E+00 | 9.9E-03 | – | – | – | – | 5.7E-01 | 2.5E+00 | 1.7E-02 | – | – |
| Polychlorinated biphenyls (PCBs) | 1336-36-3 | 5.4E+01 | 2.8E+01 | 3.0E+00 | 7.4E+00 | 1.3E+01 | 5.4E+01 | 2.8E+01 | – | – | 1.6E+00 | 5.1E+00 | 1.4E+01 | – | – |
| Potassium* | 7440-09-7 | – | – | – | – | – | – | – | – | – | – | – | – | – | – |
| Primene | 68955-53-3 | – | – | – | – | – | – | – | – | – | 4.9E+02 | 2.1E+03 | 3.9E+03 | – | – |
| Prometon (pramitol) | 1610-18-0 | – | – | – | – | – | – | – | – | – | 1.2E+03 | 5.3E+03 | – | – | – |
| Prometryn | 7287-19-6 | – | – | – | – | – | – | – | – | – | 3.3E+03 | 1.4E+04 | – | – | – |
| Pronamide | 23950-58-5 | – | – | – | – | – | – | – | – | – | 6.1E+03 | 2.7E+04 | – | – | – |
| Propanal (propionaldehyde) | 123-38-6 | – | – | – | – | – | – | – | 1.2E+02 | 6.3E+01 | 6.6E+02 | – | – | 1.2E+02 | 6.3E+01 |
| Propane, 1-bromo- | 106-94-5 | – | – | – | – | – | – | – | – | – | 2.9E+03 | – | – | – | – |
| Propanil | 709-98-8 | – | – | – | – | – | – | – | – | – | 4.1E+02 | 1.8E+03 | – | – | – |
| Propanoic acid (propionic acid) | 79-09-4 | – | – | – | – | – | – | – | – | – | 4.1E+04 | – | – | – | – |
| Propanol, 1- | 71-23-8 | – | – | – | – | – | – | – | – | – | 1.6E+04 | – | – | – | – |
| Propargite | 2312-35-8 | – | – | – | – | – | – | – | – | – | 1.6E+03 | 7.1E+03 | – | – | – |
| Propargyl alcohol | 107-19-7 | – | – | – | – | – | – | – | – | – | 1.6E+02 | – | – | – | – |
| Propazine | 139-40-2 | – | – | 1.4E+02 | 4.7E+02 | – | – | – | – | – | 1.6E+03 | 7.1E+03 | – | – | – |
| Propham | 122-42-9 | – | – | – | – | – | – | – | – | – | 1.6E+03 | 7.1E+03 | – | – | – |
| Propionitrile (propane nitrile) | 107-12-0 | – | – | – | – | – | – | – | – | – | 3.3E+01 | – | – | – | – |
| Propyl acetate, n- | 109-60-4 | – | – | – | – | – | – | – | – | – | 7.4E+03 | – | – | – | – |
| Propylbenzene, n- | 103-65-1 | – | – | – | – | – | – | – | 6.3E+03 | 3.3E+03 | 3.3E+03 | – | – | 6.3E+03 | 3.3E+03 |
| Propylene glycol | 57-55-6 | – | – | – | – | – | – | – | 3.7E+02 | 1.9E+02 | 1.0E+06 | 1.0E+06 | – | 3.7E+02 | 1.9E+02 |
| Propylene glycol monomethyl ether | 107-98-2 | – | – | – | – | – | – | – | 2.3E+05 | 1.2E+05 | 5.7E+04 | – | – | 2.3E+05 | 1.2E+05 |
| Propylene oxide | 75-56-9 | 9.7E+01 | 5.0E+01 | 2.5E+01 | – | – | 9.7E+01 | 5.0E+01 | 4.6E+02 | 2.4E+02 | – | – | – | 4.6E+02 | 2.4E+02 |
| Propylene tetramer | 6842-15-5 | – | – | – | – | – | – | – | 1.5E+04 | 7.9E+03 | 8.2E+03 | 3.6E+04 | – | 1.5E+04 | 7.9E+03 |
| Prothiofos (Tokuthion) | 34643-46-4 | – | – | – | – | – | – | – | – | – | 8.2E+00 | 3.6E+01 | 4.9E+02 | – | – |
| Pyrene | 129-00-0 | – | – | – | – | – | – | – | – | – | 2.5E+03 | 8.2E+03 | 1.7E+04 | – | – |
| Pyridine | 110-86-1 | – | – | – | – | – | – | – | – | – | 8.2E+01 | – | – | – | – |
| Quinoline | 91-22-5 | – | – | 2.0E+00 | 6.9E+00 | – | – | – | – | – | – | – | – | – | – |
| Ronnel | 299-84-3 | – | – | – | – | – | – | – | – | – | 4.1E+03 | 1.8E+04 | 7.0E+03 | – | – |
| Safrole | 94-59-7 | 6.7E+01 | 3.4E+01 | 2.8E+01 | 9.4E+01 | – | 6.7E+01 | 3.4E+01 | – | – | – | – | – | – | – |
| Selenium | 7782-49-2 | – | – | – | – | – | – | – | – | – | 4.1E+02 | 1.8E+04 | 1.3E+03 | – | – |
| Selenourea | 630-10-4 | – | – | – | – | – | – | – | – | – | 4.1E+02 | – | – | – | – |
| Silver | 7440-22-4 | – | – | – | – | – | – | – | – | – | 4.1E+02 | 7.1E+02 | 1.5E+02 | – | – |
| Simazine | 122-34-9 | – | – | 5.1E+01 | 1.7E+02 | – | – | – | – | – | 4.1E+02 | 1.8E+03 | – | – | – |
| Sodium* | 7440-23-5 | – | – | – | – | – | – | – | – | – | – | – | – | – | – |
| Sodium hypochlorite | 7681-52-9 | – | – | – | – | – | – | – | 3.0E+05 | 1.5E+05 | 1.7E+04 | 1.5E+05 | – | – | – |
| Sodium polyacrylate | 9003-04-7 | – | – | – | – | – | – | – | 1.2E+02 | 6.2E+01 | 4.1E+04 | – | – | 1.2E+02 | 6.2E+01 |
| Strontium | 7440-24-6 | – | – | – | – | – | – | – | – | – | 4.9E+04 | 4.3E+05 | – | – | – |
| Strychnine | 57-24-9 | – | – | – | – | – | – | – | – | – | 2.5E+01 | 1.1E+02 | – | – | – |
| Styrene | 100-42-5 | – | – | – | – | – | – | – | 1.1E+04 | 5.8E+03 | 1.6E+04 | – | – | 1.1E+04 | 5.8E+03 |
| Sulfate* | 14808-79-8 | – | – | – | – | – | – | – | – | – | – | – | – | – | – |
| Sulfide* | 18496-25-8 | – | – | – | – | – | – | – | – | – | – | – | – | – | – |
| Sulfolane | 126-33-0 | – | – | – | – | – | – | – | 8.6E+02 | 4.4E+02 | 1.1E+03 | 4.6E+03 | – | 8.6E+02 | 4.4E+02 |

# Table 6
# Tier 1 Individual Residential Soil PCLs

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | Carcinogenic | | | | | | | Noncarcinogenic | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | $^{Air}Soil_{Inh\text{-}VP}$ 0.5 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}VP}$ 30 acre source area (mg/kg) | $^{Soil}Soil_{Ing}$ (mg/kg) | $^{Soil}Soil_{Derm}$ (mg/kg) | $^{Veg}Soil_{Ing}$ (mg/kg) | $^{Air}Soil_{Inh\text{-}V}$[1] 0.5 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}V}$[1] 30 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}VP}$ 0.5 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}VP}$ 30 acre source area (mg/kg) | $^{Soil}Soil_{Ing}$ (mg/kg) | $^{Soil}Soil_{Derm}$ (mg/kg) | $^{Veg}Soil_{Ing}$ (mg/kg) | $^{Air}Soil_{Inh\text{-}V}$[1] 0.5 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}V}$[1] 30 acre source area (mg/kg) |
| Sulfur* | 7704-34-9 | – | – | – | – | – | – | – | – | – | – | – | – | – | – |
| Sulprofos (Bolstar) | 35400-43-2 | – | – | – | – | – | – | – | – | – | 2.5E+02 | 1.1E+03 | 8.4E+03 | – | – |
| Tebuconazole | 107534-96-3 | – | – | – | – | – | – | – | – | – | 2.5E+03 | 1.1E+04 | – | – | – |
| Tebuthiuron | 34014-18-1 | – | – | – | – | – | – | – | – | – | 5.7E+03 | 2.5E+04 | – | – | – |
| Terbufos | 13071-79-9 | – | – | – | – | – | – | – | – | – | 2.0E+00 | 8.9E+00 | – | – | – |
| Tert-amyl ethyl ether (TAEE) | 919-94-8 | – | – | – | – | – | – | – | – | – | 3.3E+03 | – | – | – | – |
| Tert-amyl-methyl ether (TAME) | 994-05-8 | – | – | – | – | – | – | – | – | – | 3.3E+03 | – | – | – | – |
| Tert-butyl alcohol (2-methyl-2-propanol) | 75-65-0 | – | – | – | – | – | – | – | – | – | 7.4E+03 | – | – | – | – |
| Tetrachlorobenzene, 1,2,3,4- | 634-66-2 | – | – | – | – | – | – | – | – | – | 2.5E+01 | 1.1E+02 | – | – | – |
| Tetrachlorobenzene, 1,2,3,5- | 634-90-2 | – | – | – | – | – | – | – | – | – | 2.5E+01 | 1.1E+02 | 4.2E+01 | – | – |
| Tetrachlorobenzene, 1,2,4,5- | 95-94-3 | – | – | – | – | – | – | – | – | – | 2.5E+01 | 1.1E+02 | – | – | – |
| Tetrachloroethane, 1,1,1,2- | 630-20-6 | 9.1E+01 | 4.7E+01 | 2.3E+02 | – | – | 9.1E+01 | 4.7E+01 | – | – | 2.5E+03 | – | – | – | – |
| Tetrachloroethane, 1,1,2,2- | 79-34-5 | – | – | 3.0E+01 | – | – | – | – | – | – | 1.6E+03 | – | – | – | – |
| Tetrachloroethylene | 127-18-4 | 9.4E+02 | 4.8E+02 | 2.9E+03 | – | – | 9.4E+02 | 4.8E+02 | 5.7E+03 | 2.9E+03 | 1.7E+03 | – | – | 5.7E+03 | 2.9E+03 |
| Tetrachlorophenol, 2,3,4,5- | 4901-51-3 | – | – | – | – | – | – | – | – | – | 2.5E+03 | 1.1E+04 | 5.0E+02 | – | – |
| Tetrachlorophenol, 2,3,4,6- | 58-90-2 | – | – | – | – | – | – | – | – | – | 2.5E+03 | 1.1E+04 | 2.0E+02 | – | – |
| Tetrachlorophenol, 2,3,5,6- | 935-95-5 | – | – | – | – | – | – | – | – | – | 2.5E+03 | 1.1E+04 | 2.3E+01 | – | – |
| Tetrachlorvinphos (Stirophos) | 22248-79-9 | – | – | – | – | – | – | – | – | – | 3.4E+03 | 1.5E+04 | 4.5E+04 | – | – |
| Tetradifon | 116-29-0 | – | – | – | – | – | – | – | – | – | 1.6E+03 | 7.1E+03 | 4.9E+03 | – | – |
| Tetraethyl dithiopyrophosphate (sulfotep) | 3689-24-5 | – | – | – | – | – | – | – | – | – | 4.1E+01 | 1.8E+02 | – | – | – |
| Tetraethyl lead | 78-00-2 | – | – | – | – | – | – | – | – | – | 8.2E-03 | 3.6E-02 | – | – | – |
| Tetraethyl pyrophosphate (TEPP) | 107-49-3 | – | – | – | – | – | – | – | – | – | 9.0E-01 | 3.9E+00 | – | – | – |
| Tetraethylene glycol | 112-60-7 | – | – | – | – | – | – | – | – | – | 2.7E+04 | 1.2E+05 | – | – | – |
| Tetrahydrofuran | 109-99-9 | 1.9E+02 | 9.7E+01 | 8.0E+02 | – | – | 1.9E+02 | 9.7E+01 | 3.1E+04 | 1.6E+04 | 7.4E+04 | – | – | 3.1E+04 | 1.6E+04 |
| Tetrahydropyran | 142-68-7 | 2.0E+02 | 1.0E+02 | 8.0E+02 | – | – | 2.0E+02 | 1.0E+02 | – | – | 1.6E+04 | – | – | – | – |
| Tetraoxadodecane, 2,5,8,11- | 112-49-2 | – | – | – | – | – | – | – | – | – | 2.0E+03 | 8.9E+03 | – | – | – |
| Thallium | 7440-28-0 | – | – | – | – | – | – | – | – | – | 5.5E+00 | 2.4E+02 | 3.7E+02 | – | – |
| Thiofanox | 39196-18-4 | – | – | – | – | – | – | – | – | – | 2.5E+01 | 1.1E+02 | – | – | – |
| Thionazin | 297-97-2 | – | – | – | – | – | – | – | – | – | 5.7E+00 | 2.5E+01 | – | – | – |
| Thiophanate-methyl | 23564-05-8 | – | – | – | – | – | – | – | – | – | 6.6E+03 | 2.8E+04 | – | – | – |
| Thiram | 137-26-8 | – | – | – | – | – | – | – | – | – | 4.1E+02 | 1.8E+03 | – | – | – |
| Tin | 7440-31-5 | – | – | – | – | – | – | – | – | – | 4.9E+04 | 2.1E+05 | 3.1E+05 | – | – |
| Titanium | 7440-32-6 | – | – | – | – | – | – | – | – | – | 4.1E+05 | 5.3E+05 | 1.0E+06 | – | – |
| Toluene | 108-88-3 | – | – | – | – | – | – | – | 6.3E+04 | 3.2E+04 | 6.6E+03 | – | – | 6.3E+04 | 3.2E+04 |
| Toluene diisocyanate, 2,4/2,6- | 26471-62-5 | – | – | – | – | – | – | – | 1.5E+02 | 7.5E+01 | – | – | – | 1.5E+02 | 7.5E+01 |
| Toluenediamine, 2,4- | 95-80-7 | – | – | 1.9E+00 | 6.5E+00 | – | – | – | – | – | – | – | – | – | – |
| Toluenediamine, 2,6- | 823-40-5 | – | – | – | – | – | – | – | – | – | 2.5E+03 | 1.1E+04 | – | – | – |
| Toluidine, o- | 95-53-4 | 1.4E+02 | 7.1E+01 | 3.8E+02 | 8.7E+01 | – | 1.4E+02 | 7.1E+01 | – | – | – | – | – | – | – |
| Toluidine, p- | 106-49-0 | – | – | 2.0E+02 | 1.1E+02 | – | – | – | – | – | – | – | – | – | – |
| Toxaphene | 8001-35-2 | 9.4E+02 | 4.8E+02 | 5.5E+00 | 1.9E+01 | 1.8E+00 | 9.6E+02 | 4.9E+02 | – | – | 2.5E+01 | 1.1E+02 | 1.6E+01 | – | – |
| TPH, TX1005, C6-C12 | TPH-1005-1 | – | – | – | – | – | – | – | 3.1E+03 | 1.6E+03 | 3.3E+03 | – | – | 3.1E+03 | 1.6E+03 |
| TPH, TX1005, >C12-C28 | TPH-1005-2 | – | – | – | – | – | – | – | 1.5E+04 | 7.8E+03 | 3.3E+03 | 1.4E+04 | – | 1.5E+04 | 7.8E+03 |
| TPH, TX1005, >C12-C35 | TPH-1005-3 | – | – | – | – | – | – | – | 1.5E+04 | 7.8E+03 | 3.3E+03 | 1.4E+04 | – | 1.5E+04 | 7.8E+03 |

# Table 6
# Tier 1 Individual Residential Soil PCLs

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | Carcinogenic | | | | | | | Noncarcinogenic | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | $^{Air}Soil_{Inh\text{-}VP}$ 0.5 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}VP}$ 30 acre source area (mg/kg) | $^{Soil}Soil_{Ing}$ (mg/kg) | $^{Soil}Soil_{Derm}$ (mg/kg) | $^{Veg}Soil_{Ing}$ (mg/kg) | $^{Air}Soil_{Inh\text{-}V}$[1] 0.5 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}V}$[1] 30 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}VP}$ 0.5 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}VP}$ 30 acre source area (mg/kg) | $^{Soil}Soil_{Ing}$ (mg/kg) | $^{Soil}Soil_{Derm}$ (mg/kg) | $^{Veg}Soil_{Ing}$ (mg/kg) | $^{Air}Soil_{Inh\text{-}V}$[1] 0.5 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}V}$[1] 30 acre source area (mg/kg) |
| TPH, TX1005, >C28-C35 | TPH-1005-4 | – | – | – | – | – | – | – | 1.5E+04 | 7.8E+03 | 3.3E+03 | 1.4E+04 | – | 1.5E+04 | 7.8E+03 |
| TP Silvex, 2,4,5- | 93-72-1 | – | – | – | – | – | – | – | – | – | 6.6E+02 | 2.8E+03 | – | – | – |
| Triademenol | 55219-65-3 | – | – | – | – | – | – | – | – | – | 2.5E+03 | 1.1E+04 | – | – | – |
| Triallate | 2303-17-5 | – | – | – | – | – | – | – | – | – | 1.1E+03 | 4.6E+03 | 5.2E+02 | – | – |
| Triaminotrinitrobenzene (TATB) | 3058-38-6 | – | – | – | – | – | – | – | – | – | 2.5E+02 | 1.1E+03 | – | – | – |
| Tributyltin oxide | 56-35-9 | – | – | – | – | – | – | – | – | – | 2.5E+01 | 1.1E+02 | – | – | – |
| Trichloro-1,2,2-trifluoroethane, 1,1,2- | 76-13-1 | – | – | – | – | – | – | – | 7.7E+04 | 3.9E+04 | 1.0E+06 | – | – | 7.7E+04 | 3.9E+04 |
| Trichlorobenzene, 1,2,3- | 87-61-6 | – | – | – | – | – | – | – | 3.0E+02 | 1.6E+02 | 2.5E+02 | 1.1E+03 | – | 3.0E+02 | 1.6E+02 |
| Trichlorobenzene, 1,2,4- | 120-82-1 | – | – | 2.1E+02 | 7.2E+02 | – | – | – | 1.5E+02 | 7.8E+01 | 8.2E+02 | 3.6E+03 | – | 1.5E+02 | 7.8E+01 |
| Trichlorobenzene, 1,3,5- | 108-70-3 | – | – | – | – | – | – | – | 1.3E+02 | 6.5E+01 | 2.5E+02 | 1.1E+03 | – | 1.3E+02 | 6.5E+01 |
| Trichloroethane, 1,1,1- | 71-55-6 | – | – | – | – | – | – | – | 7.8E+04 | 4.0E+04 | 1.6E+05 | – | – | 7.8E+04 | 4.0E+04 |
| Trichloroethane, 1,1,2- | 79-00-5 | 2.2E+01 | 1.2E+01 | 1.1E+02 | – | – | 2.2E+01 | 1.2E+01 | – | – | 3.3E+02 | – | – | – | – |
| Trichloroethylene | 79-01-6 | 8.7E+01 | 4.5E+01 | 1.3E+02 | – | – | 8.7E+01 | 4.5E+01 | 3.1E+01 | 1.6E+01 | 4.1E+01 | – | – | 3.1E+01 | 1.6E+01 |
| Trichlorofluoromethane | 75-69-4 | – | – | – | – | – | – | – | – | – | 2.5E+04 | – | – | – | – |
| Trichloronate | 327-98-0 | – | – | – | – | – | – | – | – | – | 2.5E+02 | 1.1E+03 | 4.4E+02 | – | – |
| Trichlorophenol, 2,3,4- | 15950-66-0 | – | – | – | – | – | – | – | – | – | 8.2E+03 | 3.6E+04 | – | – | – |
| Trichlorophenol, 2,3,5- | 933-78-8 | – | – | – | – | – | – | – | – | – | 8.2E+03 | 3.6E+04 | – | – | – |
| Trichlorophenol, 2,3,6- | 933-75-5 | – | – | – | – | – | – | – | – | – | 8.2E+03 | 3.6E+04 | 5.8E+02 | – | – |
| Trichlorophenol, 2,4,5- | 95-95-4 | – | – | – | – | – | – | – | – | – | 8.2E+03 | 3.6E+04 | – | – | – |
| Trichlorophenol, 2,4,6- | 88-06-2 | 2.0E+03 | 1.0E+03 | 5.5E+02 | 1.9E+03 | – | 2.0E+03 | 1.0E+03 | – | – | 8.2E+01 | 3.6E+02 | – | – | – |
| Trichlorophenol, 3,4,5- | 609-19-8 | – | – | – | – | – | – | – | – | – | 8.2E+03 | 3.6E+04 | – | – | – |
| Trichlorophenoxyacetic acid, 2,4,5- | 93-76-5 | – | – | – | – | – | – | – | – | – | 8.2E+02 | 3.6E+03 | – | – | – |
| Trichloropropane, 1,1,2- | 598-77-6 | – | – | – | – | – | – | – | 4.6E+00 | 2.4E+00 | 4.1E+02 | – | – | 4.6E+00 | 2.4E+00 |
| Trichloropropane, 1,2,3- | 96-18-4 | – | – | 2.0E-01 | – | – | – | – | 1.4E+01 | 7.2E+00 | 3.3E+02 | – | – | 1.4E+01 | 7.2E+00 |
| Triethanolamine | 102-71-6 | – | – | – | – | – | – | – | 3.9E+03 | 2.0E+03 | 1.6E+04 | 7.1E+04 | – | 3.9E+03 | 2.0E+03 |
| Triethylamine | 121-44-8 | – | – | – | – | – | – | – | 1.1E+02 | 5.5E+01 | – | – | – | 1.1E+02 | 5.5E+01 |
| Triethylene glycol | 112-27-6 | – | – | – | – | – | – | – | – | – | 1.6E+05 | 7.1E+05 | – | – | – |
| Triethylphosphorothioate, O, O, O- | 126-68-1 | – | – | – | – | – | – | – | – | – | 6.8E-01 | 3.0E+00 | – | – | – |
| Trifluralin | 1582-09-8 | – | – | 7.9E+02 | 2.7E+03 | 5.0E+02 | – | – | – | – | 6.1E+02 | 2.7E+03 | 7.7E+02 | – | – |
| Trimethylamine | 75-50-3 | – | – | – | – | – | – | – | 1.5E+02 | 7.6E+01 | – | – | – | 1.5E+02 | 7.6E+01 |
| Trimethylbenzene, 1,2,3- | 526-73-8 | – | – | – | – | – | – | – | 3.6E+03 | 1.9E+03 | 2.8E+03 | – | – | 3.6E+03 | 1.9E+03 |
| Trimethylbenzene, 1,2,4- | 95-63-6 | – | – | – | – | – | – | – | 4.0E+03 | 2.1E+03 | 2.8E+03 | – | – | 4.0E+03 | 2.1E+03 |
| Trimethylbenzene, 1,3,5- | 108-67-8 | – | – | – | – | – | – | – | 3.5E+03 | 1.8E+03 | 2.8E+03 | – | – | 3.5E+03 | 1.8E+03 |
| Trinitrobenzene, 1,3,5- | 99-35-4 | – | – | – | – | – | – | – | – | – | 2.5E+03 | 1.1E+04 | – | – | – |
| Trinitrophenylmethylnitramine (tetryl; nitramine) | 479-45-8 | – | – | – | – | – | – | – | – | – | 1.6E+02 | 1.4E+03 | – | – | – |
| Trinitrotoluene, 2,4,6- | 118-96-7 | – | – | 2.0E+02 | 6.9E+02 | – | – | – | – | – | 4.1E+01 | 1.8E+02 | – | – | – |
| Tungsten (as sodium tungstate dihydride) | 7440-33-7 | – | – | – | – | – | – | – | 1.0E+06 | 1.0E+06 | 8.2E+01 | 7.1E+02 | – | – | – |
| Uranium (soluble salts) | 7440-61-1 | – | – | – | – | – | – | – | 3.9E+04 | 2.0E+04 | 2.5E+02 | 1.1E+04 | 2.9E+03 | – | – |
| Valeric acid (pentanoic acid) | 109-52-4 | – | – | – | – | – | – | – | 1.3E+02 | 6.8E+01 | 4.1E+04 | 1.8E+05 | – | 1.3E+02 | 6.8E+01 |
| Vanadium | 7440-62-2 | – | – | – | – | – | – | – | 2.9E+04 | 1.5E+04 | 1.5E+02 | 1.7E+02 | 2.4E+03 | – | – |
| Vernam | 1929-77-7 | – | – | – | – | – | – | – | – | – | 8.2E+01 | 3.6E+02 | – | – | – |
| Vinyl acetate | 108-05-4 | – | – | – | – | – | – | – | 3.1E+03 | 1.6E+03 | 8.2E+04 | – | – | 3.1E+03 | 1.6E+03 |
| Vinyl chloride | 75-01-4 | 4.3E+01 | 2.2E+01 | 4.0E+00 | – | – | 4.3E+01 | 2.2E+01 | 9.2E+02 | 4.7E+02 | 2.5E+02 | – | – | 9.2E+02 | 4.7E+02 |

# Table 6
# Tier 1 Individual Residential Soil PCLs

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | Carcinogenic | | | | | | | Noncarcinogenic | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | $^{Air}Soil_{Inh-VP}$ 0.5 acre source area (mg/kg) | $^{Air}Soil_{Inh-VP}$ 30 acre source area (mg/kg) | $^{Soil}Soil_{Ing}$ (mg/kg) | $^{Soil}Soil_{Derm}$ (mg/kg) | $^{Veg}Soil_{Ing}$ (mg/kg) | $^{Air}Soil_{Inh-V}$[1] 0.5 acre source area (mg/kg) | $^{Air}Soil_{Inh-V}$[1] 30 acre source area (mg/kg) | $^{Air}Soil_{Inh-VP}$ 0.5 acre source area (mg/kg) | $^{Air}Soil_{Inh-VP}$ 30 acre source area (mg/kg) | $^{Soil}Soil_{Ing}$ (mg/kg) | $^{Soil}Soil_{Derm}$ (mg/kg) | $^{Veg}Soil_{Ing}$ (mg/kg) | $^{Air}Soil_{Inh-V}$[1] 0.5 acre source area (mg/kg) | $^{Air}Soil_{Inh-V}$[1] 30 acre source area (mg/kg) |
| Vinylcyclohexane | 695-12-5 | – | – | – | – | – | – | – | – | – | 4.1E+04 | – | – | – | – |
| Warfarin | 81-81-2 | – | – | – | – | – | – | – | – | – | 2.5E+01 | 1.1E+02 | – | – | – |
| Xylene, m- | 108-38-3 | – | – | – | – | – | – | – | 9.4E+03 | 4.8E+03 | 1.6E+05 | – | – | 9.4E+03 | 4.8E+03 |
| Xylene, o- | 95-47-6 | – | – | – | – | – | – | – | 6.8E+04 | 3.5E+04 | 1.6E+05 | – | – | 6.8E+04 | 3.5E+04 |
| Xylene, p- | 106-42-3 | – | – | – | – | – | – | – | 9.4E+03 | 4.8E+03 | 1.6E+05 | – | – | 9.4E+03 | 4.8E+03 |
| Xylenes | 1330-20-7 | – | – | – | – | – | – | – | 9.4E+03 | 4.8E+03 | 1.6E+04 | – | – | 9.4E+03 | 4.8E+03 |
| Zinc | 7440-66-6 | – | – | – | – | – | – | – | – | – | 2.5E+04 | 2.1E+05 | 1.8E+04 | – | – |
| 6 C aliphatics (TPH) (>53% n-hexane content) | NA | – | – | – | – | – | – | – | 1.0E+04 | 5.3E+03 | 4.9E+03 | – | – | 1.0E+04 | 5.3E+03 |
| 6 C aliphatics (TPH) (<53% n-hexane content) | NA | – | – | – | – | – | – | – | 2.8E+05 | 1.5E+05 | 4.9E+03 | – | – | 2.8E+05 | 1.5E+05 |
| >6-8 C aliphatics (TPH) (>53% n-hexane content) | NA | – | – | – | – | – | – | – | 1.0E+04 | 5.3E+03 | 4.9E+03 | – | – | 1.0E+04 | 5.3E+03 |
| >6-8 C aliphatics (TPH) (<53% n-hexane content) | NA | – | – | – | – | – | – | – | 2.8E+05 | 1.5E+05 | 4.9E+03 | – | – | 2.8E+05 | 1.5E+05 |
| >8-10 C aliphatics (TPH) | NA | – | – | – | – | – | – | – | 7.7E+03 | 3.9E+03 | 8.2E+03 | – | – | 7.7E+03 | 3.9E+03 |
| >10-12 C aliphatics (TPH) | NA | – | – | – | – | – | – | – | 7.7E+03 | 3.9E+03 | 8.2E+03 | 3.6E+04 | – | 7.7E+03 | 3.9E+03 |
| >12-16 C aliphatics (TPH) | NA | – | – | – | – | – | – | – | 1.2E+04 | 6.2E+03 | 8.2E+03 | 3.6E+04 | – | 1.2E+04 | 6.2E+03 |
| >16-21 C aliphatics (TPH) | NA | – | – | – | – | – | – | – | – | – | 1.6E+05 | 7.1E+05 | – | – | – |
| >16-21 C aliphatics (TPH) (for transformer mineral oil releases only) | NA | – | – | – | – | – | – | – | – | – | 1.3E+05 | 7.1E+05 | – | – | – |
| >21-35 C aliphatics (TPH) | NA | – | – | – | – | – | – | – | – | – | 1.6E+05 | 5.7E+05 | – | – | – |
| >21-35 C aliphatics (TPH) (for transformer mineral oil releases only) | NA | – | – | – | – | – | – | – | – | – | 1.3E+05 | 5.7E+05 | – | – | – |
| >7-8 C aromatics (TPH) | NA | – | – | – | – | – | – | – | 2.9E+04 | 1.5E+04 | 8.2E+03 | – | – | 2.9E+04 | 1.5E+04 |
| >8-10 C aromatics (TPH) | NA | – | – | – | – | – | – | – | 3.1E+03 | 1.6E+03 | 3.3E+03 | – | – | 3.1E+03 | 1.6E+03 |
| >10-12 C aromatics (TPH) | NA | – | – | – | – | – | – | – | 6.6E+03 | 3.4E+03 | 3.3E+03 | 1.4E+04 | – | 6.6E+03 | 3.4E+03 |
| >12-16 C aromatics (TPH) | NA | – | – | – | – | – | – | – | 1.5E+04 | 7.8E+03 | 3.3E+03 | 1.4E+04 | – | 1.5E+04 | 7.8E+03 |
| >16-21 C aromatics (TPH) | NA | – | – | – | – | – | – | – | – | – | 2.5E+03 | 1.1E+04 | – | – | – |
| >21-35 C aromatics (TPH) | NA | – | – | – | – | – | – | – | – | – | 2.5E+03 | 1.1E+04 | – | – | – |

**Footnotes**

**1** For subsurface soils only

**2** Site-specific PCLs for mercury may vary based on the pH-dependent Kd value (see Figure:30 TAC §350.73(f)(1)(C)).

***** These compounds are not necessarily of concern from a human health standpoint, therefore calculation of human health-based values is not required. However, aesthetics and ecological criteria would still apply. See table entitled "Compounds for which Calculation of a Human Health PCL is Not Required" available on the TCEQ website at http://www.tceq.state.tx.us/remediation/trrp/trrp.html.

NA = not applicable

All values capped at 1E+06

This table shows individual residential soil protective concentration levels with both carcinogenic and non-carcinogenic values depicted

end of worksheet

# Table 7
# Tier 1 Individual Commercial/Industrial Soil PCLs

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | Carcinogenic | | | | | | Noncarcinogenic | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | $^{Air}Soil_{Inh\text{-}VP}$ 0.5 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}VP}$ 30 acre source area (mg/kg) | $^{Soil}Soil_{Ing}$ (mg/kg) | $^{Soil}Soil_{Derm}$ (mg/kg) | $^{Air}Soil_{Inh\text{-}V}$[1] 0.5 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}V}$[1] 30 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}VP}$ 0.5 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}VP}$ 30 acre source area (mg/kg) | $^{Soil}Soil_{Ing}$ (mg/kg) | $^{Soil}Soil_{Derm}$ (mg/kg) | $^{Air}Soil_{Inh\text{-}V}$[1] 0.5 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}V}$[1] 30 acre source area (mg/kg) |
| Acenaphthene | 83-32-9 | – | – | – | – | – | – | – | – | 6.1E+04 | 9.4E+04 | – | – |
| Acenaphthylene | 208-96-8 | – | – | – | – | – | – | – | – | 6.1E+04 | 9.4E+04 | – | – |
| Acetaldehyde | 75-07-0 | 2.9E+02 | 1.5E+02 | – | – | 2.9E+02 | 1.5E+02 | 2.0E+02 | 1.0E+02 | 1.0E+05 | – | 2.0E+02 | 1.0E+02 |
| Acetate, 2-ethoxyethanol | 111-15-9 | – | – | – | – | – | – | 8.4E+03 | 4.3E+03 | 1.0E+05 | – | 8.4E+03 | 4.3E+03 |
| Acetate, isoamyl | 123-92-2 | – | – | – | – | – | – | – | – | 7.4E+04 | – | – | – |
| Acetate, isobutyl | 110-19-0 | – | – | – | – | – | – | – | – | 4.9E+04 | – | – | – |
| Acetate, sec-butyl | 105-46-4 | – | – | – | – | – | – | – | – | 4.9E+04 | – | – | – |
| Acetic acid* | 64-19-7 | – | – | – | – | – | – | – | – | – | – | – | – |
| Acetone (2-propanone) | 67-64-1 | – | – | – | – | – | – | 8.4E+05 | 4.3E+05 | 9.2E+05 | – | 8.4E+05 | 4.3E+05 |
| Acetone cyanohydrin | 75-86-5 | – | – | – | – | – | – | 6.1E+03 | 3.1E+03 | 3.1E+03 | 6.1E+03 | 6.1E+03 | 3.1E+03 |
| Acetonitrile | 75-05-8 | – | – | – | – | – | – | 1.8E+03 | 9.4E+02 | 3.3E+04 | – | 1.8E+03 | 9.4E+02 |
| Acetophenone | 98-86-2 | – | – | – | – | – | – | – | – | 1.0E+05 | 2.0E+05 | – | – |
| Acetylaminofluorene, 2- | 53-96-3 | 3.1E+01 | 1.6E+01 | 7.5E+00 | 1.5E+01 | 3.1E+01 | 1.6E+01 | – | – | – | – | – | – |
| Acifluorfen, sodium | 62476-59-9 | – | – | – | – | – | – | – | – | 1.3E+04 | 2.7E+04 | – | – |
| Acridine | 260-94-6 | – | – | – | – | – | – | – | – | 3.1E+03 | 6.1E+03 | – | – |
| Acrolein | 107-02-8 | – | – | – | – | – | – | 2.1E+02 | 1.1E+02 | 5.1E+02 | – | 2.1E+02 | 1.1E+02 |
| Acrylamide | 79-06-1 | 4.7E+01 | 2.4E+01 | 5.7E+01 | 1.1E+02 | 4.7E+01 | 2.4E+01 | 1.0E+03 | 5.2E+02 | 2.0E+03 | 4.1E+03 | 1.0E+03 | 5.2E+02 |
| Acrylic acid | 79-10-7 | – | – | – | – | – | – | 1.7E+02 | 8.7E+01 | 5.1E+05 | – | 1.7E+02 | 8.7E+01 |
| Acrylonitrile | 107-13-1 | 8.8E+00 | 4.6E+00 | 5.3E+01 | – | 8.8E+00 | 4.6E+00 | 4.3E+01 | 2.2E+01 | 1.0E+03 | – | 4.3E+01 | 2.2E+01 |
| Adipic acid (hexanedioic acid) | 124-04-9 | – | – | – | – | – | – | – | – | 1.0E+06 | 1.0E+06 | – | – |
| Alachlor | 15972-60-8 | – | – | 3.6E+02 | 7.2E+02 | – | – | – | – | 1.0E+04 | 2.0E+04 | – | – |
| Aldicarb | 116-06-3 | – | – | – | – | – | – | – | – | 1.0E+03 | 2.0E+03 | – | – |
| Aldicarb sulfone | 1646-88-4 | – | – | – | – | – | – | – | – | 1.0E+03 | 2.0E+03 | – | – |
| Aldrin | 309-00-2 | 1.4E+01 | 7.2E+00 | 1.7E+00 | 3.4E+00 | 1.4E+01 | 7.2E+00 | – | – | 3.1E+01 | 6.1E+01 | – | – |
| Allyl alcohol | 107-18-6 | – | – | – | – | – | – | 8.0E+00 | 4.1E+00 | 5.1E+03 | – | 8.0E+00 | 4.1E+00 |
| Allyl chloride | 107-05-1 | – | – | – | – | – | – | 2.1E+01 | 1.1E+01 | 1.0E+04 | – | 2.1E+01 | 1.1E+01 |
| Aluminum | 7429-90-5 | – | – | – | – | – | – | 1.0E+06 | 1.0E+06 | 1.0E+06 | 1.0E+06 | – | – |
| Ametryn | 834-12-8 | – | – | – | – | – | – | – | – | 9.2E+03 | 1.8E+04 | – | – |
| Amino-2,6-dinitrotoluene, 4- | 19406-51-0 | – | – | 2.9E+03 | 5.7E+03 | – | – | – | – | 1.7E+02 | 3.4E+02 | – | – |
| Amino-4,6-dinitrotoluene, 2- | 35572-78-2 | – | – | 2.9E+03 | 5.7E+03 | – | – | – | – | 1.7E+02 | 3.4E+02 | – | – |
| Aminobiphenyl, 4- (1,1-biphenyl-4-amine) | 92-67-1 | – | – | 4.7E+00 | 9.4E+00 | – | – | – | – | – | – | – | – |
| Aminopyridine, 4- | 504-24-5 | – | – | – | – | – | – | – | – | 2.0E+01 | 4.1E+01 | – | – |
| Ammonia | 7664-41-7 | – | – | – | – | – | – | 6.9E+03 | 3.5E+03 | – | – | 6.9E+03 | 3.5E+03 |
| Ammonium polyphosphate* | 6833-79-9 | – | – | – | – | – | – | – | – | – | – | – | – |
| Ammonium salts* | AMMONIUM | – | – | – | – | – | – | – | – | – | – | – | – |
| Aniline | 62-53-3 | – | – | 5.0E+03 | 1.0E+04 | – | – | 1.8E+02 | 9.4E+01 | 7.2E+03 | 1.4E+04 | 1.8E+02 | 9.4E+01 |
| Anthracene | 120-12-7 | – | – | – | – | – | – | – | – | 3.1E+05 | 4.7E+05 | – | – |

# Table 7
# Tier 1 Individual Commercial/Industrial Soil PCLs

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | Carcinogenic | | | | | | Noncarcinogenic | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | $^{Air}Soil_{Inh\text{-}VP}$ 0.5 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}VP}$ 30 acre source area (mg/kg) | $^{Soil}Soil_{Ing}$ (mg/kg) | $^{Soil}Soil_{Derm}$ (mg/kg) | $^{Air}Soil_{Inh\text{-}V}$[1] 0.5 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}V}$[1] 30 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}VP}$ 0.5 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}VP}$ 30 acre source area (mg/kg) | $^{Soil}Soil_{Ing}$ (mg/kg) | $^{Soil}Soil_{Derm}$ (mg/kg) | $^{Air}Soil_{Inh\text{-}V}$[1] 0.5 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}V}$[1] 30 acre source area (mg/kg) |
| Anthraquinone, 9,10- | 84-65-1 | – | – | 7.3E+02 | 1.5E+03 | – | – | – | – | 2.0E+04 | 4.1E+04 | – | – |
| Antimony | 7440-36-0 | – | – | – | – | – | – | – | – | 4.1E+02 | 1.2E+03 | – | – |
| Aramite | 140-57-8 | 1.0E+06 | 1.0E+06 | 1.1E+03 | 2.3E+03 | – | – | – | – | 5.1E+04 | 1.0E+05 | – | – |
| Arsenic | 7440-38-2 | 2.5E+05 | 1.3E+05 | 2.4E+02 | 1.3E+03 | – | – | – | – | 3.9E+02 | 2.0E+03 | – | – |
| Arsine | 7784-42-1 | – | – | – | – | – | – | 1.1E+00 | 5.5E-01 | – | – | 1.1E+00 | 5.5E-01 |
| Atrazine | 1912-24-9 | – | – | 1.3E+02 | 2.6E+02 | – | – | – | – | 3.6E+04 | 7.2E+04 | – | – |
| Azinphos-methyl (guthion) | 86-50-0 | – | – | – | – | – | – | – | – | 1.5E+03 | 3.1E+03 | – | – |
| Azobenzene | 103-33-3 | 2.3E+03 | 1.2E+03 | 2.6E+02 | 5.2E+02 | 2.3E+03 | 1.2E+03 | – | – | – | – | – | – |
| Barium | 7440-39-3 | – | – | – | – | – | – | – | – | 2.0E+05 | 2.9E+05 | – | – |
| Bayleton | 43121-43-3 | – | – | – | – | – | – | – | – | 3.1E+04 | 6.1E+04 | – | – |
| Benefin (benfluralin) | 1861-40-1 | – | – | – | – | – | – | – | – | 3.1E+05 | 6.1E+05 | – | – |
| Benomyl | 17804-35-2 | – | – | – | – | – | – | – | – | 5.1E+04 | 1.0E+05 | – | – |
| Benz-a-anthracene | 56-55-3 | 9.1E+03 | 4.7E+03 | 2.9E+02 | 4.4E+02 | 9.2E+03 | 4.7E+03 | – | – | – | – | – | – |
| Benzaldehyde | 100-52-7 | – | – | – | – | – | – | – | – | 1.0E+05 | – | – | – |
| Benzene | 71-43-2 | 2.7E+02 | 1.4E+02 | 1.9E+03 | – | 2.7E+02 | 1.4E+02 | 6.0E+03 | 3.1E+03 | 4.1E+03 | – | 6.0E+03 | 3.1E+03 |
| Benzenedicarbonitrile, 1,3- | 626-17-5 | – | – | – | – | – | – | – | – | 6.1E+03 | 1.2E+04 | – | – |
| Benzenedicarboxylic acid, 1,2-disodecyl ester | 26761-40-0 | – | – | – | – | – | – | 1.0E+06 | 1.0E+06 | 4.1E+04 | 8.2E+04 | 1.0E+06 | 1.0E+06 |
| Benzenethiol | 108-98-5 | – | – | – | – | – | – | – | – | 1.0E+03 | – | – | – |
| Benzidine | 92-87-5 | 1.1E-01 | 5.4E-02 | 1.2E-01 | 2.5E-01 | 1.1E-01 | 5.4E-02 | – | – | 3.1E+03 | 6.1E+03 | – | – |
| Benzo-a-pyrene | 50-32-8 | 2.0E+03 | 1.0E+03 | 2.9E+01 | 4.4E+01 | 2.1E+03 | 1.1E+03 | 8.7E+01 | 4.5E+01 | 3.1E+02 | 4.7E+02 | 8.9E+01 | 4.6E+01 |
| Benzo-b-fluoranthene | 205-99-2 | 1.5E+04 | 7.6E+03 | 2.9E+02 | 4.4E+02 | 1.5E+04 | 7.8E+03 | – | – | – | – | – | – |
| Benzo-e-pyrene | 192-97-2 | – | – | – | – | – | – | – | – | 3.1E+04 | 4.7E+04 | – | – |
| Benzo-g,h,i-perylene | 191-24-2 | – | – | – | – | – | – | – | – | 3.1E+04 | 4.7E+04 | – | – |
| Benzoic acid | 65-85-0 | – | – | – | – | – | – | – | – | 1.0E+06 | 1.0E+06 | – | – |
| Benzo-j-fluoranthene | 205-82-3 | 7.8E+03 | 4.0E+03 | 2.9E+02 | 4.4E+02 | 7.9E+03 | 4.1E+03 | – | – | – | – | – | – |
| Benzo-k-fluoranthene | 207-08-9 | 3.5E+05 | 1.8E+05 | 2.9E+03 | 4.4E+03 | 3.8E+05 | 1.9E+05 | – | – | – | – | – | – |
| Benzophenone | 119-61-9 | – | – | – | – | – | – | – | – | 6.8E+03 | 1.4E+04 | – | – |
| Benzotrichloride | 98-07-7 | – | – | 2.2E+00 | 4.4E+00 | – | – | – | – | – | – | – | – |
| Benzoyl peroxide | 94-36-0 | – | – | – | – | – | – | – | – | 5.1E+04 | 1.0E+05 | – | – |
| Benzyl alcohol | 100-51-6 | – | – | – | – | – | – | – | – | 1.0E+05 | 2.0E+05 | – | – |
| Benzyl chloride | 100-44-7 | – | – | 1.7E+02 | – | – | – | 4.3E+01 | 2.2E+01 | 2.0E+03 | – | 4.3E+01 | 2.2E+01 |
| Benzyl dichloride | 98-87-3 | – | – | 1.7E+02 | 3.4E+02 | – | – | 7.7E+01 | 4.0E+01 | 2.0E+03 | 4.1E+03 | 7.7E+01 | 4.0E+01 |
| Beryllium | 7440-41-7 | 1.6E+04 | 8.1E+03 | – | – | – | – | 2.7E+04 | 1.4E+04 | 2.0E+03 | 2.9E+02 | – | – |
| Biphenyl, 1,1- | 92-52-4 | – | – | – | – | – | – | – | – | 5.1E+05 | 1.0E+05 | – | – |
| Biphenyl, 1,1'-, 2-phenoxy- | 6738-04-1 | – | – | – | – | – | – | – | – | 5.1E+04 | 1.0E+05 | – | – |
| Biquinoline, 2,2'- | 119-91-5 | – | – | – | – | – | – | – | – | 3.1E+03 | 6.1E+03 | – | – |
| Bis (2-chloroethoxy) methane | 111-91-1 | 1.9E+01 | 9.8E+00 | 2.6E+01 | 5.2E+01 | 1.9E+01 | 9.8E+00 | – | – | 3.1E+03 | 6.1E+03 | – | – |

# Table 7
# Tier 1 Individual Commercial/Industrial Soil PCLs

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | Carcinogenic | | | | | | Noncarcinogenic | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | $^{Air}Soil_{Inh\text{-}VP}$ 0.5 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}VP}$ 30 acre source area (mg/kg) | $^{Soil}Soil_{Ing}$ (mg/kg) | $^{Soil}Soil_{Derm}$ (mg/kg) | $^{Air}Soil_{Inh\text{-}V}$[1] 0.5 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}V}$[1] 30 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}VP}$ 0.5 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}VP}$ 30 acre source area (mg/kg) | $^{Soil}Soil_{Ing}$ (mg/kg) | $^{Soil}Soil_{Derm}$ (mg/kg) | $^{Air}Soil_{Inh\text{-}V}$[1] 0.5 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}V}$[1] 30 acre source area (mg/kg) |
| Bis (2-chloroethyl) ether | 111-44-4 | 6.0E+00 | 3.1E+00 | 2.6E+01 | – | 6.0E+00 | 3.1E+00 | – | – | – | – | – | – |
| Bis (2-chloro-1-methyl) ether | 108-60-1 | 3.5E+02 | 1.8E+02 | 4.1E+02 | 8.2E+02 | 3.5E+02 | 1.8E+02 | – | – | 4.1E+04 | 8.2E+04 | – | – |
| Bis (2-chloromethyl) ether | 542-88-1 | 9.7E-03 | 5.0E-03 | 1.3E-01 | – | 9.7E-03 | 5.0E-03 | – | – | – | – | – | – |
| Bis (2-ethyl-hexyl) phthalate | 117-81-7 | – | – | 2.0E+03 | 7.8E+02 | – | – | – | – | 2.0E+04 | 7.8E+03 | – | – |
| Bismuth | 7440-69-9 | – | – | – | – | – | – | – | – | 5.1E+05 | 1.0E+06 | – | – |
| Bisphenol A | 80-05-7 | – | – | – | – | – | – | – | – | 5.1E+04 | 1.0E+05 | – | – |
| Boron | 7440-42-8 | – | – | – | – | – | – | 1.0E+06 | 1.0E+06 | 2.0E+05 | 1.0E+06 | – | – |
| Bromacil | 314-40-9 | – | – | – | – | – | – | – | – | 1.0E+05 | 2.0E+05 | – | – |
| Bromo-2-chloroethane, 1- | 107-04-0 | – | – | – | – | – | – | – | – | 4.1E+04 | – | – | – |
| Bromobenzene | 108-86-1 | – | – | – | – | – | – | 1.4E+03 | 7.0E+02 | 8.2E+03 | – | 1.4E+03 | 7.0E+02 |
| Bromodichloromethane | 75-27-4 | – | – | 4.6E+02 | – | – | – | – | – | 2.0E+04 | – | – | – |
| Bromoform | 75-25-2 | 1.4E+03 | 7.2E+02 | 3.6E+03 | – | 1.4E+03 | 7.2E+02 | – | – | 2.0E+04 | – | – | – |
| Bromomethane | 74-83-9 | – | – | – | – | – | – | 1.1E+02 | 5.5E+01 | 1.4E+03 | – | 1.1E+02 | 5.5E+01 |
| Bromophenyl phenylether, 4- | 101-55-3 | 1.6E+01 | 8.4E+00 | 1.9E+00 | 3.8E+00 | 1.6E+01 | 8.4E+00 | – | – | – | – | – | – |
| Butadiene, 1,3- | 106-99-0 | 1.2E+03 | 6.2E+02 | – | – | 1.2E+03 | 6.2E+02 | 7.1E+02 | 3.6E+02 | – | – | 7.1E+02 | 3.6E+02 |
| Butadiene, 2-methyl-1,3- (isoprene) | 78-79-5 | – | – | – | – | – | – | 3.9E+05 | 2.0E+05 | 6.1E+04 | – | 3.9E+05 | 2.0E+05 |
| Butanal (butyraldehyde) | 123-72-8 | – | – | – | – | – | – | 2.1E+03 | 1.1E+03 | 6.1E+04 | – | 2.1E+03 | 1.1E+03 |
| Butane, 2,3-dimethyl- | 79-29-8 | – | – | – | – | – | – | 3.9E+05 | 2.0E+05 | 6.1E+04 | – | 3.9E+05 | 2.0E+05 |
| Butanoic acid (butyric acid) | 107-92-6 | – | – | – | – | – | – | 1.8E+02 | 9.3E+01 | 5.1E+05 | 1.0E+06 | 1.8E+02 | 9.3E+01 |
| Butanol, 2- | 78-92-2 | – | – | – | – | – | – | 1.0E+06 | 1.0E+06 | 1.0E+06 | – | 1.0E+06 | 1.0E+06 |
| Butanol, 2-methyl-1- | 137-32-6 | – | – | – | – | – | – | – | – | 1.0E+04 | – | – | – |
| Butanol, 2-methyl-2- | 75-85-4 | – | – | – | – | – | – | – | – | 1.0E+04 | – | – | – |
| Butanol, n- | 71-36-3 | – | – | – | – | – | – | – | – | 1.0E+05 | – | – | – |
| Butene, 1- | 106-98-9 | – | – | – | – | – | – | 1.1E+05 | 5.9E+04 | 6.1E+04 | – | 1.1E+05 | 5.9E+04 |
| Butene, cis-2- | 590-18-1 | – | – | – | – | – | – | 3.4E+04 | 1.8E+04 | 6.1E+04 | – | 3.4E+04 | 1.8E+04 |
| Butene, trans-2- | 624-64-6 | – | – | – | – | – | – | 3.4E+04 | 1.8E+04 | 6.1E+04 | – | 3.4E+04 | 1.8E+04 |
| Butoxy ethanol, 2- (Ethylene glycol monobutyl ether; EGBE) | 111-76-2 | – | – | – | – | – | – | 4.1E+05 | 2.1E+05 | 1.0E+05 | 2.0E+05 | 4.1E+05 | 2.1E+05 |
| Butyl acetate | 123-86-4 | – | – | – | – | – | – | 1.2E+05 | 6.0E+04 | 1.4E+05 | – | 1.2E+05 | 6.0E+04 |
| Butyl acrylate | 141-32-2 | – | – | – | – | – | – | – | – | 9.2E+03 | – | – | – |
| Butyl benzyl phthalate | 85-68-7 | – | – | 1.5E+04 | 3.0E+04 | – | – | – | – | 2.0E+05 | 4.1E+05 | – | – |
| Butyl ether, n- (dibutyl ether) | 142-96-1 | – | – | – | – | – | – | – | – | 1.0E+05 | – | – | – |
| Butyl methacrylate | 97-88-1 | – | – | – | – | – | – | – | – | 9.2E+04 | 3.7E+04 | – | – |
| Butylate | 2008-41-5 | – | – | – | – | – | – | – | – | 5.1E+04 | 1.0E+05 | – | – |
| Butylbenzene, n- | 104-51-8 | – | – | – | – | – | – | – | – | 5.1E+04 | 1.0E+05 | – | – |
| Butylbenzene, sec- | 135-98-8 | – | – | – | – | – | – | – | – | 4.1E+04 | – | – | – |
| Butylbenzene, tert- | 98-06-6 | – | – | – | – | – | – | – | – | 4.1E+04 | – | – | – |
| Cacodylic acid | 75-60-5 | – | – | – | – | – | – | – | – | 3.1E+03 | 6.1E+03 | – | – |

# Table 7
# Tier 1 Individual Commercial/Industrial Soil PCLs

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | Carcinogenic | | | | | | Noncarcinogenic | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | $^{Air}Soil_{Inh\text{-}VP}$ 0.5 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}VP}$ 30 acre source area (mg/kg) | $^{Soil}Soil_{Ing}$ (mg/kg) | $^{Soil}Soil_{Derm}$ (mg/kg) | $^{Air}Soil_{Inh\text{-}V}$[1] 0.5 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}V}$[1] 30 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}VP}$ 0.5 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}VP}$ 30 acre source area (mg/kg) | $^{Soil}Soil_{Ing}$ (mg/kg) | $^{Soil}Soil_{Derm}$ (mg/kg) | $^{Air}Soil_{Inh\text{-}V}$[1] 0.5 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}V}$[1] 30 acre source area (mg/kg) |
| Cadmium | 7440-43-9 | 7.7E+04 | 4.0E+04 | – | – | – | – | 1.5E+04 | 7.7E+03 | 1.0E+03 | 5.1E+03 | – | – |
| Calcium* | 7440-70-2 | – | – | – | – | – | – | – | – | – | – | – | – |
| Caprolactam | 105-60-2 | – | – | – | – | – | – | – | – | 5.1E+05 | 1.0E+06 | – | – |
| Captan | 133-06-2 | – | – | 8.2E+03 | 1.6E+04 | – | – | – | – | 1.3E+05 | 2.7E+05 | – | – |
| Carbaryl | 63-25-2 | – | – | – | – | – | – | – | – | 1.0E+05 | 2.0E+05 | – | – |
| Carbazole | 86-74-8 | – | – | 1.4E+03 | 2.9E+03 | – | – | – | – | – | – | – | – |
| Carbofuran | 1563-66-2 | – | – | – | – | – | – | – | – | 5.1E+03 | 1.0E+04 | – | – |
| Carbon disulfide | 75-15-0 | – | – | – | – | – | – | 1.5E+04 | 7.7E+03 | 1.0E+05 | – | 1.5E+04 | 7.7E+03 |
| Carbon tetrachloride | 56-23-5 | 1.0E+02 | 5.2E+01 | 4.1E+02 | – | 1.0E+02 | 5.2E+01 | 2.1E+03 | 1.1E+03 | 4.1E+03 | – | 2.1E+03 | 1.1E+03 |
| Carbophenothion | 786-19-6 | – | – | – | – | – | – | – | – | 1.3E+04 | 2.7E+04 | – | – |
| Carbosulfan | 55285-14-8 | – | – | – | – | – | – | – | – | 1.0E+04 | 2.0E+04 | – | – |
| Carboxin | 5234-68-4 | – | – | – | – | – | – | – | – | 1.0E+05 | 2.0E+05 | – | – |
| Chloral | 75-87-6 | – | – | – | – | – | – | – | – | 1.0E+05 | – | – | – |
| Chloral hydrate (1,1-ethanediol, 2,2,2-trichloro-) | 302-17-0 | – | – | – | – | – | – | – | – | 1.0E+05 | 2.0E+05 | – | – |
| Chloramben (amiben; 3-amino-2,5-dichlorobenzoic acid) | 133-90-4 | – | – | – | – | – | – | – | – | 1.5E+04 | 3.1E+04 | – | – |
| Chlordane (technical) | 12789-03-6 | 2.1E+03 | 1.1E+03 | 8.2E+01 | 4.1E+02 | 2.1E+03 | 1.1E+03 | 5.2E+03 | 2.7E+03 | 5.1E+02 | 2.6E+03 | 5.2E+03 | 2.7E+03 |
| Chlordane, cis- (alpha chlordane) | 5103-71-9 | 6.8E+03 | 3.5E+03 | 8.2E+01 | 1.6E+02 | 6.9E+03 | 3.5E+03 | 1.7E+04 | 8.7E+03 | 5.1E+02 | 1.0E+03 | 1.7E+04 | 8.9E+03 |
| Chlordane, trans- (gamma chordane) | 5103-74-2 | 1.6E+03 | 8.3E+02 | 8.2E+01 | 1.6E+02 | 1.6E+03 | 8.4E+02 | 4.0E+03 | 2.1E+03 | 5.1E+02 | 1.0E+03 | 4.1E+03 | 2.1E+03 |
| Chlorfenvinphos | 470-90-6 | – | – | – | – | – | – | 4.3E+01 | 2.2E+01 | 7.2E+02 | 1.4E+03 | 4.3E+01 | 2.2E+01 |
| Chloride* | 16887-00-6 | – | – | – | – | – | – | – | – | – | – | – | – |
| Chlorine | 7782-50-5 | – | – | – | – | – | – | 1.9E+02 | 9.6E+01 | 1.0E+05 | 4.1E+05 | 1.9E+02 | 9.6E+01 |
| Chloro-1,3-butadiene, 2- | 126-99-8 | 2.0E+00 | 1.0E+00 | – | – | 2.0E+00 | 1.0E+00 | 4.3E+02 | 2.2E+02 | – | – | 4.3E+02 | 2.2E+02 |
| Chloro-2-propanol, 1- | 127-00-4 | – | – | – | – | – | – | – | – | 2.0E+04 | – | – | – |
| Chloro-3-methylphenol, 4- | 59-50-7 | – | – | – | – | – | – | – | – | 5.1E+03 | 1.0E+04 | – | – |
| Chloroaniline, p- | 106-47-8 | – | – | 1.4E+02 | 2.9E+02 | – | – | – | – | 4.1E+03 | 8.2E+03 | – | – |
| Chlorobenzene | 108-90-7 | – | – | – | – | – | – | 1.1E+03 | 5.5E+02 | 2.0E+04 | – | 1.1E+03 | 5.5E+02 |
| Chlorobenzilate | 510-15-6 | 5.9E+02 | 3.0E+02 | 1.1E+02 | 2.1E+02 | 5.9E+02 | 3.0E+02 | – | – | 2.0E+04 | 4.1E+04 | – | – |
| Chlorobromomethane (bromochloromethane) | 74-97-5 | – | – | – | – | – | – | – | – | 4.1E+04 | – | – | – |
| Chlorodifluoromethane | 75-45-6 | – | – | – | – | – | – | 1.0E+06 | 5.5E+05 | – | – | 1.0E+06 | 5.5E+05 |
| Chloroethane (ethyl chloride) | 75-00-3 | – | – | – | – | – | – | 2.1E+05 | 1.1E+05 | 4.1E+05 | – | 2.1E+05 | 1.1E+05 |
| Chloroethanol, 2- | 107-07-3 | – | – | – | – | – | – | – | – | 2.0E+04 | – | – | – |
| Chloroethoxy ethene, 2- (2-chloroethylvinylether) | 110-75-8 | – | – | 2.6E+01 | – | – | – | 6.4E+00 | 3.3E+00 | 2.0E+03 | – | 6.4E+00 | 3.3E+00 |
| Chloroform | 67-66-3 | 2.6E+01 | 1.3E+01 | – | – | 2.6E+01 | 1.3E+01 | 2.1E+03 | 1.1E+03 | 1.0E+04 | – | 2.1E+03 | 1.1E+03 |
| Chlorohexane, 1- | 544-10-5 | – | – | – | – | – | – | 2.1E+04 | 1.1E+04 | 4.1E+04 | – | 2.1E+04 | 1.1E+04 |
| Chloromethane (methyl chloride) | 74-87-3 | 3.3E+02 | 1.7E+02 | 2.2E+03 | – | 3.3E+02 | 1.7E+02 | 1.9E+03 | 9.9E+02 | 3.7E+03 | – | 1.9E+03 | 9.9E+02 |
| Chloronaphthalene, 1- (Chloronaphthalene, alpha-) | 90-13-1 | – | – | – | – | – | – | – | – | 8.2E+04 | 1.3E+05 | – | – |
| Chloronaphthalene, 2- (chloronaphthalene, beta) | 91-58-7 | – | – | – | – | – | – | – | – | 8.2E+04 | 1.3E+05 | – | – |

# Table 7
# Tier 1 Individual Commercial/Industrial Soil PCLs

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | Carcinogenic | | | | | | Noncarcinogenic | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | $^{Air}Soil_{Inh\text{-}VP}$ 0.5 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}VP}$ 30 acre source area (mg/kg) | $^{Soil}Soil_{Ing}$ (mg/kg) | $^{Soil}Soil_{Derm}$ (mg/kg) | $^{Air}Soil_{Inh\text{-}V}$[1] 0.5 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}V}$[1] 30 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}VP}$ 0.5 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}VP}$ 30 acre source area (mg/kg) | $^{Soil}Soil_{Ing}$ (mg/kg) | $^{Soil}Soil_{Derm}$ (mg/kg) | $^{Air}Soil_{Inh\text{-}V}$[1] 0.5 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}V}$[1] 30 acre source area (mg/kg) |
| Chloronitrobenzene, p- (1-chloro-4-nitrobenzene) | 100-00-5 | – | – | 4.5E+03 | 9.1E+03 | – | – | 8.8E+01 | 4.5E+01 | 1.0E+03 | 2.0E+03 | 8.8E+01 | 4.5E+01 |
| Chlorophenol, 2- | 95-57-8 | – | – | – | – | – | – | – | – | 5.1E+03 | – | – | – |
| Chlorophenol, 3- | 108-43-0 | – | – | – | – | – | – | – | – | 5.1E+03 | 1.0E+04 | – | – |
| Chlorophenol, 4- | 106-48-9 | – | – | – | – | – | – | – | – | 5.1E+03 | 1.0E+04 | – | – |
| Chlorophenyl phenylether, 4- | 7005-72-3 | 4.2E+00 | 2.2E+00 | 1.9E+00 | 3.8E+00 | 4.2E+00 | 2.2E+00 | – | – | – | – | – | – |
| Chloropropane, 2- | 75-29-6 | – | – | – | – | – | – | 2.1E+03 | 1.1E+03 | 3.1E+04 | – | 2.1E+03 | 1.1E+03 |
| Chlorothalonil | 1897-45-6 | – | – | 2.6E+03 | 5.2E+03 | – | – | – | – | 1.5E+04 | 3.1E+04 | – | – |
| Chlorotoluene, o- (2-chlorotoluene) | 95-49-8 | – | – | – | – | – | – | 1.8E+04 | 9.5E+03 | 2.0E+04 | 4.1E+04 | 1.8E+04 | 9.5E+03 |
| Chlorotoluene, p- (4-chlorotoluene) | 106-43-4 | – | – | – | – | – | – | – | – | 2.0E+04 | – | – | – |
| Chlorpyrifos | 2921-88-2 | – | – | – | – | – | – | – | – | 3.1E+03 | 6.1E+03 | – | – |
| Chromium (III) | 16065-83-1 | – | – | – | – | – | – | 1.9E+05 | 9.8E+04 | 1.0E+06 | 4.0E+05 | – | – |
| Chromium (total) | 7440-47-3 | – | – | – | – | – | – | 1.9E+05 | 9.8E+04 | 1.0E+06 | 4.0E+05 | – | – |
| Chromium (VI) | 18540-29-9 | 1.6E+04 | 8.5E+03 | – | – | – | – | 3.0E+05 | 1.5E+05 | 3.2E+03 | 1.5E+03 | – | – |
| Chrysene | 218-01-9 | 1.0E+06 | 7.3E+05 | 2.9E+04 | 4.4E+04 | 1.0E+06 | 7.5E+05 | – | – | – | – | – | – |
| Cobalt | 7440-48-4 | 6.3E+03 | 3.3E+03 | – | – | – | – | 8.5E+04 | 4.4E+04 | 1.0E+04 | 2.0E+05 | – | – |
| Copolymer acrylamide | 69418-26-4 | – | – | – | – | – | – | – | – | 2.0E+02 | 4.1E+02 | – | – |
| Copper | 7440-50-8 | – | – | – | – | – | – | – | – | 9.9E+04 | 1.0E+06 | – | – |
| Coronene | 191-07-1 | – | – | – | – | – | – | – | – | 2.0E+03 | 4.1E+03 | – | – |
| Coumaphos | 56-72-4 | – | – | – | – | – | – | – | – | 7.2E+03 | 1.4E+04 | – | – |
| Cresol | 1319-77-3 | – | – | – | – | – | – | – | – | 5.1E+04 | 1.0E+05 | – | – |
| Cresol, m- (3-methylphenol) | 108-39-4 | – | – | – | – | – | – | – | – | 5.1E+04 | 1.0E+05 | – | – |
| Cresol, o- (2-methylphenol) | 95-48-7 | – | – | – | – | – | – | – | – | 5.1E+04 | 1.0E+05 | – | – |
| Cresol, p- (4-methylphenol) | 106-44-5 | – | – | – | – | – | – | – | – | 5.1E+03 | 1.0E+04 | – | – |
| Crotonaldehyde | 123-73-9 | – | – | 1.5E+01 | – | – | – | – | – | 1.0E+03 | – | – | – |
| Cumene (isopropylbenzene) | 98-82-8 | – | – | – | – | – | – | 1.3E+04 | 6.7E+03 | 1.0E+05 | – | 1.3E+04 | 6.7E+03 |
| Cyanazine | 21725-46-2 | – | – | 3.4E+01 | 6.8E+01 | – | – | – | – | 2.0E+03 | 4.1E+03 | – | – |
| Cyanide | 57-12-5 | – | – | – | – | – | – | 1.0E+03 | 5.2E+02 | 6.1E+02 | 1.2E+04 | 1.0E+03 | 5.2E+02 |
| Cyanogen | 460-19-5 | – | – | – | – | – | – | 1.7E+01 | 8.8E+00 | 1.0E+03 | – | 1.7E+01 | 8.8E+00 |
| Cycloate | 1134-23-2 | – | – | – | – | – | – | – | – | 5.6E+04 | 1.1E+05 | – | – |
| Cyclohexane | 110-82-7 | – | – | – | – | – | – | 1.3E+05 | 6.6E+04 | 1.0E+06 | – | 1.3E+05 | 6.6E+04 |
| Cyclohexanol | 108-93-0 | – | – | – | – | – | – | – | – | 1.0E+06 | 1.0E+06 | – | – |
| Cyclohexanone | 108-94-1 | – | – | – | – | – | – | 4.9E+04 | 2.5E+04 | 1.0E+06 | – | 4.9E+04 | 2.5E+04 |
| Cyclohexene, 1-methanol-3- | 1679-51-2 | – | – | – | – | – | – | – | – | 2.0E+04 | 4.1E+04 | – | – |
| Cyclohexene, 4-vinyl-1- | 100-40-3 | – | – | – | – | – | – | 7.1E+03 | 3.6E+03 | 2.2E+04 | – | 7.1E+03 | 3.6E+03 |
| Cyclopentane | 287-92-3 | – | – | – | – | – | – | 5.2E+05 | 2.7E+05 | 6.1E+04 | – | 5.2E+05 | 2.7E+05 |
| Cyclopentane, methyl- | 96-37-7 | – | – | – | – | – | – | 2.1E+04 | 1.1E+04 | 1.0E+05 | – | 2.1E+04 | 1.1E+04 |
| Cyclopentene | 142-29-0 | – | – | – | – | – | – | – | – | 1.0E+06 | – | – | – |

# Table 7
## Tier 1 Individual Commercial/Industrial Soil PCLs

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | Carcinogenic | | | | | | Noncarcinogenic | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | $^{Air}Soil_{Inh\text{-}VP}$ 0.5 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}VP}$ 30 acre source area (mg/kg) | $^{Soil}Soil_{Ing}$ (mg/kg) | $^{Soil}Soil_{Derm}$ (mg/kg) | $^{Air}Soil_{Inh\text{-}V}$[1] 0.5 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}V}$[1] 30 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}VP}$ 0.5 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}VP}$ 30 acre source area (mg/kg) | $^{Soil}Soil_{Ing}$ (mg/kg) | $^{Soil}Soil_{Derm}$ (mg/kg) | $^{Air}Soil_{Inh\text{-}V}$[1] 0.5 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}V}$[1] 30 acre source area (mg/kg) |
| Cyclotetramethylenetetranitramine (HMX) | 2691-41-0 | – | – | – | – | – | – | – | – | 5.1E+04 | 1.5E+04 | – | – |
| Cyclotrimethylenetrinitramine (RDX) | 121-82-4 | – | – | 3.6E+02 | 7.2E+02 | – | – | – | – | 4.1E+03 | 8.2E+03 | – | – |
| Cymene (isopropyltoluene) | 99-87-6 | – | – | – | – | – | – | – | – | 1.0E+05 | – | – | – |
| Cymoxanil | 57966-95-7 | – | – | – | – | – | – | – | – | 1.3E+04 | 2.7E+04 | – | – |
| Dacthal (DCPA) | 1861-32-1 | – | – | – | – | – | – | – | – | 1.0E+04 | 2.0E+04 | – | – |
| Dalapon, sodium salt (2,2-dichloropropanoic acid) | 75-99-0 | – | – | – | – | – | – | – | – | 3.1E+04 | 6.1E+04 | – | – |
| DDD | 72-54-8 | – | – | 1.2E+02 | 7.9E+02 | – | – | – | – | – | – | – | – |
| DDE | 72-55-9 | – | – | 8.4E+01 | 5.6E+02 | – | – | – | – | – | – | – | – |
| DDT | 50-29-3 | 2.0E+03 | 1.0E+03 | 8.4E+01 | 5.6E+02 | 2.0E+03 | 1.0E+03 | – | – | 5.1E+02 | 3.4E+03 | – | – |
| Demeton | 8065-48-3 | – | – | – | – | – | – | – | – | 4.1E+01 | 8.2E+01 | – | – |
| Desethylatrazine | 6190-65-4 | – | – | – | – | – | – | – | – | 3.6E+04 | 7.2E+04 | – | – |
| Diacetone alcohol (4-hydroxy-4-methyl-2-pentanone) | 123-42-2 | – | – | – | – | – | – | – | – | 4.1E+04 | 8.2E+04 | – | – |
| Diallate | 2303-16-4 | – | – | 4.7E+02 | 9.4E+02 | – | – | – | – | – | – | – | – |
| Diazinon | 333-41-5 | – | – | – | – | – | – | 9.1E+01 | 4.7E+01 | 9.2E+02 | 1.8E+03 | 9.1E+01 | 4.7E+01 |
| Dibenz(a,h)acridine | 226-36-8 | 2.4E+04 | 1.2E+04 | 2.4E+01 | 4.8E+01 | 2.6E+04 | 1.3E+04 | – | – | – | – | – | – |
| Dibenz(a,j)acridine | 224-42-0 | 3.3E+04 | 1.7E+04 | 3.9E+01 | 6.0E+01 | 3.5E+04 | 1.8E+04 | – | – | – | – | – | – |
| Dibenz-a,h-anthracene | 53-70-3 | 4.5E+03 | 2.3E+03 | 2.9E+01 | 4.4E+01 | 4.8E+03 | 2.5E+03 | – | – | – | – | – | – |
| Dibenzo(a,e)pyrene | 192-65-4 | 9.5E+03 | 4.9E+03 | 3.9E+00 | 7.8E+00 | 1.2E+04 | 6.2E+03 | – | – | – | – | – | – |
| Dibenzo(a,h)pyrene | 189-64-0 | 9.2E+02 | 4.7E+02 | 3.9E-01 | 7.8E-01 | 1.2E+03 | 6.0E+02 | – | – | – | – | – | – |
| Dibenzo(a,i)pyrene | 189-55-9 | 9.2E+02 | 4.7E+02 | 3.9E-01 | 7.8E-01 | 1.2E+03 | 6.0E+02 | – | – | – | – | – | – |
| Dibenzofuran | 132-64-9 | – | – | – | – | – | – | – | – | 4.1E+03 | 8.2E+03 | – | – |
| Dibenzothiophene | 132-65-0 | – | – | – | – | – | – | – | – | 1.0E+04 | 6.1E+03 | – | – |
| Dibromo-3-chloropropane, 1,2- | 96-12-8 | 2.6E-01 | 1.4E-01 | 3.6E+01 | 7.2E+01 | 2.6E-01 | 1.4E-01 | 1.1E+01 | 5.8E+00 | 2.0E+02 | 4.1E+02 | 1.1E+01 | 5.8E+00 |
| Dibromochloromethane (chlorodibromomethane) | 124-48-1 | – | – | 3.4E+02 | – | – | – | – | – | 2.0E+04 | – | – | – |
| Dibromofluoromethane | 1868-53-7 | – | – | – | – | – | – | – | – | 2.0E+05 | – | – | – |
| Dicamba | 1918-00-9 | – | – | – | – | – | – | – | – | 3.1E+04 | 6.1E+04 | – | – |
| Dichlormid | 37764-25-3 | – | – | – | – | – | – | – | – | 2.6E+04 | 5.1E+04 | – | – |
| Dichloro-2-butene, 1,4- | 764-41-0 | 3.3E-01 | 1.7E-01 | – | – | 3.3E-01 | 1.7E-01 | – | – | – | – | – | – |
| Dichloro-2-butene, 1,4- trans | 110-57-6 | 3.4E-01 | 1.8E-01 | – | – | 3.4E-01 | 1.8E-01 | – | – | – | – | – | – |
| Dichlorobenzene, 1,2- | 95-50-1 | – | – | – | – | – | – | 1.1E+03 | 5.7E+02 | 9.2E+04 | – | 1.1E+03 | 5.7E+02 |
| Dichlorobenzene, 1,3- | 541-73-1 | – | – | – | – | – | – | 1.7E+02 | 8.8E+01 | 3.1E+04 | – | 1.7E+02 | 8.8E+01 |
| Dichlorobenzene, 1,4- | 106-46-7 | – | – | 1.2E+03 | – | – | – | 1.6E+04 | 8.5E+03 | – | – | 1.6E+04 | 8.5E+03 |
| Dichlorobenzidine, 3,3- | 91-94-1 | – | – | 6.4E+01 | 1.3E+02 | – | – | – | – | – | – | – | – |
| Dichlorobutane, 2,3- | 7581-97-7 | – | – | – | – | – | – | 1.5E+02 | 7.7E+01 | 1.0E+04 | – | 1.5E+02 | 7.7E+01 |
| Dichlorodifluoromethane | 75-71-8 | – | – | – | – | – | – | 2.1E+03 | 1.1E+03 | 2.0E+05 | – | 2.1E+03 | 1.1E+03 |
| Dichloroethane, 1,1- | 75-34-3 | – | – | – | – | – | – | 5.2E+04 | 2.7E+04 | 2.0E+05 | – | 5.2E+04 | 2.7E+04 |
| Dichloroethane, 1,2- | 107-06-2 | 1.8E+02 | 9.1E+01 | 3.1E+02 | – | 1.8E+02 | 9.1E+01 | 9.5E+02 | 4.9E+02 | 8.0E+04 | – | 9.5E+02 | 4.9E+02 |

# Table 7
## Tier 1 Individual Commercial/Industrial Soil PCLs

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | Carcinogenic | | | | | | Noncarcinogenic | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | $^{Air}Soil_{Inh\text{-}VP}$ 0.5 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}VP}$ 30 acre source area (mg/kg) | $^{Soil}Soil_{Ing}$ (mg/kg) | $^{Soil}Soil_{Derm}$ (mg/kg) | $^{Air}Soil_{Inh\text{-}V}$[1] 0.5 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}V}$[1] 30 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}VP}$ 0.5 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}VP}$ 30 acre source area (mg/kg) | $^{Soil}Soil_{Ing}$ (mg/kg) | $^{Soil}Soil_{Derm}$ (mg/kg) | $^{Air}Soil_{Inh\text{-}V}$[1] 0.5 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}V}$[1] 30 acre source area (mg/kg) |
| Dichloroethylene, 1,1- | 75-35-4 | – | – | – | – | – | – | 7.3E+03 | 3.8E+03 | 5.1E+04 | – | 7.3E+03 | 3.8E+03 |
| Dichloroethylene, cis-1,2- | 156-59-2 | – | – | – | – | – | – | 1.3E+03 | 6.6E+02 | 2.0E+03 | – | 1.3E+03 | 6.6E+02 |
| Dichloroethylene, trans-1,2 | 156-60-5 | – | – | – | – | – | – | 1.3E+03 | 6.6E+02 | 2.0E+04 | – | 1.3E+03 | 6.6E+02 |
| Dichlorofluoromethane | 75-43-4 | – | – | – | – | – | – | – | – | 2.0E+05 | – | – | – |
| Dichlorophenol, 2,3- | 576-24-9 | – | – | – | – | – | – | – | – | 3.1E+03 | 6.1E+03 | – | – |
| Dichlorophenol, 2,4- | 120-83-2 | – | – | – | – | – | – | – | – | 3.1E+03 | 6.1E+03 | – | – |
| Dichlorophenol, 2,5- | 583-78-8 | – | – | – | – | – | – | – | – | 3.1E+03 | 6.1E+03 | – | – |
| Dichlorophenol, 2,6- | 87-65-0 | – | – | – | – | – | – | – | – | 1.0E+03 | 2.0E+03 | – | – |
| Dichlorophenol, 3,4- | 95-77-2 | – | – | – | – | – | – | – | – | 3.1E+03 | 6.1E+03 | – | – |
| Dichlorophenol, 3,5- | 591-35-5 | – | – | – | – | – | – | – | – | 3.1E+03 | 6.1E+03 | – | – |
| Dichlorophenoxy, 2,4- butyric acid, 4- (2,4-DB) | 94-82-6 | – | – | – | – | – | – | – | – | 8.2E+03 | 1.6E+04 | – | – |
| Dichlorophenoxyacetic acid, 2,4- (2,4-D) | 94-75-7 | – | – | – | – | – | – | – | – | 1.0E+04 | 4.1E+04 | – | – |
| Dichloroprop (2-(2,4-dichlorophenoxy) propanoic acid) | 120-36-5 | – | – | – | – | – | – | – | – | 1.0E+04 | 2.0E+04 | – | – |
| Dichloropropane, 1,2- | 78-87-5 | 6.5E+02 | 3.4E+02 | 7.7E+02 | – | 6.5E+02 | 3.4E+02 | 8.6E+01 | 4.4E+01 | 1.3E+05 | – | 8.6E+01 | 4.4E+01 |
| Dichloropropane, 1,3- | 142-28-9 | 1.5E+02 | 7.7E+01 | 2.9E+02 | – | 1.5E+02 | 7.7E+01 | 4.3E+02 | 2.2E+02 | 2.0E+04 | – | 4.3E+02 | 2.2E+02 |
| Dichloropropane, 2,2- | 594-20-7 | – | – | 4.2E+02 | – | – | – | 8.6E+01 | 4.4E+01 | 9.2E+04 | – | 8.6E+01 | 4.4E+01 |
| Dichloropropanol, 2,3- | 616-23-9 | – | – | – | – | – | – | – | – | 3.1E+03 | 6.1E+03 | – | – |
| Dichloropropene, 1,1- | 563-58-6 | 1.5E+02 | 7.7E+01 | 2.9E+02 | – | 1.5E+02 | 7.7E+01 | 4.3E+02 | 2.2E+02 | 3.1E+04 | – | 4.3E+02 | 2.2E+02 |
| Dichloropropene, 1,3- (mixed isomers) | 542-75-6 | 1.5E+02 | 7.7E+01 | 2.9E+02 | – | 1.5E+02 | 7.7E+01 | 4.3E+02 | 2.2E+02 | 3.1E+04 | – | 4.3E+02 | 2.2E+02 |
| Dichloropropene, cis 1,3- | 10061-01-5 | – | – | 5.3E+01 | – | – | – | 4.3E+02 | 2.2E+02 | 1.0E+02 | – | 4.3E+02 | 2.2E+02 |
| Dichloropropene, trans 1,3- | 10061-02-6 | 1.5E+02 | 7.7E+01 | 2.9E+02 | – | 1.5E+02 | 7.7E+01 | 4.3E+02 | 2.2E+02 | 3.1E+04 | – | 4.3E+02 | 2.2E+02 |
| Dichlorvos | 62-73-7 | – | – | 9.9E+01 | 2.0E+02 | – | – | 4.8E+05 | 2.5E+05 | 5.1E+02 | 1.0E+03 | 1.0E+06 | 8.7E+05 |
| Dicrotophos (bidrin) | 141-66-2 | – | – | – | – | – | – | – | – | 1.0E+02 | 2.0E+02 | – | – |
| Dicyclopentadiene | 77-73-6 | – | – | – | – | – | – | – | – | 8.2E+04 | – | – | – |
| Dieldrin | 60-57-1 | 5.3E+01 | 2.7E+01 | 1.8E+00 | 3.6E+00 | 5.3E+01 | 2.7E+01 | – | – | 5.1E+01 | 1.0E+02 | – | – |
| Diethanolamine | 111-42-2 | – | – | – | – | – | – | 4.9E+03 | 2.5E+03 | 5.1E+02 | 1.0E+03 | 4.9E+03 | 2.5E+03 |
| Diethyldithiocarbamate, sodium salt | 148-18-5 | – | – | 1.1E+02 | – | – | – | – | – | 3.1E+04 | – | – | – |
| Diethyl phthalate | 84-66-2 | – | – | – | – | – | – | – | – | 8.2E+05 | 1.0E+06 | – | – |
| Diethylene glycol | 111-46-6 | – | – | – | – | – | – | – | – | 1.0E+06 | 1.0E+06 | – | – |
| Diethylene glycol monobutyl ether | 112-34-5 | – | – | – | – | – | – | 2.8E+01 | 1.5E+01 | 3.1E+04 | 6.1E+04 | 2.8E+01 | 1.5E+01 |
| Diethylhexyl adipate | 103-23-1 | – | – | 2.4E+04 | 4.8E+04 | – | – | – | – | 6.1E+05 | 1.0E+06 | – | – |
| Diethylstilbestrol | 56-53-1 | – | – | 6.1E-03 | 1.2E-02 | – | – | – | – | – | – | – | – |
| Diisobutylene (trimethyl-1-pentene, 2,4,4-) | 107-39-1 | – | – | – | – | – | – | 4.3E+03 | 2.2E+03 | 6.1E+04 | – | 4.3E+03 | 2.2E+03 |
| Diisopropylbenzene, p- | 100-18-5 | – | – | – | – | – | – | – | – | 1.0E+04 | 2.0E+04 | – | – |
| Diisopropyl ether (2,2'-oxybis-propane) | 108-20-3 | – | – | – | – | – | – | 1.5E+04 | 7.7E+03 | 1.0E+05 | – | 1.5E+04 | 7.7E+03 |
| Dimethenamid | 87674-68-8 | – | – | – | – | – | – | – | – | 1.5E+04 | 3.1E+04 | – | – |
| Dimethoate | 60-51-5 | – | – | – | – | – | – | – | – | 2.0E+02 | 4.1E+02 | – | – |

# Table 7
## Tier 1 Individual Commercial/Industrial Soil PCLs

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | Carcinogenic | | | | | | Noncarcinogenic | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | $^{Air}Soil_{Inh\text{-}VP}$ 0.5 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}VP}$ 30 acre source area (mg/kg) | $^{Soil}Soil_{Ing}$ (mg/kg) | $^{Soil}Soil_{Derm}$ (mg/kg) | $^{Air}Soil_{Inh\text{-}V}$[1] 0.5 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}V}$[1] 30 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}VP}$ 0.5 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}VP}$ 30 acre source area (mg/kg) | $^{Soil}Soil_{Ing}$ (mg/kg) | $^{Soil}Soil_{Derm}$ (mg/kg) | $^{Air}Soil_{Inh\text{-}V}$[1] 0.5 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}V}$[1] 30 acre source area (mg/kg) |
| Dimethoxybenzidine, 3,3'- | 119-90-4 | – | – | 2.0E+03 | 4.1E+03 | – | – | – | – | – | – | – | – |
| Dimethyl-2-nitrobenzene, 1,3- | 81-20-9 | – | – | – | – | – | – | 3.8E+03 | 2.0E+03 | 2.0E+03 | 4.1E+03 | 3.9E+03 | 2.0E+03 |
| Dimethyl-3-nitrobenzene, 1,2- | 83-41-0 | – | – | – | – | – | – | 3.4E+03 | 1.7E+03 | 2.0E+03 | 4.1E+03 | 3.4E+03 | 1.7E+03 |
| Dimethyl-4-nitrobenzene, 1-2- | 99-51-4 | – | – | – | – | – | – | 3.5E+03 | 1.8E+03 | 2.0E+03 | 4.1E+03 | 3.5E+03 | 1.8E+03 |
| Dimethyl-5-nitrobenzene, 1,3- | 99-12-7 | – | – | – | – | – | – | 3.1E+03 | 1.6E+03 | 2.0E+03 | 4.1E+03 | 3.1E+03 | 1.6E+03 |
| Dimethylphenethylamine, alpha, alpha- | 122-09-8 | – | – | – | – | – | – | – | – | 2.0E+03 | 4.1E+03 | – | – |
| Dimethyl phenol, 2,4- | 105-67-9 | – | – | – | – | – | – | – | – | 2.0E+04 | 4.1E+04 | – | – |
| Dimethylaminoazobenzene, p- | 60-11-7 | – | – | – | – | – | – | – | – | 1.0E+01 | 2.0E+01 | – | – |
| Dimethylbenz-a-anthracene, 7,12- | 57-97-6 | 2.1E+02 | 1.1E+02 | 1.1E-01 | 1.8E-01 | 2.4E+02 | 1.2E+02 | – | – | – | – | – | – |
| Dimethylbenzidine, 3,3'- | 119-93-7 | – | – | 2.6E+00 | 5.2E+00 | – | – | – | – | – | – | – | – |
| Dimethylformamide, N,N- | 68-12-2 | – | – | – | – | – | – | 4.5E+03 | 2.3E+03 | 1.0E+05 | – | 4.5E+03 | 2.3E+03 |
| Dimethylnaphthalene, 1,3- | 575-41-7 | – | – | – | – | – | – | – | – | 4.1E+04 | 6.3E+04 | – | – |
| Dimethylphthalate | 131-11-3 | – | – | – | – | – | – | – | – | 8.2E+05 | 1.0E+06 | – | – |
| Di-n-butyl phthalate | 84-74-2 | – | – | – | – | – | – | – | – | 1.0E+05 | 2.0E+05 | – | – |
| Dinitro-2-methylphenol, 4,6- (dinitro-o-cresol, 4, 6-) | 534-52-1 | – | – | – | – | – | – | – | – | 1.0E+02 | 2.0E+02 | – | – |
| Dinitrobenzene, 1,3- (dinitrobenzene, 2,4-) | 99-65-0 | – | – | – | – | – | – | – | – | 1.0E+02 | 2.0E+02 | – | – |
| Dinitrobenzene, 1,4- | 100-25-4 | – | – | – | – | – | – | – | – | 1.0E+02 | 2.0E+02 | – | – |
| Dinitrophenol, 2,4- | 51-28-5 | – | – | – | – | – | – | – | – | 2.0E+03 | 4.1E+03 | – | – |
| Dinitrophenol, 2,5- | 329-71-5 | – | – | – | – | – | – | – | – | 2.0E+03 | 4.1E+03 | – | – |
| Dinitrotoluene, 2,4- | 121-14-2 | – | – | 4.2E+01 | 8.4E+01 | – | – | – | – | 2.0E+03 | 4.1E+03 | – | – |
| Dinitrotoluene, 2,6- | 606-20-2 | – | – | 4.2E+01 | 8.4E+01 | – | – | – | – | 1.0E+03 | 2.0E+03 | – | – |
| Di-n-octyl phthalate | 117-84-0 | – | – | – | – | – | – | – | – | 1.0E+04 | 2.0E+04 | – | – |
| Dinoseb | 88-85-7 | – | – | – | – | – | – | – | – | 1.0E+03 | 2.0E+03 | – | – |
| Dioxane 1,4- | 123-91-1 | 3.0E+02 | 1.6E+02 | 2.9E+02 | – | 3.0E+02 | 1.6E+02 | 5.9E+03 | 3.1E+03 | 3.1E+04 | – | 5.9E+03 | 3.1E+03 |
| Dioxin (as 2,3,7,8-TCDD toxicity equivalent quotients (TEQs)) | 1746-01-6 | – | – | – | – | – | – | – | – | – | – | – | – |
| Diphenyl ether | 101-84-8 | – | – | – | – | – | – | – | – | 6.3E+03 | 1.3E+04 | – | – |
| Diphenylamine | 122-39-4 | – | – | – | – | – | – | – | – | 2.6E+04 | 5.1E+04 | – | – |
| Diphenylhydrazine, 1,2- | 122-66-7 | 2.4E+02 | 1.2E+02 | 3.6E+01 | 7.2E+01 | 2.4E+02 | 1.2E+02 | – | – | – | – | – | – |
| Dipropylene glycol | 110-98-5 | – | – | – | – | – | – | – | – | 1.2E+05 | 2.5E+05 | – | – |
| Diquat | 85-00-7 | – | – | – | – | – | – | – | – | 2.2E+03 | 4.5E+03 | – | – |
| Disodium iminodiacetate (iminodiacetic acid, disodium salt) | 142-73-4 | – | – | – | – | – | – | – | – | 1.0E+04 | 2.0E+04 | – | – |
| Disulfoton | 298-04-4 | – | – | – | – | – | – | – | – | 4.1E+01 | 8.2E+01 | – | – |
| Diuron | 330-54-1 | – | – | – | – | – | – | – | – | 2.0E+03 | 4.1E+03 | – | – |
| Dodecylphenol, 4- | 104-43-8 | – | – | – | – | – | – | – | – | 5.1E+04 | 1.0E+05 | – | – |
| Endosulfan | 115-29-7 | – | – | – | – | – | – | – | – | 6.1E+03 | 1.2E+04 | – | – |
| Endosulfan I | 959-98-8 | – | – | – | – | – | – | – | – | 2.0E+03 | 4.1E+03 | – | – |
| Endosulfan II | 33213-65-9 | – | – | – | – | – | – | – | – | 6.1E+03 | 1.2E+04 | – | – |

# Table 7
# Tier 1 Individual Commercial/Industrial Soil PCLs

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | Carcinogenic | | | | | | Noncarcinogenic | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | $^{Air}Soil_{Inh\text{-}VP}$ 0.5 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}VP}$ 30 acre source area (mg/kg) | $^{Soil}Soil_{Ing}$ (mg/kg) | $^{Soil}Soil_{Derm}$ (mg/kg) | $^{Air}Soil_{Inh\text{-}V}$[1] 0.5 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}V}$[1] 30 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}VP}$ 0.5 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}VP}$ 30 acre source area (mg/kg) | $^{Soil}Soil_{Ing}$ (mg/kg) | $^{Soil}Soil_{Derm}$ (mg/kg) | $^{Air}Soil_{Inh\text{-}V}$[1] 0.5 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}V}$[1] 30 acre source area (mg/kg) |
| Endosulfan sulfate | 1031-07-8 | – | – | – | – | – | – | – | – | 6.1E+03 | 1.2E+04 | – | – |
| Endothall | 145-73-3 | – | – | – | – | – | – | – | – | 2.0E+04 | 4.1E+04 | – | – |
| Endrin | 72-20-8 | – | – | – | – | – | – | – | – | 3.1E+02 | 6.1E+02 | – | – |
| Endrin aldehyde | 7421-93-4 | – | – | – | – | – | – | – | – | 3.1E+02 | 6.1E+02 | – | – |
| Endrin ketone | 53494-70-5 | – | – | – | – | – | – | – | – | 3.1E+02 | 6.1E+02 | – | – |
| Epichlorohydrin | 106-89-8 | 8.6E+02 | 4.4E+02 | 2.9E+03 | – | 8.6E+02 | 4.4E+02 | 3.7E+01 | 1.9E+01 | 6.1E+03 | – | 3.7E+01 | 1.9E+01 |
| EPN (o-ethyl o-(4-nitrophenyl)phenylphosphonothioate) | 2104-64-5 | – | – | – | – | – | – | – | – | 1.0E+01 | 2.0E+01 | – | – |
| Esfenvalerate | 66230-04-4 | – | – | – | – | – | – | – | – | 2.0E+03 | 4.1E+03 | – | – |
| Ethalfluralin (sonolan) | 55283-68-6 | – | – | 3.2E+02 | 6.4E+02 | – | – | – | – | 4.1E+04 | 8.2E+04 | – | – |
| Ethanol | 64-17-5 | – | – | – | – | – | – | – | – | 1.0E+06 | – | – | – |
| Ethanol, 2-amino- | 141-43-5 | – | – | – | – | – | – | 4.1E+03 | 2.1E+03 | 1.7E+03 | 3.5E+03 | 4.1E+03 | 2.1E+03 |
| Ethanol, 2-(2-aminoethoxy)- | 929-06-6 | – | – | – | – | – | – | – | – | 5.1E+02 | 1.0E+03 | – | – |
| Ethanol, 2-(2-ethoxyethoxy)- | 111-90-0 | – | – | – | – | – | – | – | – | 1.0E+06 | 1.0E+06 | – | – |
| Ethanol, 2-(methylamino)- | 109-83-1 | – | – | – | – | – | – | 9.0E+03 | 4.6E+03 | 1.6E+04 | 3.3E+04 | 9.0E+03 | 4.6E+03 |
| Ethion | 563-12-2 | – | – | – | – | – | – | – | – | 5.1E+02 | 1.0E+03 | – | – |
| Ethoprop | 13194-48-4 | – | – | 1.0E+03 | 2.0E+03 | – | – | – | – | 1.0E+02 | 2.0E+02 | – | – |
| Ethoxy ethanol, 2- | 110-80-5 | – | – | – | – | – | – | 3.5E+04 | 1.8E+04 | 9.2E+04 | – | 3.5E+04 | 1.8E+04 |
| Ethyl acetate | 141-78-6 | – | – | – | – | – | – | 5.1E+03 | 2.6E+03 | 9.2E+05 | – | 5.1E+03 | 2.6E+03 |
| Ethyl acrylate | 140-88-5 | – | – | 6.0E+02 | – | – | – | 3.4E+02 | 1.7E+02 | 5.1E+03 | – | 3.4E+02 | 1.7E+02 |
| Ethyl benzene | 100-41-4 | – | – | – | – | – | – | 4.1E+04 | 2.1E+04 | 1.0E+05 | – | 4.1E+04 | 2.1E+04 |
| Ethyl dipropylthiocarbamate, S- | 759-94-4 | – | – | – | – | – | – | – | – | 2.6E+04 | 5.1E+04 | – | – |
| Ethyl ether | 60-29-7 | – | – | – | – | – | – | – | – | 2.0E+05 | – | – | – |
| Ethyl methacrylate | 97-63-2 | – | – | – | – | – | – | 9.9E+03 | 5.1E+03 | 9.2E+04 | – | 9.9E+03 | 5.1E+03 |
| Ethyl methanesulfonate | 62-50-0 | 2.0E+02 | 1.0E+02 | 2.9E+02 | 5.8E+02 | 2.0E+02 | 1.0E+02 | – | – | – | – | – | – |
| Ethyl tert-butyl ether (2-ethyl-2-ethoxypropane) | 637-92-3 | – | – | – | – | – | – | 6.4E+03 | 3.3E+03 | 1.0E+03 | – | 6.4E+03 | 3.3E+03 |
| Ethyl-1-hexanol, 2- | 104-76-7 | – | – | – | – | – | – | – | – | 1.5E+05 | 3.1E+05 | – | – |
| Ethyl-2-hexenal, 2- | 645-62-5 | – | – | – | – | – | – | – | – | 1.5E+05 | – | – | – |
| Ethyl-2-methyl benzene, 1- | 611-14-3 | – | – | – | – | – | – | 1.2E+04 | 6.1E+03 | 5.1E+04 | – | 1.2E+04 | 6.1E+03 |
| Ethyl-4-methyl benzene, 1- | 622-96-8 | – | – | – | – | – | – | 1.0E+04 | 5.2E+03 | 5.1E+04 | – | 1.0E+04 | 5.2E+03 |
| Ethylene* | 74-85-1 | – | – | – | – | – | – | – | – | – | – | – | – |
| Ethylene dibromide (dibromoethane, 1,2- ) | 106-93-4 | 2.2E+01 | 1.1E+01 | 1.4E+01 | – | 2.2E+01 | 1.1E+01 | 2.3E+03 | 1.2E+03 | 9.2E+03 | – | 2.3E+03 | 1.2E+03 |
| Ethylene glycol | 107-21-1 | – | – | – | – | – | – | – | – | 1.0E+06 | 1.0E+06 | – | – |
| Ethylene oxide | 75-21-8 | 7.9E+00 | 4.1E+00 | 2.8E+01 | – | 7.9E+00 | 4.1E+00 | – | – | – | – | – | – |
| Ethylene thiourea | 96-45-7 | – | – | 2.6E+02 | 5.2E+02 | – | – | – | – | 8.2E+01 | 1.6E+02 | – | – |
| Ethylenediamine | 107-15-3 | – | – | – | – | – | – | – | – | 9.2E+04 | – | – | – |
| Ethylenimine | 151-56-4 | 2.2E-01 | 1.1E-01 | 4.4E-01 | – | 2.2E-01 | 1.1E-01 | – | – | – | – | – | – |
| Ethylhexyl acrylate, 2- | 103-11-7 | – | – | 6.0E+02 | 1.2E+03 | – | – | – | – | – | – | – | – |

# Table 7
# Tier 1 Individual Commercial/Industrial Soil PCLs

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | Carcinogenic | | | | | | Noncarcinogenic | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | $^{Air}Soil_{Inh\text{-}VP}$ 0.5 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}VP}$ 30 acre source area (mg/kg) | $^{Soil}Soil_{Ing}$ (mg/kg) | $^{Soil}Soil_{Derm}$ (mg/kg) | $^{Air}Soil_{Inh\text{-}V}$[1] 0.5 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}V}$[1] 30 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}VP}$ 0.5 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}VP}$ 30 acre source area (mg/kg) | $^{Soil}Soil_{Ing}$ (mg/kg) | $^{Soil}Soil_{Derm}$ (mg/kg) | $^{Air}Soil_{Inh\text{-}V}$[1] 0.5 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}V}$[1] 30 acre source area (mg/kg) |
| Famphur | 52-85-7 | – | – | – | – | – | – | – | – | 3.1E+01 | 6.1E+01 | – | – |
| Fensulfothion | 115-90-2 | – | – | – | – | – | – | – | – | 1.0E+03 | 2.0E+03 | – | – |
| Fenthion | 55-38-9 | – | – | – | – | – | – | – | – | 7.2E+01 | 1.4E+02 | – | – |
| Fenuron | 101-42-8 | – | – | – | – | – | – | – | – | 7.2E+04 | 1.4E+05 | – | – |
| Fluoranthene | 206-44-0 | – | – | – | – | – | – | – | – | 4.1E+04 | 6.3E+04 | – | – |
| Fluorene | 86-73-7 | – | – | – | – | – | – | – | – | 4.1E+04 | 6.3E+04 | – | – |
| Fluorine (soluble fluoride) | 7782-41-4 | – | – | – | – | – | – | 1.0E+06 | 1.0E+06 | 6.1E+04 | 1.0E+06 | – | – |
| Fluorochloridone | 61213-25-0 | – | – | – | – | – | – | – | – | 7.7E+03 | 1.5E+04 | – | – |
| Fonofos | 944-22-9 | – | – | – | – | – | – | – | – | 2.0E+03 | 4.1E+03 | – | – |
| Formaldehyde | 50-00-0 | – | – | – | – | – | – | 1.4E+03 | 7.1E+02 | 2.0E+05 | – | 1.4E+03 | 7.1E+02 |
| Formic acid | 64-18-6 | – | – | – | – | – | – | 3.0E+02 | 1.5E+02 | 9.2E+05 | – | 3.0E+02 | 1.5E+02 |
| Furan | 110-00-9 | – | – | – | – | – | – | – | – | 1.0E+03 | – | – | – |
| Furfural | 98-01-1 | – | – | – | – | – | – | – | – | 3.1E+03 | – | – | – |
| Glycidylaldehyde | 765-34-4 | – | – | – | – | – | – | 2.1E+02 | 1.1E+02 | 4.1E+02 | – | 2.1E+02 | 1.1E+02 |
| Glyphosate | 1071-83-6 | – | – | – | – | – | – | – | – | 1.0E+05 | 2.0E+05 | – | – |
| Heptachlor | 76-44-8 | 1.5E+01 | 7.9E+00 | 6.4E+00 | 1.3E+01 | 1.5E+01 | 7.9E+00 | – | – | 5.1E+02 | 1.0E+03 | – | – |
| Heptachlor epoxide | 1024-57-3 | 4.0E+01 | 2.0E+01 | 3.1E+00 | 6.3E+00 | 4.0E+01 | 2.1E+01 | – | – | 1.3E+01 | 2.7E+01 | – | – |
| Heptane, n- | 142-82-5 | – | – | – | – | – | – | 1.9E+05 | 9.9E+04 | 6.1E+04 | – | 1.9E+05 | 9.9E+04 |
| Heptanoic acid, n- | 111-14-8 | – | – | – | – | – | – | 1.7E+02 | 8.8E+01 | 5.1E+05 | 1.0E+06 | 1.7E+02 | 8.8E+01 |
| Hexachlorobenzene | 118-74-1 | 3.2E+01 | 1.6E+01 | 1.8E+01 | 3.6E+01 | 3.2E+01 | 1.6E+01 | – | – | 8.2E+02 | 1.6E+03 | – | – |
| Hexachlorobutadiene | 87-68-3 | 4.9E+01 | 2.5E+01 | 3.7E+02 | 7.3E+02 | 4.9E+01 | 2.5E+01 | – | – | 1.0E+03 | 2.0E+03 | – | – |
| Hexachlorocyclohexane, alpha (alpha-BHC) | 319-84-6 | 2.3E+01 | 1.2E+01 | 4.5E+00 | 2.3E+01 | 2.3E+01 | 1.2E+01 | – | – | 8.2E+03 | 4.1E+04 | – | – |
| Hexachlorocyclohexane, beta (beta-BHC) | 319-85-7 | 1.2E+02 | 6.2E+01 | 1.6E+01 | 7.9E+01 | 1.2E+02 | 6.2E+01 | – | – | – | – | – | – |
| Hexachlorocyclohexane, delta (delta-BHC) | 319-86-8 | 1.7E+02 | 8.7E+01 | 1.6E+01 | 7.9E+01 | 1.7E+02 | 8.8E+01 | – | – | 3.1E+02 | 1.5E+03 | – | – |
| Hexachlorocyclohexane, gamma (lindane; gamma-BHC) | 58-89-9 | – | – | 2.2E+01 | 1.1E+02 | – | – | – | – | 3.1E+02 | 1.5E+03 | – | – |
| Hexachlorocyclohexane, techn (technical-BHC) | 608-73-1 | 1.5E+02 | 7.7E+01 | 1.6E+01 | 7.9E+01 | 1.5E+02 | 7.7E+01 | – | – | – | – | – | – |
| Hexachlorocyclopentadiene | 77-47-4 | – | – | – | – | – | – | 2.0E+01 | 1.0E+01 | 6.1E+03 | 1.2E+04 | 2.0E+01 | 1.0E+01 |
| Hexachloroethane | 67-72-1 | – | – | 7.2E+02 | 1.4E+03 | – | – | 6.9E+03 | 3.6E+03 | 7.2E+02 | 1.4E+03 | 6.9E+03 | 3.6E+03 |
| Hexachlorophene | 70-30-4 | – | – | – | – | – | – | – | – | 3.1E+02 | 6.1E+02 | – | – |
| Hexachloropropylene | 1888-71-7 | – | – | 7.2E+02 | 1.4E+03 | – | – | 7.1E+03 | 3.7E+03 | 7.2E+02 | 1.4E+03 | 7.1E+03 | 3.7E+03 |
| Hexanal, 2-ethyl- | 123-05-7 | – | – | – | – | – | – | – | – | 1.5E+05 | 3.1E+05 | – | – |
| Hexane, n- | 110-54-3 | – | – | – | – | – | – | 1.4E+04 | 7.4E+03 | 6.1E+04 | – | 1.4E+04 | 7.4E+03 |
| Hexanediamine, 1,6- | 124-09-4 | – | – | – | – | – | – | – | – | 5.1E+03 | 1.0E+04 | – | – |
| Hexanedinitrile | 111-69-3 | – | – | – | – | – | – | 1.4E+03 | 7.1E+02 | 1.4E+03 | 2.9E+03 | 1.4E+03 | 7.1E+02 |
| Hexanediol, 1,6- | 629-11-8 | – | – | – | – | – | – | 1.0E+06 | 1.0E+06 | 1.0E+06 | 1.0E+06 | 1.0E+06 | 1.0E+06 |
| Hexanoic acid | 142-62-1 | – | – | – | – | – | – | 1.9E+02 | 9.8E+01 | 6.5E+04 | 1.3E+05 | 1.9E+02 | 9.8E+01 |
| Hexanone, 2- | 591-78-6 | – | – | – | – | – | – | 1.2E+03 | 5.9E+02 | 5.1E+03 | – | 1.2E+03 | 5.9E+02 |

# Table 7
# Tier 1 Individual Commercial/Industrial Soil PCLs

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | Carcinogenic | | | | | | Noncarcinogenic | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | $^{Air}Soil_{Inh\text{-}VP}$ 0.5 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}VP}$ 30 acre source area (mg/kg) | $^{Soil}Soil_{Ing}$ (mg/kg) | $^{Soil}Soil_{Derm}$ (mg/kg) | $^{Air}Soil_{Inh\text{-}V}$[1] 0.5 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}V}$[1] 30 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}VP}$ 0.5 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}VP}$ 30 acre source area (mg/kg) | $^{Soil}Soil_{Ing}$ (mg/kg) | $^{Soil}Soil_{Derm}$ (mg/kg) | $^{Air}Soil_{Inh\text{-}V}$[1] 0.5 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}V}$[1] 30 acre source area (mg/kg) |
| Hexazinone | 51235-04-2 | – | – | – | – | – | – | – | – | 3.4E+04 | 6.7E+04 | – | – |
| Hexene, 1- | 592-41-6 | – | – | – | – | – | – | 2.4E+03 | 1.2E+03 | 3.4E+05 | – | 2.4E+03 | 1.2E+03 |
| Hexene, cis-2- | 7688-21-3 | – | – | – | – | – | – | 2.4E+03 | 1.2E+03 | 3.4E+05 | – | 2.4E+03 | 1.2E+03 |
| Hexylene glycol (2-methyl-2,4-pentanediol) | 107-41-5 | – | – | – | – | – | – | – | – | 3.1E+05 | 6.1E+05 | – | – |
| Hydrazine | 302-01-2 | 7.8E-01 | 4.0E-01 | 9.5E+00 | – | 7.8E-01 | 4.0E-01 | 4.1E+00 | 2.1E+00 | – | – | 4.1E+00 | 2.1E+00 |
| Hydrocaproic acid, 6- (6-hydroxyhexanoic acid) | 1191-25-9 | – | – | – | – | – | – | 2.3E+02 | 1.2E+02 | 6.5E+04 | 1.3E+05 | 2.3E+02 | 1.2E+02 |
| Hydrogen chloride (hydrochloric acid)* | 7647-01-0 | – | – | – | – | – | – | – | – | – | – | – | – |
| Hydroquinone | 123-31-9 | – | – | 4.8E+02 | 9.5E+02 | – | – | – | – | 4.1E+04 | 8.2E+04 | – | – |
| Indene | 95-13-6 | – | – | – | – | – | – | 1.6E+02 | 8.1E+01 | 2.0E+04 | – | 1.6E+02 | 8.1E+01 |
| Indeno-1,2,3-cd-pyrene | 193-39-5 | 5.6E+04 | 2.9E+04 | 2.9E+02 | 4.4E+02 | 6.2E+04 | 3.2E+04 | – | – | – | – | – | – |
| Iron* | 7439-89-6 | – | – | – | – | – | – | – | – | – | – | – | – |
| Isoamyl alcohol | 123-51-3 | – | – | – | – | – | – | – | – | 5.1E+03 | – | – | – |
| Isobutyl alcohol | 78-83-1 | – | – | – | – | – | – | – | – | 3.1E+05 | – | – | – |
| Isobutylene (2-methyl-1-propene) | 115-11-7 | – | – | – | – | – | – | 1.0E+06 | 1.0E+06 | 3.8E+03 | – | 1.0E+06 | 1.0E+06 |
| Isobutyric acid (2-methylpropanoic acid) | 79-31-2 | – | – | – | – | – | – | – | – | 5.1E+05 | 1.0E+06 | – | – |
| Isodecanol | 25339-17-7 | – | – | – | – | – | – | – | – | 1.6E+03 | 3.3E+03 | – | – |
| Isodrin | 465-73-6 | 2.9E+00 | 1.5E+00 | 1.7E-01 | 3.4E-01 | 2.9E+00 | 1.5E+00 | – | – | 3.1E+00 | 6.1E+00 | – | – |
| Isopentane | 78-78-4 | – | – | – | – | – | – | 5.2E+05 | 2.7E+05 | 6.1E+04 | – | 5.2E+05 | 2.7E+05 |
| Isophorone | 78-59-1 | – | – | 3.0E+04 | 6.0E+04 | – | – | – | – | 2.0E+05 | 4.1E+05 | – | – |
| Isopropyl acetate | 108-21-4 | – | – | – | – | – | – | – | – | 7.2E+04 | – | – | – |
| Isopropyl alcohol | 67-63-0 | – | – | – | – | – | – | 1.4E+04 | 7.0E+03 | 1.0E+06 | – | 1.4E+04 | 7.0E+03 |
| Isosafrole | 120-58-1 | 1.5E+02 | 7.9E+01 | 1.3E+02 | 2.6E+02 | 1.5E+02 | 7.9E+01 | – | – | – | – | – | – |
| Kelthane (dicofol) | 115-32-2 | – | – | – | – | – | – | – | – | 6.1E+03 | 1.2E+04 | – | – |
| Kepone (chlordecone) | 143-50-0 | 8.1E+01 | 4.2E+01 | 2.9E+00 | 5.7E+00 | 8.2E+01 | 4.2E+01 | – | – | 3.1E+02 | 6.1E+02 | – | – |
| Lead (inorganic) | 7439-92-1 | – | – | – | – | – | – | – | – | – | – | – | – |
| Leptophos | 21609-90-5 | – | – | – | – | – | – | 4.6E+01 | 2.3E+01 | 5.1E+00 | 1.0E+01 | 4.7E+01 | 2.4E+01 |
| Limonene, d-* | 5989-27-5 | – | – | – | – | – | – | – | – | – | – | – | – |
| Lithium | 7439-93-2 | – | – | – | – | – | – | – | – | 2.0E+03 | 4.1E+04 | – | – |
| Magnesium* | 7439-95-4 | – | – | – | – | – | – | – | – | – | – | – | – |
| Malathion | 121-75-5 | – | – | – | – | – | – | 2.8E+02 | 1.4E+02 | 2.0E+04 | 4.1E+04 | 2.8E+02 | 1.4E+02 |
| Maleic anhydride | 108-31-6 | – | – | – | – | – | – | – | – | 1.0E+05 | 2.0E+05 | – | – |
| Maleic hydrazide | 123-33-1 | – | – | – | – | – | – | – | – | 5.1E+05 | 1.0E+06 | – | – |
| Malononitrile | 109-77-3 | – | – | – | – | – | – | – | – | 1.0E+02 | 2.0E+02 | – | – |
| Mancozeb | 8018-01-7 | – | – | – | – | – | – | – | – | 3.1E+04 | 6.1E+04 | – | – |
| Manganese | 7439-96-5 | – | – | – | – | – | – | 1.0E+06 | 5.9E+05 | 1.4E+05 | 1.7E+05 | – | – |
| MCPA (4-(chloro-2-methylphenoxy) acetic acid) | 94-74-6 | – | – | – | – | – | – | – | – | 5.1E+02 | 1.0E+03 | – | – |
| MCPP (2-(4-chloro-2-methylphenoxy) propanoic acid) | 93-65-2 | – | – | – | – | – | – | – | – | 1.0E+03 | 2.0E+03 | – | – |

# Table 7
# Tier 1 Individual Commercial/Industrial Soil PCLs

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | Carcinogenic | | | | | | Noncarcinogenic | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | $^{Air}Soil_{Inh\text{-}VP}$ 0.5 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}VP}$ 30 acre source area (mg/kg) | $^{Soil}Soil_{Ing}$ (mg/kg) | $^{Soil}Soil_{Derm}$ (mg/kg) | $^{Air}Soil_{Inh\text{-}V}$[1] 0.5 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}V}$[1] 30 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}VP}$ 0.5 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}VP}$ 30 acre source area (mg/kg) | $^{Soil}Soil_{Ing}$ (mg/kg) | $^{Soil}Soil_{Derm}$ (mg/kg) | $^{Air}Soil_{Inh\text{-}V}$[1] 0.5 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}V}$[1] 30 acre source area (mg/kg) |
| Mercury (pH = 4.9)[2] | 7439-97-6 | – | – | – | – | – | – | 6.4E+00 | 3.3E+00 | 3.1E+02 | 4.3E+02 | 6.4E+00 | 3.3E+00 |
| Mercury (pH=6.8)[2] | 7439-97-6A | – | – | – | – | – | – | 2.2E+01 | 1.1E+01 | 3.1E+02 | 4.3E+02 | 2.2E+01 | 1.1E+01 |
| Merphos | 150-50-5 | – | – | – | – | – | – | – | – | 3.1E+01 | 6.1E+01 | – | – |
| Methacrylic acid (2-methyl-2-propenoic acid) | 79-41-4 | – | – | – | – | – | – | – | – | 1.0E+04 | – | – | – |
| Methacrylonitrile | 126-98-7 | – | – | – | – | – | – | 8.2E+02 | 4.2E+02 | 5.1E+04 | – | 8.2E+02 | 4.2E+02 |
| Methanol | 67-56-1 | – | – | – | – | – | – | 4.6E+05 | 2.4E+05 | 1.0E+06 | – | 4.6E+05 | 2.4E+05 |
| Methapyrilene | 91-80-5 | – | – | 6.1E+00 | 1.2E+01 | – | – | – | – | – | – | – | – |
| Methomyl | 16752-77-5 | – | – | – | – | – | – | – | – | 2.6E+04 | 5.1E+04 | – | – |
| Methoxychlor | 72-43-5 | – | – | – | – | – | – | – | – | 5.1E+03 | 1.0E+04 | – | – |
| Methoxyethanol, 2- | 109-86-4 | – | – | – | – | – | – | 4.3E+02 | 2.2E+02 | 2.8E+04 | – | 4.3E+02 | 2.2E+02 |
| Methyl acetate (acetic acid, methyl ester) | 79-20-9 | – | – | – | – | – | – | – | – | 1.0E+06 | – | – | – |
| Methyl acrylate | 96-33-3 | – | – | – | – | – | – | 4.3E+02 | 2.2E+02 | 2.0E+03 | – | 4.3E+02 | 2.2E+02 |
| Methyl amyl ketone (2-heptanone) | 110-43-0 | – | – | – | – | – | – | 1.6E+05 | 8.0E+04 | 5.1E+04 | – | 1.6E+05 | 8.0E+04 |
| Methyl chrysene, 1- | 3351-28-8 | 1.0E+06 | 1.0E+06 | 3.9E+03 | 6.0E+03 | 1.0E+06 | 1.0E+06 | – | – | – | – | – | – |
| Methyl chrysene, 2- | 3351-32-4 | 1.0E+06 | 1.0E+06 | 3.9E+03 | 6.0E+03 | 1.0E+06 | 1.0E+06 | – | – | – | – | – | – |
| Methyl chrysene, 6- | 1705-85-7 | 3.6E+05 | 1.9E+05 | 3.9E+02 | 6.0E+02 | 3.9E+05 | 2.0E+05 | – | – | – | – | – | – |
| Methyl cyclohexane | 108-87-2 | – | – | – | – | – | – | 6.4E+04 | 3.3E+04 | 1.0E+06 | – | 6.4E+04 | 3.3E+04 |
| Methyl ethyl ketone (2-butanone) | 78-93-3 | – | – | – | – | – | – | 2.8E+05 | 1.4E+05 | 6.1E+05 | – | 2.8E+05 | 1.5E+05 |
| Methyl iodide (iodomethane) | 74-88-4 | – | – | – | – | – | – | – | – | 1.4E+03 | – | – | – |
| Methyl isobutyl ketone (4-methyl-2-pentanone) | 108-10-1 | – | – | – | – | – | – | 8.1E+04 | 4.2E+04 | 8.2E+04 | – | 8.1E+04 | 4.2E+04 |
| Methyl mercury | 22967-92-6 | – | – | – | – | – | – | – | – | 1.0E+02 | 2.0E+03 | – | – |
| Methyl methacrylate | 80-62-6 | – | – | – | – | – | – | 1.5E+04 | 7.7E+03 | 1.0E+06 | – | 1.5E+04 | 7.7E+03 |
| Methyl methanesulfonate | 66-27-3 | 1.9E+02 | 9.7E+01 | 2.9E+02 | 5.8E+02 | 1.9E+02 | 9.7E+01 | – | – | – | – | – | – |
| Methyl parathion | 298-00-0 | – | – | – | – | – | – | – | – | 2.6E+02 | 5.1E+02 | – | – |
| Methyl-1-butene, 2- | 563-46-2 | – | – | – | – | – | – | 3.9E+05 | 2.0E+05 | 6.1E+04 | – | 3.9E+05 | 2.0E+05 |
| Methyl-1-propanal, 2- (isobutyraldehyde) | 78-84-2 | – | – | – | – | – | – | – | – | 4.1E+04 | – | – | – |
| Methyl-2-butene, 2- | 513-35-9 | – | – | – | – | – | – | 3.9E+05 | 2.0E+05 | 6.1E+04 | – | 3.9E+05 | 2.0E+05 |
| Methyl-2-pentenal, 2- | 623-36-9 | – | – | 1.5E+01 | – | – | – | – | – | – | – | – | – |
| Methylcholanthrene, 3- | 56-49-5 | 2.5E+03 | 1.3E+03 | 1.3E+00 | 2.0E+00 | 3.0E+03 | 1.5E+03 | – | – | – | – | – | – |
| Methylene bromide (dibromomethane) | 74-95-3 | – | – | 3.8E+03 | – | – | – | 1.1E+02 | 5.9E+01 | 6.1E+04 | – | 1.1E+02 | 5.9E+01 |
| Methylene chloride (dichloromethane) | 75-09-2 | 2.1E+04 | 1.1E+04 | 2.9E+05 | – | 2.1E+04 | 1.1E+04 | 2.8E+04 | 1.4E+04 | 2.1E+04 | – | 2.8E+04 | 1.4E+04 |
| Methylene-bis (2-chloroaniline) 4,4'- | 101-14-4 | 4.5E+03 | 2.3E+03 | 2.9E+02 | 5.7E+02 | 4.5E+03 | 2.3E+03 | – | – | 2.0E+03 | 4.1E+03 | – | – |
| Methylmecury hydroxide | 1184-57-2 | – | – | – | – | – | – | – | – | 1.0E+02 | 2.0E+02 | – | – |
| Methylnaphthalene, 1- | 90-12-0 | – | – | 9.9E+02 | 1.5E+03 | – | – | – | – | 7.2E+04 | 1.1E+05 | – | – |
| Methylnaphthalene, 2- | 91-57-6 | – | – | – | – | – | – | – | – | 4.1E+03 | 6.3E+03 | – | – |
| Methylpyrrolidone, N- | 872-50-4 | – | – | – | – | – | – | – | – | 2.0E+04 | 4.1E+04 | – | – |
| Methylstyrene, alpha- | 98-83-9 | – | – | – | – | – | – | 6.8E+02 | 3.5E+02 | 8.5E+03 | – | 6.8E+02 | 3.5E+02 |

# Table 7
# Tier 1 Individual Commercial/Industrial Soil PCLs

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | Carcinogenic | | | | | | Noncarcinogenic | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | $^{Air}Soil_{Inh\text{-}VP}$ 0.5 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}VP}$ 30 acre source area (mg/kg) | $^{Soil}Soil_{Ing}$ (mg/kg) | $^{Soil}Soil_{Derm}$ (mg/kg) | $^{Air}Soil_{Inh\text{-}V}$[1] 0.5 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}V}$[1] 30 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}VP}$ 0.5 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}VP}$ 30 acre source area (mg/kg) | $^{Soil}Soil_{Ing}$ (mg/kg) | $^{Soil}Soil_{Derm}$ (mg/kg) | $^{Air}Soil_{Inh\text{-}V}$[1] 0.5 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}V}$[1] 30 acre source area (mg/kg) |
| Methyltetrahydrofuran, 2- | 96-47-9 | 3.2E+02 | 1.6E+02 | 3.8E+03 | – | 3.2E+02 | 1.6E+02 | – | – | 2.0E+05 | – | – | – |
| Methyltetrahydropyran, 2- | 10141-72-7 | 3.7E+02 | 1.9E+02 | 3.8E+03 | – | 3.7E+02 | 1.9E+02 | – | – | 2.0E+05 | – | – | – |
| Metolachlor | 51218-45-2 | – | – | – | – | – | – | – | – | 1.5E+05 | 3.1E+05 | – | – |
| Metribuzin | 21087-64-9 | – | – | – | – | – | – | – | – | 2.6E+04 | 5.1E+04 | – | – |
| Mirex | 2385-85-5 | – | – | – | – | – | – | – | – | 2.0E+02 | 4.1E+02 | – | – |
| Molinate | 2212-67-1 | – | – | – | – | – | – | – | – | 2.0E+03 | 4.1E+03 | – | – |
| Molybdenum | 7439-98-7 | – | – | – | – | – | – | – | – | 5.1E+03 | 3.9E+04 | – | – |
| Monocrotophos | 2157-98-4 | – | – | – | – | – | – | – | – | 6.1E+02 | 1.2E+03 | – | – |
| Morpholine | 110-91-8 | – | – | – | – | – | – | – | – | 1.0E+06 | – | – | – |
| Morpholine, N-butyl- | 1005-67-0 | – | – | – | – | – | – | – | – | 2.4E+03 | 4.7E+03 | – | – |
| MTBE (methyl tert-butyl ether) | 1634-04-4 | 2.3E+03 | 1.2E+03 | 1.6E+04 | – | 2.3E+03 | 1.2E+03 | 6.4E+04 | 3.3E+04 | 1.0E+04 | – | 6.4E+04 | 3.3E+04 |
| Naled | 300-76-5 | – | – | – | – | – | – | – | – | 2.0E+03 | 4.1E+03 | – | – |
| Naphthalene | 91-20-3 | – | – | – | – | – | – | 3.7E+02 | 1.9E+02 | 2.0E+04 | 3.1E+04 | 3.7E+02 | 1.9E+02 |
| Naphthoquinone, 1,4- | 130-15-4 | – | – | – | – | – | – | – | – | 7.2E+03 | 1.4E+04 | – | – |
| Naphthylamine, 1- | 134-32-7 | – | – | – | – | – | – | – | – | 2.0E+04 | 4.1E+04 | – | – |
| Naphthylamine, 2- | 91-59-8 | – | – | 1.6E+01 | 3.2E+01 | – | – | – | – | – | – | – | – |
| Napropamide | 15299-99-7 | – | – | – | – | – | – | – | – | 1.0E+05 | 2.0E+05 | – | – |
| Neopentyl glycol | 126-30-7 | – | – | – | – | – | – | – | – | 3.1E+05 | 6.1E+05 | – | – |
| Nickel and compounds | 7440-02-0 | 2.2E+05 | 1.1E+05 | – | – | – | – | 3.1E+05 | 1.6E+05 | 2.0E+04 | 1.6E+04 | – | – |
| Nitrate-N | 14797-55-8 | – | – | – | – | – | – | – | – | 1.0E+06 | 1.0E+06 | – | – |
| Nitrite-N | 14797-65-0 | – | – | – | – | – | – | – | – | 1.0E+05 | 1.0E+06 | – | – |
| Nitroaniline, 2- | 88-74-4 | – | – | – | – | – | – | 6.7E+01 | 3.4E+01 | 3.1E+02 | 6.1E+02 | 6.7E+01 | 3.4E+01 |
| Nitroaniline, 3- | 99-09-2 | – | – | 7.5E+02 | 1.5E+03 | – | – | 8.4E+01 | 4.3E+01 | 3.1E+02 | 6.1E+02 | 8.4E+01 | 4.3E+01 |
| Nitroaniline, 4- | 100-01-6 | – | – | 1.4E+03 | 2.9E+03 | – | – | 1.7E+03 | 8.7E+02 | 4.1E+03 | 8.2E+03 | 1.7E+03 | 8.7E+02 |
| Nitrobenzene | 98-95-3 | 1.1E+02 | 5.7E+01 | – | – | 1.1E+02 | 5.7E+01 | 1.4E+03 | 7.3E+02 | 2.0E+03 | 4.1E+03 | 1.4E+03 | 7.3E+02 |
| Nitroglycerin | 55-63-0 | – | – | 1.7E+03 | 3.4E+03 | – | – | – | – | 1.0E+02 | 2.0E+02 | – | – |
| Nitrophenol, 2- | 88-75-5 | – | – | – | – | – | – | – | – | 2.0E+03 | 4.1E+03 | – | – |
| Nitrophenol, 3- | 554-84-7 | – | – | – | – | – | – | – | – | 2.0E+03 | 4.1E+03 | – | – |
| Nitrophenol, 4- | 100-02-7 | – | – | – | – | – | – | – | – | 2.0E+03 | 4.1E+03 | – | – |
| Nitropropane, 2- | 79-46-9 | 2.2E-01 | 1.1E-01 | – | – | 2.2E-01 | 1.1E-01 | 4.3E+02 | 2.2E+02 | 1.4E+02 | – | 4.3E+02 | 2.2E+02 |
| Nitroquinoline-N-oxide, 4- | 56-57-5 | 3.2E+00 | 1.6E+00 | 3.0E+00 | 6.1E+00 | 3.2E+00 | 1.6E+00 | – | – | – | – | – | – |
| Nitrosodiethanolamine | 1116-54-7 | – | – | 1.0E+01 | 2.0E+01 | – | – | – | – | – | – | – | – |
| Nitrosodiethylamine, n- | 55-18-5 | 1.1E-01 | 5.7E-02 | 1.9E-01 | – | 1.1E-01 | 5.7E-02 | – | – | – | – | – | – |
| Nitrosodimethylamine, n- | 62-75-9 | 3.3E-01 | 1.7E-01 | 5.6E-01 | – | 3.3E-01 | 1.7E-01 | 6.6E+00 | 3.4E+00 | 8.2E+00 | – | 6.6E+00 | 3.4E+00 |
| Nitrosodi-n-butylamine, n- | 924-16-3 | 1.7E+00 | 9.0E-01 | 5.3E+00 | 1.1E+01 | 1.7E+00 | 9.0E-01 | – | – | – | – | – | – |
| Nitrosodi-n-propylamine, n- | 621-64-7 | – | – | 4.1E+00 | 2.0E+00 | – | – | – | – | – | – | – | – |
| Nitrosodiphenylamine | 86-30-6 | – | – | 5.8E+03 | 2.9E+03 | – | – | – | – | – | – | – | – |

# Table 7
# Tier 1 Individual Commercial/Industrial Soil PCLs

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | Carcinogenic | | | | | | Noncarcinogenic | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | $^{Air}Soil_{Inh\text{-}VP}$ 0.5 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}VP}$ 30 acre source area (mg/kg) | $^{Soil}Soil_{Ing}$ (mg/kg) | $^{Soil}Soil_{Derm}$ (mg/kg) | $^{Air}Soil_{Inh\text{-}V}$[1] 0.5 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}V}$[1] 30 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}VP}$ 0.5 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}VP}$ 30 acre source area (mg/kg) | $^{Soil}Soil_{Ing}$ (mg/kg) | $^{Soil}Soil_{Derm}$ (mg/kg) | $^{Air}Soil_{Inh\text{-}V}$[1] 0.5 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}V}$[1] 30 acre source area (mg/kg) |
| Nitroso-methyl-ethyl-amine, n- | 10595-95-6 | – | – | 1.3E+00 | – | – | – | – | – | – | – | – | – |
| Nitrosomorpholine, N- | 59-89-2 | 2.9E+00 | 1.5E+00 | 4.3E+00 | 8.5E+00 | 2.9E+00 | 1.5E+00 | – | – | – | – | – | – |
| Nitroso-n-ethylurea, n- | 759-73-9 | – | – | 2.0E-01 | 4.1E-01 | – | – | – | – | – | – | – | – |
| Nitrosopiperidine, N- | 100-75-4 | 2.2E+00 | 1.2E+00 | 3.0E+00 | 6.1E+00 | 2.2E+00 | 1.2E+00 | – | – | – | – | – | – |
| Nitrosopyrrolidine, n- | 930-55-2 | 9.8E+00 | 5.0E+00 | 1.4E+01 | 2.7E+01 | 9.8E+00 | 5.0E+00 | – | – | – | – | – | – |
| Nitrotoluene, m- | 99-08-1 | – | – | – | – | – | – | – | – | 1.0E+04 | 2.0E+04 | – | – |
| Nitrotoluene, o- | 88-72-2 | – | – | 1.3E+02 | 2.6E+02 | – | – | – | – | 9.2E+02 | 1.8E+03 | – | – |
| Nitrotoluene, p- | 99-99-0 | – | – | 1.8E+03 | 3.6E+03 | – | – | – | – | 4.1E+03 | 8.2E+03 | – | – |
| Nonachlor, cis- | 5103-73-1 | 2.1E+03 | 1.1E+03 | 8.2E+01 | 1.6E+02 | 2.1E+03 | 1.1E+03 | 5.2E+03 | 2.7E+03 | 5.1E+02 | 1.0E+03 | 5.2E+03 | 2.7E+03 |
| Nonachlor, trans- | 39765-80-5 | 2.1E+03 | 1.1E+03 | 8.2E+01 | 1.6E+02 | 2.1E+03 | 1.1E+03 | 5.2E+03 | 2.7E+03 | 5.1E+02 | 1.0E+03 | 5.2E+03 | 2.7E+03 |
| Nonanal | 124-19-6 | – | – | – | – | – | – | – | – | 2.0E+05 | 4.1E+05 | – | – |
| Nonene, 1-n | 124-11-8 | – | – | – | – | – | – | – | – | 1.0E+05 | – | – | – |
| Nonylphenol, 4-n- | 104-40-5 | – | – | – | – | – | – | – | – | 1.0E+05 | 2.0E+05 | – | – |
| Nonylphenol ethoxylate | 9016-45-9 | – | – | – | – | – | – | – | – | 1.0E+05 | 2.0E+05 | – | – |
| Octamethylpyrophosphoramide | 152-16-9 | – | – | – | – | – | – | – | – | 2.0E+03 | 4.1E+03 | – | – |
| Octanone | 106-68-3 | – | – | – | – | – | – | 1.0E+06 | 6.5E+05 | 6.1E+04 | – | 1.0E+06 | 6.5E+05 |
| Oxamyl | 23135-22-0 | – | – | – | – | – | – | – | – | 2.6E+04 | 5.1E+04 | – | – |
| Oxychlordane | 27304-13-8 | 2.1E+03 | 1.1E+03 | 8.2E+01 | 1.6E+02 | 2.1E+03 | 1.1E+03 | 5.2E+03 | 2.7E+03 | 5.1E+02 | 1.0E+03 | 5.2E+03 | 2.7E+03 |
| Paraquat | 1910-42-5 | – | – | – | – | – | – | – | – | 4.6E+03 | 9.2E+03 | – | – |
| Parathion (ethyl parathion) | 56-38-2 | – | – | – | – | – | – | – | – | 6.1E+03 | 1.2E+04 | – | – |
| Pebulate | 1114-71-2 | – | – | – | – | – | – | – | – | 5.1E+04 | 1.0E+05 | – | – |
| Pendimethalin | 40487-42-1 | – | – | – | – | – | – | – | – | 4.1E+04 | 8.2E+04 | – | – |
| Pentachlorobenzene | 608-93-5 | – | – | – | – | – | – | – | – | 8.2E+02 | 1.6E+03 | – | – |
| Pentachloroethane | 76-01-7 | 1.6E+02 | 8.1E+01 | 3.2E+02 | – | 1.6E+02 | 8.1E+01 | – | – | 3.1E+04 | – | – | – |
| Pentachloronitrobenzene | 82-68-8 | – | – | 1.1E+02 | 2.2E+02 | – | – | – | – | 3.1E+03 | 6.1E+03 | – | – |
| Pentachlorophenol | 87-86-5 | – | – | 7.2E+01 | 5.7E+01 | – | – | – | – | 5.1E+03 | 4.1E+03 | – | – |
| Pentadiene, 1,3-cis- | 1574-41-0 | – | – | – | – | – | – | 3.9E+05 | 2.0E+05 | 6.1E+04 | – | 3.9E+05 | 2.0E+05 |
| Pentadiene, 1,3-trans- | 2004-70-8 | – | – | – | – | – | – | 3.9E+05 | 2.0E+05 | 6.1E+04 | – | 3.9E+05 | 2.0E+05 |
| Pentaerythritol tetranitrate (PETN) | 78-11-5 | – | – | – | – | – | – | – | – | 2.0E+03 | 4.1E+03 | – | – |
| Pentane | 109-66-0 | – | – | – | – | – | – | 5.2E+05 | 2.7E+05 | 6.1E+04 | – | 5.2E+05 | 2.7E+05 |
| Pentane, 2-methyl- | 107-83-5 | – | – | – | – | – | – | 3.9E+05 | 2.0E+05 | 6.1E+04 | – | 3.9E+05 | 2.0E+05 |
| Pentane, 3-methyl- | 96-14-0 | – | – | – | – | – | – | 3.9E+05 | 2.0E+05 | 6.1E+04 | – | 3.9E+05 | 2.0E+05 |
| Pentanediol, 1,5- | 111-29-5 | – | – | – | – | – | – | 1.0E+06 | 1.0E+06 | 1.0E+06 | 1.0E+06 | 1.0E+06 | 1.0E+06 |
| Pentanol, 1- | 71-41-0 | – | – | – | – | – | – | – | – | 3.4E+04 | – | – | – |
| Pentanol, 4-methyl-2- | 108-11-2 | – | – | – | – | – | – | – | – | 2.7E+04 | – | – | – |
| Pentanone, 2- | 107-87-9 | – | – | – | – | – | – | – | – | 4.1E+04 | – | – | – |
| Pentene, 2- | 109-68-2 | – | – | – | – | – | – | 3.9E+05 | 2.0E+05 | 6.1E+04 | – | 3.9E+05 | 2.0E+05 |

# Table 7
## Tier 1 Individual Commercial/Industrial Soil PCLs

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | Carcinogenic | | | | | | Noncarcinogenic | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | $^{Air}Soil_{Inh\text{-}VP}$ 0.5 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}VP}$ 30 acre source area (mg/kg) | $^{Soil}Soil_{Ing}$ (mg/kg) | $^{Soil}Soil_{Derm}$ (mg/kg) | $^{Air}Soil_{Inh\text{-}V}$[1] 0.5 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}V}$[1] 30 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}VP}$ 0.5 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}VP}$ 30 acre source area (mg/kg) | $^{Soil}Soil_{Ing}$ (mg/kg) | $^{Soil}Soil_{Derm}$ (mg/kg) | $^{Air}Soil_{Inh\text{-}V}$[1] 0.5 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}V}$[1] 30 acre source area (mg/kg) |
| Pentyne, 1- | 627-19-0 | – | – | – | – | – | – | 3.9E+05 | 2.0E+05 | 6.1E+04 | – | 3.9E+05 | 2.0E+05 |
| Perchlorate | 14797-73-0 | – | – | – | – | – | – | – | – | 7.2E+02 | 2.9E+03 | – | – |
| Perfluorooctanoic sulfonic acid (1-Octanesulfonic acid, heptadecafluoro-1-) | 1763-23-1 | – | – | – | – | – | – | 2.2E+02 | 1.1E+02 | 2.4E+01 | 4.7E+01 | 2.2E+02 | 1.1E+02 |
| Perfluoroundecanoic acid (Undecanoic acid, uncosafluoro-) | 2058-94-8 | – | – | – | – | – | – | – | – | 1.2E+01 | 2.5E+01 | – | – |
| Perfluoropentanoic acid (Pentanoic acid, nonafluoro-) | 2706-90-3 | – | – | – | – | – | – | – | – | 3.9E+00 | 7.8E+00 | – | – |
| Perfluorohexanoic acid (Hexanoic acid, undecafluoro-) | 307-24-4 | – | – | – | – | – | – | – | – | 3.9E+00 | 7.8E+00 | – | – |
| Perfluorododecanoic acid (Dodecanoic acid, tricosafluoro-) | 307-55-1 | – | – | – | – | – | – | 9.7E+01 | 5.0E+01 | 1.2E+01 | 2.5E+01 | 9.7E+01 | 5.0E+01 |
| Perfluorooctanoic acid (Octanoic acid, pentadecafluoro-) | 335-67-1 | – | – | – | – | – | – | 3.4E+00 | 1.7E+00 | 1.2E+01 | 2.5E+01 | 3.4E+00 | 1.7E+00 |
| Perfluorodecanoic acid (Decanoic acid, nonadecafluoro-) | 335-76-2 | – | – | – | – | – | – | 1.2E+02 | 6.2E+01 | 1.5E+01 | 3.1E+01 | 1.2E+02 | 6.2E+01 |
| Perfluorodecane sulfonic acid (1-Decanesulfonic acid, heneicosafluoro-) | 335-77-3 | – | – | – | – | – | – | – | – | 1.2E+01 | 2.5E+01 | – | – |
| Perfluorohexane sulfonic acid (1-Hexanesulfonic acid, triddecafluoro-) | 355-46-4 | – | – | – | – | – | – | 1.6E+01 | 8.2E+00 | 3.9E+00 | 7.8E+00 | 1.6E+01 | 8.2E+00 |
| Perfluorobutyric acid (Butanoic acid, heptafluoro-) | 375-22-4 | – | – | – | – | – | – | 2.7E+03 | 1.4E+03 | 3.0E+03 | 5.9E+03 | 2.7E+03 | 1.4E+03 |
| Perfluorobutane sulfonic acid (1-Butanesulfonic acid, nonafluoro-) | 375-73-5 | – | – | – | – | – | – | 1.6E+03 | 8.2E+02 | 1.4E+03 | 2.9E+03 | 1.6E+03 | 8.2E+02 |
| Perfluoroheptanoic acid (Heptanoic acid, tridecafluoro-) | 375-85-9 | – | – | – | – | – | – | – | – | 2.4E+01 | 4.7E+01 | – | – |
| Perfluorononanoic acid (Nonanoic acid, heptadecafluoro-) | 375-95-1 | – | – | – | – | – | – | 2.4E+01 | 1.2E+01 | 1.2E+01 | 2.5E+01 | 2.4E+01 | 1.2E+01 |
| Perfluorotetradecanoic acid (Tetradecanoic acid, heptacosafluoro-) | 376-06-7 | – | – | – | – | – | – | – | – | 1.2E+01 | 2.5E+01 | – | – |
| Perfluorotridecanoic acid (Tridecanoic acid, pentacosafluoro-) | 72629-94-8 | – | – | – | – | – | – | – | – | 1.2E+01 | 2.5E+01 | – | – |
| Perfluorooctane sulfonamide (1-Octanesulfonamide, hetpadecafluoro-) | 754-91-6 | – | – | – | – | – | – | 8.8E-02 | 4.5E-02 | 1.2E+01 | 2.5E+01 | 8.8E-02 | 4.5E-02 |
| Perylene | 198-55-0 | – | – | – | – | – | – | – | – | 2.0E+04 | 4.1E+04 | – | – |
| Phenacetin | 62-44-2 | 1.8E+04 | 9.4E+03 | 1.3E+04 | 2.6E+04 | 1.8E+04 | 9.4E+03 | – | – | – | – | – | – |
| Phenanthrene | 85-01-8 | – | – | – | – | – | – | – | – | 3.1E+04 | 4.7E+04 | – | – |
| Phenanthridine | 229-87-8 | – | – | – | – | – | – | – | – | 3.1E+03 | 6.1E+03 | – | – |
| Phenol | 108-95-2 | – | – | – | – | – | – | 2.7E+03 | 1.4E+03 | 3.1E+05 | 6.1E+05 | 2.7E+03 | 1.4E+03 |
| Phenol, 4-tert-butyl- | 98-54-4 | – | – | – | – | – | – | – | – | 1.2E+05 | 2.5E+05 | – | – |
| Phenothiazine | 92-84-2 | – | – | – | – | – | – | – | – | 1.1E+03 | 2.2E+03 | – | – |
| Phenyl mercuric acetate | 62-38-4 | – | – | – | – | – | – | – | – | 8.2E+01 | 1.6E+02 | – | – |
| Phenylene diamine, m- | 108-45-2 | – | – | – | – | – | – | – | – | 6.1E+03 | 1.2E+04 | – | – |
| Phenylene diamine, p- | 106-50-3 | – | – | – | – | – | – | – | – | 1.9E+05 | 3.9E+05 | – | – |
| Phorate | 298-02-2 | – | – | – | – | – | – | – | – | 2.0E+02 | 4.1E+02 | – | – |
| Phosalone | 2310-17-0 | – | – | – | – | – | – | – | – | 2.0E+03 | 4.1E+03 | – | – |
| Phosdrin (mevinphos) | 7786-34-7 | – | – | – | – | – | – | – | – | 2.6E+01 | 5.1E+01 | – | – |
| Phosmet | 732-11-6 | – | – | – | – | – | – | – | – | 2.0E+04 | 4.1E+04 | – | – |
| Phosphine | 7803-51-2 | – | – | – | – | – | – | 6.4E+00 | 3.3E+00 | 3.1E+02 | 1.2E+03 | 6.4E+00 | 3.3E+00 |
| Phosphorotrithioic acid, S,S,S-tributyl ester | 78-48-8 | – | – | 3.4E+02 | 6.8E+02 | – | – | – | – | 1.0E+03 | 2.0E+03 | – | – |
| Phosphorus, total* | 7723-14-0 | – | – | – | – | – | – | – | – | – | – | – | – |

# Table 7
## Tier 1 Individual Commercial/Industrial Soil PCLs

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | Carcinogenic | | | | | | Noncarcinogenic | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | $^{Air}Soil_{Inh\text{-}VP}$ 0.5 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}VP}$ 30 acre source area (mg/kg) | $^{Soil}Soil_{Ing}$ (mg/kg) | $^{Soil}Soil_{Derm}$ (mg/kg) | $^{Air}Soil_{Inh\text{-}V}$[1] 0.5 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}V}$[1] 30 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}VP}$ 0.5 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}VP}$ 30 acre source area (mg/kg) | $^{Soil}Soil_{Ing}$ (mg/kg) | $^{Soil}Soil_{Derm}$ (mg/kg) | $^{Air}Soil_{Inh\text{-}V}$[1] 0.5 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}V}$[1] 30 acre source area (mg/kg) |
| Phosphorus, white | 7723-14-0 | – | – | – | – | – | – | – | – | 2.0E+01 | 8.2E+01 | – | – |
| Phthalic anhydride | 85-44-9 | – | – | – | – | – | – | 7.0E+04 | 3.6E+04 | 1.0E+06 | 1.0E+06 | 7.0E+04 | 3.6E+04 |
| Picloram | 1918-02-1 | – | – | – | – | – | – | – | – | 7.2E+04 | 1.4E+05 | – | – |
| Picoline, 2- (2-methylpyridine) | 109-06-8 | – | – | – | – | – | – | – | – | 9.2E+03 | – | – | – |
| Polybrominated biphenyls (PBBs) | 67774-32-7 | – | – | 3.2E+00 | 6.4E+00 | – | – | – | – | 7.2E+00 | 1.4E+01 | – | – |
| Polychlorinated biphenyls (PCBs) | 1336-36-3 | 9.1E+01 | 4.7E+01 | 1.4E+01 | 2.0E+01 | 9.1E+01 | 4.7E+01 | – | – | 2.0E+01 | 2.9E+01 | – | – |
| Potassium* | 7440-09-7 | – | – | – | – | – | – | – | – | – | – | – | – |
| Primene | 68955-53-3 | – | – | – | – | – | – | – | – | 6.1E+03 | 1.2E+04 | – | – |
| Prometon (pramitol) | 1610-18-0 | – | – | – | – | – | – | – | – | 1.5E+04 | 3.1E+04 | – | – |
| Prometryn | 7287-19-6 | – | – | – | – | – | – | – | – | 4.1E+04 | 8.2E+04 | – | – |
| Pronamide | 23950-58-5 | – | – | – | – | – | – | – | – | 7.7E+04 | 1.5E+05 | – | – |
| Propanal (propionaldehyde) | 123-38-6 | – | – | – | – | – | – | 1.7E+02 | 8.8E+01 | 8.2E+03 | – | 1.7E+02 | 8.8E+01 |
| Propane, 1-bromo- | 106-94-5 | – | – | – | – | – | – | – | – | 3.7E+04 | – | – | – |
| Propanil | 709-98-8 | – | – | – | – | – | – | – | – | 5.1E+03 | 1.0E+04 | – | – |
| Propanoic acid (propionic acid) | 79-09-4 | – | – | – | – | – | – | – | – | 5.1E+05 | – | – | – |
| Propanol, 1- | 71-23-8 | – | – | – | – | – | – | – | – | 2.0E+05 | – | – | – |
| Propargite | 2312-35-8 | – | – | – | – | – | – | – | – | 2.0E+04 | 4.1E+04 | – | – |
| Propargyl alcohol | 107-19-7 | – | – | – | – | – | – | – | – | 2.0E+03 | – | – | – |
| Propazine | 139-40-2 | – | – | 6.4E+02 | 1.3E+03 | – | – | – | – | 2.0E+04 | 4.1E+04 | – | – |
| Propham | 122-42-9 | – | – | – | – | – | – | – | – | 2.0E+04 | 4.1E+04 | – | – |
| Propionitrile (propane nitrile) | 107-12-0 | – | – | – | – | – | – | – | – | 4.1E+02 | – | – | – |
| Propyl acetate, n- | 109-60-4 | – | – | – | – | – | – | – | – | 9.2E+04 | – | – | – |
| Propylbenzene, n- | 103-65-1 | – | – | – | – | – | – | 8.9E+03 | 4.6E+03 | 4.1E+04 | – | 8.9E+03 | 4.6E+03 |
| Propylene glycol | 57-55-6 | – | – | – | – | – | – | 5.1E+02 | 2.6E+02 | 1.0E+06 | 1.0E+06 | 5.1E+02 | 2.6E+02 |
| Propylene glycol monomethyl ether | 107-98-2 | – | – | – | – | – | – | 3.2E+05 | 1.7E+05 | 7.2E+05 | – | 3.2E+05 | 1.7E+05 |
| Propylene oxide | 75-56-9 | 1.6E+02 | 8.4E+01 | 1.2E+02 | – | 1.6E+02 | 8.4E+01 | 6.4E+02 | 3.3E+02 | – | – | 6.4E+02 | 3.3E+02 |
| Propylene tetramer | 6842-15-5 | – | – | – | – | – | – | 2.1E+04 | 1.1E+04 | 1.0E+05 | 2.0E+05 | 2.1E+04 | 1.1E+04 |
| Prothiofos (Tokuthion) | 34643-46-4 | – | – | – | – | – | – | – | – | 1.0E+02 | 2.0E+02 | – | – |
| Pyrene | 129-00-0 | – | – | – | – | – | – | – | – | 3.1E+04 | 4.7E+04 | – | – |
| Pyridine | 110-86-1 | – | – | – | – | – | – | – | – | 1.0E+03 | – | – | – |
| Quinoline | 91-22-5 | – | – | 9.5E+00 | 1.9E+01 | – | – | – | – | – | – | – | – |
| Ronnel | 299-84-3 | – | – | – | – | – | – | – | – | 5.1E+04 | 1.0E+05 | – | – |
| Safrole | 94-59-7 | 1.1E+02 | 5.8E+01 | 1.3E+02 | 2.6E+02 | 1.1E+02 | 5.8E+01 | – | – | – | – | – | – |
| Selenium | 7782-49-2 | – | – | – | – | – | – | – | – | 5.1E+03 | 1.0E+05 | – | – |
| Selenourea | 630-10-4 | – | – | – | – | – | – | – | – | 5.1E+03 | – | – | – |
| Silver | 7440-22-4 | – | – | – | – | – | – | – | – | 5.1E+03 | 4.1E+03 | – | – |
| Simazine | 122-34-9 | – | – | 2.4E+02 | 4.8E+02 | – | – | – | – | 5.1E+03 | 1.0E+04 | – | – |

# Table 7
# Tier 1 Individual Commercial/Industrial Soil PCLs

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | Carcinogenic | | | | | | Noncarcinogenic | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | $^{Air}Soil_{Inh\text{-}VP}$ 0.5 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}VP}$ 30 acre source area (mg/kg) | $^{Soil}Soil_{Ing}$ (mg/kg) | $^{Soil}Soil_{Derm}$ (mg/kg) | $^{Air}Soil_{Inh\text{-}V}$[1] 0.5 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}V}$[1] 30 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}VP}$ 0.5 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}VP}$ 30 acre source area (mg/kg) | $^{Soil}Soil_{Ing}$ (mg/kg) | $^{Soil}Soil_{Derm}$ (mg/kg) | $^{Air}Soil_{Inh\text{-}V}$[1] 0.5 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}V}$[1] 30 acre source area (mg/kg) |
| Sodium* | 7440-23-5 | – | – | – | – | – | – | – | – | – | – | – | – |
| Sodium hypochlorite | 7681-52-9 | – | – | – | – | – | – | 4.2E+05 | 2.2E+05 | 2.1E+05 | 8.6E+05 | – | – |
| Sodium polyacrylate | 9003-04-7 | – | – | – | – | – | – | 1.7E+02 | 8.7E+01 | 5.1E+05 | – | 1.7E+02 | 8.7E+01 |
| Strontium | 7440-24-6 | – | – | – | – | – | – | – | – | 6.1E+05 | 1.0E+06 | – | – |
| Strychnine | 57-24-9 | – | – | – | – | – | – | – | – | 3.1E+02 | 6.1E+02 | – | – |
| Styrene | 100-42-5 | – | – | – | – | – | – | 1.6E+04 | 8.1E+03 | 2.0E+05 | – | 1.6E+04 | 8.1E+03 |
| Sulfate* | 14808-79-8 | – | – | – | – | – | – | – | – | – | – | – | – |
| Sulfide* | 18496-25-8 | – | – | – | – | – | – | – | – | – | – | – | – |
| Sulfolane | 126-33-0 | – | – | – | – | – | – | 1.2E+03 | 6.2E+02 | 1.3E+04 | 2.7E+04 | 1.2E+03 | 6.2E+02 |
| Sulfur* | 7704-34-9 | – | – | – | – | – | – | – | – | – | – | – | – |
| Sulprofos (Bolstar) | 35400-43-2 | – | – | – | – | – | – | – | – | 3.1E+03 | 6.1E+03 | – | – |
| Tebuconazole | 107534-96-3 | – | – | – | – | – | – | – | – | 3.1E+04 | 6.1E+04 | – | – |
| Tebuthiuron | 34014-18-1 | – | – | – | – | – | – | – | – | 7.2E+04 | 1.4E+05 | – | – |
| Terbufos | 13071-79-9 | – | – | – | – | – | – | – | – | 2.6E+01 | 5.1E+01 | – | – |
| Tert-amyl ethyl ether (TAEE) | 919-94-8 | – | – | – | – | – | – | – | – | 4.1E+04 | – | – | – |
| Tert-amyl-methyl ether (TAME) | 994-05-8 | – | – | – | – | – | – | – | – | 4.1E+04 | – | – | – |
| Tert-butyl alcohol (2-methyl-2-propanol) | 75-65-0 | – | – | – | – | – | – | – | – | 9.2E+04 | – | – | – |
| Tetrachlorobenzene, 1,2,3,4- | 634-66-2 | – | – | – | – | – | – | – | – | 3.1E+02 | 6.1E+02 | – | – |
| Tetrachlorobenzene, 1,2,3,5- | 634-90-2 | – | – | – | – | – | – | – | – | 3.1E+02 | 6.1E+02 | – | – |
| Tetrachlorobenzene, 1,2,4,5- | 95-94-3 | – | – | – | – | – | – | – | – | 3.1E+02 | 6.1E+02 | – | – |
| Tetrachloroethane, 1,1,1,2- | 630-20-6 | 1.5E+02 | 7.8E+01 | 1.1E+03 | – | 1.5E+02 | 7.8E+01 | – | – | 3.1E+04 | – | – | – |
| Tetrachloroethane, 1,1,2,2- | 79-34-5 | – | – | 1.4E+02 | – | – | – | – | – | 2.0E+04 | – | – | – |
| Tetrachloroethylene | 127-18-4 | 1.6E+03 | 8.1E+02 | 1.4E+04 | – | 1.6E+03 | 8.1E+02 | 8.0E+03 | 4.1E+03 | 2.1E+04 | – | 8.0E+03 | 4.1E+03 |
| Tetrachlorophenol, 2,3,4,5- | 4901-51-3 | – | – | – | – | – | – | – | – | 3.1E+04 | 6.1E+04 | – | – |
| Tetrachlorophenol, 2,3,4,6- | 58-90-2 | – | – | – | – | – | – | – | – | 3.1E+04 | 6.1E+04 | – | – |
| Tetrachlorophenol, 2,3,5,6- | 935-95-5 | – | – | – | – | – | – | – | – | 3.1E+04 | 6.1E+04 | – | – |
| Tetrachlorvinphos (Stirophos) | 22248-79-9 | – | – | – | – | – | – | – | – | 4.3E+04 | 8.6E+04 | – | – |
| Tetradifon | 116-29-0 | – | – | – | – | – | – | – | – | 2.0E+04 | 4.1E+04 | – | – |
| Tetraethyl dithiopyrophosphate (sulfotep) | 3689-24-5 | – | – | – | – | – | – | – | – | 5.1E+02 | 1.0E+03 | – | – |
| Tetraethyl lead | 78-00-2 | – | – | – | – | – | – | – | – | 1.0E-01 | 2.0E-01 | – | – |
| Tetraethyl pyrophosphate (TEPP) | 107-49-3 | – | – | – | – | – | – | – | – | 1.1E+01 | 2.2E+01 | – | – |
| Tetraethylene glycol | 112-60-7 | – | – | – | – | – | – | – | – | 3.4E+05 | 6.7E+05 | – | – |
| Tetrahydrofuran | 109-99-9 | 3.2E+02 | 1.6E+02 | 3.8E+03 | – | 3.2E+02 | 1.6E+02 | 4.3E+04 | 2.2E+04 | 9.2E+05 | – | 4.3E+04 | 2.2E+04 |
| Tetrahydropyran | 142-68-7 | 3.4E+02 | 1.7E+02 | 3.8E+03 | – | 3.4E+02 | 1.7E+02 | – | – | 2.0E+05 | – | – | – |
| Tetraoxadodecane, 2,5,8,11- | 112-49-2 | – | – | – | – | – | – | – | – | 2.6E+04 | 5.1E+04 | – | – |
| Thallium | 7440-28-0 | – | – | – | – | – | – | – | – | 6.8E+01 | 1.4E+03 | – | – |
| Thiofanox | 39196-18-4 | – | – | – | – | – | – | – | – | 3.1E+02 | 6.1E+02 | – | – |

# Table 7
## Tier 1 Individual Commercial/Industrial Soil PCLs

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | Carcinogenic | | | | | | Noncarcinogenic | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | $^{Air}Soil_{Inh\text{-}VP}$ 0.5 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}VP}$ 30 acre source area (mg/kg) | $^{Soil}Soil_{Ing}$ (mg/kg) | $^{Soil}Soil_{Derm}$ (mg/kg) | $^{Air}Soil_{Inh\text{-}V}$[1] 0.5 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}V}$[1] 30 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}VP}$ 0.5 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}VP}$ 30 acre source area (mg/kg) | $^{Soil}Soil_{Ing}$ (mg/kg) | $^{Soil}Soil_{Derm}$ (mg/kg) | $^{Air}Soil_{Inh\text{-}V}$[1] 0.5 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}V}$[1] 30 acre source area (mg/kg) |
| Thionazin | 297-97-2 | – | – | – | – | – | – | – | – | 7.2E+01 | 1.4E+02 | – | – |
| Thiophanate-methyl | 23564-05-8 | – | – | – | – | – | – | – | – | 8.2E+04 | 1.6E+05 | – | – |
| Thiram | 137-26-8 | – | – | – | – | – | – | – | – | 5.1E+03 | 1.0E+04 | – | – |
| Tin | 7440-31-5 | – | – | – | – | – | – | – | – | 6.1E+05 | 1.0E+06 | – | – |
| Titanium | 7440-32-6 | – | – | – | – | – | – | – | – | 1.0E+06 | 1.0E+06 | – | – |
| Toluene | 108-88-3 | – | – | – | – | – | – | 8.8E+04 | 4.5E+04 | 8.2E+04 | – | 8.8E+04 | 4.5E+04 |
| Toluene diisocyanate, 2,4/2,6- | 26471-62-5 | – | – | – | – | – | – | 2.0E+02 | 1.0E+02 | – | – | 2.0E+02 | 1.0E+02 |
| Toluenediamine, 2,4- | 95-80-7 | – | – | 8.9E+00 | 1.8E+01 | – | – | – | – | – | – | – | – |
| Toluenediamine, 2,6- | 823-40-5 | – | – | – | – | – | – | – | – | 3.1E+04 | 6.1E+04 | – | – |
| Toluidine, o- | 95-53-4 | 2.3E+02 | 1.2E+02 | 1.8E+03 | 2.4E+02 | 2.3E+02 | 1.2E+02 | – | – | – | – | – | – |
| Toluidine, p- | 106-49-0 | – | – | 9.5E+02 | 3.0E+02 | – | – | – | – | – | – | – | – |
| Toxaphene | 8001-35-2 | 1.6E+03 | 8.1E+02 | 2.6E+01 | 5.2E+01 | 1.6E+03 | 8.3E+02 | – | – | 3.2E+02 | 6.3E+02 | – | – |
| TPH, TX1005, C6-C12 | TPH-1005-1 | – | – | – | – | – | – | 4.3E+03 | 2.2E+03 | 4.1E+04 | – | 4.3E+03 | 2.2E+03 |
| TPH, TX1005, >C12-C28 | TPH-1005-2 | – | – | – | – | – | – | 2.1E+04 | 1.1E+04 | 4.1E+04 | 8.2E+04 | 2.1E+04 | 1.1E+04 |
| TPH, TX1005, >C12-C35 | TPH-1005-3 | – | – | – | – | – | – | 2.1E+04 | 1.1E+04 | 4.1E+04 | 8.2E+04 | 2.1E+04 | 1.1E+04 |
| TPH, TX1005, >C28-C35 | TPH-1005-4 | – | – | – | – | – | – | 2.1E+04 | 1.1E+04 | 4.1E+04 | 8.2E+04 | 2.1E+04 | 1.1E+04 |
| TP Silvex, 2,4,5- | 93-72-1 | – | – | – | – | – | – | – | – | 8.2E+03 | 1.6E+04 | – | – |
| Triademenol | 55219-65-3 | – | – | – | – | – | – | – | – | 3.1E+04 | 6.1E+04 | – | – |
| Triallate | 2303-17-5 | – | – | – | – | – | – | – | – | 1.3E+04 | 2.7E+04 | – | – |
| Triaminotrinitrobenzene (TATB) | 3058-38-6 | – | – | – | – | – | – | – | – | 3.1E+03 | 6.1E+03 | – | – |
| Tributyltin oxide | 56-35-9 | – | – | – | – | – | – | – | – | 3.1E+02 | 6.1E+02 | – | – |
| Trichloro-1,2,2-trifluoroethane, 1,1,2- | 76-13-1 | – | – | – | – | – | – | 1.1E+05 | 5.5E+04 | 1.0E+06 | – | 1.1E+05 | 5.5E+04 |
| Trichlorobenzene, 1,2,3- | 87-61-6 | – | – | – | – | – | – | 4.2E+02 | 2.2E+02 | 3.1E+03 | 6.1E+03 | 4.2E+02 | 2.2E+02 |
| Trichlorobenzene, 1,2,4- | 120-82-1 | – | – | 9.9E+02 | 2.0E+03 | – | – | 2.1E+02 | 1.1E+02 | 1.0E+04 | 2.0E+04 | 2.1E+02 | 1.1E+02 |
| Trichlorobenzene, 1,3,5- | 108-70-3 | – | – | – | – | – | – | 1.8E+02 | 9.1E+01 | 3.1E+03 | 6.1E+03 | 1.8E+02 | 9.1E+01 |
| Trichloroethane, 1,1,1- | 71-55-6 | – | – | – | – | – | – | 1.1E+05 | 5.6E+04 | 1.0E+06 | – | 1.1E+05 | 5.6E+04 |
| Trichloroethane, 1,1,2- | 79-00-5 | 3.8E+01 | 1.9E+01 | 5.0E+02 | – | 3.8E+01 | 1.9E+01 | – | – | 4.1E+03 | – | – | – |
| Trichloroethylene | 79-01-6 | 1.5E+02 | 7.5E+01 | 6.2E+02 | – | 1.5E+02 | 7.5E+01 | 4.3E+01 | 2.2E+01 | 5.1E+02 | – | 4.3E+01 | 2.2E+01 |
| Trichlorofluoromethane | 75-69-4 | – | – | – | – | – | – | – | – | 3.1E+05 | – | – | – |
| Trichloronate | 327-98-0 | – | – | – | – | – | – | – | – | 3.1E+03 | 6.1E+03 | – | – |
| Trichlorophenol, 2,3,4- | 15950-66-0 | – | – | – | – | – | – | – | – | 1.0E+05 | 2.0E+05 | – | – |
| Trichlorophenol, 2,3,5- | 933-78-8 | – | – | – | – | – | – | – | – | 1.0E+05 | 2.0E+05 | – | – |
| Trichlorophenol, 2,3,6- | 933-75-5 | – | – | – | – | – | – | – | – | 1.0E+05 | 2.0E+05 | – | – |
| Trichlorophenol, 2,4,5- | 95-95-4 | – | – | – | – | – | – | – | – | 1.0E+05 | 2.0E+05 | – | – |
| Trichlorophenol, 2,4,6- | 88-06-2 | 3.3E+03 | 1.7E+03 | 2.6E+03 | 5.2E+03 | 3.3E+03 | 1.7E+03 | – | – | 1.0E+03 | 2.0E+03 | – | – |
| Trichlorophenol, 3,4,5- | 609-19-8 | – | – | – | – | – | – | – | – | 1.0E+05 | 2.0E+05 | – | – |
| Trichlorophenoxyacetic acid, 2,4,5- | 93-76-5 | – | – | – | – | – | – | – | – | 1.0E+04 | 2.0E+04 | – | – |

# Table 7
# Tier 1 Individual Commercial/Industrial Soil PCLs

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | Carcinogenic | | | | | | Noncarcinogenic | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | $^{Air}Soil_{Inh\text{-}VP}$ 0.5 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}VP}$ 30 acre source area (mg/kg) | $^{Soil}Soil_{Ing}$ (mg/kg) | $^{Soil}Soil_{Derm}$ (mg/kg) | $^{Air}Soil_{Inh\text{-}V}$[1] 0.5 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}V}$[1] 30 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}VP}$ 0.5 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}VP}$ 30 acre source area (mg/kg) | $^{Soil}Soil_{Ing}$ (mg/kg) | $^{Soil}Soil_{Derm}$ (mg/kg) | $^{Air}Soil_{Inh\text{-}V}$[1] 0.5 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}V}$[1] 30 acre source area (mg/kg) |
| Trichloropropane, 1,1,2- | 598-77-6 | – | – | – | – | – | – | 6.4E+00 | 3.3E+00 | 5.1E+03 | – | 6.4E+00 | 3.3E+00 |
| Trichloropropane, 1,2,3- | 96-18-4 | – | – | 9.5E-01 | – | – | – | 2.0E+01 | 1.0E+01 | 4.1E+03 | – | 2.0E+01 | 1.0E+01 |
| Triethanolamine | 102-71-6 | – | – | – | – | – | – | 5.4E+03 | 2.8E+03 | 2.0E+05 | 4.1E+05 | 5.4E+03 | 2.8E+03 |
| Triethylamine | 121-44-8 | – | – | – | – | – | – | 1.5E+02 | 7.7E+01 | – | – | 1.5E+02 | 7.7E+01 |
| Triethylene glycol | 112-27-6 | – | – | – | – | – | – | – | – | 1.0E+06 | 1.0E+06 | – | – |
| Triethylphosphorothioate, O, O, O- | 126-68-1 | – | – | – | – | – | – | – | – | 8.5E+00 | 1.7E+01 | – | – |
| Trifluralin | 1582-09-8 | – | – | 3.7E+03 | 7.4E+03 | – | – | – | – | 7.7E+03 | 1.5E+04 | – | – |
| Trimethylamine | 75-50-3 | – | – | – | – | – | – | 2.1E+02 | 1.1E+02 | – | – | 2.1E+02 | 1.1E+02 |
| Trimethylbenzene, 1,2,3- | 526-73-8 | – | – | – | – | – | – | 5.1E+03 | 2.6E+03 | 3.5E+04 | – | 5.1E+03 | 2.6E+03 |
| Trimethylbenzene, 1,2,4- | 95-63-6 | – | – | – | – | – | – | 5.6E+03 | 2.9E+03 | 3.5E+04 | – | 5.6E+03 | 2.9E+03 |
| Trimethylbenzene, 1,3,5- | 108-67-8 | – | – | – | – | – | – | 4.9E+03 | 2.5E+03 | 3.5E+04 | – | 4.9E+03 | 2.5E+03 |
| Trinitrobenzene, 1,3,5- | 99-35-4 | – | – | – | – | – | – | – | – | 3.1E+04 | 6.1E+04 | – | – |
| Trinitrophenylmethylnitramine (tetryl; nitramine) | 479-45-8 | – | – | – | – | – | – | – | – | 2.0E+03 | 8.2E+03 | – | – |
| Trinitrotoluene, 2,4,6- | 118-96-7 | – | – | 9.5E+02 | 1.9E+03 | – | – | – | – | 5.1E+02 | 1.0E+03 | – | – |
| Tungsten (as sodium tungstate dihydride) | 7440-33-7 | – | – | – | – | – | – | 1.0E+06 | 1.0E+06 | 1.0E+03 | 4.1E+03 | – | – |
| Uranium (soluble salts) | 7440-61-1 | – | – | – | – | – | – | 5.4E+04 | 2.8E+04 | 3.1E+03 | 6.1E+04 | – | – |
| Valeric acid (pentanoic acid) | 109-52-4 | – | – | – | – | – | – | 1.8E+02 | 9.5E+01 | 5.1E+05 | 1.0E+06 | 1.8E+02 | 9.5E+01 |
| Vanadium | 7440-62-2 | – | – | – | – | – | – | 4.1E+04 | 2.1E+04 | 1.8E+03 | 9.6E+02 | – | – |
| Vernam | 1929-77-7 | – | – | – | – | – | – | – | – | 1.0E+03 | 2.0E+03 | – | – |
| Vinyl acetate | 108-05-4 | – | – | – | – | – | – | 4.3E+03 | 2.2E+03 | 1.0E+06 | – | 4.3E+03 | 2.2E+03 |
| Vinyl chloride | 75-01-4 | 7.2E+01 | 3.7E+01 | 1.9E+01 | – | 7.2E+01 | 3.7E+01 | 1.3E+03 | 6.6E+02 | 3.1E+03 | – | 1.3E+03 | 6.6E+02 |
| Vinylcyclohexane | 695-12-5 | – | – | – | – | – | – | – | – | 5.1E+05 | – | – | – |
| Warfarin | 81-81-2 | – | – | – | – | – | – | – | – | 3.1E+02 | 6.1E+02 | – | – |
| Xylene, m- | 108-38-3 | – | – | – | – | – | – | 1.3E+04 | 6.7E+03 | 1.0E+06 | – | 1.3E+04 | 6.7E+03 |
| Xylene, o- | 95-47-6 | – | – | – | – | – | – | 9.5E+04 | 4.9E+04 | 1.0E+06 | – | 9.5E+04 | 4.9E+04 |
| Xylene, p- | 106-42-3 | – | – | – | – | – | – | 1.3E+04 | 6.7E+03 | 1.0E+06 | – | 1.3E+04 | 6.7E+03 |
| Xylenes | 1330-20-7 | – | – | – | – | – | – | 1.3E+04 | 6.7E+03 | 2.0E+05 | – | 1.3E+04 | 6.7E+03 |
| Zinc | 7440-66-6 | – | – | – | – | – | – | – | – | 3.1E+05 | 1.0E+06 | – | – |
| 6 C aliphatics (TPH) (>53% n-hexane content) | NA | – | – | – | – | – | – | 1.4E+04 | 7.4E+03 | 6.1E+04 | – | 1.4E+04 | 7.4E+03 |
| 6 C aliphatics (TPH) (<53% n-hexane content) | NA | – | – | – | – | – | – | 4.0E+05 | 2.0E+05 | 6.1E+04 | – | 4.0E+05 | 2.0E+05 |
| >6-8 C aliphatics (TPH) (>53% n-hexane content) | NA | – | – | – | – | – | – | 1.4E+04 | 7.4E+03 | 6.1E+04 | – | 1.4E+04 | 7.4E+03 |
| >6-8 C aliphatics (TPH) (<53% n-hexane content) | NA | – | – | – | – | – | – | 4.0E+05 | 2.0E+05 | 6.1E+04 | – | 4.0E+05 | 2.0E+05 |
| >8-10 C aliphatics (TPH) | NA | – | – | – | – | – | – | 1.1E+04 | 5.5E+03 | 1.0E+05 | – | 1.1E+04 | 5.5E+03 |
| >10-12 C aliphatics (TPH) | NA | – | – | – | – | – | – | 1.1E+04 | 5.5E+03 | 1.0E+05 | 2.0E+05 | 1.1E+04 | 5.5E+03 |
| >12-16 C aliphatics (TPH) | NA | – | – | – | – | – | – | 1.7E+04 | 8.7E+03 | 1.0E+05 | 2.0E+05 | 1.7E+04 | 8.7E+03 |
| >16-21 C aliphatics (TPH) | NA | – | – | – | – | – | – | – | – | 1.0E+06 | 1.0E+06 | – | – |
| >16-21 C aliphatics (TPH) (for transformer mineral oil releases only) | NA | – | – | – | – | – | – | – | – | 1.0E+06 | 1.0E+06 | – | – |

# Table 7
# Tier 1 Individual Commercial/Industrial Soil PCLs

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | Carcinogenic | | | | | | Noncarcinogenic | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | $^{Air}Soil_{Inh\text{-}VP}$ 0.5 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}VP}$ 30 acre source area (mg/kg) | $^{Soil}Soil_{Ing}$ (mg/kg) | $^{Soil}Soil_{Derm}$ (mg/kg) | $^{Air}Soil_{Inh\text{-}V}$[1] 0.5 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}V}$[1] 30 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}VP}$ 0.5 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}VP}$ 30 acre source area (mg/kg) | $^{Soil}Soil_{Ing}$ (mg/kg) | $^{Soil}Soil_{Derm}$ (mg/kg) | $^{Air}Soil_{Inh\text{-}V}$[1] 0.5 acre source area (mg/kg) | $^{Air}Soil_{Inh\text{-}V}$[1] 30 acre source area (mg/kg) |
| >21-35 C aliphatics (TPH) | NA | – | – | – | – | – | – | – | – | 1.0E+06 | 1.0E+06 | – | – |
| >21-35 C aliphatics (TPH) (for transformer mineral oil releases only) | NA | – | – | – | – | – | – | – | – | 1.0E+06 | 1.0E+06 | – | – |
| >7-8 C aromatics (TPH) | NA | – | – | – | – | – | – | 4.1E+04 | 2.1E+04 | 1.0E+05 | – | 4.1E+04 | 2.1E+04 |
| >8-10 C aromatics (TPH) | NA | – | – | – | – | – | – | 4.3E+03 | 2.2E+03 | 4.1E+04 | – | 4.3E+03 | 2.2E+03 |
| >10-12 C aromatics (TPH) | NA | – | – | – | – | – | – | 9.2E+03 | 4.8E+03 | 4.1E+04 | 8.2E+04 | 9.2E+03 | 4.8E+03 |
| >12-16 C aromatics (TPH) | NA | – | – | – | – | – | – | 2.1E+04 | 1.1E+04 | 4.1E+04 | 8.2E+04 | 2.1E+04 | 1.1E+04 |
| >16-21 C aromatics (TPH) | NA | – | – | – | – | – | – | – | – | 3.1E+04 | 6.1E+04 | – | – |
| >21-35 C aromatics (TPH) | NA | – | – | – | – | – | – | – | – | 3.1E+04 | 6.1E+04 | – | – |

**Footnotes**

**1** For subsurface soils only

**2** Site-specific PCLs for mercury may vary based on the pH-dependent Kd value(see Figure:30 TAC §350.73(f)(1)(C)).

***** These compounds are not necessarily of concern from a human health standpoint, therefore calculation of human health-based values is not required. However, aesthetics and ecological criteria would still apply. See table entitled "Compounds for which Calculation of a Human Health PCL is Not Required" available on the TCEQ website at http://www.tceq.state.tx.us/remediation/trrp/trrp.html.

NA = not applicable

All values capped at 1E+06

This table shows individual protective concentration levels for commercial and industrial properties with carcinogenic and non-carcinogenic values depicted.

end of worksheet

**Table 8**
**Tier 1 Individual Residential and Commercial/Industrial Groundwater PCLs**

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | Residential | | | | | | | | Commercial/Industrial | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Carcinogenic | | Noncarcinogenic | | Carcinogenic | | Noncarcinogenic | | Carcinogenic | | Noncarcinogenic | | Carcinogenic | | Noncarcinogenic | |
| | | $^{GW}GW_{Ing}$ [1] (mg/L) | $^{GW}GW_{Class\ 3}$ [2] (mg/L) | $^{GW}GW_{Ing}$ [1] (mg/L) | $^{GW}GW_{Class\ 3}$ [2] (mg/L) | $^{Air}GW_{Inh\text{-}V}$ 0.5 acre source area (mg/L) | $^{Air}GW_{Inh\text{-}V}$ 30 acre source area (mg/L) | $^{Air}GW_{Inh\text{-}V}$ 0.5 acre source area (mg/L) | $^{Air}GW_{Inh\text{-}V}$ 30 acre source area (mg/L) | $^{GW}GW_{Ing}$ [1] (mg/L) | $^{GW}GW_{Class\ 3}$ [2] (mg/L) | $^{GW}GW_{Ing}$ [1] (mg/L) | $^{GW}GW_{Class\ 3}$ [2] (mg/L) | $^{Air}GW_{Inh\text{-}V}$ 0.5 acre source area (mg/L) | $^{Air}GW_{Inh\text{-}V}$ 30 acre source area (mg/L) | $^{Air}GW_{Inh\text{-}V}$ 0.5 acre source area (mg/L) | $^{Air}GW_{Inh\text{-}V}$ 30 acre source area (mg/L) |
| Acenaphthene | 83-32-9 | – | – | 1.5E+00 | 1.5E+02 | – | – | – | – | – | – | 4.4E+00 | 4.4E+02 | – | – | – | – |
| Acenaphthylene | 208-96-8 | – | – | 1.5E+00 | 1.5E+02 | – | – | – | – | – | – | 4.4E+00 | 4.4E+02 | – | – | – | – |
| Acetaldehyde | 75-07-0 | – | – | 2.4E+00 | 2.4E+02 | 2.8E+03 | 3.6E+02 | 2.4E+03 | 3.1E+02 | – | – | 7.3E+00 | 7.3E+02 | 4.7E+03 | 6.0E+02 | 3.3E+03 | 4.3E+02 |
| Acetate, 2-ethoxyethanol | 111-15-9 | – | – | 2.4E+00 | 2.4E+02 | – | – | 4.5E+05 | 5.8E+04 | – | – | 7.3E+00 | 7.3E+02 | – | – | 6.3E+05 | 8.1E+04 |
| Acetate, isoamyl | 123-92-2 | – | – | 1.8E+00 | 1.8E+02 | – | – | – | – | – | – | 5.3E+00 | 5.3E+02 | – | – | – | – |
| Acetate, isobutyl | 110-19-0 | – | – | 1.2E+00 | 1.2E+02 | – | – | – | – | – | – | 3.5E+00 | 3.5E+02 | – | – | – | – |
| Acetate, sec-butyl | 105-46-4 | – | – | 1.2E+00 | 1.2E+02 | – | – | – | – | – | – | 3.5E+00 | 3.5E+02 | – | – | – | – |
| Acetic acid* | 64-19-7 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – |
| Acetone (2-propanone) | 67-64-1 | – | – | 2.2E+01 | 2.2E+03 | – | – | 1.0E+06 | 1.0E+06 | – | – | 6.6E+01 | 6.6E+03 | – | – | 1.0E+06 | 1.0E+06 |
| Acetone cyanohydrin | 75-86-5 | – | – | 7.3E-02 | 7.3E+00 | – | – | 3.4E+05 | 4.4E+04 | – | – | 2.2E-01 | 2.2E+01 | – | – | 4.8E+05 | 6.2E+04 |
| Acetonitrile | 75-05-8 | – | – | 7.8E-01 | 7.8E+01 | – | – | 3.2E+04 | 4.2E+03 | – | – | 2.3E+00 | 2.3E+02 | – | – | 4.5E+04 | 5.8E+03 |
| Acetophenone | 98-86-2 | – | – | 2.4E+00 | 2.4E+02 | – | – | – | – | – | – | 7.3E+00 | 7.3E+02 | – | – | – | – |
| Acetylaminofluorene, 2- | 53-96-3 | 2.4E-04 | 2.4E-02 | – | – | 6.3E+02 | 1.0E+02 | – | – | 5.4E-04 | 5.4E-02 | – | – | 1.1E+03 | 1.8E+02 | – | – |
| Acifluorfen, sodium | 62476-59-9 | – | – | 3.2E-01 | 3.2E+01 | – | – | – | – | – | – | 9.5E-01 | 9.5E+01 | – | – | – | – |
| Acridine | 260-94-6 | – | – | 7.3E-02 | 7.3E+00 | – | – | – | – | – | – | 2.2E-01 | 2.2E+01 | – | – | – | – |
| Acrolein | 107-02-8 | – | – | 1.2E-02 | 1.2E+00 | – | – | 9.5E+03 | 1.2E+03 | – | – | 3.7E-02 | 3.7E+00 | – | – | 1.3E+04 | 1.7E+03 |
| Acrylamide | 79-06-1 | 1.8E-03 | 1.8E-01 | 4.9E-02 | 4.9E+00 | 3.8E+03 | 5.0E+02 | 9.7E+04 | 1.3E+04 | 4.1E-03 | 4.1E-01 | 1.5E-01 | 1.5E+01 | 6.3E+03 | 8.4E+02 | 1.4E+05 | 1.8E+04 |
| Acrylic acid | 79-10-7 | – | – | 1.2E+01 | 1.2E+03 | – | – | 1.5E+04 | 2.0E+03 | – | – | 3.7E+01 | 3.7E+03 | – | – | 2.1E+04 | 2.7E+03 |
| Acrylonitrile | 107-13-1 | 1.7E-03 | 1.7E-01 | 2.4E-02 | 2.4E+00 | 5.8E+01 | 7.5E+00 | 3.4E+02 | 4.3E+01 | 3.8E-03 | 3.8E-01 | 7.3E-02 | 7.3E+00 | 9.7E+01 | 1.3E+01 | 4.7E+02 | 6.1E+01 |
| Adipic acid (hexanedioic acid) | 124-04-9 | – | – | 4.9E+01 | 4.9E+03 | – | – | – | – | – | – | 1.5E+02 | 1.5E+04 | – | – | – | – |
| Alachlor | 15972-60-8 | 1.1E-02 | 1.1E+00 | 2.4E-01 | 2.4E+01 | – | – | – | – | 2.6E-02 | 2.6E+00 | 7.3E-01 | 7.3E+01 | – | – | – | – |
| Aldicarb | 116-06-3 | – | – | 2.4E-02 | 2.4E+00 | – | – | – | – | – | – | 7.3E-02 | 7.3E+00 | – | – | – | – |
| Aldicarb sulfone | 1646-88-4 | – | – | 2.4E-02 | 2.4E+00 | – | – | – | – | – | – | 7.3E-02 | 7.3E+00 | – | – | – | – |
| Aldrin | 309-00-2 | 5.4E-05 | 5.4E-03 | 7.3E-04 | 7.3E-02 | 4.4E+00 | 5.7E-01 | – | – | 1.2E-04 | 1.2E-02 | 2.2E-03 | 2.2E-01 | 7.4E+00 | 9.6E-01 | – | – |
| Allyl alcohol | 107-18-6 | – | – | 1.2E-01 | 1.2E+01 | – | – | 3.0E+02 | 3.8E+01 | – | – | 3.7E-01 | 3.7E+01 | – | – | 4.1E+02 | 5.4E+01 |
| Allyl chloride | 107-05-1 | – | – | 2.4E-01 | 2.4E+01 | – | – | 9.1E+00 | 1.2E+00 | – | – | 7.3E-01 | 7.3E+01 | – | – | 1.3E+01 | 1.7E+00 |
| Aluminum | 7429-90-5 | – | – | 2.4E+01 | 2.4E+03 | – | – | – | – | – | – | 7.3E+01 | 7.3E+03 | – | – | – | – |
| Ametryn | 834-12-8 | – | – | 2.2E-01 | 2.2E+01 | – | – | – | – | – | – | 6.6E-01 | 6.6E+01 | – | – | – | – |
| Amino-2,6-dinitrotoluene, 4- | 19406-51-0 | 9.1E-02 | 9.1E+00 | 4.1E-03 | 4.1E-01 | – | – | – | – | 2.0E-01 | 2.0E+01 | 1.2E-02 | 1.2E+00 | – | – | – | – |
| Amino-4,6-dinitrotoluene, 2- | 35572-78-2 | 9.1E-02 | 9.1E+00 | 4.1E-03 | 4.1E-01 | – | – | – | – | 2.0E-01 | 2.0E+01 | 1.2E-02 | 1.2E+00 | – | – | – | – |
| Aminobiphenyl, 4- (1,1-biphenyl-4-amine) | 92-67-1 | 1.5E-04 | 1.5E-02 | – | – | – | – | – | – | 3.4E-04 | 3.4E-02 | – | – | – | – | – | – |
| Aminopyridine, 4- | 504-24-5 | – | – | 4.9E-04 | 4.9E-02 | – | – | – | – | – | – | 1.5E-03 | 1.5E-01 | – | – | – | – |
| Ammonia | 7664-41-7 | – | – | – | – | – | – | 8.7E+03 | 1.1E+03 | – | – | – | – | – | – | 1.2E+04 | 1.6E+03 |
| Ammonium polyphosphate* | 6833-79-9 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – |
| Ammonium salts* | AMMONIUM | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – |
| Aniline | 62-53-3 | 1.6E-01 | 1.6E+01 | 1.7E-01 | 1.7E+01 | – | – | 1.1E+04 | 1.4E+03 | 3.6E-01 | 3.6E+01 | 5.1E-01 | 5.1E+01 | – | – | 1.6E+04 | 2.0E+03 |
| Anthracene | 120-12-7 | – | – | 7.3E+00 | 7.3E+02 | – | – | – | – | – | – | 2.2E+01 | 2.2E+03 | – | – | – | – |
| Anthraquinone, 9,10- | 84-65-1 | 2.3E-02 | 2.3E+00 | 4.9E-01 | 4.9E+01 | – | – | – | – | 5.2E-02 | 5.2E+00 | 1.5E+00 | 1.5E+02 | – | – | – | – |
| Antimony | 7440-36-0 | – | – | 9.8E-03 | 9.8E-01 | – | – | – | – | – | – | 2.9E-02 | 2.9E+00 | – | – | – | – |
| Aramite | 140-57-8 | 3.7E-02 | 3.7E+00 | 1.2E+00 | 1.2E+02 | – | – | – | – | 8.2E-02 | 8.2E+00 | 3.7E+00 | 3.7E+02 | – | – | – | – |
| Arsenic | 7440-38-2 | 6.1E-03 | 6.1E-01 | 7.3E-03 | 7.3E-01 | – | – | – | – | 1.4E-02 | 1.4E+00 | 2.2E-02 | 2.2E+00 | – | – | – | – |
| Arsine | 7784-42-1 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – |
| Atrazine | 1912-24-9 | 4.1E-03 | 4.1E-01 | 8.6E-01 | 8.6E+01 | – | – | – | – | 9.2E-03 | 9.2E-01 | 2.6E+00 | 2.6E+02 | – | – | – | – |
| Azinphos-methyl (guthion) | 86-50-0 | – | – | 3.7E-02 | 3.7E+00 | – | – | – | – | – | – | 1.1E-01 | 1.1E+01 | – | – | – | – |
| Azobenzene | 103-33-3 | 8.3E-03 | 8.3E-01 | – | – | 6.8E+02 | 8.8E+01 | – | – | 1.9E-02 | 1.9E+00 | – | – | 1.1E+03 | 1.5E+02 | – | – |
| Barium | 7440-39-3 | – | – | 4.9E+00 | 4.9E+02 | – | – | – | – | – | – | 1.5E+01 | 1.5E+03 | – | – | – | – |
| Bayleton | 43121-43-3 | – | – | 7.3E-01 | 7.3E+01 | – | – | – | – | – | – | 2.2E+00 | 2.2E+02 | – | – | – | – |
| Benefin (benfluralin) | 1861-40-1 | – | – | 7.3E+00 | 7.3E+02 | – | – | – | – | – | – | 2.2E+01 | 2.2E+03 | – | – | – | – |

**Table 8**
**Tier 1 Individual Residential and Commercial/Industrial Groundwater PCLs**

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | Residential | | | | | | | | Commercial/Industrial | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Carcinogenic | | Noncarcinogenic | | Carcinogenic | | Noncarcinogenic | | Carcinogenic | | Noncarcinogenic | | Carcinogenic | | Noncarcinogenic | |
| | | $^{GW}GW_{Ing}$[1] (mg/L) | $^{GW}GW_{Class\ 3}$[2] (mg/L) | $^{GW}GW_{Ing}$[1] (mg/L) | $^{GW}GW_{Class\ 3}$[2] (mg/L) | $^{Air}GW_{Inh\text{-}V}$ 0.5 acre source area (mg/L) | $^{Air}GW_{Inh\text{-}V}$ 30 acre source area (mg/L) | $^{Air}GW_{Inh\text{-}V}$ 0.5 acre source area (mg/L) | $^{Air}GW_{Inh\text{-}V}$ 30 acre source area (mg/L) | $^{GW}GW_{Ing}$[1] (mg/L) | $^{GW}GW_{Class\ 3}$[2] (mg/L) | $^{GW}GW_{Ing}$[1] (mg/L) | $^{GW}GW_{Class\ 3}$[2] (mg/L) | $^{Air}GW_{Inh\text{-}V}$ 0.5 acre source area (mg/L) | $^{Air}GW_{Inh\text{-}V}$ 30 acre source area (mg/L) | $^{Air}GW_{Inh\text{-}V}$ 0.5 acre source area (mg/L) | $^{Air}GW_{Inh\text{-}V}$ 30 acre source area (mg/L) |
| Benomyl | 17804-35-2 | – | – | 1.2E+00 | 1.2E+02 | – | – | – | – | – | – | 3.7E+00 | 3.7E+02 | – | – | – | – |
| Benz-a-anthracene | 56-55-3 | 9.1E-03 | 9.1E-01 | – | – | 3.0E+03 | 3.9E+02 | – | – | 2.0E-02 | 2.0E+00 | – | – | 5.0E+03 | 6.5E+02 | – | – |
| Benzaldehyde | 100-52-7 | – | – | 2.4E+00 | 2.4E+02 | – | – | – | – | – | – | 7.3E+00 | 7.3E+02 | – | – | – | – |
| Benzene | 71-43-2 | 6.1E-02 | 6.1E+00 | 9.8E-02 | 9.8E+00 | 1.8E+02 | 2.3E+01 | 4.7E+03 | 6.1E+02 | 1.4E-01 | 1.4E+01 | 2.9E-01 | 2.9E+01 | 3.0E+02 | 3.9E+01 | 6.6E+03 | 8.6E+02 |
| Benzenedicarbonitrile, 1,3- | 626-17-5 | – | – | 1.5E-01 | 1.5E+01 | – | – | – | – | – | – | 4.4E-01 | 4.4E+01 | – | – | – | – |
| Benzenedicarboxylic acid, 1,2-disodecyl ester | 26761-40-0 | – | – | 9.8E-01 | 9.8E+01 | – | – | 1.5E+05 | 1.9E+04 | – | – | 2.9E+00 | 2.9E+02 | – | – | 2.0E+05 | 2.6E+04 |
| Benzenethiol | 108-98-5 | – | – | 2.4E-02 | 2.4E+00 | – | – | – | – | – | – | 7.3E-02 | 7.3E+00 | – | – | – | – |
| Benzidine | 92-87-5 | 4.0E-06 | 4.0E-04 | 7.3E-02 | 7.3E+00 | 5.0E+00 | 8.4E-01 | – | – | 8.9E-06 | 8.9E-04 | 2.2E-01 | 2.2E+01 | 8.4E+00 | 1.4E+00 | – | – |
| Benzo-a-pyrene | 50-32-8 | 9.1E-04 | 9.1E-02 | 7.3E-03 | 7.3E-01 | 5.7E+02 | 7.4E+01 | 2.9E+01 | 3.8E+00 | 2.0E-03 | 2.0E-01 | 2.2E-02 | 2.2E+00 | 9.6E+02 | 1.2E+02 | 4.1E+01 | 5.3E+00 |
| Benzo-b-fluoranthene | 205-99-2 | 9.1E-03 | 9.1E-01 | – | – | 2.4E+03 | 3.1E+02 | – | – | 2.0E-02 | 2.0E+00 | – | – | 4.0E+03 | 5.2E+02 | – | – |
| Benzo-e-pyrene | 192-97-2 | – | – | 7.3E-01 | 7.3E+01 | – | – | – | – | – | – | 2.2E+00 | 2.2E+02 | – | – | – | – |
| Benzo-g,h,i-perylene | 191-24-2 | – | – | 7.3E-01 | 7.3E+01 | – | – | – | – | – | – | 2.2E+00 | 2.2E+02 | – | – | – | – |
| Benzoic acid | 65-85-0 | – | – | 9.8E+01 | 9.8E+03 | – | – | – | – | – | – | 2.9E+02 | 2.9E+04 | – | – | – | – |
| Benzo-j-fluoranthene | 205-82-3 | 9.1E-03 | 9.1E-01 | – | – | 1.5E+03 | 2.0E+02 | – | – | 2.0E-02 | 2.0E+00 | – | – | 2.6E+03 | 3.3E+02 | – | – |
| Benzo-k-fluoranthene | 207-08-9 | 9.1E-02 | 9.1E+00 | – | – | 1.4E+05 | 1.8E+04 | – | – | 2.0E-01 | 2.0E+01 | – | – | 2.4E+05 | 3.1E+04 | – | – |
| Benzophenone | 119-61-9 | – | – | 1.6E-01 | 1.6E+01 | – | – | – | – | – | – | 4.9E-01 | 4.9E+01 | – | – | – | – |
| Benzotrichloride | 98-07-7 | 7.0E-05 | 7.0E-03 | – | – | – | – | – | – | 1.6E-04 | 1.6E-02 | – | – | – | – | – | – |
| Benzoyl peroxide | 94-36-0 | – | – | 1.2E+00 | 1.2E+02 | – | – | – | – | – | – | 3.7E+00 | 3.7E+02 | – | – | – | – |
| Benzyl alcohol | 100-51-6 | – | – | 2.4E+00 | 2.4E+02 | – | – | – | – | – | – | 7.3E+00 | 7.3E+02 | – | – | – | – |
| Benzyl chloride | 100-44-7 | 5.4E-03 | 5.4E-01 | 4.9E-02 | 4.9E+00 | – | – | 1.0E+02 | 1.3E+01 | 1.2E-02 | 1.2E+00 | 1.5E-01 | 1.5E+01 | – | – | 1.4E+02 | 1.8E+01 |
| Benzyl dichloride | 98-87-3 | 5.4E-03 | 5.4E-01 | 4.9E-02 | 4.9E+00 | – | – | 2.0E+02 | 2.6E+01 | 1.2E-02 | 1.2E+00 | 1.5E-01 | 1.5E+01 | – | – | 2.8E+02 | 3.6E+01 |
| Beryllium | 7440-41-7 | – | – | 4.9E-02 | 4.9E+00 | – | – | – | – | – | – | 1.5E-01 | 1.5E+01 | – | – | – | – |
| Biphenyl, 1,1- | 92-52-4 | – | – | 1.2E+01 | 1.2E+03 | – | – | – | – | – | – | 3.7E+01 | 3.7E+03 | – | – | – | – |
| Biphenyl, 1,1'-, 2-phenoxy- | 6738-04-1 | – | – | 1.2E+00 | 1.2E+02 | – | – | – | – | – | – | 3.7E+00 | 3.7E+02 | – | – | – | – |
| Biquinoline, 2,2'- | 119-91-5 | – | – | 7.3E-02 | 7.3E+00 | – | – | – | – | – | – | 2.2E-01 | 2.2E+01 | – | – | – | – |
| Bis (2-chloroethoxy) methane | 111-91-1 | 8.3E-04 | 8.3E-02 | 7.3E-02 | 7.3E+00 | 8.0E+01 | 1.0E+01 | – | – | 1.9E-03 | 1.9E-01 | 2.2E-01 | 2.2E+01 | 1.3E+02 | 1.7E+01 | – | – |
| Bis (2-chloroethyl) ether | 111-44-4 | 8.3E-04 | 8.3E-02 | – | – | 9.3E+01 | 1.2E+01 | – | – | 1.9E-03 | 1.9E-01 | – | – | 1.6E+02 | 2.0E+01 | – | – |
| Bis (2-chloro-1-methyl) ether | 108-60-1 | 1.3E-02 | 1.3E+00 | 9.8E-01 | 9.8E+01 | 8.7E+02 | 1.1E+02 | – | – | 2.9E-02 | 2.9E+00 | 2.9E+00 | 2.9E+02 | 1.5E+03 | 1.9E+02 | – | – |
| Bis (2-chloromethyl) ether | 542-88-1 | 4.1E-06 | 4.1E-04 | – | – | 8.5E-02 | 1.1E-02 | – | – | 9.3E-06 | 9.3E-04 | – | – | 1.4E-01 | 1.9E-02 | – | – |
| Bis (2-ethyl-hexyl) phthalate | 117-81-7 | 6.5E-02 | 6.5E+00 | 4.9E-01 | 4.9E+01 | – | – | – | – | 1.5E-01 | 1.5E+01 | 1.5E+00 | 1.5E+02 | – | – | – | – |
| Bismuth | 7440-69-9 | – | – | 1.2E+01 | 1.2E+03 | – | – | – | – | – | – | 3.7E+01 | 3.7E+03 | – | – | – | – |
| Bisphenol A | 80-05-7 | – | – | 1.2E+00 | 1.2E+02 | – | – | – | – | – | – | 3.7E+00 | 3.7E+02 | – | – | – | – |
| Boron | 7440-42-8 | – | – | 4.9E+00 | 4.9E+02 | – | – | – | – | – | – | 1.5E+01 | 1.5E+03 | – | – | – | – |
| Bromacil | 314-40-9 | – | – | 2.4E+00 | 2.4E+02 | – | – | – | – | – | – | 7.3E+00 | 7.3E+02 | – | – | – | – |
| Bromo-2-chloroethane, 1- | 107-04-0 | – | – | 9.8E-01 | 9.8E+01 | – | – | – | – | – | – | 2.9E+00 | 2.9E+02 | – | – | – | – |
| Bromobenzene | 108-86-1 | – | – | 2.0E-01 | 2.0E+01 | – | – | 2.3E+03 | 2.9E+02 | – | – | 5.8E-01 | 5.8E+01 | – | – | 3.2E+03 | 4.1E+02 |
| Bromodichloromethane[3] | 75-27-4 | 1.5E-02 | 1.5E+00 | 4.9E-01 | 4.9E+01 | – | – | – | – | 3.3E-02 | 3.3E+00 | 1.5E+00 | 1.5E+02 | – | – | – | – |
| Bromoform[3] | 75-25-2 | 1.2E-01 | 1.2E+01 | 4.9E-01 | 4.9E+01 | 5.1E+03 | 6.7E+02 | – | – | 2.6E-01 | 2.6E+01 | 1.5E+00 | 1.5E+02 | 8.6E+03 | 1.1E+03 | – | – |
| Bromomethane | 74-83-9 | – | – | 3.4E-02 | 3.4E+00 | – | – | 4.6E+01 | 6.0E+00 | – | – | 1.0E-01 | 1.0E+01 | – | – | 6.4E+01 | 8.3E+00 |
| Bromophenyl phenylether, 4- | 101-55-3 | 6.1E-05 | 6.1E-03 | – | – | 1.6E+00 | 2.0E-01 | – | – | 1.4E-04 | 1.4E-02 | – | – | 2.7E+00 | 3.4E-01 | – | – |
| Butadiene, 1,3- | 106-99-0 | – | – | – | – | 5.1E+01 | 6.6E+00 | 3.6E+01 | 4.7E+00 | – | – | – | – | 8.6E+01 | 1.1E+01 | 5.1E+01 | 6.6E+00 |
| Butadiene, 2-methyl-1,3- (isoprene) | 78-79-5 | – | – | 1.5E+00 | 1.5E+02 | – | – | 8.2E+04 | 1.1E+04 | – | – | 4.4E+00 | 4.4E+02 | – | – | 1.2E+05 | 1.5E+04 |
| Butanal (butyraldehyde) | 123-72-8 | – | – | 1.5E+00 | 1.5E+02 | – | – | 2.0E+04 | 2.6E+03 | – | – | 4.4E+00 | 4.4E+02 | – | – | 2.8E+04 | 3.6E+03 |
| Butane, 2,3-dimethyl- | 79-29-8 | – | – | 1.5E+00 | 1.5E+02 | – | – | 2.4E+03 | 3.0E+02 | – | – | 4.4E+00 | 4.4E+02 | – | – | 3.3E+03 | 4.3E+02 |
| Butanoic acid (butyric acid) | 107-92-6 | – | – | 1.2E+01 | 1.2E+03 | – | – | 1.9E+04 | 2.5E+03 | – | – | 3.7E+01 | 3.7E+03 | – | – | 2.7E+04 | 3.4E+03 |
| Butanol, 2- | 78-92-2 | – | – | 4.9E+01 | 4.9E+03 | – | – | 1.0E+06 | 1.0E+06 | – | – | 1.5E+02 | 1.5E+04 | – | – | 1.0E+06 | 1.0E+06 |
| Butanol, 2-methyl-1- | 137-32-6 | – | – | 2.4E-01 | 2.4E+01 | – | – | – | – | – | – | 7.3E-01 | 7.3E+01 | – | – | – | – |

**Table 8**
**Tier 1 Individual Residential and Commercial/Industrial Groundwater PCLs**

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | Residential | | | | | | | | Commercial/Industrial | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Carcinogenic | | Noncarcinogenic | | Carcinogenic | | Noncarcinogenic | | Carcinogenic | | Noncarcinogenic | | Carcinogenic | | Noncarcinogenic | |
| | | $^{GW}GW_{Ing}$ [1] (mg/L) | $^{GW}GW_{Class\ 3}$ [2] (mg/L) | $^{GW}GW_{Ing}$ [1] (mg/L) | $^{GW}GW_{Class\ 3}$ [2] (mg/L) | $^{Air}GW_{Inh\text{-}V}$ 0.5 acre source area (mg/L) | $^{Air}GW_{Inh\text{-}V}$ 30 acre source area (mg/L) | $^{Air}GW_{Inh\text{-}V}$ 0.5 acre source area (mg/L) | $^{Air}GW_{Inh\text{-}V}$ 30 acre source area (mg/L) | $^{GW}GW_{Ing}$ [1] (mg/L) | $^{GW}GW_{Class\ 3}$ [2] (mg/L) | $^{GW}GW_{Ing}$ [1] (mg/L) | $^{GW}GW_{Class\ 3}$ [2] (mg/L) | $^{Air}GW_{Inh\text{-}V}$ 0.5 acre source area (mg/L) | $^{Air}GW_{Inh\text{-}V}$ 30 acre source area (mg/L) | $^{Air}GW_{Inh\text{-}V}$ 0.5 acre source area (mg/L) | $^{Air}GW_{Inh\text{-}V}$ 30 acre source area (mg/L) |
| Butanol, 2-methyl-2- | 75-85-4 | – | – | 2.4E-01 | 2.4E+01 | – | – | – | – | – | – | 7.3E-01 | 7.3E+01 | – | – | – | – |
| Butanol, n- | 71-36-3 | – | – | 2.4E+00 | 2.4E+02 | – | – | – | – | – | – | 7.3E+00 | 7.3E+02 | – | – | – | – |
| Butene, 1- | 106-98-9 | – | – | 1.5E+00 | 1.5E+02 | – | – | 2.9E+03 | 3.8E+02 | – | – | 4.4E+00 | 4.4E+02 | – | – | 4.1E+03 | 5.3E+02 |
| Butene, cis-2- | 590-18-1 | – | – | 1.5E+00 | 1.5E+02 | – | – | 1.3E+03 | 1.7E+02 | – | – | 4.4E+00 | 4.4E+02 | – | – | 1.8E+03 | 2.3E+02 |
| Butene, trans-2- | 624-64-6 | – | – | 1.5E+00 | 1.5E+02 | – | – | 1.3E+03 | 1.7E+02 | – | – | 4.4E+00 | 4.4E+02 | – | – | 1.8E+03 | 2.3E+02 |
| Butoxy ethanol, 2- (Ethylene glycol monobutyl ether; EGBE) | 111-76-2 | – | – | 2.4E+00 | 2.4E+02 | – | – | 1.0E+06 | 1.0E+06 | – | – | 7.3E+00 | 7.3E+02 | – | – | 1.0E+06 | 1.0E+06 |
| Butyl acetate | 123-86-4 | – | – | 3.4E+00 | 3.4E+02 | – | – | 7.0E+05 | 9.1E+04 | – | – | 1.0E+01 | 1.0E+03 | – | – | 9.8E+05 | 1.3E+05 |
| Butyl acrylate | 141-32-2 | – | – | 2.2E-01 | 2.2E+01 | – | – | – | – | – | – | 6.6E-01 | 6.6E+01 | – | – | – | – |
| Butyl benzyl phthalate | 85-68-7 | 4.8E-01 | 4.8E+01 | 4.9E+00 | 4.9E+02 | – | – | – | – | 1.1E+00 | 1.1E+02 | 1.5E+01 | 1.5E+03 | – | – | – | – |
| Butyl ether, n- (dibutyl ether) | 142-96-1 | – | – | 2.4E+00 | 2.4E+02 | – | – | – | – | – | – | 7.3E+00 | 7.3E+02 | – | – | – | – |
| Butyl methacrylate | 97-88-1 | – | – | 2.2E+00 | 2.2E+02 | – | – | – | – | – | – | 6.6E+00 | 6.6E+02 | – | – | – | – |
| Butylate | 2008-41-5 | – | – | 1.2E+00 | 1.2E+02 | – | – | – | – | – | – | 3.7E+00 | 3.7E+02 | – | – | – | – |
| Butylbenzene, n- | 104-51-8 | – | – | 1.2E+00 | 1.2E+02 | – | – | – | – | – | – | 3.7E+00 | 3.7E+02 | – | – | – | – |
| Butylbenzene, sec- | 135-98-8 | – | – | 9.8E-01 | 9.8E+01 | – | – | – | – | – | – | 2.9E+00 | 2.9E+02 | – | – | – | – |
| Butylbenzene, tert- | 98-06-6 | – | – | 9.8E-01 | 9.8E+01 | – | – | – | – | – | – | 2.9E+00 | 2.9E+02 | – | – | – | – |
| Cacodylic acid | 75-60-5 | – | – | 7.3E-02 | 7.3E+00 | – | – | – | – | – | – | 2.2E-01 | 2.2E+01 | – | – | – | – |
| Cadmium | 7440-43-9 | – | – | 2.4E-02 | 2.4E+00 | – | – | – | – | – | – | 7.3E-02 | 7.3E+00 | – | – | – | – |
| Calcium* | 7440-70-2 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – |
| Caprolactam | 105-60-2 | – | – | 1.2E+01 | 1.2E+03 | – | – | – | – | – | – | 3.7E+01 | 3.7E+03 | – | – | – | – |
| Captan | 133-06-2 | 2.6E-01 | 2.6E+01 | 3.2E+00 | 3.2E+02 | – | – | – | – | 5.8E-01 | 5.8E+01 | 9.5E+00 | 9.5E+02 | – | – | – | – |
| Carbaryl | 63-25-2 | – | – | 2.4E+00 | 2.4E+02 | – | – | – | – | – | – | 7.3E+00 | 7.3E+02 | – | – | – | – |
| Carbazole | 86-74-8 | 4.6E-02 | 4.6E+00 | – | – | – | – | – | – | 1.0E-01 | 1.0E+01 | – | – | – | – | – | – |
| Carbofuran | 1563-66-2 | – | – | 1.2E-01 | 1.2E+01 | – | – | – | – | – | – | 3.7E-01 | 3.7E+01 | – | – | – | – |
| Carbon disulfide | 75-15-0 | – | – | 2.4E+00 | 2.4E+02 | – | – | 4.9E+03 | 6.3E+02 | – | – | 7.3E+00 | 7.3E+02 | – | – | 6.8E+03 | 8.8E+02 |
| Carbon tetrachloride | 56-23-5 | 1.3E-02 | 1.3E+00 | 9.8E-02 | 9.8E+00 | 2.0E+01 | 2.5E+00 | 5.1E+02 | 6.6E+01 | 2.9E-02 | 2.9E+00 | 2.9E-01 | 2.9E+01 | 3.3E+01 | 4.3E+00 | 7.1E+02 | 9.2E+01 |
| Carbophenothion | 786-19-6 | – | – | 3.2E-01 | 3.2E+01 | – | – | – | – | – | – | 9.5E-01 | 9.5E+01 | – | – | – | – |
| Carbosulfan | 55285-14-8 | – | – | 2.4E-01 | 2.4E+01 | – | – | – | – | – | – | 7.3E-01 | 7.3E+01 | – | – | – | – |
| Carboxin | 5234-68-4 | – | – | 2.4E+00 | 2.4E+02 | – | – | – | – | – | – | 7.3E+00 | 7.3E+02 | – | – | – | – |
| Chloral | 75-87-6 | – | – | 2.4E+00 | 2.4E+02 | – | – | – | – | – | – | 7.3E+00 | 7.3E+02 | – | – | – | – |
| Chloral hydrate (1,1-ethanediol, 2,2,2-trichloro-) | 302-17-0 | – | – | 2.4E+00 | 2.4E+02 | – | – | – | – | – | – | 7.3E+00 | 7.3E+02 | – | – | – | – |
| Chloramben (amiben; 3-amino-2,5-dichlorobenzoic acid) | 133-90-4 | – | – | 3.7E-01 | 3.7E+01 | – | – | – | – | – | – | 1.1E+00 | 1.1E+02 | – | – | – | – |
| Chlordane (technical) | 12789-03-6 | 2.6E-03 | 2.6E-01 | 1.2E-02 | 1.2E+00 | 7.7E+02 | 9.9E+01 | 2.3E+03 | 3.0E+02 | 5.8E-03 | 5.8E-01 | 3.7E-02 | 3.7E+00 | 1.3E+03 | 1.7E+02 | 3.2E+03 | 4.2E+02 |
| Chlordane, cis- (alpha chlordane) | 5103-71-9 | 2.6E-03 | 2.6E-01 | 1.2E-02 | 1.2E+00 | 1.5E+02 | 2.0E+01 | 4.6E+02 | 6.0E+01 | 5.8E-03 | 5.8E-01 | 3.7E-02 | 3.7E+00 | 2.6E+02 | 3.3E+01 | 6.5E+02 | 8.4E+01 |
| Chlordane, trans- (gamma chordane) | 5103-74-2 | 2.6E-03 | 2.6E-01 | 1.2E-02 | 1.2E+00 | 1.5E+02 | 2.0E+01 | 4.6E+02 | 6.0E+01 | 5.8E-03 | 5.8E-01 | 3.7E-02 | 3.7E+00 | 2.6E+02 | 3.3E+01 | 6.5E+02 | 8.4E+01 |
| Chlorfenvinphos | 470-90-6 | – | – | 1.7E-02 | 1.7E+00 | – | – | – | – | – | – | 5.1E-02 | 5.1E+00 | – | – | – | – |
| Chloride* | 16887-00-6 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – |
| Chlorine | 7782-50-5 | – | – | 2.4E+00 | 2.4E+02 | – | – | 1.3E+01 | 1.6E+00 | – | – | 7.3E+00 | 7.3E+02 | – | – | 1.8E+01 | 2.3E+00 |
| Chloro-1,3-butadiene, 2- | 126-99-8 | – | – | – | – | 2.8E-01 | 3.7E-02 | 7.3E+01 | 9.4E+00 | – | – | – | – | 4.7E-01 | 6.1E-02 | 1.0E+02 | 1.3E+01 |
| Chloro-2-propanol, 1- | 127-00-4 | – | – | 4.9E-01 | 4.9E+01 | – | – | – | – | – | – | 1.5E+00 | 1.5E+02 | – | – | – | – |
| Chloro-3-methylphenol, 4- | 59-50-7 | – | – | 1.2E-01 | 1.2E+01 | – | – | – | – | – | – | 3.7E-01 | 3.7E+01 | – | – | – | – |
| Chloroaniline, p- | 106-47-8 | 4.6E-03 | 4.6E-01 | 9.8E-02 | 9.8E+00 | – | – | – | – | 1.0E-02 | 1.0E+00 | 2.9E-01 | 2.9E+01 | – | – | – | – |
| Chlorobenzene | 108-90-7 | – | – | 4.9E-01 | 4.9E+01 | – | – | 1.2E+03 | 1.5E+02 | – | – | 1.5E+00 | 1.5E+02 | – | – | 1.6E+03 | 2.1E+02 |
| Chlorobenzilate | 510-15-6 | 3.4E-03 | 3.4E-01 | 4.9E-01 | 4.9E+01 | 7.0E+03 | 9.0E+02 | – | – | 7.6E-03 | 7.6E-01 | 1.5E+00 | 1.5E+02 | 1.2E+04 | 1.5E+03 | – | – |
| Chlorobromomethane (bromochloromethane) | 74-97-5 | – | – | 9.8E-01 | 9.8E+01 | – | – | – | – | – | – | 2.9E+00 | 2.9E+02 | – | – | – | – |
| Chlorodifluoromethane | 75-45-6 | – | – | – | – | – | – | 1.7E+05 | 2.2E+04 | – | – | – | – | – | – | 2.4E+05 | 3.1E+04 |
| Chloroethane (ethyl chloride) | 75-00-3 | – | – | 9.8E+00 | 9.8E+02 | – | – | 1.2E+05 | 1.5E+04 | – | – | 2.9E+01 | 2.9E+03 | – | – | 1.6E+05 | 2.1E+04 |
| Chloroethanol, 2- | 107-07-3 | – | – | 4.9E-01 | 4.9E+01 | – | – | – | – | – | – | 1.5E+00 | 1.5E+02 | – | – | – | – |

**Table 8**
**Tier 1 Individual Residential and Commercial/Industrial Groundwater PCLs**

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | Residential | | | | | | | | Commercial/Industrial | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Carcinogenic | | Noncarcinogenic | | Carcinogenic | | Noncarcinogenic | | Carcinogenic | | Noncarcinogenic | | Carcinogenic | | Noncarcinogenic | |
| | | $^{GW}GW_{Ing}$[1] (mg/L) | $^{GW}GW_{Class\ 3}$[2] (mg/L) | $^{GW}GW_{Ing}$[1] (mg/L) | $^{GW}GW_{Class\ 3}$[2] (mg/L) | $^{Air}GW_{Inh\text{-}V}$ 0.5 acre source area (mg/L) | $^{Air}GW_{Inh\text{-}V}$ 30 acre source area (mg/L) | $^{Air}GW_{Inh\text{-}V}$ 0.5 acre source area (mg/L) | $^{Air}GW_{Inh\text{-}V}$ 30 acre source area (mg/L) | $^{GW}GW_{Ing}$[1] (mg/L) | $^{GW}GW_{Class\ 3}$[2] (mg/L) | $^{GW}GW_{Ing}$[1] (mg/L) | $^{GW}GW_{Class\ 3}$[2] (mg/L) | $^{Air}GW_{Inh\text{-}V}$ 0.5 acre source area (mg/L) | $^{Air}GW_{Inh\text{-}V}$ 30 acre source area (mg/L) | $^{Air}GW_{Inh\text{-}V}$ 0.5 acre source area (mg/L) | $^{Air}GW_{Inh\text{-}V}$ 30 acre source area (mg/L) |
| Chloroethoxy ethene, 2- (2-chloroethylvinylether) | 110-75-8 | 8.3E-04 | 8.3E-02 | 4.9E-02 | 4.9E+00 | – | – | 2.0E+01 | 2.5E+00 | 1.9E-03 | 1.9E-01 | 1.5E-01 | 1.5E+01 | – | – | 2.7E+01 | 3.5E+00 |
| Chloroform[3] | 67-66-3 | – | – | 2.4E-01 | 2.4E+01 | 2.0E+01 | 2.6E+00 | 1.9E+03 | 2.5E+02 | – | – | 7.3E-01 | 7.3E+01 | 3.3E+01 | 4.3E+00 | 2.7E+03 | 3.4E+02 |
| Chlorohexane, 1- | 544-10-5 | – | – | 9.8E-01 | 9.8E+01 | – | – | 7.3E+03 | 9.4E+02 | – | – | 2.9E+00 | 2.9E+02 | – | – | 1.0E+04 | 1.3E+03 |
| Chloromethane (methyl chloride) | 74-87-3 | 7.0E-02 | 7.0E+00 | 8.8E-02 | 8.8E+00 | 3.6E+01 | 4.7E+00 | 2.5E+02 | 3.2E+01 | 1.6E-01 | 1.6E+01 | 2.6E-01 | 2.6E+01 | 6.1E+01 | 7.9E+00 | 3.5E+02 | 4.5E+01 |
| Chloronaphthalene, 1- (Chloronaphthalene, alpha-) | 90-13-1 | – | – | 2.0E+00 | 2.0E+02 | – | – | – | – | – | – | 5.8E+00 | 5.8E+02 | – | – | – | – |
| Chloronaphthalene, 2- (chloronaphthalene, beta) | 91-58-7 | – | – | 2.0E+00 | 2.0E+02 | – | – | – | – | – | – | 5.8E+00 | 5.8E+02 | – | – | – | – |
| Chloronitrobenzene, p- (1-chloro-4-nitrobenzene) | 100-00-5 | 1.4E-01 | 1.4E+01 | 2.4E-02 | 2.4E+00 | – | – | 7.6E+02 | 9.9E+01 | 3.2E-01 | 3.2E+01 | 7.3E-02 | 7.3E+00 | – | – | 1.1E+03 | 1.4E+02 |
| Chlorophenol, 2- | 95-57-8 | – | – | 1.2E-01 | 1.2E+01 | – | – | – | – | – | – | 3.7E-01 | 3.7E+01 | – | – | – | – |
| Chlorophenol, 3- | 108-43-0 | – | – | 1.2E-01 | 1.2E+01 | – | – | – | – | – | – | 3.7E-01 | 3.7E+01 | – | – | – | – |
| Chlorophenol, 4- | 106-48-9 | – | – | 1.2E-01 | 1.2E+01 | – | – | – | – | – | – | 3.7E-01 | 3.7E+01 | – | – | – | – |
| Chlorophenyl phenylether, 4- | 7005-72-3 | 6.1E-05 | 6.1E-03 | – | – | 1.2E+00 | 1.6E-01 | – | – | 1.4E-04 | 1.4E-02 | – | – | 2.1E+00 | 2.7E-01 | – | – |
| Chloropropane, 2- | 75-29-6 | – | – | 7.3E-01 | 7.3E+01 | – | – | 4.7E+02 | 6.0E+01 | – | – | 2.2E+00 | 2.2E+02 | – | – | 6.5E+02 | 8.5E+01 |
| Chlorothalonil | 1897-45-6 | 8.3E-02 | 8.3E+00 | 3.7E-01 | 3.7E+01 | – | – | – | – | 1.9E-01 | 1.9E+01 | 1.1E+00 | 1.1E+02 | – | – | – | – |
| Chlorotoluene, o- (2-chlorotoluene) | 95-49-8 | – | – | 4.9E-01 | 4.9E+01 | – | – | 2.4E+04 | 3.1E+03 | – | – | 1.5E+00 | 1.5E+02 | – | – | 3.3E+04 | 4.3E+03 |
| Chlorotoluene, p- (4-chlorotoluene) | 106-43-4 | – | – | 4.9E-01 | 4.9E+01 | – | – | – | – | – | – | 1.5E+00 | 1.5E+02 | – | – | – | – |
| Chlorpyrifos | 2921-88-2 | – | – | 7.3E-02 | 7.3E+00 | – | – | – | – | – | – | 2.2E-01 | 2.2E+01 | – | – | – | – |
| Chromium (III) | 16065-83-1 | – | – | 3.7E+01 | 3.7E+03 | – | – | – | – | – | – | 1.1E+02 | 1.1E+04 | – | – | – | – |
| Chromium (total) | 7440-47-3 | – | – | 3.7E+01 | 3.7E+03 | – | – | – | – | – | – | 1.1E+02 | 1.1E+04 | – | – | – | – |
| Chromium (VI) | 18540-29-9 | – | – | 7.6E-02 | 7.6E+00 | – | – | – | – | – | – | 2.3E-01 | 2.3E+01 | – | – | – | – |
| Chrysene | 218-01-9 | 9.1E-01 | 9.1E+01 | – | – | 8.6E+05 | 1.1E+05 | – | – | 2.0E+00 | 2.0E+02 | – | – | 1.0E+06 | 1.9E+05 | – | – |
| Cobalt | 7440-48-4 | – | – | 2.4E-01 | 2.4E+01 | – | – | – | – | – | – | 7.3E-01 | 7.3E+01 | – | – | – | – |
| Copolymer acrylamide | 69418-26-4 | – | – | 4.9E-03 | 4.9E-01 | – | – | – | – | – | – | 1.5E-02 | 1.5E+00 | – | – | – | – |
| Copper | 7440-50-8 | – | – | 2.4E+00 | 2.4E+02 | – | – | – | – | – | – | 7.1E+00 | 7.1E+02 | – | – | – | – |
| Coronene | 191-07-1 | – | – | 4.9E-02 | 4.9E+00 | – | – | – | – | – | – | 1.5E-01 | 1.5E+01 | – | – | – | – |
| Coumaphos | 56-72-4 | – | – | 1.7E-01 | 1.7E+01 | – | – | – | – | – | – | 5.1E-01 | 5.1E+01 | – | – | – | – |
| Cresol | 1319-77-3 | – | – | 1.2E+00 | 1.2E+02 | – | – | – | – | – | – | 3.7E+00 | 3.7E+02 | – | – | – | – |
| Cresol, m- (3-methylphenol) | 108-39-4 | – | – | 1.2E+00 | 1.2E+02 | – | – | – | – | – | – | 3.7E+00 | 3.7E+02 | – | – | – | – |
| Cresol, o- (2-methylphenol) | 95-48-7 | – | – | 1.2E+00 | 1.2E+02 | – | – | – | – | – | – | 3.7E+00 | 3.7E+02 | – | – | – | – |
| Cresol, p- (4-methylphenol) | 106-44-5 | – | – | 1.2E-01 | 1.2E+01 | – | – | – | – | – | – | 3.7E-01 | 3.7E+01 | – | – | – | – |
| Crotonaldehyde | 123-73-9 | 4.8E-04 | 4.8E-02 | 2.4E-02 | 2.4E+00 | – | – | – | – | 1.1E-03 | 1.1E-01 | 7.3E-02 | 7.3E+00 | – | – | – | – |
| Cumene (isopropylbenzene) | 98-82-8 | – | – | 2.4E+00 | 2.4E+02 | – | – | 4.4E+03 | 5.7E+02 | – | – | 7.3E+00 | 7.3E+02 | – | – | 6.2E+03 | 8.0E+02 |
| Cyanazine | 21725-46-2 | 1.1E-03 | 1.1E-01 | 4.9E-02 | 4.9E+00 | – | – | – | – | 2.4E-03 | 2.4E-01 | 1.5E-01 | 1.5E+01 | – | – | – | – |
| Cyanide | 57-12-5 | – | – | 1.5E-02 | 1.5E+00 | – | – | – | – | – | – | 4.4E-02 | 4.4E+00 | – | – | – | – |
| Cyanogen | 460-19-5 | – | – | 2.4E-02 | 2.4E+00 | – | – | 7.3E+00 | 9.4E-01 | – | – | 7.3E-02 | 7.3E+00 | – | – | 1.0E+01 | 1.3E+00 |
| Cycloate | 1134-23-2 | – | – | 1.3E+00 | 1.3E+02 | – | – | – | – | – | – | 4.0E+00 | 4.0E+02 | – | – | – | – |
| Cyclohexane | 110-82-7 | – | – | 1.2E+02 | 1.2E+04 | – | – | 5.9E+03 | 7.7E+02 | – | – | 3.7E+02 | 3.7E+04 | – | – | 8.3E+03 | 1.1E+03 |
| Cyclohexanol | 108-93-0 | – | – | 1.2E+02 | 1.2E+04 | – | – | – | – | – | – | 3.7E+02 | 3.7E+04 | – | – | – | – |
| Cyclohexanone | 108-94-1 | – | – | 1.2E+02 | 1.2E+04 | – | – | 1.0E+06 | 1.8E+05 | – | – | 3.7E+02 | 3.7E+04 | – | – | 1.0E+06 | 2.5E+05 |
| Cyclohexene, 1-methanol-3- | 1679-51-2 | – | – | 4.9E-01 | 4.9E+01 | – | – | – | – | – | – | 1.5E+00 | 1.5E+02 | – | – | – | – |
| Cyclohexene, 4-vinyl-1- | 100-40-3 | – | – | 5.4E-01 | 5.4E+01 | – | – | 1.1E+03 | 1.4E+02 | – | – | 1.6E+00 | 1.6E+02 | – | – | 1.5E+03 | 2.0E+02 |
| Cyclopentane | 287-92-3 | – | – | 1.5E+00 | 1.5E+02 | – | – | 3.7E+04 | 4.8E+03 | – | – | 4.4E+00 | 4.4E+02 | – | – | 5.1E+04 | 6.7E+03 |
| Cyclopentane, methyl- | 96-37-7 | – | – | 2.4E+00 | 2.4E+02 | – | – | 6.8E+02 | 8.8E+01 | – | – | 7.3E+00 | 7.3E+02 | – | – | 9.5E+02 | 1.2E+02 |
| Cyclopentene | 142-29-0 | – | – | 1.2E+02 | 1.2E+04 | – | – | – | – | – | – | 3.7E+02 | 3.7E+04 | – | – | – | – |
| Cyclotetramethylenetetranitramine (HMX) | 2691-41-0 | – | – | 1.2E+00 | 1.2E+02 | – | – | – | – | – | – | 3.7E+00 | 3.7E+02 | – | – | – | – |
| Cyclotrimethylenetrinitramine (RDX) | 121-82-4 | 1.1E-02 | 1.1E+00 | 9.8E-02 | 9.8E+00 | – | – | – | – | 2.6E-02 | 2.6E+00 | 2.9E-01 | 2.9E+01 | – | – | – | – |
| Cymene (isopropyltoluene) | 99-87-6 | – | – | 2.4E+00 | 2.4E+02 | – | – | – | – | – | – | 7.3E+00 | 7.3E+02 | – | – | – | – |
| Cymoxanil | 57966-95-7 | – | – | 3.2E-01 | 3.2E+01 | – | – | – | – | – | – | 9.5E-01 | 9.5E+01 | – | – | – | – |

**Table 8**
**Tier 1 Individual Residential and Commercial/Industrial Groundwater PCLs**

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | Residential | | | | | | | | Commercial/Industrial | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Carcinogenic | | Noncarcinogenic | | Carcinogenic | | Noncarcinogenic | | Carcinogenic | | Noncarcinogenic | | Carcinogenic | | Noncarcinogenic | |
| | | $^{GW}GW_{Ing}$[1] (mg/L) | $^{GW}GW_{Class\ 3}$[2] (mg/L) | $^{GW}GW_{Ing}$[1] (mg/L) | $^{GW}GW_{Class\ 3}$[2] (mg/L) | $^{Air}GW_{Inh\text{-}V}$ 0.5 acre source area (mg/L) | $^{Air}GW_{Inh\text{-}V}$ 30 acre source area (mg/L) | $^{Air}GW_{Inh\text{-}V}$ 0.5 acre source area (mg/L) | $^{Air}GW_{Inh\text{-}V}$ 30 acre source area (mg/L) | $^{GW}GW_{Ing}$[1] (mg/L) | $^{GW}GW_{Class\ 3}$[2] (mg/L) | $^{GW}GW_{Ing}$[1] (mg/L) | $^{GW}GW_{Class\ 3}$[2] (mg/L) | $^{Air}GW_{Inh\text{-}V}$ 0.5 acre source area (mg/L) | $^{Air}GW_{Inh\text{-}V}$ 30 acre source area (mg/L) | $^{Air}GW_{Inh\text{-}V}$ 0.5 acre source area (mg/L) | $^{Air}GW_{Inh\text{-}V}$ 30 acre source area (mg/L) |
| Dacthal (DCPA) | 1861-32-1 | – | – | 2.4E-01 | 2.4E+01 | – | – | – | – | – | – | 7.3E-01 | 7.3E+01 | – | – | – | – |
| Dalapon, sodium salt (2,2-dichloropropanoic acid) | 75-99-0 | – | – | 7.3E-01 | 7.3E+01 | – | – | – | – | – | – | 2.2E+00 | 2.2E+02 | – | – | – | – |
| DDD | 72-54-8 | 3.8E-03 | 3.8E-01 | – | – | – | – | – | – | 8.5E-03 | 8.5E-01 | – | – | – | – | – | – |
| DDE | 72-55-9 | 2.7E-03 | 2.7E-01 | – | – | – | – | – | – | 6.0E-03 | 6.0E-01 | – | – | – | – | – | – |
| DDT | 50-29-3 | 2.7E-03 | 2.7E-01 | 1.2E-02 | 1.2E+00 | 6.2E+02 | 8.1E+01 | – | – | 6.0E-03 | 6.0E-01 | 3.7E-02 | 3.7E+00 | 1.0E+03 | 1.4E+02 | – | – |
| Demeton | 8065-48-3 | – | – | 9.8E-04 | 9.8E-02 | – | – | – | – | – | – | 2.9E-03 | 2.9E-01 | – | – | – | – |
| Desethylatrazine | 6190-65-4 | – | – | 8.6E-01 | 8.6E+01 | – | – | – | – | – | – | 2.6E+00 | 2.6E+02 | – | – | – | – |
| Diacetone alcohol (4-hydroxy-4-methyl-2-pentanone) | 123-42-2 | – | – | 9.8E-01 | 9.8E+01 | – | – | – | – | – | – | 2.9E+00 | 2.9E+02 | – | – | – | – |
| Diallate | 2303-16-4 | 1.5E-02 | 1.5E+00 | – | – | – | – | – | – | 3.4E-02 | 3.4E+00 | – | – | – | – | – | – |
| Diazinon | 333-41-5 | – | – | 2.2E-02 | 2.2E+00 | – | – | 4.0E+03 | 5.2E+02 | – | – | 6.6E-02 | 6.6E+00 | – | – | 5.6E+03 | 7.2E+02 |
| Dibenz(a,h)acridine | 226-36-8 | 7.6E-04 | 7.6E-02 | – | – | 8.1E+03 | 1.1E+03 | – | – | 1.7E-03 | 1.7E-01 | – | – | 1.4E+04 | 1.8E+03 | – | – |
| Dibenz(a,j)acridine | 224-42-0 | 1.3E-03 | 1.3E-01 | – | – | 1.0E+04 | 1.3E+03 | – | – | 2.8E-03 | 2.8E-01 | – | – | 1.7E+04 | 2.2E+03 | – | – |
| Dibenz-a,h-anthracene | 53-70-3 | 9.1E-04 | 9.1E-02 | – | – | 1.5E+03 | 2.0E+02 | – | – | 2.0E-03 | 2.0E-01 | – | – | 2.6E+03 | 3.3E+02 | – | – |
| Dibenzo(a,e)pyrene | 192-65-4 | 1.3E-04 | 1.3E-02 | – | – | 1.0E+03 | 1.3E+02 | – | – | 2.8E-04 | 2.8E-02 | – | – | 1.7E+03 | 2.2E+02 | – | – |
| Dibenzo(a,h)pyrene | 189-64-0 | 1.3E-05 | 1.3E-03 | – | – | 1.0E+02 | 1.3E+01 | – | – | 2.8E-05 | 2.8E-03 | – | – | 1.7E+02 | 2.2E+01 | – | – |
| Dibenzo(a,i)pyrene | 189-55-9 | 1.3E-05 | 1.3E-03 | – | – | 1.0E+02 | 1.3E+01 | – | – | 2.8E-05 | 2.8E-03 | – | – | 1.7E+02 | 2.2E+01 | – | – |
| Dibenzofuran | 132-64-9 | – | – | 9.8E-02 | 9.8E+00 | – | – | – | – | – | – | 2.9E-01 | 2.9E+01 | – | – | – | – |
| Dibenzothiophene | 132-65-0 | – | – | 2.4E-01 | 2.4E+01 | – | – | – | – | – | – | 7.3E-01 | 7.3E+01 | – | – | – | – |
| Dibromo-3-chloropropane, 1,2- | 96-12-8 | 1.1E-03 | 1.1E-01 | 4.9E-03 | 4.9E-01 | 6.2E-01 | 8.0E-02 | 3.2E+01 | 4.1E+00 | 2.6E-03 | 2.6E-01 | 1.5E-02 | 1.5E+00 | 1.0E+00 | 1.3E-01 | 4.4E+01 | 5.7E+00 |
| Dibromochloromethane (chlorodibromomethane)[3] | 124-48-1 | 1.1E-02 | 1.1E+00 | 4.9E-01 | 4.9E+01 | – | – | – | – | 2.4E-02 | 2.4E+00 | 1.5E+00 | 1.5E+02 | – | – | – | – |
| Dibromofluoromethane | 1868-53-7 | – | – | 4.9E+00 | 4.9E+02 | – | – | – | – | – | – | 1.5E+01 | 1.5E+03 | – | – | – | – |
| Dicamba | 1918-00-9 | – | – | 7.3E-01 | 7.3E+01 | – | – | – | – | – | – | 2.2E+00 | 2.2E+02 | – | – | – | – |
| Dichlormid | 37764-25-3 | – | – | 6.1E-01 | 6.1E+01 | – | – | – | – | – | – | 1.8E+00 | 1.8E+02 | – | – | – | – |
| Dichloro-2-butene, 1,4- | 764-41-0 | – | – | – | – | 6.7E-01 | 8.7E-02 | – | – | – | – | – | – | 1.1E+00 | 1.5E-01 | – | – |
| Dichloro-2-butene, 1,4- trans | 110-57-6 | – | – | – | – | 6.5E-01 | 8.5E-02 | – | – | – | – | – | – | 1.1E+00 | 1.4E-01 | – | – |
| Dichlorobenzene, 1,2- | 95-50-1 | – | – | 2.2E+00 | 2.2E+02 | – | – | 1.2E+03 | 1.5E+02 | – | – | 6.6E+00 | 6.6E+02 | – | – | 1.6E+03 | 2.1E+02 |
| Dichlorobenzene, 1,3- | 541-73-1 | – | – | 7.3E-01 | 7.3E+01 | – | – | 1.9E+02 | 2.5E+01 | – | – | 2.2E+00 | 2.2E+02 | – | – | 2.7E+02 | 3.4E+01 |
| Dichlorobenzene, 1,4- | 106-46-7 | 3.8E-02 | 3.8E+00 | – | – | – | – | 1.7E+04 | 2.2E+03 | 8.5E-02 | 8.5E+00 | – | – | – | – | 2.4E+04 | 3.1E+03 |
| Dichlorobenzidine, 3,3- | 91-94-1 | 2.0E-03 | 2.0E-01 | – | – | – | – | – | – | 4.5E-03 | 4.5E-01 | – | – | – | – | – | – |
| Dichlorobutane, 2,3- | 7581-97-7 | – | – | 2.4E-01 | 2.4E+01 | – | – | 1.4E+02 | 1.9E+01 | – | – | 7.3E-01 | 7.3E+01 | – | – | 2.0E+02 | 2.6E+01 |
| Dichlorodifluoromethane | 75-71-8 | – | – | 4.9E+00 | 4.9E+02 | – | – | 6.0E+01 | 7.8E+00 | – | – | 1.5E+01 | 1.5E+03 | – | – | 8.4E+01 | 1.1E+01 |
| Dichloroethane, 1,1- | 75-34-3 | – | – | 4.9E+00 | 4.9E+02 | – | – | 4.3E+04 | 5.6E+03 | – | – | 1.5E+01 | 1.5E+03 | – | – | 6.0E+04 | 7.8E+03 |
| Dichloroethane, 1,2- | 107-06-2 | 1.0E-02 | 1.0E+00 | 1.9E+00 | 1.9E+02 | 2.5E+02 | 3.3E+01 | 1.6E+03 | 2.1E+02 | 2.2E-02 | 2.2E+00 | 5.7E+00 | 5.7E+02 | 4.2E+02 | 5.5E+01 | 2.3E+03 | 2.9E+02 |
| Dichloroethylene, 1,1- | 75-35-4 | – | – | 1.2E+00 | 1.2E+02 | – | – | 1.7E+03 | 2.2E+02 | – | – | 3.7E+00 | 3.7E+02 | – | – | 2.3E+03 | 3.0E+02 |
| Dichloroethylene, cis-1,2- | 156-59-2 | – | – | 4.9E-02 | 4.9E+00 | – | – | 1.2E+03 | 1.6E+02 | – | – | 1.5E-01 | 1.5E+01 | – | – | 1.7E+03 | 2.2E+02 |
| Dichloroethylene, trans-1,2 | 156-60-5 | – | – | 4.9E-01 | 4.9E+01 | – | – | 7.7E+02 | 9.9E+01 | – | – | 1.5E+00 | 1.5E+02 | – | – | 1.1E+03 | 1.4E+02 |
| Dichlorofluoromethane | 75-43-4 | – | – | 4.9E+00 | 4.9E+02 | – | – | – | – | – | – | 1.5E+01 | 1.5E+03 | – | – | – | – |
| Dichlorophenol, 2,3- | 576-24-9 | – | – | 7.3E-02 | 7.3E+00 | – | – | – | – | – | – | 2.2E-01 | 2.2E+01 | – | – | – | – |
| Dichlorophenol, 2,4- | 120-83-2 | – | – | 7.3E-02 | 7.3E+00 | – | – | – | – | – | – | 2.2E-01 | 2.2E+01 | – | – | – | – |
| Dichlorophenol, 2,5- | 583-78-8 | – | – | 7.3E-02 | 7.3E+00 | – | – | – | – | – | – | 2.2E-01 | 2.2E+01 | – | – | – | – |
| Dichlorophenol, 2,6- | 87-65-0 | – | – | 2.4E-02 | 2.4E+00 | – | – | – | – | – | – | 7.3E-02 | 7.3E+00 | – | – | – | – |
| Dichlorophenol, 3,4- | 95-77-2 | – | – | 7.3E-02 | 7.3E+00 | – | – | – | – | – | – | 2.2E-01 | 2.2E+01 | – | – | – | – |
| Dichlorophenol, 3,5- | 591-35-5 | – | – | 7.3E-02 | 7.3E+00 | – | – | – | – | – | – | 2.2E-01 | 2.2E+01 | – | – | – | – |
| Dichlorophenoxy, 2,4- butyric acid, 4- (2,4-DB) | 94-82-6 | – | – | 2.0E-01 | 2.0E+01 | – | – | – | – | – | – | 5.8E-01 | 5.8E+01 | – | – | – | – |
| Dichlorophenoxyacetic acid, 2,4- (2,4-D) | 94-75-7 | – | – | 2.4E-01 | 2.4E+01 | – | – | – | – | – | – | 7.3E-01 | 7.3E+01 | – | – | – | – |
| Dichloroprop (2-(2,4-dichlorophenoxy) propanoic acid) | 120-36-5 | – | – | 2.4E-01 | 2.4E+01 | – | – | – | – | – | – | 7.3E-01 | 7.3E+01 | – | – | – | – |
| Dichloropropane, 1,2- | 78-87-5 | 2.5E-02 | 2.5E+00 | 3.2E+00 | 3.2E+02 | 7.4E+02 | 9.5E+01 | 1.2E+02 | 1.5E+01 | 5.5E-02 | 5.5E+00 | 9.5E+00 | 9.5E+02 | 1.2E+03 | 1.6E+02 | 1.6E+02 | 2.1E+01 |

**Table 8**
**Tier 1 Individual Residential and Commercial/Industrial Groundwater PCLs**

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | Residential | | | | | | | | Commercial/Industrial | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Carcinogenic | | Noncarcinogenic | | Carcinogenic | | Noncarcinogenic | | Carcinogenic | | Noncarcinogenic | | Carcinogenic | | Noncarcinogenic | |
| | | $^{GW}GW_{Ing}$ [1] (mg/L) | $^{GW}GW_{Class\ 3}$ [2] (mg/L) | $^{GW}GW_{Ing}$ [1] (mg/L) | $^{GW}GW_{Class\ 3}$ [2] (mg/L) | $^{Air}GW_{Inh\text{-}V}$ 0.5 acre source area (mg/L) | $^{Air}GW_{Inh\text{-}V}$ 30 acre source area (mg/L) | $^{Air}GW_{Inh\text{-}V}$ 0.5 acre source area (mg/L) | $^{Air}GW_{Inh\text{-}V}$ 30 acre source area (mg/L) | $^{GW}GW_{Ing}$ [1] (mg/L) | $^{GW}GW_{Class\ 3}$ [2] (mg/L) | $^{GW}GW_{Ing}$ [1] (mg/L) | $^{GW}GW_{Class\ 3}$ [2] (mg/L) | $^{Air}GW_{Inh\text{-}V}$ 0.5 acre source area (mg/L) | $^{Air}GW_{Inh\text{-}V}$ 30 acre source area (mg/L) | $^{Air}GW_{Inh\text{-}V}$ 0.5 acre source area (mg/L) | $^{Air}GW_{Inh\text{-}V}$ 30 acre source area (mg/L) |
| Dichloropropane, 1,3- | 142-28-9 | 9.1E-03 | 9.1E-01 | 4.9E-01 | 4.9E+01 | 2.5E+02 | 3.3E+01 | 8.7E+02 | 1.1E+02 | 2.0E-02 | 2.0E+00 | 1.5E+00 | 1.5E+02 | 4.3E+02 | 5.5E+01 | 1.2E+03 | 1.6E+02 |
| Dichloropropane, 2,2- | 594-20-7 | 1.3E-02 | 1.3E+00 | 2.2E+00 | 2.2E+02 | – | – | 5.7E+01 | 7.3E+00 | 3.0E-02 | 3.0E+00 | 6.6E+00 | 6.6E+02 | – | – | 7.9E+01 | 1.0E+01 |
| Dichloropropanol, 2,3- | 616-23-9 | – | – | 7.3E-02 | 7.3E+00 | – | – | – | – | – | – | 2.2E-01 | 2.2E+01 | – | – | – | – |
| Dichloropropene, 1,1- | 563-58-6 | 9.1E-03 | 9.1E-01 | 7.3E-01 | 7.3E+01 | 1.9E+01 | 2.5E+00 | 6.6E+01 | 8.5E+00 | 2.0E-02 | 2.0E+00 | 2.2E+00 | 2.2E+02 | 3.2E+01 | 4.2E+00 | 9.2E+01 | 1.2E+01 |
| Dichloropropene, 1,3- (mixed isomers) | 542-75-6 | 9.1E-03 | 9.1E-01 | 7.3E-01 | 7.3E+01 | 1.8E+02 | 2.3E+01 | 6.1E+02 | 7.9E+01 | 2.0E-02 | 2.0E+00 | 2.2E+00 | 2.2E+02 | 3.0E+02 | 3.8E+01 | 8.5E+02 | 1.1E+02 |
| Dichloropropene, cis 1,3- | 10061-01-5 | 1.7E-03 | 1.7E-01 | 2.4E-03 | 2.4E-01 | – | – | 6.9E+02 | 8.9E+01 | 3.8E-03 | 3.8E-01 | 7.3E-03 | 7.3E-01 | – | – | 9.7E+02 | 1.2E+02 |
| Dichloropropene, trans 1,3- | 10061-02-6 | 9.1E-03 | 9.1E-01 | 7.3E-01 | 7.3E+01 | 1.9E+02 | 2.5E+01 | 6.5E+02 | 8.4E+01 | 2.0E-02 | 2.0E+00 | 2.2E+00 | 2.2E+02 | 3.2E+02 | 4.1E+01 | 9.1E+02 | 1.2E+02 |
| Dichlorvos | 62-73-7 | 3.1E-03 | 3.1E-01 | 1.2E-02 | 1.2E+00 | – | – | 1.0E+04 | 1.3E+03 | 7.0E-03 | 7.0E-01 | 3.7E-02 | 3.7E+00 | – | – | 1.4E+04 | 1.8E+03 |
| Dicrotophos (bidrin) | 141-66-2 | – | – | 2.4E-03 | 2.4E-01 | – | – | – | – | – | – | 7.3E-03 | 7.3E-01 | – | – | – | – |
| Dicyclopentadiene | 77-73-6 | – | – | 2.0E+00 | 2.0E+02 | – | – | – | – | – | – | 5.8E+00 | 5.8E+02 | – | – | – | – |
| Dieldrin | 60-57-1 | 5.7E-05 | 5.7E-03 | 1.2E-03 | 1.2E-01 | 1.3E+02 | 1.6E+01 | – | – | 1.3E-04 | 1.3E-02 | 3.7E-03 | 3.7E-01 | 2.1E+02 | 2.8E+01 | – | – |
| Diethanolamine | 111-42-2 | – | – | 1.2E-02 | 1.2E+00 | – | – | 1.0E+06 | 1.0E+06 | – | – | 3.7E-02 | 3.7E+00 | – | – | 1.0E+06 | 1.0E+06 |
| Diethyldithiocarbamate, sodium salt | 148-18-5 | 3.4E-03 | 3.4E-01 | 7.3E-01 | 7.3E+01 | – | – | – | – | 7.6E-03 | 7.6E-01 | 2.2E+00 | 2.2E+02 | – | – | – | – |
| Diethyl phthalate | 84-66-2 | – | – | 2.0E+01 | 2.0E+03 | – | – | – | – | – | – | 5.8E+01 | 5.8E+03 | – | – | – | – |
| Diethylene glycol | 111-46-6 | – | – | 4.9E+01 | 4.9E+03 | – | – | – | – | – | – | 1.5E+02 | 1.5E+04 | – | – | – | – |
| Diethylene glycol monobutyl ether | 112-34-5 | – | – | 7.3E-01 | 7.3E+01 | – | – | 3.2E+03 | 4.1E+02 | – | – | 2.2E+00 | 2.2E+02 | – | – | 4.5E+03 | 5.8E+02 |
| Diethylhexyl adipate | 103-23-1 | 7.6E-01 | 7.6E+01 | 1.5E+01 | 1.5E+03 | – | – | – | – | 1.7E+00 | 1.7E+02 | 4.4E+01 | 4.4E+03 | – | – | – | – |
| Diethylstilbestrol | 56-53-1 | 1.9E-07 | 1.9E-05 | – | – | – | – | – | – | 4.3E-07 | 4.3E-05 | – | – | – | – | – | – |
| Diisobutylene (trimethyl-1-pentene, 2,4,4-) | 107-39-1 | – | – | 1.5E+00 | 1.5E+02 | – | – | 2.3E+01 | 3.0E+00 | – | – | 4.4E+00 | 4.4E+02 | – | – | 3.2E+01 | 4.2E+00 |
| Diisopropylbenzene, p- | 100-18-5 | – | – | 2.4E-01 | 2.4E+01 | – | – | – | – | – | – | 7.3E-01 | 7.3E+01 | – | – | – | – |
| Diisopropyl ether (2,2'-oxybis-propane) | 108-20-3 | – | – | 2.4E+00 | 2.4E+02 | – | – | 2.0E+04 | 2.5E+03 | – | – | 7.3E+00 | 7.3E+02 | – | – | 2.7E+04 | 3.5E+03 |
| Dimethenamid | 87674-68-8 | – | – | 3.7E-01 | 3.7E+01 | – | – | – | – | – | – | 1.1E+00 | 1.1E+02 | – | – | – | – |
| Dimethoate | 60-51-5 | – | – | 4.9E-03 | 4.9E-01 | – | – | – | – | – | – | 1.5E-02 | 1.5E+00 | – | – | – | – |
| Dimethoxybenzidine, 3,3'- | 119-90-4 | 6.5E-02 | 6.5E+00 | – | – | – | – | – | – | 1.5E-01 | 1.5E+01 | – | – | – | – | – | – |
| Dimethyl-2-nitrobenzene, 1,3- | 81-20-9 | – | – | 4.9E-02 | 4.9E+00 | – | – | 1.1E+04 | 1.4E+03 | – | – | 1.5E-01 | 1.5E+01 | – | – | 1.5E+04 | 2.0E+03 |
| Dimethyl-3-nitrobenzene, 1,2- | 83-41-0 | – | – | 4.9E-02 | 4.9E+00 | – | – | 1.3E+04 | 1.7E+03 | – | – | 1.5E-01 | 1.5E+01 | – | – | 1.9E+04 | 2.4E+03 |
| Dimethyl-4-nitrobenzene, 1-2- | 99-51-4 | – | – | 4.9E-02 | 4.9E+00 | – | – | 1.5E+04 | 1.9E+03 | – | – | 1.5E-01 | 1.5E+01 | – | – | 2.1E+04 | 2.7E+03 |
| Dimethyl-5-nitrobenzene, 1,3- | 99-12-7 | – | – | 4.9E-02 | 4.9E+00 | – | – | 9.5E+03 | 1.2E+03 | – | – | 1.5E-01 | 1.5E+01 | – | – | 1.3E+04 | 1.7E+03 |
| Dimethylphenethylamine, alpha, alpha- | 122-09-8 | – | – | 4.9E-02 | 4.9E+00 | – | – | – | – | – | – | 1.5E-01 | 1.5E+01 | – | – | – | – |
| Dimethyl phenol, 2,4- | 105-67-9 | – | – | 4.9E-01 | 4.9E+01 | – | – | – | – | – | – | 1.5E+00 | 1.5E+02 | – | – | – | – |
| Dimethylaminoazobenzene, p- | 60-11-7 | – | – | 2.4E-04 | 2.4E-02 | – | – | – | – | – | – | 7.3E-04 | 7.3E-02 | – | – | – | – |
| Dimethylbenz-a-anthracene, 7,12- | 57-97-6 | 3.7E-06 | 3.7E-04 | – | – | 3.3E+01 | 4.3E+00 | – | – | 8.2E-06 | 8.2E-04 | – | – | 5.5E+01 | 7.2E+00 | – | – |
| Dimethylbenzidine, 3,3'- | 119-93-7 | 8.3E-05 | 8.3E-03 | – | – | – | – | – | – | 1.9E-04 | 1.9E-02 | – | – | – | – | – | – |
| Dimethylformamide, N,N- | 68-12-2 | – | – | 2.4E+00 | 2.4E+02 | – | – | 3.7E+05 | 4.8E+04 | – | – | 7.3E+00 | 7.3E+02 | – | – | 5.2E+05 | 6.8E+04 |
| Dimethylnaphthalene, 1,3- | 575-41-7 | – | – | 9.8E-01 | 9.8E+01 | – | – | – | – | – | – | 2.9E+00 | 2.9E+02 | – | – | – | – |
| Dimethylphthalate | 131-11-3 | – | – | 2.0E+01 | 2.0E+03 | – | – | – | – | – | – | 5.8E+01 | 5.8E+03 | – | – | – | – |
| Di-n-butyl phthalate | 84-74-2 | – | – | 2.4E+00 | 2.4E+02 | – | – | – | – | – | – | 7.3E+00 | 7.3E+02 | – | – | – | – |
| Dinitro-2-methylphenol, 4,6- (dinitro-o-cresol, 4, 6-) | 534-52-1 | – | – | 2.4E-03 | 2.4E-01 | – | – | – | – | – | – | 7.3E-03 | 7.3E-01 | – | – | – | – |
| Dinitrobenzene, 1,3- (dinitrobenzene, 2,4-) | 99-65-0 | – | – | 2.4E-03 | 2.4E-01 | – | – | – | – | – | – | 7.3E-03 | 7.3E-01 | – | – | – | – |
| Dinitrobenzene, 1,4- | 100-25-4 | – | – | 2.4E-03 | 2.4E-01 | – | – | – | – | – | – | 7.3E-03 | 7.3E-01 | – | – | – | – |
| Dinitrophenol, 2,4- | 51-28-5 | – | – | 4.9E-02 | 4.9E+00 | – | – | – | – | – | – | 1.5E-01 | 1.5E+01 | – | – | – | – |
| Dinitrophenol, 2,5- | 329-71-5 | – | – | 4.9E-02 | 4.9E+00 | – | – | – | – | – | – | 1.5E-01 | 1.5E+01 | – | – | – | – |
| Dinitrotoluene, 2,4- | 121-14-2 | 1.3E-03 | 1.3E-01 | 4.9E-02 | 4.9E+00 | – | – | – | – | 3.0E-03 | 3.0E-01 | 1.5E-01 | 1.5E+01 | – | – | – | – |
| Dinitrotoluene, 2,6- | 606-20-2 | 1.3E-03 | 1.3E-01 | 2.4E-02 | 2.4E+00 | – | – | – | – | 3.0E-03 | 3.0E-01 | 7.3E-02 | 7.3E+00 | – | – | – | – |
| Di-n-octyl phthalate | 117-84-0 | – | – | 2.4E-01 | 2.4E+01 | – | – | – | – | – | – | 7.3E-01 | 7.3E+01 | – | – | – | – |
| Dinoseb | 88-85-7 | – | – | 2.4E-02 | 2.4E+00 | – | – | – | – | – | – | 7.3E-02 | 7.3E+00 | – | – | – | – |
| Dioxane 1,4- | 123-91-1 | 9.1E-03 | 9.1E-01 | 7.3E-01 | 7.3E+01 | 7.7E+03 | 1.0E+03 | 1.8E+05 | 2.3E+04 | 2.0E-02 | 2.0E+00 | 2.2E+00 | 2.2E+02 | 1.3E+04 | 1.7E+03 | 2.5E+05 | 3.3E+04 |

**Table 8**
**Tier 1 Individual Residential and Commercial/Industrial Groundwater PCLs**

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | Residential | | | | | | | | Commercial/Industrial | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Carcinogenic | | Noncarcinogenic | | Carcinogenic | | Noncarcinogenic | | Carcinogenic | | Noncarcinogenic | | Carcinogenic | | Noncarcinogenic | |
| | | $^{GW}GW_{Ing}$ [1] (mg/L) | $^{GW}GW_{Class\ 3}$ [2] (mg/L) | $^{GW}GW_{Ing}$ [1] (mg/L) | $^{GW}GW_{Class\ 3}$ [2] (mg/L) | $^{Air}GW_{Inh\text{-}V}$ 0.5 acre source area (mg/L) | $^{Air}GW_{Inh\text{-}V}$ 30 acre source area (mg/L) | $^{Air}GW_{Inh\text{-}V}$ 0.5 acre source area (mg/L) | $^{Air}GW_{Inh\text{-}V}$ 30 acre source area (mg/L) | $^{GW}GW_{Ing}$ [1] (mg/L) | $^{GW}GW_{Class\ 3}$ [2] (mg/L) | $^{GW}GW_{Ing}$ [1] (mg/L) | $^{GW}GW_{Class\ 3}$ [2] (mg/L) | $^{Air}GW_{Inh\text{-}V}$ 0.5 acre source area (mg/L) | $^{Air}GW_{Inh\text{-}V}$ 30 acre source area (mg/L) | $^{Air}GW_{Inh\text{-}V}$ 0.5 acre source area (mg/L) | $^{Air}GW_{Inh\text{-}V}$ 30 acre source area (mg/L) |
| Dioxin (as 2,3,7,8-TCDD toxicity equivalent quotients (TEQs)) | 1746-01-6 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – |
| Diphenyl ether | 101-84-8 | – | – | 1.5E-01 | 1.5E+01 | – | – | – | – | – | – | 4.5E-01 | 4.5E+01 | – | – | – | – |
| Diphenylamine | 122-39-4 | – | – | 6.1E-01 | 6.1E+01 | – | – | – | – | – | – | 1.8E+00 | 1.8E+02 | – | – | – | – |
| Diphenylhydrazine, 1,2- | 122-66-7 | 1.1E-03 | 1.1E-01 | – | – | 3.8E+03 | 4.9E+02 | – | – | 2.6E-03 | 2.6E-01 | – | – | 6.4E+03 | 8.3E+02 | – | – |
| Dipropylene glycol | 110-98-5 | – | – | 2.9E+00 | 2.9E+02 | – | – | – | – | – | – | 8.8E+00 | 8.8E+02 | – | – | – | – |
| Diquat | 85-00-7 | – | – | 5.4E-02 | 5.4E+00 | – | – | – | – | – | – | 1.6E-01 | 1.6E+01 | – | – | – | – |
| Disodium iminodiacetate (iminodiacetic acid, disodium salt) | 142-73-4 | – | – | 2.4E-01 | 2.4E+01 | – | – | – | – | – | – | 7.3E-01 | 7.3E+01 | – | – | – | – |
| Disulfoton | 298-04-4 | – | – | 9.8E-04 | 9.8E-02 | – | – | – | – | – | – | 2.9E-03 | 2.9E-01 | – | – | – | – |
| Diuron | 330-54-1 | – | – | 4.9E-02 | 4.9E+00 | – | – | – | – | – | – | 1.5E-01 | 1.5E+01 | – | – | – | – |
| Dodecylphenol, 4- | 104-43-8 | – | – | 1.2E+00 | 1.2E+02 | – | – | – | – | – | – | 3.7E+00 | 3.7E+02 | – | – | – | – |
| Endosulfan | 115-29-7 | – | – | 1.5E-01 | 1.5E+01 | – | – | – | – | – | – | 4.4E-01 | 4.4E+01 | – | – | – | – |
| Endosulfan I | 959-98-8 | – | – | 4.9E-02 | 4.9E+00 | – | – | – | – | – | – | 1.5E-01 | 1.5E+01 | – | – | – | – |
| Endosulfan II | 33213-65-9 | – | – | 1.5E-01 | 1.5E+01 | – | – | – | – | – | – | 4.4E-01 | 4.4E+01 | – | – | – | – |
| Endosulfan sulfate | 1031-07-8 | – | – | 1.5E-01 | 1.5E+01 | – | – | – | – | – | – | 4.4E-01 | 4.4E+01 | – | – | – | – |
| Endothall | 145-73-3 | – | – | 4.9E-01 | 4.9E+01 | – | – | – | – | – | – | 1.5E+00 | 1.5E+02 | – | – | – | – |
| Endrin | 72-20-8 | – | – | 7.3E-03 | 7.3E-01 | – | – | – | – | – | – | 2.2E-02 | 2.2E+00 | – | – | – | – |
| Endrin aldehyde | 7421-93-4 | – | – | 7.3E-03 | 7.3E-01 | – | – | – | – | – | – | 2.2E-02 | 2.2E+00 | – | – | – | – |
| Endrin ketone | 53494-70-5 | – | – | 7.3E-03 | 7.3E-01 | – | – | – | – | – | – | 2.2E-02 | 2.2E+00 | – | – | – | – |
| Epichlorohydrin | 106-89-8 | 9.2E-02 | 9.2E+00 | 1.5E-01 | 1.5E+01 | 1.4E+04 | 1.8E+03 | 7.1E+02 | 9.1E+01 | 2.1E-01 | 2.1E+01 | 4.4E-01 | 4.4E+01 | 2.3E+04 | 3.0E+03 | 9.9E+02 | 1.3E+02 |
| EPN (o-ethyl o-(4-nitrophenyl)phenylphosphonothioate) | 2104-64-5 | – | – | 2.4E-04 | 2.4E-02 | – | – | – | – | – | – | 7.3E-04 | 7.3E-02 | – | – | – | – |
| Esfenvalerate | 66230-04-4 | – | – | 4.9E-02 | 4.9E+00 | – | – | – | – | – | – | 1.5E-01 | 1.5E+01 | – | – | – | – |
| Ethalfluralin (sonolan) | 55283-68-6 | 1.0E-02 | 1.0E+00 | 9.8E-01 | 9.8E+01 | – | – | – | – | 2.3E-02 | 2.3E+00 | 2.9E+00 | 2.9E+02 | – | – | – | – |
| Ethanol | 64-17-5 | – | – | 8.1E+02 | 8.1E+04 | – | – | – | – | – | – | 2.4E+03 | 2.4E+05 | – | – | – | – |
| Ethanol, 2-amino- | 141-43-5 | – | – | 4.2E-02 | 4.2E+00 | – | – | 4.2E+05 | 5.5E+04 | – | – | 1.2E-01 | 1.2E+01 | – | – | 5.9E+05 | 7.7E+04 |
| Ethanol, 2-(2-aminoethoxy)- | 929-06-6 | – | – | 1.2E-02 | 1.2E+00 | – | – | – | – | – | – | 3.7E-02 | 3.7E+00 | – | – | – | – |
| Ethanol, 2-(2-ethoxyethoxy)- | 111-90-0 | – | – | 4.9E+01 | 4.9E+03 | – | – | – | – | – | – | 1.5E+02 | 1.5E+04 | – | – | – | – |
| Ethanol, 2-(methylamino)- | 109-83-1 | – | – | 3.9E-01 | 3.9E+01 | – | – | 1.0E+06 | 1.3E+05 | – | – | 1.2E+00 | 1.2E+02 | – | – | 1.0E+06 | 1.8E+05 |
| Ethion | 563-12-2 | – | – | 1.2E-02 | 1.2E+00 | – | – | – | – | – | – | 3.7E-02 | 3.7E+00 | – | – | – | – |
| Ethoprop | 13194-48-4 | 3.2E-02 | 3.2E+00 | 2.4E-03 | 2.4E-01 | – | – | – | – | 7.3E-02 | 7.3E+00 | 7.3E-03 | 7.3E-01 | – | – | – | – |
| Ethoxy ethanol, 2- | 110-80-5 | – | – | 2.2E+00 | 2.2E+02 | – | – | 1.0E+06 | 4.3E+05 | – | – | 6.6E+00 | 6.6E+02 | – | – | 1.0E+06 | 6.1E+05 |
| Ethyl acetate | 141-78-6 | – | – | 2.2E+01 | 2.2E+03 | – | – | 5.3E+04 | 6.9E+03 | – | – | 6.6E+01 | 6.6E+03 | – | – | 7.4E+04 | 9.6E+03 |
| Ethyl acrylate | 140-88-5 | 1.9E-02 | 1.9E+00 | 1.2E-01 | 1.2E+01 | – | – | 1.1E+03 | 1.4E+02 | 4.3E-02 | 4.3E+00 | 3.7E-01 | 3.7E+01 | – | – | 1.5E+03 | 2.0E+02 |
| Ethyl benzene | 100-41-4 | – | – | 2.4E+00 | 2.4E+02 | – | – | 3.0E+04 | 3.8E+03 | – | – | 7.3E+00 | 7.3E+02 | – | – | 4.2E+04 | 5.4E+03 |
| Ethyl dipropylthiocarbamate, S- | 759-94-4 | – | – | 6.1E-01 | 6.1E+01 | – | – | – | – | – | – | 1.8E+00 | 1.8E+02 | – | – | – | – |
| Ethyl ether | 60-29-7 | – | – | 4.9E+00 | 4.9E+02 | – | – | – | – | – | – | 1.5E+01 | 1.5E+03 | – | – | – | – |
| Ethyl methacrylate | 97-63-2 | – | – | 2.2E+00 | 2.2E+02 | – | – | 5.7E+04 | 7.4E+03 | – | – | 6.6E+00 | 6.6E+02 | – | – | 8.0E+04 | 1.0E+04 |
| Ethyl methanesulfonate | 62-50-0 | 9.2E-03 | 9.2E-01 | – | – | 1.9E+04 | 2.4E+03 | – | – | 2.1E-02 | 2.1E+00 | – | – | 3.1E+04 | 4.0E+03 | – | – |
| Ethyl tert-butyl ether (2-ethyl-2-ethoxypropane) | 637-92-3 | – | – | 2.4E-02 | 2.4E+00 | – | – | 1.1E+04 | 1.4E+03 | – | – | 7.3E-02 | 7.3E+00 | – | – | 1.5E+04 | 2.0E+03 |
| Ethyl-1-hexanol, 2- | 104-76-7 | – | – | 3.7E+00 | 3.7E+02 | – | – | – | – | – | – | 1.1E+01 | 1.1E+03 | – | – | – | – |
| Ethyl-2-hexenal, 2- | 645-62-5 | – | – | 3.7E+00 | 3.7E+02 | – | – | – | – | – | – | 1.1E+01 | 1.1E+03 | – | – | – | – |
| Ethyl-2-methyl benzene, 1- | 611-14-3 | – | – | 1.2E+00 | 1.2E+02 | – | – | 9.2E+03 | 1.2E+03 | – | – | 3.7E+00 | 3.7E+02 | – | – | 1.3E+04 | 1.7E+03 |
| Ethyl-4-methyl benzene, 1- | 622-96-8 | – | – | 1.2E+00 | 1.2E+02 | – | – | 7.0E+03 | 9.0E+02 | – | – | 3.7E+00 | 3.7E+02 | – | – | 9.7E+03 | 1.3E+03 |
| Ethylene* | 74-85-1 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – |
| Ethylene dibromide (dibromoethane, 1,2- ) | 106-93-4 | 4.6E-04 | 4.6E-02 | 2.2E-01 | 2.2E+01 | 7.6E+01 | 9.8E+00 | 9.6E+03 | 1.2E+03 | 1.0E-03 | 1.0E-01 | 6.6E-01 | 6.6E+01 | 1.3E+02 | 1.7E+01 | 1.3E+04 | 1.7E+03 |
| Ethylene glycol | 107-21-1 | – | – | 4.9E+01 | 4.9E+03 | – | – | – | – | – | – | 1.5E+02 | 1.5E+04 | – | – | – | – |
| Ethylene oxide | 75-21-8 | 8.9E-04 | 8.9E-02 | – | – | 5.5E+01 | 7.1E+00 | – | – | 2.0E-03 | 2.0E-01 | – | – | 9.3E+01 | 1.2E+01 | – | – |
| Ethylene thiourea | 96-45-7 | 8.3E-03 | 8.3E-01 | 2.0E-03 | 2.0E-01 | – | – | – | – | 1.9E-02 | 1.9E+00 | 5.8E-03 | 5.8E-01 | – | – | – | – |

**Table 8**
**Tier 1 Individual Residential and Commercial/Industrial Groundwater PCLs**

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | Residential | | | | | | | | Commercial/Industrial | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Carcinogenic | | Noncarcinogenic | | Carcinogenic | | Noncarcinogenic | | Carcinogenic | | Noncarcinogenic | | Carcinogenic | | Noncarcinogenic | |
| | | $^{GW}GW_{Ing}$ [1] (mg/L) | $^{GW}GW_{Class\ 3}$ [2] (mg/L) | $^{GW}GW_{Ing}$ [1] (mg/L) | $^{GW}GW_{Class\ 3}$ [2] (mg/L) | $^{Air}GW_{Inh\text{-}V}$ 0.5 acre source area (mg/L) | $^{Air}GW_{Inh\text{-}V}$ 30 acre source area (mg/L) | $^{Air}GW_{Inh\text{-}V}$ 0.5 acre source area (mg/L) | $^{Air}GW_{Inh\text{-}V}$ 30 acre source area (mg/L) | $^{GW}GW_{Ing}$ [1] (mg/L) | $^{GW}GW_{Class\ 3}$ [2] (mg/L) | $^{GW}GW_{Ing}$ [1] (mg/L) | $^{GW}GW_{Class\ 3}$ [2] (mg/L) | $^{Air}GW_{Inh\text{-}V}$ 0.5 acre source area (mg/L) | $^{Air}GW_{Inh\text{-}V}$ 30 acre source area (mg/L) | $^{Air}GW_{Inh\text{-}V}$ 0.5 acre source area (mg/L) | $^{Air}GW_{Inh\text{-}V}$ 30 acre source area (mg/L) |
| Ethylenediamine | 107-15-3 | – | – | 2.2E+00 | 2.2E+02 | – | – | – | – | – | – | 6.6E+00 | 6.6E+02 | – | – | – | – |
| Ethylenimine | 151-56-4 | 1.4E-05 | 1.4E-03 | – | – | 1.4E+01 | 1.8E+00 | – | – | 3.1E-05 | 3.1E-03 | – | – | 2.3E+01 | 3.0E+00 | – | – |
| Ethylhexyl acrylate, 2- | 103-11-7 | 1.9E-02 | 1.9E+00 | – | – | – | – | – | – | 4.3E-02 | 4.3E+00 | – | – | – | – | – | – |
| Famphur | 52-85-7 | – | – | 7.3E-04 | 7.3E-02 | – | – | – | – | – | – | 2.2E-03 | 2.2E-01 | – | – | – | – |
| Fensulfothion | 115-90-2 | – | – | 2.4E-02 | 2.4E+00 | – | – | – | – | – | – | 7.3E-02 | 7.3E+00 | – | – | – | – |
| Fenthion | 55-38-9 | – | – | 1.7E-03 | 1.7E-01 | – | – | – | – | – | – | 5.1E-03 | 5.1E-01 | – | – | – | – |
| Fenuron | 101-42-8 | – | – | 1.7E+00 | 1.7E+02 | – | – | – | – | – | – | 5.1E+00 | 5.1E+02 | – | – | – | – |
| Fluoranthene | 206-44-0 | – | – | 9.8E-01 | 9.8E+01 | – | – | – | – | – | – | 2.9E+00 | 2.9E+02 | – | – | – | – |
| Fluorene | 86-73-7 | – | – | 9.8E-01 | 9.8E+01 | – | – | – | – | – | – | 2.9E+00 | 2.9E+02 | – | – | – | – |
| Fluorine (soluble fluoride) | 7782-41-4 | – | – | 1.5E+00 | 1.5E+02 | – | – | – | – | – | – | 4.4E+00 | 4.4E+02 | – | – | – | – |
| Fluorochloridone | 61213-25-0 | – | – | 1.8E-01 | 1.8E+01 | – | – | – | – | – | – | 5.5E-01 | 5.5E+01 | – | – | – | – |
| Fonofos | 944-22-9 | – | – | 4.9E-02 | 4.9E+00 | – | – | – | – | – | – | 1.5E-01 | 1.5E+01 | – | – | – | – |
| Formaldehyde | 50-00-0 | – | – | 4.9E+00 | 4.9E+02 | – | – | 8.6E+04 | 1.1E+04 | – | – | 1.5E+01 | 1.5E+03 | – | – | 1.2E+05 | 1.6E+04 |
| Formic acid | 64-18-6 | – | – | 2.2E+01 | 2.2E+03 | – | – | 1.7E+04 | 2.3E+03 | – | – | 6.6E+01 | 6.6E+03 | – | – | 2.4E+04 | 3.2E+03 |
| Furan | 110-00-9 | – | – | 2.4E-02 | 2.4E+00 | – | – | – | – | – | – | 7.3E-02 | 7.3E+00 | – | – | – | – |
| Furfural | 98-01-1 | – | – | 7.3E-02 | 7.3E+00 | – | – | – | – | – | – | 2.2E-01 | 2.2E+01 | – | – | – | – |
| Glycidylaldehyde | 765-34-4 | – | – | 9.8E-03 | 9.8E-01 | – | – | 1.4E+04 | 1.9E+03 | – | – | 2.9E-02 | 2.9E+00 | – | – | 2.0E+04 | 2.6E+03 |
| Glyphosate | 1071-83-6 | – | – | 2.4E+00 | 2.4E+02 | – | – | – | – | – | – | 7.3E+00 | 7.3E+02 | – | – | – | – |
| Heptachlor | 76-44-8 | 2.0E-04 | 2.0E-02 | 1.2E-02 | 1.2E+00 | 6.3E+00 | 8.1E-01 | – | – | 4.5E-04 | 4.5E-02 | 3.7E-02 | 3.7E+00 | 1.1E+01 | 1.4E+00 | – | – |
| Heptachlor epoxide | 1024-57-3 | 1.0E-04 | 1.0E-02 | 3.2E-04 | 3.2E-02 | 1.2E+02 | 1.5E+01 | – | – | 2.2E-04 | 2.2E-02 | 9.5E-04 | 9.5E-02 | 2.0E+02 | 2.6E+01 | – | – |
| Heptane, n- | 142-82-5 | – | – | 1.5E+00 | 1.5E+02 | – | – | 8.7E+02 | 1.1E+02 | – | – | 4.4E+00 | 4.4E+02 | – | – | 1.2E+03 | 1.6E+02 |
| Heptanoic acid, n- | 111-14-8 | – | – | 1.2E+01 | 1.2E+03 | – | – | 1.7E+04 | 2.1E+03 | – | – | 3.7E+01 | 3.7E+03 | – | – | 2.3E+04 | 3.0E+03 |
| Hexachlorobenzene | 118-74-1 | 5.7E-04 | 5.7E-02 | 2.0E-02 | 2.0E+00 | 5.7E+00 | 7.4E-01 | – | – | 1.3E-03 | 1.3E-01 | 5.8E-02 | 5.8E+00 | 9.6E+00 | 1.2E+00 | – | – |
| Hexachlorobutadiene | 87-68-3 | 1.2E-02 | 1.2E+00 | 2.4E-02 | 2.4E+00 | 8.9E+00 | 1.1E+00 | – | – | 2.6E-02 | 2.6E+00 | 7.3E-02 | 7.3E+00 | 1.5E+01 | 1.9E+00 | – | – |
| Hexachlorocyclohexane, alpha (alpha-BHC) | 319-84-6 | 1.4E-04 | 1.4E-02 | 2.0E-01 | 2.0E+01 | 1.5E+02 | 2.0E+01 | – | – | 3.2E-04 | 3.2E-02 | 5.8E-01 | 5.8E+01 | 2.6E+02 | 3.3E+01 | – | – |
| Hexachlorocyclohexane, beta (beta-BHC) | 319-85-7 | 5.1E-04 | 5.1E-02 | – | – | 1.1E+03 | 1.5E+02 | – | – | 1.1E-03 | 1.1E-01 | – | – | 1.9E+03 | 2.5E+02 | – | – |
| Hexachlorocyclohexane, delta (delta-BHC) | 319-86-8 | 5.1E-04 | 5.1E-02 | 7.3E-03 | 7.3E-01 | 3.6E+02 | 4.7E+01 | – | – | 1.1E-03 | 1.1E-01 | 2.2E-02 | 2.2E+00 | 6.1E+02 | 7.9E+01 | – | – |
| Hexachlorocyclohexane, gamma (lindane; gamma-BHC) | 58-89-9 | 7.0E-04 | 7.0E-02 | 7.3E-03 | 7.3E-01 | – | – | – | – | 1.6E-03 | 1.6E-01 | 2.2E-02 | 2.2E+00 | – | – | – | – |
| Hexachlorocyclohexane, techn (technical-BHC) | 608-73-1 | 5.1E-04 | 5.1E-02 | – | – | 9.9E+02 | 1.3E+02 | – | – | 1.1E-03 | 1.1E-01 | – | – | 1.7E+03 | 2.2E+02 | – | – |
| Hexachlorocyclopentadiene | 77-47-4 | – | – | 1.5E-01 | 1.5E+01 | – | – | 5.4E+00 | 7.0E-01 | – | – | 4.4E-01 | 4.4E+01 | – | – | 7.6E+00 | 9.8E-01 |
| Hexachloroethane | 67-72-1 | 2.3E-02 | 2.3E+00 | 1.7E-02 | 1.7E+00 | – | – | 7.3E+03 | 9.5E+02 | 5.1E-02 | 5.1E+00 | 5.1E-02 | 5.1E+00 | – | – | 1.0E+04 | 1.3E+03 |
| Hexachlorophene | 70-30-4 | – | – | 7.3E-03 | 7.3E-01 | – | – | – | – | – | – | 2.2E-02 | 2.2E+00 | – | – | – | – |
| Hexachloropropylene | 1888-71-7 | 2.3E-02 | 2.3E+00 | 1.7E-02 | 1.7E+00 | – | – | 2.1E+03 | 2.8E+02 | 5.1E-02 | 5.1E+00 | 5.1E-02 | 5.1E+00 | – | – | 3.0E+03 | 3.9E+02 |
| Hexanal, 2-ethyl- | 123-05-7 | – | – | 3.7E+00 | 3.7E+02 | – | – | – | – | – | – | 1.1E+01 | 1.1E+03 | – | – | – | – |
| Hexane, n- | 110-54-3 | – | – | 1.5E+00 | 1.5E+02 | – | – | 3.8E+01 | 4.9E+00 | – | – | 4.4E+00 | 4.4E+02 | – | – | 5.3E+01 | 6.9E+00 |
| Hexanediamine, 1,6- | 124-09-4 | – | – | 1.2E-01 | 1.2E+01 | – | – | – | – | – | – | 3.7E-01 | 3.7E+01 | – | – | – | – |
| Hexanedinitrile | 111-69-3 | – | – | 3.4E-02 | 3.4E+00 | – | – | 1.6E+05 | 2.1E+04 | – | – | 1.0E-01 | 1.0E+01 | – | – | 2.2E+05 | 2.9E+04 |
| Hexanediol, 1,6- | 629-11-8 | – | – | 1.2E+02 | 1.2E+04 | – | – | 1.0E+06 | 1.0E+06 | – | – | 3.7E+02 | 3.7E+04 | – | – | 1.0E+06 | 1.0E+06 |
| Hexanoic acid | 142-62-1 | – | – | 1.6E+00 | 1.6E+02 | – | – | 2.1E+04 | 2.7E+03 | – | – | 4.7E+00 | 4.7E+02 | – | – | 3.0E+04 | 3.8E+03 |
| Hexanone, 2- | 591-78-6 | – | – | 1.2E-01 | 1.2E+01 | – | – | 1.2E+04 | 1.5E+03 | – | – | 3.7E-01 | 3.7E+01 | – | – | 1.6E+04 | 2.1E+03 |
| Hexazinone | 51235-04-2 | – | – | 8.1E-01 | 8.1E+01 | – | – | – | – | – | – | 2.4E+00 | 2.4E+02 | – | – | – | – |
| Hexene, 1- | 592-41-6 | – | – | 8.1E+00 | 8.1E+02 | – | – | 3.4E+01 | 4.3E+00 | – | – | 2.4E+01 | 2.4E+03 | – | – | 4.7E+01 | 6.1E+00 |
| Hexene, cis-2- | 7688-21-3 | – | – | 8.1E+00 | 8.1E+02 | – | – | 4.8E+01 | 6.2E+00 | – | – | 2.4E+01 | 2.4E+03 | – | – | 6.7E+01 | 8.7E+00 |
| Hexylene glycol (2-methyl-2,4-pentanediol) | 107-41-5 | – | – | 7.3E+00 | 7.3E+02 | – | – | – | – | – | – | 2.2E+01 | 2.2E+03 | – | – | – | – |
| Hydrazine | 302-01-2 | 3.0E-04 | 3.0E-02 | – | – | 5.1E+01 | 6.7E+00 | 3.2E+02 | 4.2E+01 | 6.8E-04 | 6.8E-02 | – | – | 8.6E+01 | 1.1E+01 | 4.5E+02 | 5.9E+01 |
| Hydrocaproic acid, 6- (6-hydroxyhexanoic acid) | 1191-25-9 | – | – | 1.6E+00 | 1.6E+02 | – | – | 2.9E+04 | 4.2E+03 | – | – | 4.7E+00 | 4.7E+02 | – | – | 4.0E+04 | 5.9E+03 |
| Hydrogen chloride (hydrochloric acid)* | 7647-01-0 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – |

**Table 8**
**Tier 1 Individual Residential and Commercial/Industrial Groundwater PCLs**

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | Residential | | | | | | | | Commercial/Industrial | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Carcinogenic | | Noncarcinogenic | | Carcinogenic | | Noncarcinogenic | | Carcinogenic | | Noncarcinogenic | | Carcinogenic | | Noncarcinogenic | |
| | | $^{GW}GW_{Ing}$[1] (mg/L) | $^{GW}GW_{Class\ 3}$[2] (mg/L) | $^{GW}GW_{Ing}$[1] (mg/L) | $^{GW}GW_{Class\ 3}$[2] (mg/L) | $^{Air}GW_{Inh\text{-}V}$ 0.5 acre source area (mg/L) | $^{Air}GW_{Inh\text{-}V}$ 30 acre source area (mg/L) | $^{Air}GW_{Inh\text{-}V}$ 0.5 acre source area (mg/L) | $^{Air}GW_{Inh\text{-}V}$ 30 acre source area (mg/L) | $^{GW}GW_{Ing}$[1] (mg/L) | $^{GW}GW_{Class\ 3}$[2] (mg/L) | $^{GW}GW_{Ing}$[1] (mg/L) | $^{GW}GW_{Class\ 3}$[2] (mg/L) | $^{Air}GW_{Inh\text{-}V}$ 0.5 acre source area (mg/L) | $^{Air}GW_{Inh\text{-}V}$ 30 acre source area (mg/L) | $^{Air}GW_{Inh\text{-}V}$ 0.5 acre source area (mg/L) | $^{Air}GW_{Inh\text{-}V}$ 30 acre source area (mg/L) |
| Hydroquinone | 123-31-9 | 1.5E-02 | 1.5E+00 | 9.8E-01 | 9.8E+01 | – | – | – | – | 3.4E-02 | 3.4E+00 | 2.9E+00 | 2.9E+02 | – | – | – | – |
| Indene | 95-13-6 | – | – | 4.9E-01 | 4.9E+01 | – | – | 2.7E+02 | 3.5E+01 | – | – | 1.5E+00 | 1.5E+02 | – | – | 3.8E+02 | 5.0E+01 |
| Indeno-1,2,3-cd-pyrene | 193-39-5 | 9.1E-03 | 9.1E-01 | – | – | 1.4E+04 | 1.8E+03 | – | – | 2.0E-02 | 2.0E+00 | – | – | 2.3E+04 | 3.0E+03 | – | – |
| Iron* | 7439-89-6 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – |
| Isoamyl alcohol | 123-51-3 | – | – | 1.2E-01 | 1.2E+01 | – | – | – | – | – | – | 3.7E-01 | 3.7E+01 | – | – | – | – |
| Isobutyl alcohol | 78-83-1 | – | – | 7.3E+00 | 7.3E+02 | – | – | – | – | – | – | 2.2E+01 | 2.2E+03 | – | – | – | – |
| Isobutylene (2-methyl-1-propene) | 115-11-7 | – | – | 9.0E-02 | 9.0E+00 | – | – | 6.1E+04 | 7.9E+03 | – | – | 2.7E-01 | 2.7E+01 | – | – | 8.5E+04 | 1.1E+04 |
| Isobutyric acid (2-methylpropanoic acid) | 79-31-2 | – | – | 1.2E+01 | 1.2E+03 | – | – | – | – | – | – | 3.7E+01 | 3.7E+03 | – | – | – | – |
| Isodecanol | 25339-17-7 | – | – | 3.9E-02 | 3.9E+00 | – | – | – | – | – | – | 1.2E-01 | 1.2E+01 | – | – | – | – |
| Isodrin | 465-73-6 | 5.4E-06 | 5.4E-04 | 7.3E-05 | 7.3E-03 | 3.4E-02 | 4.4E-03 | – | – | 1.2E-05 | 1.2E-03 | 2.2E-04 | 2.2E-02 | 5.7E-02 | 7.4E-03 | – | – |
| Isopentane | 78-78-4 | – | – | 1.5E+00 | 1.5E+02 | – | – | 2.5E+03 | 3.2E+02 | – | – | 4.4E+00 | 4.4E+02 | – | – | 3.4E+03 | 4.4E+02 |
| Isophorone | 78-59-1 | 9.6E-01 | 9.6E+01 | 4.9E+00 | 4.9E+02 | – | – | – | – | 2.2E+00 | 2.2E+02 | 1.5E+01 | 1.5E+03 | – | – | – | – |
| Isopropyl acetate | 108-21-4 | – | – | 1.7E+00 | 1.7E+02 | – | – | – | – | – | – | 5.1E+00 | 5.1E+02 | – | – | – | – |
| Isopropyl alcohol | 67-63-0 | – | – | 4.9E+01 | 4.9E+03 | – | – | 4.2E+05 | 5.5E+04 | – | – | 1.5E+02 | 1.5E+04 | – | – | 5.9E+05 | 7.6E+04 |
| Isosafrole | 120-58-1 | 4.1E-03 | 4.1E-01 | – | – | 4.3E+02 | 5.5E+01 | – | – | 9.3E-03 | 9.3E-01 | – | – | 7.2E+02 | 9.3E+01 | – | – |
| Kelthane (dicofol) | 115-32-2 | – | – | 1.5E-01 | 1.5E+01 | – | – | – | – | – | – | 4.4E-01 | 4.4E+01 | – | – | – | – |
| Kepone (chlordecone) | 143-50-0 | 9.1E-05 | 9.1E-03 | 7.3E-03 | 7.3E-01 | 2.4E+02 | 3.0E+01 | – | – | 2.0E-04 | 2.0E-02 | 2.2E-02 | 2.2E+00 | 4.0E+02 | 5.1E+01 | – | – |
| Lead (inorganic) | 7439-92-1 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – |
| Leptophos | 21609-90-5 | – | – | 1.2E-04 | 1.2E-02 | – | – | 6.4E+01 | 8.2E+00 | – | – | 3.7E-04 | 3.7E-02 | – | – | 8.9E+01 | 1.2E+01 |
| Limonene, d-* | 5989-27-5 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – |
| Lithium | 7439-93-2 | – | – | 4.9E-02 | 4.9E+00 | – | – | – | – | – | – | 1.5E-01 | 1.5E+01 | – | – | – | – |
| Magnesium* | 7439-95-4 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – |
| Malathion | 121-75-5 | – | – | 4.9E-01 | 4.9E+01 | – | – | 9.2E+03 | 1.2E+03 | – | – | 1.5E+00 | 1.5E+02 | – | – | 1.3E+04 | 1.7E+03 |
| Maleic anhydride | 108-31-6 | – | – | 2.4E+00 | 2.4E+02 | – | – | – | – | – | – | 7.3E+00 | 7.3E+02 | – | – | – | – |
| Maleic hydrazide | 123-33-1 | – | – | 1.2E+01 | 1.2E+03 | – | – | – | – | – | – | 3.7E+01 | 3.7E+03 | – | – | – | – |
| Malononitrile | 109-77-3 | – | – | 2.4E-03 | 2.4E-01 | – | – | – | – | – | – | 7.3E-03 | 7.3E-01 | – | – | – | – |
| Mancozeb | 8018-01-7 | – | – | 7.3E-01 | 7.3E+01 | – | – | – | – | – | – | 2.2E+00 | 2.2E+02 | – | – | – | – |
| Manganese | 7439-96-5 | – | – | 1.1E+00 | 1.1E+02 | – | – | – | – | – | – | 1.0E+01 | 1.0E+03 | – | – | – | – |
| MCPA (4-(chloro-2-methylphenoxy) acetic acid) | 94-74-6 | – | – | 1.2E-02 | 1.2E+00 | – | – | – | – | – | – | 3.7E-02 | 3.7E+00 | – | – | – | – |
| MCPP (2-(4-chloro-2-methylphenoxy) propanoic acid) | 93-65-2 | – | – | 2.4E-02 | 2.4E+00 | – | – | – | – | – | – | 7.3E-02 | 7.3E+00 | – | – | – | – |
| Mercury (pH = 4.9) | 7439-97-6 | – | – | 7.3E-03 | 7.3E-01 | – | – | 7.3E+00 | 9.4E-01 | – | – | 2.2E-02 | 2.2E+00 | – | – | 1.0E+01 | 1.3E+00 |
| Mercury (pH=6.8) | 7439-97-6A | – | – | 7.3E-03 | 7.3E-01 | – | – | 7.3E+00 | 9.4E-01 | – | – | 2.2E-02 | 2.2E+00 | – | – | 1.0E+01 | 1.3E+00 |
| Merphos | 150-50-5 | – | – | 7.3E-04 | 7.3E-02 | – | – | – | – | – | – | 2.2E-03 | 2.2E-01 | – | – | – | – |
| Methacrylic acid (2-methyl-2-propenoic acid) | 79-41-4 | – | – | 2.4E-01 | 2.4E+01 | – | – | – | – | – | – | 7.3E-01 | 7.3E+01 | – | – | – | – |
| Methacrylonitrile | 126-98-7 | – | – | 1.2E+00 | 1.2E+02 | – | – | 1.1E+04 | 1.4E+03 | – | – | 3.7E+00 | 3.7E+02 | – | – | 1.6E+04 | 2.0E+03 |
| Methanol | 67-56-1 | – | – | 4.9E+01 | 4.9E+03 | – | – | 1.0E+06 | 1.0E+06 | – | – | 1.5E+02 | 1.5E+04 | – | – | 1.0E+06 | 1.0E+06 |
| Methapyrilene | 91-80-5 | 1.9E-04 | 1.9E-02 | – | – | – | – | – | – | 4.3E-04 | 4.3E-02 | – | – | – | – | – | – |
| Methomyl | 16752-77-5 | – | – | 6.1E-01 | 6.1E+01 | – | – | – | – | – | – | 1.8E+00 | 1.8E+02 | – | – | – | – |
| Methoxychlor | 72-43-5 | – | – | 1.2E-01 | 1.2E+01 | – | – | – | – | – | – | 3.7E-01 | 3.7E+01 | – | – | – | – |
| Methoxyethanol, 2- | 109-86-4 | – | – | 6.6E-01 | 6.6E+01 | – | – | 8.1E+01 | 1.1E+01 | – | – | 2.0E+00 | 2.0E+02 | – | – | 1.1E+02 | 1.5E+01 |
| Methyl acetate (acetic acid, methyl ester) | 79-20-9 | – | – | 2.4E+01 | 2.4E+03 | – | – | – | – | – | – | 7.3E+01 | 7.3E+03 | – | – | – | – |
| Methyl acrylate | 96-33-3 | – | – | 4.9E-02 | 4.9E+00 | – | – | 2.7E+03 | 3.4E+02 | – | – | 1.5E-01 | 1.5E+01 | – | – | 3.7E+03 | 4.8E+02 |
| Methyl amyl ketone (2-heptanone) | 110-43-0 | – | – | 1.2E+00 | 1.2E+02 | – | – | 1.0E+06 | 1.4E+05 | – | – | 3.7E+00 | 3.7E+02 | – | – | 1.0E+06 | 2.0E+05 |
| Methyl chrysene, 1- | 3351-28-8 | 1.3E-01 | 1.3E+01 | – | – | 8.0E+05 | 1.0E+05 | – | – | 2.8E-01 | 2.8E+01 | – | – | 1.0E+06 | 1.7E+05 | – | – |
| Methyl chrysene, 2- | 3351-32-4 | 1.3E-01 | 1.3E+01 | – | – | 8.0E+05 | 1.0E+05 | – | – | 2.8E-01 | 2.8E+01 | – | – | 1.0E+06 | 1.7E+05 | – | – |
| Methyl chrysene, 6- | 1705-85-7 | 1.3E-02 | 1.3E+00 | – | – | 8.0E+04 | 1.0E+04 | – | – | 2.8E-02 | 2.8E+00 | – | – | 1.3E+05 | 1.7E+04 | – | – |
| Methyl cyclohexane | 108-87-2 | – | – | 1.2E+02 | 1.2E+04 | – | – | 1.4E+03 | 1.8E+02 | – | – | 3.7E+02 | 3.7E+04 | – | – | 2.0E+03 | 2.6E+02 |

**Table 8**
**Tier 1 Individual Residential and Commercial/Industrial Groundwater PCLs**

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | Residential | | | | | | | | Commercial/Industrial | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Carcinogenic | | Noncarcinogenic | | Carcinogenic | | Noncarcinogenic | | Carcinogenic | | Noncarcinogenic | | Carcinogenic | | Noncarcinogenic | |
| | | $^{GW}GW_{Ing}$ [1] (mg/L) | $^{GW}GW_{Class\ 3}$ [2] (mg/L) | $^{GW}GW_{Ing}$ [1] (mg/L) | $^{GW}GW_{Class\ 3}$ [2] (mg/L) | $^{Air}GW_{Inh\text{-}V}$ 0.5 acre source area (mg/L) | $^{Air}GW_{Inh\text{-}V}$ 30 acre source area (mg/L) | $^{Air}GW_{Inh\text{-}V}$ 0.5 acre source area (mg/L) | $^{Air}GW_{Inh\text{-}V}$ 30 acre source area (mg/L) | $^{GW}GW_{Ing}$ [1] (mg/L) | $^{GW}GW_{Class\ 3}$ [2] (mg/L) | $^{GW}GW_{Ing}$ [1] (mg/L) | $^{GW}GW_{Class\ 3}$ [2] (mg/L) | $^{Air}GW_{Inh\text{-}V}$ 0.5 acre source area (mg/L) | $^{Air}GW_{Inh\text{-}V}$ 30 acre source area (mg/L) | $^{Air}GW_{Inh\text{-}V}$ 0.5 acre source area (mg/L) | $^{Air}GW_{Inh\text{-}V}$ 30 acre source area (mg/L) |
| Methyl ethyl ketone (2-butanone) | 78-93-3 | – | – | 1.5E+01 | 1.5E+03 | – | – | 1.0E+06 | 6.2E+05 | – | – | 4.4E+01 | 4.4E+03 | – | – | 1.0E+06 | 8.7E+05 |
| Methyl iodide (iodomethane) | 74-88-4 | – | – | 3.4E-02 | 3.4E+00 | – | – | – | – | – | – | 1.0E-01 | 1.0E+01 | – | – | – | – |
| Methyl isobutyl ketone (4-methyl-2-pentanone) | 108-10-1 | – | – | 2.0E+00 | 2.0E+02 | – | – | 6.7E+05 | 8.7E+04 | – | – | 5.8E+00 | 5.8E+02 | – | – | 9.4E+05 | 1.2E+05 |
| Methyl mercury | 22967-92-6 | – | – | 2.4E-03 | 2.4E-01 | – | – | – | – | – | – | 7.3E-03 | 7.3E-01 | – | – | – | – |
| Methyl methacrylate | 80-62-6 | – | – | 3.4E+01 | 3.4E+03 | – | – | 7.9E+04 | 1.0E+04 | – | – | 1.0E+02 | 1.0E+04 | – | – | 1.1E+05 | 1.4E+04 |
| Methyl methanesulfonate | 66-27-3 | 9.2E-03 | 9.2E-01 | – | – | 1.7E+04 | 2.2E+03 | – | – | 2.1E-02 | 2.1E+00 | – | – | 2.8E+04 | 3.7E+03 | – | – |
| Methyl parathion | 298-00-0 | – | – | 6.1E-03 | 6.1E-01 | – | – | – | – | – | – | 1.8E-02 | 1.8E+00 | – | – | – | – |
| Methyl-1-butene, 2- | 563-46-2 | – | – | 1.5E+00 | 1.5E+02 | – | – | 7.8E+03 | 1.0E+03 | – | – | 4.4E+00 | 4.4E+02 | – | – | 1.1E+04 | 1.4E+03 |
| Methyl-1-propanal, 2- (isobutyraldehyde) | 78-84-2 | – | – | 9.8E-01 | 9.8E+01 | – | – | – | – | – | – | 2.9E+00 | 2.9E+02 | – | – | – | – |
| Methyl-2-butene, 2- | 513-35-9 | – | – | 1.5E+00 | 1.5E+02 | – | – | 1.5E+04 | 1.9E+03 | – | – | 4.4E+00 | 4.4E+02 | – | – | 2.1E+04 | 2.7E+03 |
| Methyl-2-pentenal, 2- | 623-36-9 | 4.8E-04 | 4.8E-02 | – | – | – | – | – | – | 1.1E-03 | 1.1E-01 | – | – | – | – | – | – |
| Methylcholanthrene, 3- | 56-49-5 | 4.1E-05 | 4.1E-03 | – | – | 4.1E+02 | 5.4E+01 | – | – | 9.3E-05 | 9.3E-03 | – | – | 7.0E+02 | 9.0E+01 | – | – |
| Methylene bromide (dibromomethane) | 74-95-3 | 1.2E-01 | 1.2E+01 | 1.5E+00 | 1.5E+02 | – | – | 2.4E+02 | 3.1E+01 | 2.7E-01 | 2.7E+01 | 4.4E+00 | 4.4E+02 | – | – | 3.3E+02 | 4.3E+01 |
| Methylene chloride (dichloromethane) | 75-09-2 | 9.3E+00 | 9.3E+02 | 5.1E-01 | 5.1E+01 | 2.1E+04 | 2.8E+03 | 3.3E+04 | 4.3E+03 | 2.1E+01 | 2.1E+03 | 1.5E+00 | 1.5E+02 | 3.6E+04 | 4.6E+03 | 4.7E+04 | 6.0E+03 |
| Methylene-bis (2-chloroaniline) 4,4'- | 101-14-4 | 9.1E-03 | 9.1E-01 | 4.9E-02 | 4.9E+00 | 2.0E+04 | 2.6E+03 | – | – | 2.0E-02 | 2.0E+00 | 1.5E-01 | 1.5E+01 | 3.3E+04 | 4.3E+03 | – | – |
| Methylmecury hydroxide | 1184-57-2 | – | – | 2.4E-03 | 2.4E-01 | – | – | – | – | – | – | 7.3E-03 | 7.3E-01 | – | – | – | – |
| Methylnaphthalene, 1- | 90-12-0 | 3.1E-02 | 3.1E+00 | 1.7E+00 | 1.7E+02 | – | – | – | – | 7.0E-02 | 7.0E+00 | 5.1E+00 | 5.1E+02 | – | – | – | – |
| Methylnaphthalene, 2- | 91-57-6 | – | – | 9.8E-02 | 9.8E+00 | – | – | – | – | – | – | 2.9E-01 | 2.9E+01 | – | – | – | – |
| Methylpyrrolidone, N- | 872-50-4 | – | – | 4.9E-01 | 4.9E+01 | – | – | – | – | – | – | 1.5E+00 | 1.5E+02 | – | – | – | – |
| Methylstyrene, alpha- | 98-83-9 | – | – | 2.0E-01 | 2.0E+01 | – | – | 6.6E+02 | 8.5E+01 | – | – | 6.1E-01 | 6.1E+01 | – | – | 9.2E+02 | 1.2E+02 |
| Methyltetrahydrofuran, 2- | 96-47-9 | 1.2E-01 | 1.2E+01 | 4.9E+00 | 4.9E+02 | 1.8E+03 | 2.3E+02 | – | – | 2.7E-01 | 2.7E+01 | 1.5E+01 | 1.5E+03 | 3.1E+03 | 3.9E+02 | – | – |
| Methyltetrahydropyran, 2- | 10141-72-7 | 1.2E-01 | 1.2E+01 | 4.9E+00 | 4.9E+02 | 2.1E+03 | 2.7E+02 | – | – | 2.7E-01 | 2.7E+01 | 1.5E+01 | 1.5E+03 | 3.6E+03 | 4.6E+02 | – | – |
| Metolachlor | 51218-45-2 | – | – | 3.7E+00 | 3.7E+02 | – | – | – | – | – | – | 1.1E+01 | 1.1E+03 | – | – | – | – |
| Metribuzin | 21087-64-9 | – | – | 6.1E-01 | 6.1E+01 | – | – | – | – | – | – | 1.8E+00 | 1.8E+02 | – | – | – | – |
| Mirex | 2385-85-5 | – | – | 4.9E-03 | 4.9E-01 | – | – | – | – | – | – | 1.5E-02 | 1.5E+00 | – | – | – | – |
| Molinate | 2212-67-1 | – | – | 4.9E-02 | 4.9E+00 | – | – | – | – | – | – | 1.5E-01 | 1.5E+01 | – | – | – | – |
| Molybdenum | 7439-98-7 | – | – | 1.2E-01 | 1.2E+01 | – | – | – | – | – | – | 3.7E-01 | 3.7E+01 | – | – | – | – |
| Monocrotophos | 2157-98-4 | – | – | 1.5E-02 | 1.5E+00 | – | – | – | – | – | – | 4.4E-02 | 4.4E+00 | – | – | – | – |
| Morpholine | 110-91-8 | – | – | 1.2E+04 | 1.2E+06 | – | – | – | – | – | – | 3.7E+04 | 3.7E+06 | – | – | – | – |
| Morpholine, N-butyl- | 1005-67-0 | – | – | 5.6E-02 | 5.6E+00 | – | – | – | – | – | – | 1.7E-01 | 1.7E+01 | – | – | – | – |
| MTBE (methyl tert-butyl ether) | 1634-04-4 | 5.1E-01 | 5.1E+01 | 2.4E-01 | 2.4E+01 | 4.0E+03 | 5.2E+02 | 1.4E+05 | 1.7E+04 | 1.1E+00 | 1.1E+02 | 7.3E-01 | 7.3E+01 | 6.8E+03 | 8.8E+02 | 1.9E+05 | 2.4E+04 |
| Naled | 300-76-5 | – | – | 4.9E-02 | 4.9E+00 | – | – | – | – | – | – | 1.5E-01 | 1.5E+01 | – | – | – | – |
| Naphthalene | 91-20-3 | – | – | 4.9E-01 | 4.9E+01 | – | – | 3.2E+02 | 4.1E+01 | – | – | 1.5E+00 | 1.5E+02 | – | – | 4.4E+02 | 5.7E+01 |
| Naphthoquinone, 1,4- | 130-15-4 | – | – | 1.7E-01 | 1.7E+01 | – | – | – | – | – | – | 5.1E-01 | 5.1E+01 | – | – | – | – |
| Naphthylamine, 1- | 134-32-7 | – | – | 4.9E-01 | 4.9E+01 | – | – | – | – | – | – | 1.5E+00 | 1.5E+02 | – | – | – | – |
| Naphthylamine, 2- | 91-59-8 | 5.1E-04 | 5.1E-02 | – | – | – | – | – | – | 1.1E-03 | 1.1E-01 | – | – | – | – | – | – |
| Napropamide | 15299-99-7 | – | – | 2.4E+00 | 2.4E+02 | – | – | – | – | – | – | 7.3E+00 | 7.3E+02 | – | – | – | – |
| Neopentyl glycol | 126-30-7 | – | – | 7.3E+00 | 7.3E+02 | – | – | – | – | – | – | 2.2E+01 | 2.2E+03 | – | – | – | – |
| Nickel and compounds | 7440-02-0 | – | – | 4.9E-01 | 4.9E+01 | – | – | – | – | – | – | 1.5E+00 | 1.5E+02 | – | – | – | – |
| Nitrate-N | 14797-55-8 | – | – | 3.9E+01 | 3.9E+03 | – | – | – | – | – | – | 1.2E+02 | 1.2E+04 | – | – | – | – |
| Nitrite-N | 14797-65-0 | – | – | 2.4E+00 | 2.4E+02 | – | – | – | – | – | – | 7.3E+00 | 7.3E+02 | – | – | – | – |
| Nitroaniline, 2- | 88-74-4 | – | – | 7.3E-03 | 7.3E-01 | – | – | 4.0E+03 | 5.2E+02 | – | – | 2.2E-02 | 2.2E+00 | – | – | 5.6E+03 | 7.2E+02 |
| Nitroaniline, 3- | 99-09-2 | 2.4E-02 | 2.4E+00 | 7.3E-03 | 7.3E-01 | – | – | 4.7E+03 | 6.1E+02 | 5.4E-02 | 5.4E+00 | 2.2E-02 | 2.2E+00 | – | – | 6.6E+03 | 8.6E+02 |
| Nitroaniline, 4- | 100-01-6 | 4.6E-02 | 4.6E+00 | 9.8E-02 | 9.8E+00 | – | – | 1.4E+05 | 1.9E+04 | 1.0E-01 | 1.0E+01 | 2.9E-01 | 2.9E+01 | – | – | 2.0E+05 | 2.6E+04 |
| Nitrobenzene | 98-95-3 | – | – | 4.9E-02 | 4.9E+00 | 7.2E+02 | 9.3E+01 | 1.1E+04 | 1.4E+03 | – | – | 1.5E-01 | 1.5E+01 | 1.2E+03 | 1.6E+02 | 1.6E+04 | 2.0E+03 |
| Nitroglycerin | 55-63-0 | 5.4E-02 | 5.4E+00 | 2.4E-03 | 2.4E-01 | – | – | – | – | 1.2E-01 | 1.2E+01 | 7.3E-03 | 7.3E-01 | – | – | – | – |
| Nitrophenol, 2- | 88-75-5 | – | – | 4.9E-02 | 4.9E+00 | – | – | – | – | – | – | 1.5E-01 | 1.5E+01 | – | – | – | – |

**Table 8**
**Tier 1 Individual Residential and Commercial/Industrial Groundwater PCLs**

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | Residential | | | | | | | | Commercial/Industrial | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Carcinogenic | | Noncarcinogenic | | Carcinogenic | | Noncarcinogenic | | Carcinogenic | | Noncarcinogenic | | Carcinogenic | | Noncarcinogenic | |
| | | $^{GW}GW_{Ing}$ [1] (mg/L) | $^{GW}GW_{Class\ 3}$ [2] (mg/L) | $^{GW}GW_{Ing}$ [1] (mg/L) | $^{GW}GW_{Class\ 3}$ [2] (mg/L) | $^{Air}GW_{Inh\text{-}V}$ 0.5 acre source area (mg/L) | $^{Air}GW_{Inh\text{-}V}$ 30 acre source area (mg/L) | $^{Air}GW_{Inh\text{-}V}$ 0.5 acre source area (mg/L) | $^{Air}GW_{Inh\text{-}V}$ 30 acre source area (mg/L) | $^{GW}GW_{Ing}$ [1] (mg/L) | $^{GW}GW_{Class\ 3}$ [2] (mg/L) | $^{GW}GW_{Ing}$ [1] (mg/L) | $^{GW}GW_{Class\ 3}$ [2] (mg/L) | $^{Air}GW_{Inh\text{-}V}$ 0.5 acre source area (mg/L) | $^{Air}GW_{Inh\text{-}V}$ 30 acre source area (mg/L) | $^{Air}GW_{Inh\text{-}V}$ 0.5 acre source area (mg/L) | $^{Air}GW_{Inh\text{-}V}$ 30 acre source area (mg/L) |
| Nitrophenol, 3- | 554-84-7 | – | – | 4.9E-02 | 4.9E+00 | – | – | – | – | – | – | 1.5E-01 | 1.5E+01 | – | – | – | – |
| Nitrophenol, 4- | 100-02-7 | – | – | 4.9E-02 | 4.9E+00 | – | – | – | – | – | – | 1.5E-01 | 1.5E+01 | – | – | – | – |
| Nitropropane, 2- | 79-46-9 | – | – | 3.4E-03 | 3.4E-01 | 1.7E+00 | 2.2E-01 | 4.0E+03 | 5.2E+02 | – | – | 1.0E-02 | 1.0E+00 | 2.9E+00 | 3.8E-01 | 5.6E+03 | 7.3E+02 |
| Nitroquinoline-N-oxide, 4- | 56-57-5 | 9.7E-05 | 9.7E-03 | – | – | 1.1E+04 | 1.1E+04 | – | – | 2.2E-04 | 2.2E-02 | – | – | 1.9E+04 | 1.8E+04 | – | – |
| Nitrosodiethanolamine | 1116-54-7 | 3.3E-04 | 3.3E-02 | – | – | – | – | – | – | 7.3E-04 | 7.3E-02 | – | – | – | – | – | – |
| Nitrosodiethylamine, n- | 55-18-5 | 6.1E-06 | 6.1E-04 | – | – | 7.4E+00 | 9.5E-01 | – | – | 1.4E-05 | 1.4E-03 | – | – | 1.2E+01 | 1.6E+00 | – | – |
| Nitrosodimethylamine, n- | 62-75-9 | 1.8E-05 | 1.8E-03 | 2.0E-04 | 2.0E-02 | 2.0E+01 | 2.6E+00 | 4.8E+02 | 6.3E+01 | 4.0E-05 | 4.0E-03 | 5.8E-04 | 5.8E-02 | 3.4E+01 | 4.4E+00 | 6.8E+02 | 8.8E+01 |
| Nitrosodi-n-butylamine, n- | 924-16-3 | 1.7E-04 | 1.7E-02 | – | – | 4.7E+00 | 6.1E-01 | – | – | 3.8E-04 | 3.8E-02 | – | – | 7.9E+00 | 1.0E+00 | – | – |
| Nitrosodi-n-propylamine, n- | 621-64-7 | 1.3E-04 | 1.3E-02 | – | – | – | – | – | – | 2.9E-04 | 2.9E-02 | – | – | – | – | – | – |
| Nitrosodiphenylamine | 86-30-6 | 1.9E-01 | 1.9E+01 | – | – | – | – | – | – | 4.2E-01 | 4.2E+01 | – | – | – | – | – | – |
| Nitroso-methyl-ethyl-amine, n- | 10595-95-6 | 4.1E-05 | 4.1E-03 | – | – | – | – | – | – | 9.3E-05 | 9.3E-03 | – | – | – | – | – | – |
| Nitrosomorpholine, N- | 59-89-2 | 1.4E-04 | 1.4E-02 | – | – | 2.7E+02 | 3.6E+01 | – | – | 3.1E-04 | 3.1E-02 | – | – | 4.6E+02 | 6.0E+01 | – | – |
| Nitroso-n-ethylurea, n- | 759-73-9 | 6.5E-06 | 6.5E-04 | – | – | – | – | – | – | 1.5E-05 | 1.5E-03 | – | – | – | – | – | – |
| Nitrosopiperidine, N- | 100-75-4 | 9.7E-05 | 9.7E-03 | – | – | 1.6E+02 | 2.1E+01 | – | – | 2.2E-04 | 2.2E-02 | – | – | 2.8E+02 | 3.6E+01 | – | – |
| Nitrosopyrrolidine, n- | 930-55-2 | 4.3E-04 | 4.3E-02 | – | – | 9.6E+02 | 1.2E+02 | – | – | 9.7E-04 | 9.7E-02 | – | – | 1.6E+03 | 2.1E+02 | – | – |
| Nitrotoluene, m- | 99-08-1 | – | – | 2.4E-01 | 2.4E+01 | – | – | – | – | – | – | 7.3E-01 | 7.3E+01 | – | – | – | – |
| Nitrotoluene, o- | 88-72-2 | 4.1E-03 | 4.1E-01 | 2.2E-02 | 2.2E+00 | – | – | – | – | 9.3E-03 | 9.3E-01 | 6.6E-02 | 6.6E+00 | – | – | – | – |
| Nitrotoluene, p- | 99-99-0 | 5.7E-02 | 5.7E+00 | 9.8E-02 | 9.8E+00 | – | – | – | – | 1.3E-01 | 1.3E+01 | 2.9E-01 | 2.9E+01 | – | – | – | – |
| Nonachlor, cis- | 5103-73-1 | 2.6E-03 | 2.6E-01 | 1.2E-02 | 1.2E+00 | 7.7E+02 | 9.9E+01 | 2.3E+03 | 3.0E+02 | 5.8E-03 | 5.8E-01 | 3.7E-02 | 3.7E+00 | 1.3E+03 | 1.7E+02 | 3.2E+03 | 4.2E+02 |
| Nonachlor, trans- | 39765-80-5 | 2.6E-03 | 2.6E-01 | 1.2E-02 | 1.2E+00 | 7.7E+02 | 9.9E+01 | 2.3E+03 | 3.0E+02 | 5.8E-03 | 5.8E-01 | 3.7E-02 | 3.7E+00 | 1.3E+03 | 1.7E+02 | 3.2E+03 | 4.2E+02 |
| Nonanal | 124-19-6 | – | – | 4.9E+00 | 4.9E+02 | – | – | – | – | – | – | 1.5E+01 | 1.5E+03 | – | – | – | – |
| Nonene, 1-n | 124-11-8 | – | – | 2.4E+00 | 2.4E+02 | – | – | – | – | – | – | 7.3E+00 | 7.3E+02 | – | – | – | – |
| Nonylphenol, 4-n- | 104-40-5 | – | – | 2.4E+00 | 2.4E+02 | – | – | – | – | – | – | 7.3E+00 | 7.3E+02 | – | – | – | – |
| Nonylphenol ethoxylate | 9016-45-9 | – | – | 2.4E+00 | 2.4E+02 | – | – | – | – | – | – | 7.3E+00 | 7.3E+02 | – | – | – | – |
| Octamethylpyrophosphoramide | 152-16-9 | – | – | 4.9E-02 | 4.9E+00 | – | – | – | – | – | – | 1.5E-01 | 1.5E+01 | – | – | – | – |
| Octanone | 106-68-3 | – | – | 1.5E+00 | 1.5E+02 | – | – | 1.0E+06 | 6.2E+05 | – | – | 4.4E+00 | 4.4E+02 | – | – | 1.0E+06 | 8.7E+05 |
| Oxamyl | 23135-22-0 | – | – | 6.1E-01 | 6.1E+01 | – | – | – | – | – | – | 1.8E+00 | 1.8E+02 | – | – | – | – |
| Oxychlordane | 27304-13-8 | 2.6E-03 | 2.6E-01 | 1.2E-02 | 1.2E+00 | 7.7E+02 | 9.9E+01 | 2.3E+03 | 3.0E+02 | 5.8E-03 | 5.8E-01 | 3.7E-02 | 3.7E+00 | 1.3E+03 | 1.7E+02 | 3.2E+03 | 4.2E+02 |
| Paraquat | 1910-42-5 | – | – | 1.1E-01 | 1.1E+01 | – | – | – | – | – | – | 3.3E-01 | 3.3E+01 | – | – | – | – |
| Parathion (ethyl parathion) | 56-38-2 | – | – | 1.5E-01 | 1.5E+01 | – | – | – | – | – | – | 4.4E-01 | 4.4E+01 | – | – | – | – |
| Pebulate | 1114-71-2 | – | – | 1.2E+00 | 1.2E+02 | – | – | – | – | – | – | 3.7E+00 | 3.7E+02 | – | – | – | – |
| Pendimethalin | 40487-42-1 | – | – | 9.8E-01 | 9.8E+01 | – | – | – | – | – | – | 2.9E+00 | 2.9E+02 | – | – | – | – |
| Pentachlorobenzene | 608-93-5 | – | – | 2.0E-02 | 2.0E+00 | – | – | – | – | – | – | 5.8E-02 | 5.8E+00 | – | – | – | – |
| Pentachloroethane | 76-01-7 | 1.0E-02 | 1.0E+00 | 7.3E-01 | 7.3E+01 | 3.0E+02 | 3.8E+01 | – | – | 2.3E-02 | 2.3E+00 | 2.2E+00 | 2.2E+02 | 5.0E+02 | 6.4E+01 | – | – |
| Pentachloronitrobenzene | 82-68-8 | 3.5E-03 | 3.5E-01 | 7.3E-02 | 7.3E+00 | – | – | – | – | 7.9E-03 | 7.9E-01 | 2.2E-01 | 2.2E+01 | – | – | – | – |
| Pentachlorophenol | 87-86-5 | 2.3E-03 | 2.3E-01 | 1.2E-01 | 1.2E+01 | – | – | – | – | 5.1E-03 | 5.1E-01 | 3.7E-01 | 3.7E+01 | – | – | – | – |
| Pentadiene, 1,3-cis- | 1574-41-0 | – | – | 1.5E+00 | 1.5E+02 | – | – | 4.3E+04 | 5.6E+03 | – | – | 4.4E+00 | 4.4E+02 | – | – | 6.0E+04 | 7.8E+03 |
| Pentadiene, 1,3-trans- | 2004-70-8 | – | – | 1.5E+00 | 1.5E+02 | – | – | 7.6E+04 | 9.8E+03 | – | – | 4.4E+00 | 4.4E+02 | – | – | 1.1E+05 | 1.4E+04 |
| Pentaerythritol tetranitrate (PETN) | 78-11-5 | – | – | 4.9E-02 | 4.9E+00 | – | – | – | – | – | – | 1.5E-01 | 1.5E+01 | – | – | – | – |
| Pentane | 109-66-0 | – | – | 1.5E+00 | 1.5E+02 | – | – | 3.4E+02 | 4.4E+01 | – | – | 4.4E+00 | 4.4E+02 | – | – | 4.8E+02 | 6.2E+01 |
| Pentane, 2-methyl- | 107-83-5 | – | – | 1.5E+00 | 1.5E+02 | – | – | 1.7E+03 | 2.3E+02 | – | – | 4.4E+00 | 4.4E+02 | – | – | 2.4E+03 | 3.2E+02 |
| Pentane, 3-methyl- | 96-14-0 | – | – | 1.5E+00 | 1.5E+02 | – | – | 2.2E+03 | 2.9E+02 | – | – | 4.4E+00 | 4.4E+02 | – | – | 3.1E+03 | 4.0E+02 |
| Pentanediol, 1,5- | 111-29-5 | – | – | 1.2E+02 | 1.2E+04 | – | – | 1.0E+06 | 1.0E+06 | – | – | 3.7E+02 | 3.7E+04 | – | – | 1.0E+06 | 1.0E+06 |
| Pentanol, 1- | 71-41-0 | – | – | 8.1E-01 | 8.1E+01 | – | – | – | – | – | – | 2.4E+00 | 2.4E+02 | – | – | – | – |
| Pentanol, 4-methyl-2- | 108-11-2 | – | – | 6.4E-01 | 6.4E+01 | – | – | – | – | – | – | 1.9E+00 | 1.9E+02 | – | – | – | – |
| Pentanone, 2- | 107-87-9 | – | – | 9.8E-01 | 9.8E+01 | – | – | – | – | – | – | 2.9E+00 | 2.9E+02 | – | – | – | – |
| Pentene, 2- | 109-68-2 | – | – | 1.5E+00 | 1.5E+02 | – | – | 1.4E+04 | 1.8E+03 | – | – | 4.4E+00 | 4.4E+02 | – | – | 2.0E+04 | 2.5E+03 |

**Table 8**
**Tier 1 Individual Residential and Commercial/Industrial Groundwater PCLs**

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | Residential | | | | | | | | Commercial/Industrial | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Carcinogenic | | Noncarcinogenic | | Carcinogenic | | Noncarcinogenic | | Carcinogenic | | Noncarcinogenic | | Carcinogenic | | Noncarcinogenic | |
| | | $^{GW}GW_{Ing}$ [1] (mg/L) | $^{GW}GW_{Class\ 3}$ [2] (mg/L) | $^{GW}GW_{Ing}$ [1] (mg/L) | $^{GW}GW_{Class\ 3}$ [2] (mg/L) | $^{Air}GW_{Inh\text{-}V}$ 0.5 acre source area (mg/L) | $^{Air}GW_{Inh\text{-}V}$ 30 acre source area (mg/L) | $^{Air}GW_{Inh\text{-}V}$ 0.5 acre source area (mg/L) | $^{Air}GW_{Inh\text{-}V}$ 30 acre source area (mg/L) | $^{GW}GW_{Ing}$ [1] (mg/L) | $^{GW}GW_{Class\ 3}$ [2] (mg/L) | $^{GW}GW_{Ing}$ [1] (mg/L) | $^{GW}GW_{Class\ 3}$ [2] (mg/L) | $^{Air}GW_{Inh\text{-}V}$ 0.5 acre source area (mg/L) | $^{Air}GW_{Inh\text{-}V}$ 30 acre source area (mg/L) | $^{Air}GW_{Inh\text{-}V}$ 0.5 acre source area (mg/L) | $^{Air}GW_{Inh\text{-}V}$ 30 acre source area (mg/L) |
| Pentyne, 1- | 627-19-0 | – | – | 1.5E+00 | 1.5E+02 | – | – | 7.2E+04 | 9.3E+03 | – | – | 4.4E+00 | 4.4E+02 | – | – | 1.0E+05 | 1.3E+04 |
| Perchlorate | 14797-73-0 | – | – | 1.7E-02 | 1.7E+00 | – | – | – | – | – | – | 5.1E-02 | 5.1E+00 | – | – | – | – |
| Perfluorooctanoic sulfonic acid (1-Octanesulfonic acid, heptadecafluoro-1-) | 1763-23-1 | – | – | 5.6E-04 | 5.6E-02 | – | – | 1.8E+03 | 2.4E+02 | – | – | 1.7E-03 | 1.7E-01 | – | – | 2.6E+03 | 3.4E+02 |
| Perfluoroundecanoic acid (Undecanoic acid, uncosafluoro-) | 2058-94-8 | – | – | 2.9E-04 | 2.9E-02 | – | – | – | – | – | – | 8.8E-04 | 8.8E-02 | – | – | – | – |
| Perfluoropentanoic acid (Pentanoic acid, nonafluoro-) | 2706-90-3 | – | – | 9.3E-05 | 9.3E-03 | – | – | – | – | – | – | 2.8E-04 | 2.8E-02 | – | – | – | – |
| Perfluorohexanoic acid (Hexanoic acid, undecafluoro-) | 307-24-4 | – | – | 9.3E-05 | 9.3E-03 | – | – | – | – | – | – | 2.8E-04 | 2.8E-02 | – | – | – | – |
| Perfluorododecanoic acid (Dodecanoic acid, tricosafluoro-) | 307-55-1 | – | – | 2.9E-04 | 2.9E-02 | – | – | 5.5E+02 | 7.2E+01 | – | – | 8.8E-04 | 8.8E-02 | – | – | 7.8E+02 | 1.0E+02 |
| Perfluorooctanoic acid (Octanoic acid, pentadecafluoro-) | 335-67-1 | – | – | 2.9E-04 | 2.9E-02 | – | – | 9.0E+01 | 1.2E+01 | – | – | 8.8E-04 | 8.8E-02 | – | – | 1.3E+02 | 1.6E+01 |
| Perfluorodecanoic acid (Decanoic acid, nonadecafluoro-) | 335-76-2 | – | – | 3.7E-04 | 3.7E-02 | – | – | 1.3E+03 | 1.6E+02 | – | – | 1.1E-03 | 1.1E-01 | – | – | 1.8E+03 | 2.3E+02 |
| Perfluorodecane sulfonic acid (1-Decanesulfonic acid, heneicosafluoro-) | 335-77-3 | – | – | 2.9E-04 | 2.9E-02 | – | – | – | – | – | – | 8.8E-04 | 8.8E-02 | – | – | – | – |
| Perfluorohexane sulfonic acid (1-Hexanesulfonic acid, triddecafluoro-) | 355-46-4 | – | – | 9.3E-05 | 9.3E-03 | – | – | 2.9E+02 | 5.7E+01 | – | – | 2.8E-04 | 2.8E-02 | – | – | 4.0E+02 | 7.9E+01 |
| Perfluorobutyric acid (Butanoic acid, heptafluoro-) | 375-22-4 | – | – | 7.1E-02 | 7.1E+00 | – | – | 8.5E+05 | 7.1E+05 | – | – | 2.1E-01 | 2.1E+01 | – | – | 1.0E+06 | 1.0E+06 |
| Perfluorobutane sulfonic acid (1-Butanesulfonic acid, nonafluoro-) | 375-73-5 | – | – | 3.4E-02 | 3.4E+00 | – | – | 5.4E+05 | 4.7E+05 | – | – | 1.0E-01 | 1.0E+01 | – | – | 7.6E+05 | 6.5E+05 |
| Perfluoroheptanoic acid (Heptanoic acid, tridecafluoro-) | 375-85-9 | – | – | 5.6E-04 | 5.6E-02 | – | – | – | – | – | – | 1.7E-03 | 1.7E-01 | – | – | – | – |
| Perfluorononanoic acid (Nonanoic acid, heptadecafluoro-) | 375-95-1 | – | – | 2.9E-04 | 2.9E-02 | – | – | 6.5E+02 | 8.4E+01 | – | – | 8.8E-04 | 8.8E-02 | – | – | 9.1E+02 | 1.2E+02 |
| Perfluorotetradecanoic acid (Tetradecanoic acid, heptacosafluoro-) | 376-06-7 | – | – | 2.9E-04 | 2.9E-02 | – | – | – | – | – | – | 8.8E-04 | 8.8E-02 | – | – | – | – |
| Perfluorotridecanoic acid (Tridecanoic acid, pentacosafluoro-) | 72629-94-8 | – | – | 2.9E-04 | 2.9E-02 | – | – | – | – | – | – | 8.8E-04 | 8.8E-02 | – | – | – | – |
| Perfluorooctane sulfonamide (1-Octanesulfonamide, hetpadecafluoro-) | 754-91-6 | – | – | 2.9E-04 | 2.9E-02 | – | – | 5.3E-05 | 6.8E-06 | – | – | 8.8E-04 | 8.8E-02 | – | – | 7.4E-05 | 9.6E-06 |
| Perylene | 198-55-0 | – | – | 4.9E-01 | 4.9E+01 | – | – | – | – | – | – | 1.5E+00 | 1.5E+02 | – | – | – | – |
| Phenacetin | 62-44-2 | 4.1E-01 | 4.1E+01 | – | – | 1.0E+06 | 1.5E+05 | – | – | 9.3E-01 | 9.3E+01 | – | – | 1.0E+06 | 2.5E+05 | – | – |
| Phenanthrene | 85-01-8 | – | – | 7.3E-01 | 7.3E+01 | – | – | – | – | – | – | 2.2E+00 | 2.2E+02 | – | – | – | – |
| Phenanthridine | 229-87-8 | – | – | 7.3E-02 | 7.3E+00 | – | – | – | – | – | – | 2.2E-01 | 2.2E+01 | – | – | – | – |
| Phenol | 108-95-2 | – | – | 7.3E+00 | 7.3E+02 | – | – | 1.6E+05 | 2.1E+04 | – | – | 2.2E+01 | 2.2E+03 | – | – | 2.2E+05 | 2.9E+04 |
| Phenol, 4-tert-butyl- | 98-54-4 | – | – | 2.9E+00 | 2.9E+02 | – | – | – | – | – | – | 8.8E+00 | 8.8E+02 | – | – | – | – |
| Phenothiazine | 92-84-2 | – | – | 2.7E-02 | 2.7E+00 | – | – | – | – | – | – | 8.0E-02 | 8.0E+00 | – | – | – | – |
| Phenyl mercuric acetate | 62-38-4 | – | – | 2.0E-03 | 2.0E-01 | – | – | – | – | – | – | 5.8E-03 | 5.8E-01 | – | – | – | – |
| Phenylene diamine, m- | 108-45-2 | – | – | 1.5E-01 | 1.5E+01 | – | – | – | – | – | – | 4.4E-01 | 4.4E+01 | – | – | – | – |
| Phenylene diamine, p- | 106-50-3 | – | – | 4.6E+00 | 4.6E+02 | – | – | – | – | – | – | 1.4E+01 | 1.4E+03 | – | – | – | – |
| Phorate | 298-02-2 | – | – | 4.9E-03 | 4.9E-01 | – | – | – | – | – | – | 1.5E-02 | 1.5E+00 | – | – | – | – |
| Phosalone | 2310-17-0 | – | – | 4.9E-02 | 4.9E+00 | – | – | – | – | – | – | 1.5E-01 | 1.5E+01 | – | – | – | – |
| Phosdrin (mevinphos) | 7786-34-7 | – | – | 6.1E-04 | 6.1E-02 | – | – | – | – | – | – | 1.8E-03 | 1.8E-01 | – | – | – | – |
| Phosmet | 732-11-6 | – | – | 4.9E-01 | 4.9E+01 | – | – | – | – | – | – | 1.5E+00 | 1.5E+02 | – | – | – | – |
| Phosphine | 7803-51-2 | – | – | 7.3E-03 | 7.3E-01 | – | – | 2.9E-03 | 3.7E-04 | – | – | 2.2E-02 | 2.2E+00 | – | – | 4.0E-03 | 5.2E-04 |
| Phosphorotrithioic acid, S,S,S-tributyl ester | 78-48-8 | 1.1E-02 | 1.1E+00 | 2.4E-02 | 2.4E+00 | – | – | – | – | 2.4E-02 | 2.4E+00 | 7.3E-02 | 7.3E+00 | – | – | – | – |
| Phosphorus, total* | 7723-14-0 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – |
| Phosphorus, white | 7723-14-0 | – | – | 4.9E-04 | 4.9E-02 | – | – | – | – | – | – | 1.5E-03 | 1.5E-01 | – | – | – | – |
| Phthalic anhydride | 85-44-9 | – | – | 4.9E+01 | 4.9E+03 | – | – | 1.0E+06 | 4.0E+05 | – | – | 1.5E+02 | 1.5E+04 | – | – | 1.0E+06 | 5.6E+05 |
| Picloram | 1918-02-1 | – | – | 1.7E+00 | 1.7E+02 | – | – | – | – | – | – | 5.1E+00 | 5.1E+02 | – | – | – | – |
| Picoline, 2- (2-methylpyridine) | 109-06-8 | – | – | 2.2E-01 | 2.2E+01 | – | – | – | – | – | – | 6.6E-01 | 6.6E+01 | – | – | – | – |
| Polybrominated biphenyls (PBBs) | 67774-32-7 | 1.0E-04 | 1.0E-02 | 1.7E-04 | 1.7E-02 | – | – | – | – | 2.3E-04 | 2.3E-02 | 5.1E-04 | 5.1E-02 | – | – | – | – |
| Polychlorinated biphenyls (PCBs) | 1336-36-3 | 4.6E-04 | 4.6E-02 | 4.9E-04 | 4.9E-02 | 2.9E+00 | 3.8E-01 | – | – | 1.0E-03 | 1.0E-01 | 1.5E-03 | 1.5E-01 | 4.9E+00 | 6.4E-01 | – | – |
| Potassium* | 7440-09-7 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – |
| Primene | 68955-53-3 | – | – | 1.5E-01 | 1.5E+01 | – | – | – | – | – | – | 4.4E-01 | 4.4E+01 | – | – | – | – |
| Prometon (pramitol) | 1610-18-0 | – | – | 3.7E-01 | 3.7E+01 | – | – | – | – | – | – | 1.1E+00 | 1.1E+02 | – | – | – | – |
| Prometryn | 7287-19-6 | – | – | 9.8E-01 | 9.8E+01 | – | – | – | – | – | – | 2.9E+00 | 2.9E+02 | – | – | – | – |

**Table 8**
**Tier 1 Individual Residential and Commercial/Industrial Groundwater PCLs**

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | Residential | | | | | | | | Commercial/Industrial | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Carcinogenic | | Noncarcinogenic | | Carcinogenic | | Noncarcinogenic | | Carcinogenic | | Noncarcinogenic | | Carcinogenic | | Noncarcinogenic | |
| | | $^{GW}GW_{Ing}$ [1] (mg/L) | $^{GW}GW_{Class\ 3}$ [2] (mg/L) | $^{GW}GW_{Ing}$ [1] (mg/L) | $^{GW}GW_{Class\ 3}$ [2] (mg/L) | $^{Air}GW_{Inh\text{-}V}$ 0.5 acre source area (mg/L) | $^{Air}GW_{Inh\text{-}V}$ 30 acre source area (mg/L) | $^{Air}GW_{Inh\text{-}V}$ 0.5 acre source area (mg/L) | $^{Air}GW_{Inh\text{-}V}$ 30 acre source area (mg/L) | $^{GW}GW_{Ing}$ [1] (mg/L) | $^{GW}GW_{Class\ 3}$ [2] (mg/L) | $^{GW}GW_{Ing}$ [1] (mg/L) | $^{GW}GW_{Class\ 3}$ [2] (mg/L) | $^{Air}GW_{Inh\text{-}V}$ 0.5 acre source area (mg/L) | $^{Air}GW_{Inh\text{-}V}$ 30 acre source area (mg/L) | $^{Air}GW_{Inh\text{-}V}$ 0.5 acre source area (mg/L) | $^{Air}GW_{Inh\text{-}V}$ 30 acre source area (mg/L) |
| Pronamide | 23950-58-5 | – | – | 1.8E+00 | 1.8E+02 | – | – | – | – | – | – | 5.5E+00 | 5.5E+02 | – | – | – | – |
| Propanal (propionaldehyde) | 123-38-6 | – | – | 2.0E-01 | 2.0E+01 | – | – | 1.6E+03 | 2.1E+02 | – | – | 5.8E-01 | 5.8E+01 | – | – | 2.3E+03 | 3.0E+02 |
| Propane, 1-bromo- | 106-94-5 | – | – | 8.8E-01 | 8.8E+01 | – | – | – | – | – | – | 2.6E+00 | 2.6E+02 | – | – | – | – |
| Propanil | 709-98-8 | – | – | 1.2E-01 | 1.2E+01 | – | – | – | – | – | – | 3.7E-01 | 3.7E+01 | – | – | – | – |
| Propanoic acid (propionic acid) | 79-09-4 | – | – | 1.2E+01 | 1.2E+03 | – | – | – | – | – | – | 3.7E+01 | 3.7E+03 | – | – | – | – |
| Propanol, 1- | 71-23-8 | – | – | 4.9E+00 | 4.9E+02 | – | – | – | – | – | – | 1.5E+01 | 1.5E+03 | – | – | – | – |
| Propargite | 2312-35-8 | – | – | 4.9E-01 | 4.9E+01 | – | – | – | – | – | – | 1.5E+00 | 1.5E+02 | – | – | – | – |
| Propargyl alcohol | 107-19-7 | – | – | 4.9E-02 | 4.9E+00 | – | – | – | – | – | – | 1.5E-01 | 1.5E+01 | – | – | – | – |
| Propazine | 139-40-2 | 2.1E-02 | 2.1E+00 | 4.9E-01 | 4.9E+01 | – | – | – | – | 4.6E-02 | 4.6E+00 | 1.5E+00 | 1.5E+02 | – | – | – | – |
| Propham | 122-42-9 | – | – | 4.9E-01 | 4.9E+01 | – | – | – | – | – | – | 1.5E+00 | 1.5E+02 | – | – | – | – |
| Propionitrile (propane nitrile) | 107-12-0 | – | – | 9.8E-03 | 9.8E-01 | – | – | – | – | – | – | 2.9E-02 | 2.9E+00 | – | – | – | – |
| Propyl acetate, n- | 109-60-4 | – | – | 2.2E+00 | 2.2E+02 | – | – | – | – | – | – | 6.6E+00 | 6.6E+02 | – | – | – | – |
| Propylbenzene, n- | 103-65-1 | – | – | 9.8E-01 | 9.8E+01 | – | – | 6.0E+03 | 7.8E+02 | – | – | 2.9E+00 | 2.9E+02 | – | – | 8.5E+03 | 1.1E+03 |
| Propylene glycol | 57-55-6 | – | – | 4.9E+02 | 4.9E+04 | – | – | 5.0E+04 | 6.4E+03 | – | – | 1.5E+03 | 1.5E+05 | – | – | 7.0E+04 | 9.0E+03 |
| Propylene glycol monomethyl ether | 107-98-2 | – | – | 1.7E+01 | 1.7E+03 | – | – | 1.0E+06 | 1.0E+06 | – | – | 5.1E+01 | 5.1E+03 | – | – | 1.0E+06 | 1.0E+06 |
| Propylene oxide | 75-56-9 | 3.8E-03 | 3.8E-01 | – | – | 1.6E+03 | 2.0E+02 | 7.5E+03 | 9.7E+02 | 8.5E-03 | 8.5E-01 | – | – | 2.7E+03 | 3.4E+02 | 1.1E+04 | 1.4E+03 |
| Propylene tetramer | 6842-15-5 | – | – | 2.4E+00 | 2.4E+02 | – | – | 4.4E+01 | 5.7E+00 | – | – | 7.3E+00 | 7.3E+02 | – | – | 6.2E+01 | 8.0E+00 |
| Prothiofos (Tokuthion) | 34643-46-4 | – | – | 2.4E-03 | 2.4E-01 | – | – | – | – | – | – | 7.3E-03 | 7.3E-01 | – | – | – | – |
| Pyrene | 129-00-0 | – | – | 7.3E-01 | 7.3E+01 | – | – | – | – | – | – | 2.2E+00 | 2.2E+02 | – | – | – | – |
| Pyridine | 110-86-1 | – | – | 2.4E-02 | 2.4E+00 | – | – | – | – | – | – | 7.3E-02 | 7.3E+00 | – | – | – | – |
| Quinoline | 91-22-5 | 3.0E-04 | 3.0E-02 | – | – | – | – | – | – | 6.8E-04 | 6.8E-02 | – | – | – | – | – | – |
| Ronnel | 299-84-3 | – | – | 1.2E+00 | 1.2E+02 | – | – | – | – | – | – | 3.7E+00 | 3.7E+02 | – | – | – | – |
| Safrole | 94-59-7 | 4.1E-03 | 4.1E-01 | – | – | 1.9E+02 | 2.4E+01 | – | – | 9.3E-03 | 9.3E-01 | – | – | 3.2E+02 | 4.1E+01 | – | – |
| Selenium | 7782-49-2 | – | – | 1.2E-01 | 1.2E+01 | – | – | – | – | – | – | 3.7E-01 | 3.7E+01 | – | – | – | – |
| Selenourea | 630-10-4 | – | – | 1.2E-01 | 1.2E+01 | – | – | – | – | – | – | 3.7E-01 | 3.7E+01 | – | – | – | – |
| Silver | 7440-22-4 | – | – | 1.2E-01 | 1.2E+01 | – | – | – | – | – | – | 3.7E-01 | 3.7E+01 | – | – | – | – |
| Simazine | 122-34-9 | 7.6E-03 | 7.6E-01 | 1.2E-01 | 1.2E+01 | – | – | – | – | 1.7E-02 | 1.7E+00 | 3.7E-01 | 3.7E+01 | – | – | – | – |
| Sodium* | 7440-23-5 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – |
| Sodium hypochlorite | 7681-52-9 | – | – | 5.1E+00 | 5.1E+02 | – | – | – | – | – | – | 1.5E+01 | 1.5E+03 | – | – | – | – |
| Sodium polyacrylate | 9003-04-7 | – | – | 1.2E+01 | 1.2E+03 | – | – | 1.5E+04 | 2.0E+03 | – | – | 3.7E+01 | 3.7E+03 | – | – | 2.1E+04 | 2.7E+03 |
| Strontium | 7440-24-6 | – | – | 1.5E+01 | 1.5E+03 | – | – | – | – | – | – | 4.4E+01 | 4.4E+03 | – | – | – | – |
| Strychnine | 57-24-9 | – | – | 7.3E-03 | 7.3E-01 | – | – | – | – | – | – | 2.2E-02 | 2.2E+00 | – | – | – | – |
| Styrene | 100-42-5 | – | – | 4.9E+00 | 4.9E+02 | – | – | 1.5E+04 | 2.0E+03 | – | – | 1.5E+01 | 1.5E+03 | – | – | 2.1E+04 | 2.7E+03 |
| Sulfate* | 14808-79-8 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – |
| Sulfide* | 18496-25-8 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – |
| Sulfolane | 126-33-0 | – | – | 3.2E-01 | 3.2E+01 | – | – | 1.3E+05 | 1.7E+04 | – | – | 9.5E-01 | 9.5E+01 | – | – | 1.8E+05 | 2.3E+04 |
| Sulfur* | 7704-34-9 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – |
| Sulprofos (Bolstar) | 35400-43-2 | – | – | 7.3E-02 | 7.3E+00 | – | – | – | – | – | – | 2.2E-01 | 2.2E+01 | – | – | – | – |
| Tebuconazole | 107534-96-3 | – | – | 7.3E-01 | 7.3E+01 | – | – | – | – | – | – | 2.2E+00 | 2.2E+02 | – | – | – | – |
| Tebuthiuron | 34014-18-1 | – | – | 1.7E+00 | 1.7E+02 | – | – | – | – | – | – | 5.1E+00 | 5.1E+02 | – | – | – | – |
| Terbufos | 13071-79-9 | – | – | 6.1E-04 | 6.1E-02 | – | – | – | – | – | – | 1.8E-03 | 1.8E-01 | – | – | – | – |
| Tert-amyl ethyl ether (TAEE) | 919-94-8 | – | – | 9.8E-01 | 9.8E+01 | – | – | – | – | – | – | 2.9E+00 | 2.9E+02 | – | – | – | – |
| Tert-amyl-methyl ether (TAME) | 994-05-8 | – | – | 9.8E-01 | 9.8E+01 | – | – | – | – | – | – | 2.9E+00 | 2.9E+02 | – | – | – | – |
| Tert-butyl alcohol (2-methyl-2-propanol) | 75-65-0 | – | – | 2.2E+00 | 2.2E+02 | – | – | – | – | – | – | 6.6E+00 | 6.6E+02 | – | – | – | – |
| Tetrachlorobenzene, 1,2,3,4- | 634-66-2 | – | – | 7.3E-03 | 7.3E-01 | – | – | – | – | – | – | 2.2E-02 | 2.2E+00 | – | – | – | – |
| Tetrachlorobenzene, 1,2,3,5- | 634-90-2 | – | – | 7.3E-03 | 7.3E-01 | – | – | – | – | – | – | 2.2E-02 | 2.2E+00 | – | – | – | – |
| Tetrachlorobenzene, 1,2,4,5- | 95-94-3 | – | – | 7.3E-03 | 7.3E-01 | – | – | – | – | – | – | 2.2E-02 | 2.2E+00 | – | – | – | – |

**Table 8**
**Tier 1 Individual Residential and Commercial/Industrial Groundwater PCLs**

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | Residential | | | | | | | | Commercial/Industrial | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Carcinogenic | | Noncarcinogenic | | Carcinogenic | | Noncarcinogenic | | Carcinogenic | | Noncarcinogenic | | Carcinogenic | | Noncarcinogenic | |
| | | $^{GW}GW_{Ing}$ [1] (mg/L) | $^{GW}GW_{Class\ 3}$ [2] (mg/L) | $^{GW}GW_{Ing}$ [1] (mg/L) | $^{GW}GW_{Class\ 3}$ [2] (mg/L) | $^{Air}GW_{Inh\text{-}V}$ 0.5 acre source area (mg/L) | $^{Air}GW_{Inh\text{-}V}$ 30 acre source area (mg/L) | $^{Air}GW_{Inh\text{-}V}$ 0.5 acre source area (mg/L) | $^{Air}GW_{Inh\text{-}V}$ 30 acre source area (mg/L) | $^{GW}GW_{Ing}$ [1] (mg/L) | $^{GW}GW_{Class\ 3}$ [2] (mg/L) | $^{GW}GW_{Ing}$ [1] (mg/L) | $^{GW}GW_{Class\ 3}$ [2] (mg/L) | $^{Air}GW_{Inh\text{-}V}$ 0.5 acre source area (mg/L) | $^{Air}GW_{Inh\text{-}V}$ 30 acre source area (mg/L) | $^{Air}GW_{Inh\text{-}V}$ 0.5 acre source area (mg/L) | $^{Air}GW_{Inh\text{-}V}$ 30 acre source area (mg/L) |
| Tetrachloroethane, 1,1,1,2- | 630-20-6 | 3.5E-02 | 3.5E+00 | 7.3E-01 | 7.3E+01 | 1.1E+02 | 1.4E+01 | – | – | 7.9E-02 | 7.9E+00 | 2.2E+00 | 2.2E+02 | 1.9E+02 | 2.4E+01 | – | – |
| Tetrachloroethane, 1,1,2,2- | 79-34-5 | 4.6E-03 | 4.6E-01 | 4.9E-01 | 4.9E+01 | – | – | – | – | 1.0E-02 | 1.0E+00 | 1.5E+00 | 1.5E+02 | – | – | – | – |
| Tetrachloroethylene | 127-18-4 | 4.3E-01 | 4.3E+01 | 5.1E-01 | 5.1E+01 | 5.0E+02 | 6.4E+01 | 3.0E+03 | 3.9E+02 | 9.7E-01 | 9.7E+01 | 1.5E+00 | 1.5E+02 | 8.4E+02 | 1.1E+02 | 4.2E+03 | 5.4E+02 |
| Tetrachlorophenol, 2,3,4,5- | 4901-51-3 | – | – | 7.3E-01 | 7.3E+01 | – | – | – | – | – | – | 2.2E+00 | 2.2E+02 | – | – | – | – |
| Tetrachlorophenol, 2,3,4,6- | 58-90-2 | – | – | 7.3E-01 | 7.3E+01 | – | – | – | – | – | – | 2.2E+00 | 2.2E+02 | – | – | – | – |
| Tetrachlorophenol, 2,3,5,6- | 935-95-5 | – | – | 7.3E-01 | 7.3E+01 | – | – | – | – | – | – | 2.2E+00 | 2.2E+02 | – | – | – | – |
| Tetrachlorvinphos (Stirophos) | 22248-79-9 | – | – | 1.0E+00 | 1.0E+02 | – | – | – | – | – | – | 3.1E+00 | 3.1E+02 | – | – | – | – |
| Tetradifon | 116-29-0 | – | – | 4.9E-01 | 4.9E+01 | – | – | – | – | – | – | 1.5E+00 | 1.5E+02 | – | – | – | – |
| Tetraethyl dithiopyrophosphate (sulfotep) | 3689-24-5 | – | – | 1.2E-02 | 1.2E+00 | – | – | – | – | – | – | 3.7E-02 | 3.7E+00 | – | – | – | – |
| Tetraethyl lead | 78-00-2 | – | – | 2.4E-06 | 2.4E-04 | – | – | – | – | – | – | 7.3E-06 | 7.3E-04 | – | – | – | – |
| Tetraethyl pyrophosphate (TEPP) | 107-49-3 | – | – | 2.7E-04 | 2.7E-02 | – | – | – | – | – | – | 8.0E-04 | 8.0E-02 | – | – | – | – |
| Tetraethylene glycol | 112-60-7 | – | – | 8.1E+00 | 8.1E+02 | – | – | – | – | – | – | 2.4E+01 | 2.4E+03 | – | – | – | – |
| Tetrahydrofuran | 109-99-9 | 1.2E-01 | 1.2E+01 | 2.2E+01 | 2.2E+03 | 2.2E+03 | 2.9E+02 | 3.6E+05 | 4.7E+04 | 2.7E-01 | 2.7E+01 | 6.6E+01 | 6.6E+03 | 3.7E+03 | 4.8E+02 | 5.1E+05 | 6.6E+04 |
| Tetrahydropyran | 142-68-7 | 1.2E-01 | 1.2E+01 | 4.9E+00 | 4.9E+02 | 2.6E+03 | 3.4E+02 | – | – | 2.7E-01 | 2.7E+01 | 1.5E+01 | 1.5E+03 | 4.4E+03 | 5.7E+02 | – | – |
| Tetraoxadodecane, 2,5,8,11- | 112-49-2 | – | – | 6.1E-01 | 6.1E+01 | – | – | – | – | – | – | 1.8E+00 | 1.8E+02 | – | – | – | – |
| Thallium | 7440-28-0 | – | – | 1.6E-03 | 1.6E-01 | – | – | – | – | – | – | 4.9E-03 | 4.9E-01 | – | – | – | – |
| Thiofanox | 39196-18-4 | – | – | 7.3E-03 | 7.3E-01 | – | – | – | – | – | – | 2.2E-02 | 2.2E+00 | – | – | – | – |
| Thionazin | 297-97-2 | – | – | 1.7E-03 | 1.7E-01 | – | – | – | – | – | – | 5.1E-03 | 5.1E-01 | – | – | – | – |
| Thiophanate-methyl | 23564-05-8 | – | – | 2.0E+00 | 2.0E+02 | – | – | – | – | – | – | 5.8E+00 | 5.8E+02 | – | – | – | – |
| Thiram | 137-26-8 | – | – | 1.2E-01 | 1.2E+01 | – | – | – | – | – | – | 3.7E-01 | 3.7E+01 | – | – | – | – |
| Tin | 7440-31-5 | – | – | 1.5E+01 | 1.5E+03 | – | – | – | – | – | – | 4.4E+01 | 4.4E+03 | – | – | – | – |
| Titanium | 7440-32-6 | – | – | 1.2E+02 | 1.2E+04 | – | – | – | – | – | – | 3.7E+02 | 3.7E+04 | – | – | – | – |
| Toluene | 108-88-3 | – | – | 2.0E+00 | 2.0E+02 | – | – | 6.4E+04 | 8.2E+03 | – | – | 5.8E+00 | 5.8E+02 | – | – | 8.9E+04 | 1.2E+04 |
| Toluene diisocyanate, 2,4/2,6- | 26471-62-5 | – | – | – | – | – | – | 1.8E+03 | 2.4E+02 | – | – | – | – | – | – | 2.6E+03 | 3.3E+02 |
| Toluenediamine, 2,4- | 95-80-7 | 2.9E-04 | 2.9E-02 | – | – | – | – | – | – | 6.4E-04 | 6.4E-02 | – | – | – | – | – | – |
| Toluenediamine, 2,6- | 823-40-5 | – | – | 7.3E-01 | 7.3E+01 | – | – | – | – | – | – | 2.2E+00 | 2.2E+02 | – | – | – | – |
| Toluidine, o- | 95-53-4 | 5.7E-02 | 5.7E+00 | – | – | 2.6E+03 | 3.4E+02 | – | – | 1.3E-01 | 1.3E+01 | – | – | 4.4E+03 | 5.7E+02 | – | – |
| Toluidine, p- | 106-49-0 | 3.0E-02 | 3.0E+00 | – | – | – | – | – | – | 6.8E-02 | 6.8E+00 | – | – | – | – | – | – |
| Toxaphene | 8001-35-2 | 8.3E-04 | 8.3E-02 | 7.6E-03 | 7.6E-01 | 1.8E+03 | 2.3E+02 | – | – | 1.9E-03 | 1.9E-01 | 2.3E-02 | 2.3E+00 | 3.0E+03 | 3.9E+02 | – | – |
| TPH, TX1005, C6-C12 | TPH-1005-1 | – | – | 9.8E-01 | 9.8E+01 | – | – | 1.8E+03 | 2.3E+02 | – | – | 2.9E+00 | 2.9E+02 | – | – | 2.5E+03 | 3.2E+02 |
| TPH, TX1005, >C12-C28 | TPH-1005-2 | – | – | 9.8E-01 | 9.8E+01 | – | – | 7.5E+03 | 9.7E+02 | – | – | 2.9E+00 | 2.9E+02 | – | – | 1.0E+04 | 1.4E+03 |
| TPH, TX1005, >C12-C35 | TPH-1005-3 | – | – | 9.8E-01 | 9.8E+01 | – | – | 7.5E+03 | 9.7E+02 | – | – | 2.9E+00 | 2.9E+02 | – | – | 1.0E+04 | 1.4E+03 |
| TPH, TX1005, >C28-C35 | TPH-1005-4 | – | – | 9.8E-01 | 9.8E+01 | – | – | 7.5E+03 | 9.7E+02 | – | – | 2.9E+00 | 2.9E+02 | – | – | 1.0E+04 | 1.4E+03 |
| TP Silvex, 2,4,5- | 93-72-1 | – | – | 2.0E-01 | 2.0E+01 | – | – | – | – | – | – | 5.8E-01 | 5.8E+01 | – | – | – | – |
| Triademenol | 55219-65-3 | – | – | 7.3E-01 | 7.3E+01 | – | – | – | – | – | – | 2.2E+00 | 2.2E+02 | – | – | – | – |
| Triallate | 2303-17-5 | – | – | 3.2E-01 | 3.2E+01 | – | – | – | – | – | – | 9.5E-01 | 9.5E+01 | – | – | – | – |
| Triaminotrinitrobenzene (TATB) | 3058-38-6 | – | – | 7.3E-02 | 7.3E+00 | – | – | – | – | – | – | 2.2E-01 | 2.2E+01 | – | – | – | – |
| Tributyltin oxide | 56-35-9 | – | – | 7.3E-03 | 7.3E-01 | – | – | – | – | – | – | 2.2E-02 | 2.2E+00 | – | – | – | – |
| Trichloro-1,2,2-trifluoroethane, 1,1,2- | 76-13-1 | – | – | 7.3E+02 | 7.3E+04 | – | – | 1.5E+03 | 2.0E+02 | – | – | 2.2E+03 | 2.2E+05 | – | – | 2.1E+03 | 2.8E+02 |
| Trichlorobenzene, 1,2,3- | 87-61-6 | – | – | 7.3E-02 | 7.3E+00 | – | – | 1.3E+02 | 1.7E+01 | – | – | 2.2E-01 | 2.2E+01 | – | – | 1.9E+02 | 2.4E+01 |
| Trichlorobenzene, 1,2,4- | 120-82-1 | 3.1E-02 | 3.1E+00 | 2.4E-01 | 2.4E+01 | – | – | 1.6E+02 | 2.0E+01 | 7.0E-02 | 7.0E+00 | 7.3E-01 | 7.3E+01 | – | – | 2.2E+02 | 2.8E+01 |
| Trichlorobenzene, 1,3,5- | 108-70-3 | – | – | 7.3E-02 | 7.3E+00 | – | – | 1.0E+02 | 1.3E+01 | – | – | 2.2E-01 | 2.2E+01 | – | – | 1.4E+02 | 1.8E+01 |
| Trichloroethane, 1,1,1- | 71-55-6 | – | – | 4.9E+01 | 4.9E+03 | – | – | 4.1E+04 | 5.2E+03 | – | – | 1.5E+02 | 1.5E+04 | – | – | 5.7E+04 | 7.3E+03 |
| Trichloroethane, 1,1,2- | 79-00-5 | 1.6E-02 | 1.6E+00 | 9.8E-02 | 9.8E+00 | 8.0E+01 | 1.0E+01 | – | – | 3.6E-02 | 3.6E+00 | 2.9E-01 | 2.9E+01 | 1.3E+02 | 1.7E+01 | – | – |
| Trichloroethylene | 79-01-6 | 2.0E-02 | 2.0E+00 | 1.2E-02 | 1.2E+00 | 6.7E+01 | 8.7E+00 | 2.4E+01 | 3.1E+00 | 4.4E-02 | 4.4E+00 | 3.7E-02 | 3.7E+00 | 1.1E+02 | 1.5E+01 | 3.3E+01 | 4.3E+00 |
| Trichlorofluoromethane | 75-69-4 | – | – | 7.3E+00 | 7.3E+02 | – | – | – | – | – | – | 2.2E+01 | 2.2E+03 | – | – | – | – |
| Trichloronate | 327-98-0 | – | – | 7.3E-02 | 7.3E+00 | – | – | – | – | – | – | 2.2E-01 | 2.2E+01 | – | – | – | – |

**Table 8**
**Tier 1 Individual Residential and Commercial/Industrial Groundwater PCLs**

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | Residential | | | | | | | | Commercial/Industrial | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Carcinogenic | | Noncarcinogenic | | Carcinogenic | | Noncarcinogenic | | Carcinogenic | | Noncarcinogenic | | Carcinogenic | | Noncarcinogenic | |
| | | $^{GW}GW_{Ing}$ [1] (mg/L) | $^{GW}GW_{Class\ 3}$ [2] (mg/L) | $^{GW}GW_{Ing}$ [1] (mg/L) | $^{GW}GW_{Class\ 3}$ [2] (mg/L) | $^{Air}GW_{Inh\text{-}V}$ 0.5 acre source area (mg/L) | $^{Air}GW_{Inh\text{-}V}$ 30 acre source area (mg/L) | $^{Air}GW_{Inh\text{-}V}$ 0.5 acre source area (mg/L) | $^{Air}GW_{Inh\text{-}V}$ 30 acre source area (mg/L) | $^{GW}GW_{Ing}$ [1] (mg/L) | $^{GW}GW_{Class\ 3}$ [2] (mg/L) | $^{GW}GW_{Ing}$ [1] (mg/L) | $^{GW}GW_{Class\ 3}$ [2] (mg/L) | $^{Air}GW_{Inh\text{-}V}$ 0.5 acre source area (mg/L) | $^{Air}GW_{Inh\text{-}V}$ 30 acre source area (mg/L) | $^{Air}GW_{Inh\text{-}V}$ 0.5 acre source area (mg/L) | $^{Air}GW_{Inh\text{-}V}$ 30 acre source area (mg/L) |
| Trichlorophenol, 2,3,4- | 15950-66-0 | – | – | 2.4E+00 | 2.4E+02 | – | – | – | – | – | – | 7.3E+00 | 7.3E+02 | – | – | – | – |
| Trichlorophenol, 2,3,5- | 933-78-8 | – | – | 2.4E+00 | 2.4E+02 | – | – | – | – | – | – | 7.3E+00 | 7.3E+02 | – | – | – | – |
| Trichlorophenol, 2,3,6- | 933-75-5 | – | – | 2.4E+00 | 2.4E+02 | – | – | – | – | – | – | 7.3E+00 | 7.3E+02 | – | – | – | – |
| Trichlorophenol, 2,4,5- | 95-95-4 | – | – | 2.4E+00 | 2.4E+02 | – | – | – | – | – | – | 7.3E+00 | 7.3E+02 | – | – | – | – |
| Trichlorophenol, 2,4,6- | 88-06-2 | 8.3E-02 | 8.3E+00 | 2.4E-02 | 2.4E+00 | 4.9E+04 | 6.4E+03 | – | – | 1.9E-01 | 1.9E+01 | 7.3E-02 | 7.3E+00 | 8.3E+04 | 1.1E+04 | – | – |
| Trichlorophenol, 3,4,5- | 609-19-8 | – | – | 2.4E+00 | 2.4E+02 | – | – | – | – | – | – | 7.3E+00 | 7.3E+02 | – | – | – | – |
| Trichlorophenoxyacetic acid, 2,4,5- | 93-76-5 | – | – | 2.4E-01 | 2.4E+01 | – | – | – | – | – | – | 7.3E-01 | 7.3E+01 | – | – | – | – |
| Trichloropropane, 1,1,2- | 598-77-6 | – | – | 1.2E-01 | 1.2E+01 | – | – | 2.7E+00 | 3.5E-01 | – | – | 3.7E-01 | 3.7E+01 | – | – | 3.8E+00 | 4.9E-01 |
| Trichloropropane, 1,2,3- | 96-18-4 | 3.0E-05 | 3.0E-03 | 9.8E-02 | 9.8E+00 | – | – | 3.2E+01 | 4.2E+00 | 6.8E-05 | 6.8E-03 | 2.9E-01 | 2.9E+01 | – | – | 4.5E+01 | 5.8E+00 |
| Triethanolamine | 102-71-6 | – | – | 4.9E+00 | 4.9E+02 | – | – | 1.0E+06 | 1.0E+06 | – | – | 1.5E+01 | 1.5E+03 | – | – | 1.0E+06 | 1.0E+06 |
| Triethylamine | 121-44-8 | – | – | – | – | – | – | 6.3E+02 | 8.1E+01 | – | – | – | – | – | – | 8.8E+02 | 1.1E+02 |
| Triethylene glycol | 112-27-6 | – | – | 4.9E+01 | 4.9E+03 | – | – | – | – | – | – | 1.5E+02 | 1.5E+04 | – | – | – | – |
| Triethylphosphorothioate, O, O, O- | 126-68-1 | – | – | 2.0E-04 | 2.0E-02 | – | – | – | – | – | – | 6.1E-04 | 6.1E-02 | – | – | – | – |
| Trifluralin | 1582-09-8 | 1.2E-01 | 1.2E+01 | 1.8E-01 | 1.8E+01 | – | – | – | – | 2.7E-01 | 2.7E+01 | 5.5E-01 | 5.5E+01 | – | – | – | – |
| Trimethylamine | 75-50-3 | – | – | – | – | – | – | 1.7E+03 | 2.2E+02 | – | – | – | – | – | – | 2.3E+03 | 3.0E+02 |
| Trimethylbenzene, 1,2,3- | 526-73-8 | – | – | 8.3E-01 | 8.3E+01 | – | – | 5.6E+03 | 7.3E+02 | – | – | 2.5E+00 | 2.5E+02 | – | – | 7.9E+03 | 1.0E+03 |
| Trimethylbenzene, 1,2,4- | 95-63-6 | – | – | 8.3E-01 | 8.3E+01 | – | – | 4.9E+03 | 6.3E+02 | – | – | 2.5E+00 | 2.5E+02 | – | – | 6.8E+03 | 8.8E+02 |
| Trimethylbenzene, 1,3,5- | 108-67-8 | – | – | 8.3E-01 | 8.3E+01 | – | – | 3.8E+03 | 4.9E+02 | – | – | 2.5E+00 | 2.5E+02 | – | – | 5.3E+03 | 6.8E+02 |
| Trinitrobenzene, 1,3,5- | 99-35-4 | – | – | 7.3E-01 | 7.3E+01 | – | – | – | – | – | – | 2.2E+00 | 2.2E+02 | – | – | – | – |
| Trinitrophenylmethylnitramine (tetryl; nitramine) | 479-45-8 | – | – | 4.9E-02 | 4.9E+00 | – | – | – | – | – | – | 1.5E-01 | 1.5E+01 | – | – | – | – |
| Trinitrotoluene, 2,4,6- | 118-96-7 | 3.0E-02 | 3.0E+00 | 1.2E-02 | 1.2E+00 | – | – | – | – | 6.8E-02 | 6.8E+00 | 3.7E-02 | 3.7E+00 | – | – | – | – |
| Tungsten (as sodium tungstate dihydride) | 7440-33-7 | – | – | 2.4E-02 | 2.4E+00 | – | – | – | – | – | – | 7.3E-02 | 7.3E+00 | – | – | – | – |
| Uranium (soluble salts) | 7440-61-1 | – | – | 7.3E-02 | 7.3E+00 | – | – | – | – | – | – | 2.2E-01 | 2.2E+01 | – | – | – | – |
| Valeric acid (pentanoic acid) | 109-52-4 | – | – | 1.2E+01 | 1.2E+03 | – | – | 2.0E+04 | 2.6E+03 | – | – | 3.7E+01 | 3.7E+03 | – | – | 2.8E+04 | 3.6E+03 |
| Vanadium | 7440-62-2 | – | – | 4.4E-02 | 4.4E+00 | – | – | – | – | – | – | 1.3E-01 | 1.3E+01 | – | – | – | – |
| Vernam | 1929-77-7 | – | – | 2.4E-02 | 2.4E+00 | – | – | – | – | – | – | 7.3E-02 | 7.3E+00 | – | – | – | – |
| Vinyl acetate | 108-05-4 | – | – | 2.4E+01 | 2.4E+03 | – | – | 1.4E+04 | 1.8E+03 | – | – | 7.3E+01 | 7.3E+03 | – | – | 2.0E+04 | 2.6E+03 |
| Vinyl chloride | 75-01-4 | 6.1E-04 | 6.1E-02 | 7.3E-02 | 7.3E+00 | 3.8E+00 | 4.9E-01 | 8.2E+01 | 1.1E+01 | 1.4E-03 | 1.4E-01 | 2.2E-01 | 2.2E+01 | 6.4E+00 | 8.3E-01 | 1.2E+02 | 1.5E+01 |
| Vinylcyclohexane | 695-12-5 | – | – | 1.2E+01 | 1.2E+03 | – | – | – | – | – | – | 3.7E+01 | 3.7E+03 | – | – | – | – |
| Warfarin | 81-81-2 | – | – | 7.3E-03 | 7.3E-01 | – | – | – | – | – | – | 2.2E-02 | 2.2E+00 | – | – | – | – |
| Xylene, m- | 108-38-3 | – | – | 4.9E+01 | 4.9E+03 | – | – | 1.1E+04 | 1.4E+03 | – | – | 1.5E+02 | 1.5E+04 | – | – | 1.5E+04 | 1.9E+03 |
| Xylene, o- | 95-47-6 | – | – | 4.9E+01 | 4.9E+03 | – | – | 7.6E+05 | 9.8E+04 | – | – | 1.5E+02 | 1.5E+04 | – | – | 1.0E+06 | 1.4E+05 |
| Xylene, p- | 106-42-3 | – | – | 4.9E+01 | 4.9E+03 | – | – | 9.4E+03 | 1.2E+03 | – | – | 1.5E+02 | 1.5E+04 | – | – | 1.3E+04 | 1.7E+03 |
| Xylenes | 1330-20-7 | – | – | 4.9E+00 | 4.9E+02 | – | – | 1.0E+04 | 1.3E+03 | – | – | 1.5E+01 | 1.5E+03 | – | – | 1.4E+04 | 1.9E+03 |
| Zinc | 7440-66-6 | – | – | 7.3E+00 | 7.3E+02 | – | – | – | – | – | – | 2.2E+01 | 2.2E+03 | – | – | – | – |
| 6 C aliphatics (TPH) (>53% n-hexane content) | NA | – | – | 1.5E+00 | 1.5E+02 | – | – | 1.1E+02 | 1.4E+01 | – | – | 4.4E+00 | 4.4E+02 | – | – | 1.5E+02 | 1.9E+01 |
| 6 C aliphatics (TPH) (<53% n-hexane content) | NA | – | – | 1.5E+00 | 1.5E+02 | – | – | 2.9E+03 | 3.8E+02 | – | – | 4.4E+00 | 4.4E+02 | – | – | 4.1E+03 | 5.3E+02 |
| >6-8 C aliphatics (TPH) (>53% n-hexane content) | NA | – | – | 1.5E+00 | 1.5E+02 | – | – | 7.1E+01 | 9.1E+00 | – | – | 4.4E+00 | 4.4E+02 | – | – | 9.9E+01 | 1.3E+01 |
| >6-8 C aliphatics (TPH) (<53% n-hexane content) | NA | – | – | 1.5E+00 | 1.5E+02 | – | – | 1.9E+03 | 2.5E+02 | – | – | 4.4E+00 | 4.4E+02 | – | – | 2.7E+03 | 3.5E+02 |
| >8-10 C aliphatics (TPH) | NA | – | – | 2.4E+00 | 2.4E+02 | – | – | 3.3E+01 | 4.3E+00 | – | – | 7.3E+00 | 7.3E+02 | – | – | 4.6E+01 | 6.0E+00 |
| >10-12 C aliphatics (TPH) | NA | – | – | 2.4E+00 | 2.4E+02 | – | – | 2.2E+01 | 2.8E+00 | – | – | 7.3E+00 | 7.3E+02 | – | – | 3.1E+01 | 4.0E+00 |
| >12-16 C aliphatics (TPH) | NA | – | – | 2.4E+00 | 2.4E+02 | – | – | 5.1E+00 | 6.6E-01 | – | – | 7.3E+00 | 7.3E+02 | – | – | 7.1E+00 | 9.2E-01 |
| >16-21 C aliphatics (TPH) | NA | – | – | 4.9E+01 | 4.9E+03 | – | – | – | – | – | – | 1.5E+02 | 1.5E+04 | – | – | – | – |
| >16-21 C aliphatics (TPH) (for transformer mineral oil releases only) | NA | – | – | 3.9E+01 | 3.9E+03 | – | – | – | – | – | – | 1.2E+02 | 1.2E+04 | – | – | – | – |
| >21-35 C aliphatics (TPH) | NA | – | – | 4.9E+01 | 4.9E+03 | – | – | – | – | – | – | 1.5E+02 | 1.5E+04 | – | – | – | – |
| >21-35 C aliphatics (TPH) (for transformer mineral oil releases only) | NA | – | – | 3.9E+01 | 3.9E+03 | – | – | – | – | – | – | 1.2E+02 | 1.2E+04 | – | – | – | – |
| >7-8 C aromatics (TPH) | NA | – | – | 2.4E+00 | 2.4E+02 | – | – | 2.9E+04 | 3.8E+03 | – | – | 7.3E+00 | 7.3E+02 | – | – | 4.1E+04 | 5.3E+03 |

## Table 8
## Tier 1 Individual Residential and Commercial/Industrial Groundwater PCLs

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | Residential | | | | | | | | Commercial/Industrial | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Carcinogenic | | Noncarcinogenic | | Carcinogenic | | Noncarcinogenic | | Carcinogenic | | Noncarcinogenic | | Carcinogenic | | Noncarcinogenic | |
| | | $^{GW}GW_{Ing}$ [1] (mg/L) | $^{GW}GW_{Class\ 3}$ [2] (mg/L) | $^{GW}GW_{Ing}$ [1] (mg/L) | $^{GW}GW_{Class\ 3}$ [2] (mg/L) | $^{Air}GW_{Inh\text{-}V}$ 0.5 acre source area (mg/L) | $^{Air}GW_{Inh\text{-}V}$ 30 acre source area (mg/L) | $^{Air}GW_{Inh\text{-}V}$ 0.5 acre source area (mg/L) | $^{Air}GW_{Inh\text{-}V}$ 30 acre source area (mg/L) | $^{GW}GW_{Ing}$ [1] (mg/L) | $^{GW}GW_{Class\ 3}$ [2] (mg/L) | $^{GW}GW_{Ing}$ [1] (mg/L) | $^{GW}GW_{Class\ 3}$ [2] (mg/L) | $^{Air}GW_{Inh\text{-}V}$ 0.5 acre source area (mg/L) | $^{Air}GW_{Inh\text{-}V}$ 30 acre source area (mg/L) | $^{Air}GW_{Inh\text{-}V}$ 0.5 acre source area (mg/L) | $^{Air}GW_{Inh\text{-}V}$ 30 acre source area (mg/L) |
| >8-10 C aromatics (TPH) | NA | – | – | 9.8E-01 | 9.8E+01 | – | – | 1.8E+03 | 2.3E+02 | – | – | 2.9E+00 | 2.9E+02 | – | – | 2.5E+03 | 3.2E+02 |
| >10-12 C aromatics (TPH) | NA | – | – | 9.8E-01 | 9.8E+01 | – | – | 4.3E+03 | 5.5E+02 | – | – | 2.9E+00 | 2.9E+02 | – | – | 6.0E+03 | 7.7E+02 |
| >12-16 C aromatics (TPH) | NA | – | – | 9.8E-01 | 9.8E+01 | – | – | 7.5E+03 | 9.7E+02 | – | – | 2.9E+00 | 2.9E+02 | – | – | 1.0E+04 | 1.4E+03 |
| >16-21 C aromatics (TPH) | NA | – | – | 7.3E-01 | 7.3E+01 | – | – | – | – | – | – | 2.2E+00 | 2.2E+02 | – | – | – | – |
| >21-35 C aromatics (TPH) | NA | – | – | 7.3E-01 | 7.3E+01 | – | – | – | – | – | – | 2.2E+00 | 2.2E+02 | – | – | – | – |

**Footnotes**

**1** Based on primary MCLs when available

**2** 100 x $^{GW}GW_{Ing}$

**3** The total MCL for trihalomethanes (bromodichloromethane, bromoform, chloroform, and dibromochloromethane) is 0.08 mg/L.

***** These compounds are not necessarily of concern from a human health standpoint, therefore calculation of human health-based values is not required. However, aesthetics and ecological criteria would still apply. See table entitled "Compounds for which Calculation of a Human Health PCL is Not Required" available on the TCEQ website at http://www.tceq.state.tx.us/remediation/trrp/trrp.html.

NA=Not applicable

All values capped at 1E+06

This table shows the residential and commercial and industrial groundwater protective concentration levels with carcinogenic and non-carcinogenic values depicted.

end of worksheet

# Table 9
# Individual RBELs Residential

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | Soil | | | | | | | | | | Groundwater | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Carcinogenic | | | | | Noncarcinogenic | | | | | Carcinogenic | | Noncarcinogenic | |
| | | $^{Air}RBEL_{Inh}$ (mg/m3) | $^{Soil}RBEL_{Ing}$ (mg/kg) | $^{Soil}RBEL_{Derm}$ (mg/kg) | $^{AbgVeg}RBEL_{Ing}$ above-ground (mg/kg) | $^{BgVeg}RBEL_{Ing}$ below-ground (mg/kg) | $^{Air}RBEL_{Inh}$ (mg/m3) | $^{Soil}RBEL_{Ing}$ (mg/kg) | $^{Soil}RBEL_{Derm}$ (mg/kg) | $^{AbgVeg}RBEL_{Ing}$ above-ground (mg/kg) | $^{BgVeg}RBEL_{Ing}$ below-ground (mg/kg) | $^{GW}RBEL_{Ing}$ [1] (mg/L) | $^{GW}RBEL_{Class\ 3}$ [2] (mg/L) | $^{GW}RBEL_{Ing}$ [1] (mg/L) | $^{GW}RBEL_{Class\ 3}$ [2] (mg/L) |
| Acenaphthene | 83-32-9 | – | – | – | – | – | – | 4.9E+03 | 1.6E+04 | – | 9.4E+02 | – | – | 1.5E+00 | 1.5E+02 |
| Acenaphthylene | 208-96-8 | – | – | – | – | – | – | 4.9E+03 | 1.6E+04 | – | – | – | – | 1.5E+00 | 1.5E+02 |
| Acetaldehyde | 75-07-0 | 1.1E-02 | – | – | – | – | 9.4E-03 | 8.2E+03 | – | – | – | – | – | 2.4E+00 | 2.4E+02 |
| Acetate, 2-ethoxyethanol | 111-15-9 | – | – | – | – | – | 6.3E-02 | 8.2E+03 | – | – | – | – | – | 2.4E+00 | 2.4E+02 |
| Acetate, isoamyl | 123-92-2 | – | – | – | – | – | – | 5.9E+03 | – | – | – | – | – | 1.8E+00 | 1.8E+02 |
| Acetate, isobutyl | 110-19-0 | – | – | – | – | – | – | 3.9E+03 | – | – | – | – | – | 1.2E+00 | 1.2E+02 |
| Acetate, sec-butyl | 105-46-4 | – | – | – | – | – | – | 3.9E+03 | – | – | – | – | – | 1.2E+00 | 1.2E+02 |
| Acetic acid* | 64-19-7 | – | – | – | – | – | – | – | – | – | – | – | – | – | – |
| Acetone (2-propanone) | 67-64-1 | – | – | – | – | – | 3.2E+01 | 7.4E+04 | – | – | – | – | – | 2.2E+01 | 2.2E+03 |
| Acetone cyanohydrin | 75-86-5 | – | – | – | – | – | 6.3E-02 | 2.5E+02 | 1.1E+03 | – | – | – | – | 7.3E-02 | 7.3E+00 |
| Acetonitrile | 75-05-8 | – | – | – | – | – | 6.3E-02 | 2.6E+03 | – | – | – | – | – | 7.8E-01 | 7.8E+01 |
| Acetophenone | 98-86-2 | – | – | – | – | – | – | 8.2E+03 | 3.6E+04 | – | – | – | – | 2.4E+00 | 2.4E+02 |
| Acetylaminofluorene, 2- | 53-96-3 | 1.9E-05 | 1.6E+00 | 5.5E+00 | – | – | – | – | – | – | – | 2.4E-04 | 2.4E-02 | – | – |
| Acifluorfen, sodium | 62476-59-9 | – | – | – | – | – | – | 1.1E+03 | 4.6E+03 | – | – | – | – | 3.2E-01 | 3.2E+01 |
| Acridine | 260-94-6 | – | – | – | – | – | – | 2.5E+02 | 1.1E+03 | – | – | – | – | 7.3E-02 | 7.3E+00 |
| Acrolein | 107-02-8 | – | – | – | – | – | 2.8E-03 | 4.1E+01 | – | – | – | – | – | 1.2E-02 | 1.2E+00 |
| Acrylamide | 79-06-1 | 2.4E-04 | 1.2E+01 | 4.2E+01 | – | – | 6.3E-03 | 1.6E+02 | 7.1E+02 | – | – | 1.8E-03 | 1.8E-01 | 4.9E-02 | 4.9E+00 |
| Acrylic acid | 79-10-7 | – | – | – | – | – | 1.0E-03 | 4.1E+04 | – | – | – | – | – | 1.2E+01 | 1.2E+03 |
| Acrylonitrile | 107-13-1 | 3.6E-04 | 1.1E+01 | – | – | – | 2.1E-03 | 8.2E+01 | – | – | – | 1.7E-03 | 1.7E-01 | 2.4E-02 | 2.4E+00 |
| Adipic acid (hexanedioic acid) | 124-04-9 | – | – | – | – | – | – | 1.6E+05 | 7.1E+05 | – | – | – | – | 4.9E+01 | 4.9E+03 |
| Alachlor | 15972-60-8 | – | 7.6E+01 | 2.6E+02 | – | – | – | 8.2E+02 | 3.6E+03 | – | – | 1.1E-02 | 1.1E+00 | 2.4E-01 | 2.4E+01 |
| Aldicarb | 116-06-3 | – | – | – | – | – | – | 8.2E+01 | 3.6E+02 | – | – | – | – | 2.4E-02 | 2.4E+00 |
| Aldicarb sulfone | 1646-88-4 | – | – | – | – | – | – | 8.2E+01 | 3.6E+02 | – | – | – | – | 2.4E-02 | 2.4E+00 |
| Aldrin | 309-00-2 | 5.0E-06 | 3.6E-01 | 1.2E+00 | – | 3.4E-02 | – | 2.5E+00 | 1.1E+01 | – | 4.7E-01 | 5.4E-05 | 5.4E-03 | 7.3E-04 | 7.3E-02 |
| Allyl alcohol | 107-18-6 | – | – | – | – | – | 1.0E-04 | 4.1E+02 | – | – | – | – | – | 1.2E-01 | 1.2E+01 |
| Allyl chloride | 107-05-1 | – | – | – | – | – | 1.0E-03 | 8.2E+02 | – | – | – | – | – | 2.4E-01 | 2.4E+01 |
| Aluminum | 7429-90-5 | – | – | – | – | – | 5.2E-03 | 8.2E+04 | 3.6E+05 | 6.5E+03 | 1.6E+04 | – | – | 2.4E+01 | 2.4E+03 |
| Ametryn | 834-12-8 | – | – | – | – | – | – | 7.4E+02 | 3.2E+03 | – | – | – | – | 2.2E-01 | 2.2E+01 |
| Amino-2,6-dinitrotoluene, 4- | 19406-51-0 | – | 6.1E+02 | 2.1E+03 | – | – | – | 1.4E+01 | 5.9E+01 | – | – | 9.1E-02 | 9.1E+00 | 4.1E-03 | 4.1E-01 |
| Amino-4,6-dinitrotoluene, 2- | 35572-78-2 | – | 6.1E+02 | 2.1E+03 | – | – | – | 1.4E+01 | 5.9E+01 | – | – | 9.1E-02 | 9.1E+00 | 4.1E-03 | 4.1E-01 |
| Aminobiphenyl, 4- (1,1-biphenyl-4-amine) | 92-67-1 | – | 1.0E+00 | 3.4E+00 | – | – | – | – | – | – | – | 1.5E-04 | 1.5E-02 | – | – |
| Aminopyridine, 4- | 504-24-5 | – | – | – | – | – | – | 1.6E+00 | 7.1E+00 | – | – | – | – | 4.9E-04 | 4.9E-02 |
| Ammonia | 7664-41-7 | – | – | – | – | – | 3.3E-01 | – | – | – | – | – | – | – | – |
| Ammonium polyphosphate* | 6833-79-9 | – | – | – | – | – | – | – | – | – | – | – | – | – | – |
| Ammonium salts* | AMMONIUM | – | – | – | – | – | – | – | – | – | – | – | – | – | – |
| Aniline | 62-53-3 | – | 1.1E+03 | 3.6E+03 | – | – | 1.0E-03 | 5.7E+02 | 2.5E+03 | – | – | 1.6E-01 | 1.6E+01 | 1.7E-01 | 1.7E+01 |
| Anthracene | 120-12-7 | – | – | – | – | – | – | 2.5E+04 | 8.2E+04 | – | 4.7E+03 | – | – | 7.3E+00 | 7.3E+02 |
| Anthraquinone, 9,10- | 84-65-1 | – | 1.6E+02 | 5.3E+02 | – | – | – | 1.6E+03 | 7.1E+03 | – | – | 2.3E-02 | 2.3E+00 | 4.9E-01 | 4.9E+01 |
| Antimony | 7440-36-0 | – | – | – | – | – | – | 3.3E+01 | 2.1E+02 | 2.6E+00 | 6.3E+00 | – | – | 9.8E-03 | 9.8E-01 |
| Aramite | 140-57-8 | 3.4E-03 | 2.4E+02 | 8.3E+02 | – | 2.3E+01 | – | 4.1E+03 | 1.8E+04 | – | 7.8E+02 | 3.7E-02 | 3.7E+00 | 1.2E+00 | 1.2E+02 |

# Table 9
# Individual RBELs Residential

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | Soil | | | | | | | | | | Groundwater | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Carcinogenic | | | | | Noncarcinogenic | | | | | Carcinogenic | | Noncarcinogenic | |
| | | $^{Air}RBEL_{Inh}$ (mg/m3) | $^{Soil}RBEL_{Ing}$ (mg/kg) | $^{Soil}RBEL_{Derm}$ (mg/kg) | $^{AbgVeg}RBEL_{Ing}$ above-ground (mg/kg) | $^{BgVeg}RBEL_{Ing}$ below-ground (mg/kg) | $^{Air}RBEL_{Inh}$ (mg/m3) | $^{Soil}RBEL_{Ing}$ (mg/kg) | $^{Soil}RBEL_{Derm}$ (mg/kg) | $^{AbgVeg}RBEL_{Ing}$ above-ground (mg/kg) | $^{BgVeg}RBEL_{Ing}$ below-ground (mg/kg) | $^{GW}RBEL_{Ing}$ [1] (mg/L) | $^{GW}RBEL_{Class\ 3}$ [2] (mg/L) | $^{GW}RBEL_{Ing}$ [1] (mg/L) | $^{GW}RBEL_{Class\ 3}$ [2] (mg/L) |
| Arsenic | 7440-38-2 | 1.6E-04 | 5.2E+01 | 4.6E+02 | 1.7E+00 | 3.9E+00 | – | 3.1E+01 | 3.6E+02 | 2.0E+00 | 4.7E+00 | 6.1E-03 | 6.1E-01 | 7.3E-03 | 7.3E-01 |
| Arsine | 7784-42-1 | – | – | – | – | – | 5.2E-05 | – | – | – | – | – | – | – | – |
| Atrazine | 1912-24-9 | – | 2.7E+01 | 9.4E+01 | – | – | – | 2.9E+03 | 1.2E+04 | – | – | 4.1E-03 | 4.1E-01 | 8.6E-01 | 8.6E+01 |
| Azinphos-methyl (guthion) | 86-50-0 | – | – | – | – | – | – | 1.2E+02 | 5.3E+02 | – | – | – | – | 3.7E-02 | 3.7E+00 |
| Azobenzene | 103-33-3 | 7.8E-04 | 5.5E+01 | 1.9E+02 | – | 5.3E+00 | – | – | – | – | – | 8.3E-03 | 8.3E-01 | – | – |
| Barium | 7440-39-3 | – | – | – | – | – | – | 1.6E+04 | 5.0E+04 | 1.3E+03 | 3.1E+03 | – | – | 4.9E+00 | 4.9E+02 |
| Bayleton | 43121-43-3 | – | – | – | – | – | – | 2.5E+03 | 1.1E+04 | – | – | – | – | 7.3E-01 | 7.3E+01 |
| Benefin (benfluralin) | 1861-40-1 | – | – | – | – | – | – | 2.5E+04 | 1.1E+05 | – | 4.7E+03 | – | – | 7.3E+00 | 7.3E+02 |
| Benomyl | 17804-35-2 | – | – | – | – | – | – | 4.1E+03 | 1.8E+04 | – | – | – | – | 1.2E+00 | 1.2E+02 |
| Benz-a-anthracene | 56-55-3 | 4.1E-04 | 6.1E+01 | 1.6E+02 | – | 5.8E+00 | – | – | – | – | – | 9.1E-03 | 9.1E-01 | – | – |
| Benzaldehyde | 100-52-7 | – | – | – | – | – | – | 8.2E+03 | – | – | – | – | – | 2.4E+00 | 2.4E+02 |
| Benzene | 71-43-2 | 1.1E-02 | 4.0E+02 | – | – | – | 2.9E-01 | 3.3E+02 | – | – | – | 6.1E-02 | 6.1E+00 | 9.8E-02 | 9.8E+00 |
| Benzenedicarbonitrile, 1,3- | 626-17-5 | – | – | – | – | – | – | 4.9E+02 | 2.1E+03 | – | – | – | – | 1.5E-01 | 1.5E+01 |
| Benzenedicarboxylic acid, 1,2-disodecyl ester | 26761-40-0 | – | – | – | – | – | 5.2E-03 | 3.3E+03 | 1.4E+04 | – | 6.3E+02 | – | – | 9.8E-01 | 9.8E+01 |
| Benzenethiol | 108-98-5 | – | – | – | – | – | – | 8.2E+01 | – | – | – | – | – | 2.4E-02 | 2.4E+00 |
| Benzidine | 92-87-5 | 3.6E-07 | 2.6E-02 | 9.0E-02 | – | – | – | 2.5E+02 | 1.1E+03 | – | – | 4.0E-06 | 4.0E-04 | 7.3E-02 | 7.3E+00 |
| Benzo-a-pyrene | 50-32-8 | 4.1E-05 | 6.1E+00 | 1.6E+01 | – | 5.8E-01 | 2.1E-06 | 2.5E+01 | 8.2E+01 | – | 4.7E+00 | 9.1E-04 | 9.1E-02 | 7.3E-03 | 7.3E-01 |
| Benzo-b-fluoranthene | 205-99-2 | 4.1E-04 | 6.1E+01 | 1.6E+02 | – | 5.8E+00 | – | – | – | – | – | 9.1E-03 | 9.1E-01 | – | – |
| Benzo-e-pyrene | 192-97-2 | – | – | – | – | – | – | 2.5E+03 | 8.2E+03 | – | 4.7E+02 | – | – | 7.3E-01 | 7.3E+01 |
| Benzo-g,h,i-perylene | 191-24-2 | – | – | – | – | – | – | 2.5E+03 | 8.2E+03 | – | 4.7E+02 | – | – | 7.3E-01 | 7.3E+01 |
| Benzoic acid | 65-85-0 | – | – | – | – | – | – | 3.3E+05 | 1.0E+06 | – | – | – | – | 9.8E+01 | 9.8E+03 |
| Benzo-j-fluoranthene | 205-82-3 | 4.1E-04 | 6.1E+01 | 1.6E+02 | – | 5.8E+00 | – | – | – | – | – | 9.1E-03 | 9.1E-01 | – | – |
| Benzo-k-fluoranthene | 207-08-9 | 4.1E-03 | 6.1E+02 | 1.6E+03 | – | 5.8E+01 | – | – | – | – | – | 9.1E-02 | 9.1E+00 | – | – |
| Benzophenone | 119-61-9 | – | – | – | – | – | – | 5.5E+02 | 2.4E+03 | – | – | – | – | 1.6E-01 | 1.6E+01 |
| Benzotrichloride | 98-07-7 | – | 4.7E-01 | 1.6E+00 | – | – | – | – | – | – | – | 7.0E-05 | 7.0E-03 | – | – |
| Benzoyl peroxide | 94-36-0 | – | – | – | – | – | – | 4.1E+03 | 1.8E+04 | – | – | – | – | 1.2E+00 | 1.2E+02 |
| Benzyl alcohol | 100-51-6 | – | – | – | – | – | – | 8.2E+03 | 3.6E+04 | – | – | – | – | 2.4E+00 | 2.4E+02 |
| Benzyl chloride | 100-44-7 | – | 3.6E+01 | – | – | – | 1.0E-03 | 1.6E+02 | – | – | – | 5.4E-03 | 5.4E-01 | 4.9E-02 | 4.9E+00 |
| Benzyl dichloride | 98-87-3 | – | 3.6E+01 | 1.2E+02 | – | – | 1.0E-03 | 1.6E+02 | 7.1E+02 | – | – | 5.4E-03 | 5.4E-01 | 4.9E-02 | 4.9E+00 |
| Beryllium | 7440-41-7 | 1.0E-05 | – | – | – | – | 2.1E-05 | 1.6E+02 | 5.0E+01 | 1.3E+01 | 3.1E+01 | – | – | 4.9E-02 | 4.9E+00 |
| Biphenyl, 1,1- | 92-52-4 | – | – | – | – | – | – | 4.1E+04 | 1.8E+04 | – | – | – | – | 1.2E+01 | 1.2E+03 |
| Biphenyl, 1,1'-, 2-phenoxy- | 6738-04-1 | – | – | – | – | – | – | 4.1E+03 | 1.8E+04 | – | 7.8E+02 | – | – | 1.2E+00 | 1.2E+02 |
| Biquinoline, 2,2'- | 119-91-5 | – | – | – | – | – | – | 2.5E+02 | 1.1E+03 | – | 4.7E+01 | – | – | 7.3E-02 | 7.3E+00 |
| Bis (2-chloroethoxy) methane | 111-91-1 | 7.4E-05 | 5.5E+00 | 1.9E+01 | – | – | – | 2.5E+02 | 1.1E+03 | – | – | 8.3E-04 | 8.3E-02 | 7.3E-02 | 7.3E+00 |
| Bis (2-chloroethyl) ether | 111-44-4 | 7.4E-05 | 5.5E+00 | – | – | – | – | – | – | – | – | 8.3E-04 | 8.3E-02 | – | – |
| Bis (2-chloro-1-methyl) ether | 108-60-1 | 2.4E-03 | 8.7E+01 | 3.0E+02 | – | – | – | 3.3E+03 | 1.4E+04 | – | – | 1.3E-02 | 1.3E+00 | 9.8E-01 | 9.8E+01 |
| Bis (2-chloromethyl) ether | 542-88-1 | 3.9E-07 | 2.8E-02 | – | – | – | – | – | – | – | – | 4.1E-06 | 4.1E-04 | – | – |
| Bis (2-ethyl-hexyl) phthalate | 117-81-7 | – | 4.3E+02 | 2.8E+02 | – | 4.2E+01 | – | 1.6E+03 | 1.4E+03 | – | 3.1E+02 | 6.5E-02 | 6.5E+00 | 4.9E-01 | 4.9E+01 |
| Bismuth | 7440-69-9 | – | – | – | – | – | – | 4.1E+04 | 3.6E+05 | 3.3E+03 | – | – | – | 1.2E+01 | 1.2E+03 |
| Bisphenol A | 80-05-7 | – | – | – | – | – | – | 4.1E+03 | 1.8E+04 | – | – | – | – | 1.2E+00 | 1.2E+02 |

# Table 9
# Individual RBELs Residential

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | Soil | | | | | | | | | | Groundwater | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Carcinogenic | | | | | Noncarcinogenic | | | | | Carcinogenic | | Noncarcinogenic | |
| | | $^{Air}RBEL_{Inh}$ (mg/m3) | $^{Soil}RBEL_{Ing}$ (mg/kg) | $^{Soil}RBEL_{Derm}$ (mg/kg) | $^{AbgVeg}RBEL_{Ing}$ above-ground (mg/kg) | $^{BgVeg}RBEL_{Ing}$ below-ground (mg/kg) | $^{Air}RBEL_{Inh}$ (mg/m3) | $^{Soil}RBEL_{Ing}$ (mg/kg) | $^{Soil}RBEL_{Derm}$ (mg/kg) | $^{AbgVeg}RBEL_{Ing}$ above-ground (mg/kg) | $^{BgVeg}RBEL_{Ing}$ below-ground (mg/kg) | $^{GW}RBEL_{Ing}$ [1] (mg/L) | $^{GW}RBEL_{Class\ 3}$ [2] (mg/L) | $^{GW}RBEL_{Ing}$ [1] (mg/L) | $^{GW}RBEL_{Class\ 3}$ [2] (mg/L) |
| Boron | 7440-42-8 | – | – | – | – | – | 2.1E-02 | 1.6E+04 | 7.1E+05 | – | – | – | – | 4.9E+00 | 4.9E+02 |
| Bromacil | 314-40-9 | – | – | – | – | – | – | 8.2E+03 | 3.6E+04 | – | – | – | – | 2.4E+00 | 2.4E+02 |
| Bromo-2-chloroethane, 1- | 107-04-0 | – | – | – | – | – | – | 3.3E+03 | – | – | – | – | – | 9.8E-01 | 9.8E+01 |
| Bromobenzene | 108-86-1 | – | – | – | – | – | 6.3E-02 | 6.6E+02 | – | – | – | – | – | 2.0E-01 | 2.0E+01 |
| Bromodichloromethane[3] | 75-27-4 | – | 9.8E+01 | – | – | – | – | 1.6E+03 | – | – | – | 1.5E-02 | 1.5E+00 | 4.9E-01 | 4.9E+01 |
| Bromoform[3] | 75-25-2 | 2.2E-02 | 7.7E+02 | – | – | – | – | 1.6E+03 | – | – | – | 1.2E-01 | 1.2E+01 | 4.9E-01 | 4.9E+01 |
| Bromomethane | 74-83-9 | – | – | – | – | – | 5.2E-03 | 1.1E+02 | – | – | – | – | – | 3.4E-02 | 3.4E+00 |
| Bromophenyl phenylether, 4- | 101-55-3 | 7.4E-06 | 4.0E-01 | 1.4E+00 | – | 3.9E-02 | – | – | – | – | – | 6.1E-05 | 6.1E-03 | – | – |
| Butadiene, 1,3- | 106-99-0 | 4.9E-02 | – | – | – | – | 3.4E-02 | – | – | – | – | – | – | – | – |
| Butadiene, 2-methyl-1,3- (isoprene) | 78-79-5 | – | – | – | – | – | 1.9E+01 | 4.9E+03 | – | – | – | – | – | 1.5E+00 | 1.5E+02 |
| Butanal (butyraldehyde) | 123-72-8 | – | – | – | – | – | 1.0E-01 | 4.9E+03 | – | – | – | – | – | 1.5E+00 | 1.5E+02 |
| Butane, 2,3-dimethyl- | 79-29-8 | – | – | – | – | – | 1.9E+01 | 4.9E+03 | – | – | – | – | – | 1.5E+00 | 1.5E+02 |
| Butanoic acid (butyric acid) | 107-92-6 | – | – | – | – | – | 1.0E-03 | 4.1E+04 | 1.8E+05 | – | – | – | – | 1.2E+01 | 1.2E+03 |
| Butanol, 2- | 78-92-2 | – | – | – | – | – | 3.1E+01 | 1.6E+05 | – | – | – | – | – | 4.9E+01 | 4.9E+03 |
| Butanol, 2-methyl-1- | 137-32-6 | – | – | – | – | – | – | 8.2E+02 | – | – | – | – | – | 2.4E-01 | 2.4E+01 |
| Butanol, 2-methyl-2- | 75-85-4 | – | – | – | – | – | – | 8.2E+02 | – | – | – | – | – | 2.4E-01 | 2.4E+01 |
| Butanol, n- | 71-36-3 | – | – | – | – | – | – | 8.2E+03 | – | – | – | – | – | 2.4E+00 | 2.4E+02 |
| Butene, 1- | 106-98-9 | – | – | – | – | – | 5.5E+00 | 4.9E+03 | – | – | – | – | – | 1.5E+00 | 1.5E+02 |
| Butene, cis-2- | 590-18-1 | – | – | – | – | – | 1.7E+00 | 4.9E+03 | – | – | – | – | – | 1.5E+00 | 1.5E+02 |
| Butene, trans-2- | 624-64-6 | – | – | – | – | – | 1.7E+00 | 4.9E+03 | – | – | – | – | – | 1.5E+00 | 1.5E+02 |
| Butoxy ethanol, 2- (Ethylene glycol monobutyl ether; EGBE) | 111-76-2 | – | – | – | – | – | 1.7E+00 | 8.2E+03 | 3.6E+04 | – | – | – | – | 2.4E+00 | 2.4E+02 |
| Butyl acetate | 123-86-4 | – | – | – | – | – | 4.9E+00 | 1.1E+04 | – | – | – | – | – | 3.4E+00 | 3.4E+02 |
| Butyl acrylate | 141-32-2 | – | – | – | – | – | – | 7.4E+02 | – | – | – | – | – | 2.2E-01 | 2.2E+01 |
| Butyl benzyl phthalate | 85-68-7 | – | 3.2E+03 | 1.1E+04 | – | 3.1E+02 | – | 1.6E+04 | 7.1E+04 | – | 3.1E+03 | 4.8E-01 | 4.8E+01 | 4.9E+00 | 4.9E+02 |
| Butyl ether, n- (dibutyl ether) | 142-96-1 | – | – | – | – | – | – | 8.2E+03 | – | – | – | – | – | 2.4E+00 | 2.4E+02 |
| Butyl methacrylate | 97-88-1 | – | – | – | – | – | – | 7.4E+03 | 6.4E+03 | – | – | – | – | 2.2E+00 | 2.2E+02 |
| Butylate | 2008-41-5 | – | – | – | – | – | – | 4.1E+03 | 1.8E+04 | – | – | – | – | 1.2E+00 | 1.2E+02 |
| Butylbenzene, n- | 104-51-8 | – | – | – | – | – | – | 4.1E+03 | 1.8E+04 | – | – | – | – | 1.2E+00 | 1.2E+02 |
| Butylbenzene, sec- | 135-98-8 | – | – | – | – | – | – | 3.3E+03 | – | – | – | – | – | 9.8E-01 | 9.8E+01 |
| Butylbenzene, tert- | 98-06-6 | – | – | – | – | – | – | 3.3E+03 | – | – | – | – | – | 9.8E-01 | 9.8E+01 |
| Cacodylic acid | 75-60-5 | – | – | – | – | – | – | 2.5E+02 | 1.1E+03 | – | – | – | – | 7.3E-02 | 7.3E+00 |
| Cadmium | 7440-43-9 | 5.0E-05 | – | – | – | – | 1.1E-05 | 2.6E+02 | 2.3E+03 | 1.1E+01 | 2.6E+01 | – | – | 2.4E-02 | 2.4E+00 |
| Calcium* | 7440-70-2 | – | – | – | – | – | – | – | – | – | – | – | – | – | – |
| Caprolactam | 105-60-2 | – | – | – | – | – | – | 4.1E+04 | 1.8E+05 | – | – | – | – | 1.2E+01 | 1.2E+03 |
| Captan | 133-06-2 | – | 1.7E+03 | 5.9E+03 | – | – | – | 1.1E+04 | 4.6E+04 | – | – | 2.6E-01 | 2.6E+01 | 3.2E+00 | 3.2E+02 |
| Carbaryl | 63-25-2 | – | – | – | – | – | – | 8.2E+03 | 3.6E+04 | – | – | – | – | 2.4E+00 | 2.4E+02 |
| Carbazole | 86-74-8 | – | 3.0E+02 | 1.0E+03 | – | – | – | – | – | – | – | 4.6E-02 | 4.6E+00 | – | – |
| Carbofuran | 1563-66-2 | – | – | – | – | – | – | 4.1E+02 | 1.8E+03 | – | – | – | – | 1.2E-01 | 1.2E+01 |
| Carbon disulfide | 75-15-0 | – | – | – | – | – | 7.3E-01 | 8.2E+03 | – | – | – | – | – | 2.4E+00 | 2.4E+02 |
| Carbon tetrachloride | 56-23-5 | 4.1E-03 | 8.7E+01 | – | – | – | 1.0E-01 | 3.3E+02 | – | – | – | 1.3E-02 | 1.3E+00 | 9.8E-02 | 9.8E+00 |

# Table 9
# Individual RBELs Residential

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | Soil | | | | | | | | | | Groundwater | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Carcinogenic | | | | | Noncarcinogenic | | | | | Carcinogenic | | Noncarcinogenic | |
| | | $^{Air}RBEL_{Inh}$ (mg/m3) | $^{Soil}RBEL_{Ing}$ (mg/kg) | $^{Soil}RBEL_{Derm}$ (mg/kg) | $^{AbgVeg}RBEL_{Ing}$ above-ground (mg/kg) | $^{BgVeg}RBEL_{Ing}$ below-ground (mg/kg) | $^{Air}RBEL_{Inh}$ (mg/m3) | $^{Soil}RBEL_{Ing}$ (mg/kg) | $^{Soil}RBEL_{Derm}$ (mg/kg) | $^{AbgVeg}RBEL_{Ing}$ above-ground (mg/kg) | $^{BgVeg}RBEL_{Ing}$ below-ground (mg/kg) | $^{GW}RBEL_{Ing}$ [1] (mg/L) | $^{GW}RBEL_{Class\ 3}$ [2] (mg/L) | $^{GW}RBEL_{Ing}$ [1] (mg/L) | $^{GW}RBEL_{Class\ 3}$ [2] (mg/L) |
| Carbophenothion | 786-19-6 | – | – | – | – | – | – | 1.1E+03 | 4.6E+03 | – | 2.0E+02 | – | – | 3.2E-01 | 3.2E+01 |
| Carbosulfan | 55285-14-8 | – | – | – | – | – | – | 8.2E+02 | 3.6E+03 | – | 1.6E+02 | – | – | 2.4E-01 | 2.4E+01 |
| Carboxin | 5234-68-4 | – | – | – | – | – | – | 8.2E+03 | 3.6E+04 | – | – | – | – | 2.4E+00 | 2.4E+02 |
| Chloral | 75-87-6 | – | – | – | – | – | – | 8.2E+03 | – | – | – | – | – | 2.4E+00 | 2.4E+02 |
| Chloral hydrate (1,1-ethanediol, 2,2,2-trichloro-) | 302-17-0 | – | – | – | – | – | – | 8.2E+03 | 3.6E+04 | – | – | – | – | 2.4E+00 | 2.4E+02 |
| Chloramben (amiben; 3-amino-2,5-dichlorobenzoic acid) | 133-90-4 | – | – | – | – | – | – | 1.2E+03 | 5.3E+03 | – | – | – | – | 3.7E-01 | 3.7E+01 |
| Chlordane (technical) | 12789-03-6 | 2.4E-04 | 1.7E+01 | 1.5E+02 | – | 1.7E+00 | 7.3E-04 | 4.1E+01 | 4.4E+02 | – | 7.8E+00 | 2.6E-03 | 2.6E-01 | 1.2E-02 | 1.2E+00 |
| Chlordane, cis- (alpha chlordane) | 5103-71-9 | 2.4E-04 | 1.7E+01 | 5.9E+01 | – | 1.7E+00 | 7.3E-04 | 4.1E+01 | 1.8E+02 | – | 7.8E+00 | 2.6E-03 | 2.6E-01 | 1.2E-02 | 1.2E+00 |
| Chlordane, trans- (gamma chordane) | 5103-74-2 | 2.4E-04 | 1.7E+01 | 5.9E+01 | – | 1.7E+00 | 7.3E-04 | 4.1E+01 | 1.8E+02 | – | 7.8E+00 | 2.6E-03 | 2.6E-01 | 1.2E-02 | 1.2E+00 |
| Chlorfenvinphos | 470-90-6 | – | – | – | – | – | 2.1E-03 | 5.7E+01 | 2.5E+02 | – | 1.1E+01 | – | – | 1.7E-02 | 1.7E+00 |
| Chloride* | 16887-00-6 | – | – | – | – | – | – | – | – | – | – | – | – | – | – |
| Chlorine | 7782-50-5 | – | – | – | – | – | 9.1E-03 | 8.2E+03 | 7.1E+04 | – | – | – | – | 2.4E+00 | 2.4E+02 |
| Chloro-1,3-butadiene, 2- | 126-99-8 | 8.1E-05 | – | – | – | – | 2.1E-02 | – | – | – | – | – | – | – | – |
| Chloro-2-propanol, 1- | 127-00-4 | – | – | – | – | – | – | 1.6E+03 | – | – | – | – | – | 4.9E-01 | 4.9E+01 |
| Chloro-3-methylphenol, 4- | 59-50-7 | – | – | – | – | – | – | 4.1E+02 | 1.8E+03 | – | – | – | – | 1.2E-01 | 1.2E+01 |
| Chloroaniline, p- | 106-47-8 | – | 3.0E+01 | 1.0E+02 | – | – | – | 3.3E+02 | 1.4E+03 | – | – | 4.6E-03 | 4.6E-01 | 9.8E-02 | 9.8E+00 |
| Chlorobenzene | 108-90-7 | – | – | – | – | – | 5.2E-02 | 1.6E+03 | – | – | – | – | – | 4.9E-01 | 4.9E+01 |
| Chlorobenzilate | 510-15-6 | 3.1E-04 | 2.2E+01 | 7.7E+01 | – | – | – | 1.6E+03 | 7.1E+03 | – | – | 3.4E-03 | 3.4E-01 | 4.9E-01 | 4.9E+01 |
| Chlorobromomethane (bromochloromethane) | 74-97-5 | – | – | – | – | – | – | 3.3E+03 | – | – | – | – | – | 9.8E-01 | 9.8E+01 |
| Chlorodifluoromethane | 75-45-6 | – | – | – | – | – | 5.2E+01 | – | – | – | – | – | – | – | – |
| Chloroethane (ethyl chloride) | 75-00-3 | – | – | – | – | – | 1.0E+01 | 3.3E+04 | – | – | – | – | – | 9.8E+00 | 9.8E+02 |
| Chloroethanol, 2- | 107-07-3 | – | – | – | – | – | – | 1.6E+03 | – | – | – | – | – | 4.9E-01 | 4.9E+01 |
| Chloroethoxy ethene, 2- (2-chloroethylvinylether) | 110-75-8 | – | 5.5E+00 | – | – | – | 3.1E-04 | 1.6E+02 | – | – | – | 8.3E-04 | 8.3E-02 | 4.9E-02 | 4.9E+00 |
| Chloroform[3] | 67-66-3 | 1.1E-03 | – | – | – | – | 1.0E-01 | 8.2E+02 | – | – | – | – | – | 2.4E-01 | 2.4E+01 |
| Chlorohexane, 1- | 544-10-5 | – | – | – | – | – | 1.0E+00 | 3.3E+03 | – | – | – | – | – | 9.8E-01 | 9.8E+01 |
| Chloromethane (methyl chloride) | 74-87-3 | 1.4E-02 | 4.7E+02 | – | – | – | 9.4E-02 | 2.9E+02 | – | – | – | 7.0E-02 | 7.0E+00 | 8.8E-02 | 8.8E+00 |
| Chloronaphthalene, 1- (Chloronaphthalene, alpha-) | 90-13-1 | – | – | – | – | – | – | 6.6E+03 | 2.2E+04 | – | 1.3E+03 | – | – | 2.0E+00 | 2.0E+02 |
| Chloronaphthalene, 2- (chloronaphthalene, beta) | 91-58-7 | – | – | – | – | – | – | 6.6E+03 | 2.2E+04 | – | – | – | – | 2.0E+00 | 2.0E+02 |
| Chloronitrobenzene, p- (1-chloro-4-nitrobenzene) | 100-00-5 | – | 9.6E+02 | 3.3E+03 | – | – | 6.3E-04 | 8.2E+01 | 3.6E+02 | – | – | 1.4E-01 | 1.4E+01 | 2.4E-02 | 2.4E+00 |
| Chlorophenol, 2- | 95-57-8 | – | – | – | – | – | – | 4.1E+02 | – | – | – | – | – | 1.2E-01 | 1.2E+01 |
| Chlorophenol, 3- | 108-43-0 | – | – | – | – | – | – | 4.1E+02 | 1.8E+03 | – | – | – | – | 1.2E-01 | 1.2E+01 |
| Chlorophenol, 4- | 106-48-9 | – | – | – | – | – | – | 4.1E+02 | 1.8E+03 | – | – | – | – | 1.2E-01 | 1.2E+01 |
| Chlorophenyl phenylether, 4- | 7005-72-3 | 7.4E-06 | 4.0E-01 | 1.4E+00 | – | 3.9E-02 | – | – | – | – | – | 6.1E-05 | 6.1E-03 | – | – |
| Chloropropane, 2- | 75-29-6 | – | – | – | – | – | 1.0E-01 | 2.5E+03 | – | – | – | – | – | 7.3E-01 | 7.3E+01 |
| Chlorothalonil | 1897-45-6 | – | 5.5E+02 | 1.9E+03 | – | – | – | 1.2E+03 | 5.3E+03 | – | – | 8.3E-02 | 8.3E+00 | 3.7E-01 | 3.7E+01 |
| Chlorotoluene, o- (2-chlorotoluene) | 95-49-8 | – | – | – | – | – | 8.3E-01 | 1.6E+03 | 7.1E+03 | – | – | – | – | 4.9E-01 | 4.9E+01 |
| Chlorotoluene, p- (4-chlorotoluene) | 106-43-4 | – | – | – | – | – | – | 1.6E+03 | – | – | – | – | – | 4.9E-01 | 4.9E+01 |
| Chlorpyrifos | 2921-88-2 | – | – | – | – | – | – | 2.5E+02 | 1.1E+03 | – | 4.7E+01 | – | – | 7.3E-02 | 7.3E+00 |
| Chromium (III) | 16065-83-1 | – | – | – | – | – | 1.5E-04 | 1.2E+05 | 6.9E+04 | 9.8E+03 | 2.3E+04 | – | – | 3.7E+01 | 3.7E+03 |
| Chromium (total) | 7440-47-3 | – | – | – | – | – | 1.5E-04 | 1.2E+05 | 6.9E+04 | 9.8E+03 | 2.3E+04 | – | – | 3.7E+01 | 3.7E+03 |

# Table 9
# Individual RBELs Residential

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | Soil | | | | | | | | | | Groundwater | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Carcinogenic | | | | | Noncarcinogenic | | | | | Carcinogenic | | Noncarcinogenic | |
| | | $^{Air}RBEL_{Inh}$ (mg/m3) | $^{Soil}RBEL_{Ing}$ (mg/kg) | $^{Soil}RBEL_{Derm}$ (mg/kg) | $^{AbgVeg}RBEL_{Ing}$ above-ground (mg/kg) | $^{BgVeg}RBEL_{Ing}$ below-ground (mg/kg) | $^{Air}RBEL_{Inh}$ (mg/m3) | $^{Soil}RBEL_{Ing}$ (mg/kg) | $^{Soil}RBEL_{Derm}$ (mg/kg) | $^{AbgVeg}RBEL_{Ing}$ above-ground (mg/kg) | $^{BgVeg}RBEL_{Ing}$ below-ground (mg/kg) | $^{GW}RBEL_{Ing}$ [1] (mg/L) | $^{GW}RBEL_{Class\ 3}$ [2] (mg/L) | $^{GW}RBEL_{Ing}$ [1] (mg/L) | $^{GW}RBEL_{Class\ 3}$ [2] (mg/L) |
| Chromium (VI) | 18540-29-9 | 1.1E-05 | – | – | – | – | 2.3E-04 | 2.5E+02 | 2.7E+02 | 2.0E+01 | 4.8E+01 | – | – | 7.6E-02 | 7.6E+00 |
| Chrysene | 218-01-9 | 4.1E-02 | 6.1E+03 | 1.6E+04 | – | 5.8E+02 | – | – | – | – | – | 9.1E-01 | 9.1E+01 | – | – |
| Cobalt | 7440-48-4 | 4.1E-06 | – | – | – | – | 6.6E-05 | 8.2E+02 | 3.6E+04 | 6.5E+01 | 1.6E+02 | – | – | 2.4E-01 | 2.4E+01 |
| Copolymer acrylamide | 69418-26-4 | – | – | – | – | – | – | 1.6E+01 | 7.1E+01 | – | – | – | – | 4.9E-03 | 4.9E-01 |
| Copper | 7440-50-8 | – | – | – | – | – | – | 7.9E+03 | 3.4E+05 | 6.3E+02 | 1.5E+03 | – | – | 2.4E+00 | 2.4E+02 |
| Coronene | 191-07-1 | – | – | – | – | – | – | 1.6E+02 | 7.1E+02 | – | 3.1E+01 | – | – | 4.9E-02 | 4.9E+00 |
| Coumaphos | 56-72-4 | – | – | – | – | – | – | 5.7E+02 | 2.5E+03 | – | 1.1E+02 | – | – | 1.7E-01 | 1.7E+01 |
| Cresol | 1319-77-3 | – | – | – | – | – | – | 4.1E+03 | 1.8E+04 | – | – | – | – | 1.2E+00 | 1.2E+02 |
| Cresol, m- (3-methylphenol) | 108-39-4 | – | – | – | – | – | – | 4.1E+03 | 1.8E+04 | – | – | – | – | 1.2E+00 | 1.2E+02 |
| Cresol, o- (2-methylphenol) | 95-48-7 | – | – | – | – | – | – | 4.1E+03 | 1.8E+04 | – | – | – | – | 1.2E+00 | 1.2E+02 |
| Cresol, p- (4-methylphenol) | 106-44-5 | – | – | – | – | – | – | 4.1E+02 | 1.8E+03 | – | – | – | – | 1.2E-01 | 1.2E+01 |
| Crotonaldehyde | 123-73-9 | – | 3.2E+00 | – | – | – | – | 8.2E+01 | – | – | – | 4.8E-04 | 4.8E-02 | 2.4E-02 | 2.4E+00 |
| Cumene (isopropylbenzene) | 98-82-8 | – | – | – | – | – | 4.2E-01 | 8.2E+03 | – | – | – | – | – | 2.4E+00 | 2.4E+02 |
| Cyanazine | 21725-46-2 | – | 7.2E+00 | 2.5E+01 | – | – | – | 1.6E+02 | 7.1E+02 | – | – | 1.1E-03 | 1.1E-01 | 4.9E-02 | 4.9E+00 |
| Cyanide | 57-12-5 | – | – | – | – | – | 8.3E-04 | 4.9E+01 | 2.1E+03 | – | – | – | – | 1.5E-02 | 1.5E+00 |
| Cyanogen | 460-19-5 | – | – | – | – | – | 8.3E-04 | 8.2E+01 | – | – | – | – | – | 2.4E-02 | 2.4E+00 |
| Cycloate | 1134-23-2 | – | – | – | – | – | – | 4.5E+03 | 2.0E+04 | – | – | – | – | 1.3E+00 | 1.3E+02 |
| Cyclohexane | 110-82-7 | – | – | – | – | – | 6.3E+00 | 4.1E+05 | – | – | – | – | – | 1.2E+02 | 1.2E+04 |
| Cyclohexanol | 108-93-0 | – | – | – | – | – | – | 4.1E+05 | 1.0E+06 | – | – | – | – | 1.2E+02 | 1.2E+04 |
| Cyclohexanone | 108-94-1 | – | – | – | – | – | 7.3E-01 | 4.1E+05 | – | – | – | – | – | 1.2E+02 | 1.2E+04 |
| Cyclohexene, 1-methanol-3- | 1679-51-2 | – | – | – | – | – | – | 1.6E+03 | 7.1E+03 | – | – | – | – | 4.9E-01 | 4.9E+01 |
| Cyclohexene, 4-vinyl-1- | 100-40-3 | – | – | – | – | – | 3.4E-01 | 1.8E+03 | – | – | – | – | – | 5.4E-01 | 5.4E+01 |
| Cyclopentane | 287-92-3 | – | – | – | – | – | 2.5E+01 | 4.9E+03 | – | – | – | – | – | 1.5E+00 | 1.5E+02 |
| Cyclopentane, methyl- | 96-37-7 | – | – | – | – | – | 1.0E+00 | 8.2E+03 | – | – | – | – | – | 2.4E+00 | 2.4E+02 |
| Cyclopentene | 142-29-0 | – | – | – | – | – | – | 4.1E+05 | – | – | – | – | – | 1.2E+02 | 1.2E+04 |
| Cyclotetramethylenetetranitramine (HMX) | 2691-41-0 | – | – | – | – | – | – | 4.1E+03 | 2.7E+03 | – | – | – | – | 1.2E+00 | 1.2E+02 |
| Cyclotrimethylenetrinitramine (RDX) | 121-82-4 | – | 7.6E+01 | 2.6E+02 | – | – | – | 3.3E+02 | 1.4E+03 | – | – | 1.1E-02 | 1.1E+00 | 9.8E-02 | 9.8E+00 |
| Cymene (isopropyltoluene) | 99-87-6 | – | – | – | – | – | – | 8.2E+03 | – | – | – | – | – | 2.4E+00 | 2.4E+02 |
| Cymoxanil | 57966-95-7 | – | – | – | – | – | – | 1.1E+03 | 4.6E+03 | – | – | – | – | 3.2E-01 | 3.2E+01 |
| Dacthal (DCPA) | 1861-32-1 | – | – | – | – | – | – | 8.2E+02 | 3.6E+03 | – | 1.6E+02 | – | – | 2.4E-01 | 2.4E+01 |
| Dalapon, sodium salt (2,2-dichloropropanoic acid) | 75-99-0 | – | – | – | – | – | – | 2.5E+03 | 1.1E+04 | – | – | – | – | 7.3E-01 | 7.3E+01 |
| DDD | 72-54-8 | – | 2.5E+01 | 2.9E+02 | – | 2.4E+00 | – | – | – | – | – | 3.8E-03 | 3.8E-01 | – | – |
| DDE | 72-55-9 | – | 1.8E+01 | 2.0E+02 | – | 1.7E+00 | – | – | – | – | – | 2.7E-03 | 2.7E-01 | – | – |
| DDT | 50-29-3 | 2.5E-04 | 1.8E+01 | 2.0E+02 | – | 1.7E+00 | – | 4.1E+01 | 5.9E+02 | – | 7.8E+00 | 2.7E-03 | 2.7E-01 | 1.2E-02 | 1.2E+00 |
| Demeton | 8065-48-3 | – | – | – | – | – | – | 3.3E+00 | 1.4E+01 | – | – | – | – | 9.8E-04 | 9.8E-02 |
| Desethylatrazine | 6190-65-4 | – | – | – | – | – | – | 2.9E+03 | 1.2E+04 | – | – | – | – | 8.6E-01 | 8.6E+01 |
| Diacetone alcohol (4-hydroxy-4-methyl-2-pentanone) | 123-42-2 | – | – | – | – | – | – | 3.3E+03 | 1.4E+04 | – | – | – | – | 9.8E-01 | 9.8E+01 |
| Diallate | 2303-16-4 | – | 1.0E+02 | 3.4E+02 | – | 9.6E+00 | – | – | – | – | – | 1.5E-02 | 1.5E+00 | – | – |
| Diazinon | 333-41-5 | – | – | – | – | – | 1.0E-04 | 7.4E+01 | 3.2E+02 | – | – | – | – | 2.2E-02 | 2.2E+00 |
| Dibenz(a,h)acridine | 226-36-8 | 2.2E-04 | 5.1E+00 | 1.7E+01 | – | 4.9E-01 | – | – | – | – | – | 7.6E-04 | 7.6E-02 | – | – |

# Table 9
# Individual RBELs Residential

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | Soil | | | | | | | | | | Groundwater | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Carcinogenic | | | | | Noncarcinogenic | | | | | Carcinogenic | | Noncarcinogenic | |
| | | $^{Air}RBEL_{Inh}$ (mg/m3) | $^{Soil}RBEL_{Ing}$ (mg/kg) | $^{Soil}RBEL_{Derm}$ (mg/kg) | $^{AbgVeg}RBEL_{Ing}$ above-ground (mg/kg) | $^{BgVeg}RBEL_{Ing}$ below-ground (mg/kg) | $^{Air}RBEL_{Inh}$ (mg/m3) | $^{Soil}RBEL_{Ing}$ (mg/kg) | $^{Soil}RBEL_{Derm}$ (mg/kg) | $^{AbgVeg}RBEL_{Ing}$ above-ground (mg/kg) | $^{BgVeg}RBEL_{Ing}$ below-ground (mg/kg) | $^{GW}RBEL_{Ing}$ [1] (mg/L) | $^{GW}RBEL_{Class\ 3}$ [2] (mg/L) | $^{GW}RBEL_{Ing}$ [1] (mg/L) | $^{GW}RBEL_{Class\ 3}$ [2] (mg/L) |
| Dibenz(a,j)acridine | 224-42-0 | 2.8E-04 | 8.3E+00 | 2.2E+01 | – | 8.0E-01 | – | – | – | – | – | 1.3E-03 | 1.3E-01 | – | – |
| Dibenz-a,h-anthracene | 53-70-3 | 4.1E-05 | 6.1E+00 | 1.6E+01 | – | 5.8E-01 | – | – | – | – | – | 9.1E-04 | 9.1E-02 | – | – |
| Dibenzo(a,e)pyrene | 192-65-4 | 2.8E-05 | 8.3E-01 | 2.8E+00 | – | 8.0E-02 | – | – | – | – | – | 1.3E-04 | 1.3E-02 | – | – |
| Dibenzo(a,h)pyrene | 189-64-0 | 2.8E-06 | 8.3E-02 | 2.8E-01 | – | 8.0E-03 | – | – | – | – | – | 1.3E-05 | 1.3E-03 | – | – |
| Dibenzo(a,i)pyrene | 189-55-9 | 2.8E-06 | 8.3E-02 | 2.8E-01 | – | 8.0E-03 | – | – | – | – | – | 1.3E-05 | 1.3E-03 | – | – |
| Dibenzofuran | 132-64-9 | – | – | – | – | – | – | 3.3E+02 | 1.4E+03 | – | – | – | – | 9.8E-02 | 9.8E+00 |
| Dibenzothiophene | 132-65-0 | – | – | – | – | – | – | 8.2E+02 | 1.1E+03 | – | 1.6E+02 | – | – | 2.4E-01 | 2.4E+01 |
| Dibromo-3-chloropropane, 1,2- | 96-12-8 | 4.1E-06 | 7.6E+00 | 2.6E+01 | – | – | 2.1E-04 | 1.6E+01 | 7.1E+01 | – | – | 1.1E-03 | 1.1E-01 | 4.9E-03 | 4.9E-01 |
| Dibromochloromethane (chlorodibromomethane)[3] | 124-48-1 | – | 7.2E+01 | – | – | – | – | 1.6E+03 | – | – | – | 1.1E-02 | 1.1E+00 | 4.9E-01 | 4.9E+01 |
| Dibromofluoromethane | 1868-53-7 | – | – | – | – | – | – | 1.6E+04 | – | – | – | – | – | 4.9E+00 | 4.9E+02 |
| Dicamba | 1918-00-9 | – | – | – | – | – | – | 2.5E+03 | 1.1E+04 | – | – | – | – | 7.3E-01 | 7.3E+01 |
| Dichlormid | 37764-25-3 | – | – | – | – | – | – | 2.0E+03 | 8.9E+03 | – | – | – | – | 6.1E-01 | 6.1E+01 |
| Dichloro-2-butene, 1,4- | 764-41-0 | 5.8E-06 | – | – | – | – | – | – | – | – | – | – | – | – | – |
| Dichloro-2-butene, 1,4- trans | 110-57-6 | 5.8E-06 | – | – | – | – | – | – | – | – | – | – | – | – | – |
| Dichlorobenzene, 1,2- | 95-50-1 | – | – | – | – | – | 3.1E-02 | 7.4E+03 | – | – | – | – | – | 2.2E+00 | 2.2E+02 |
| Dichlorobenzene, 1,3- | 541-73-1 | – | – | – | – | – | 8.3E-03 | 2.5E+03 | – | – | – | – | – | 7.3E-01 | 7.3E+01 |
| Dichlorobenzene, 1,4- | 106-46-7 | – | 2.5E+02 | – | – | – | 5.5E-01 | – | – | – | – | 3.8E-02 | 3.8E+00 | – | – |
| Dichlorobenzidine, 3,3- | 91-94-1 | – | 1.3E+01 | 4.6E+01 | – | – | – | – | – | – | – | 2.0E-03 | 2.0E-01 | – | – |
| Dichlorobutane, 2,3- | 7581-97-7 | – | – | – | – | – | 7.3E-03 | 8.2E+02 | – | – | – | – | – | 2.4E-01 | 2.4E+01 |
| Dichlorodifluoromethane | 75-71-8 | – | – | – | – | – | 1.0E-01 | 1.6E+04 | – | – | – | – | – | 4.9E+00 | 4.9E+02 |
| Dichloroethane, 1,1- | 75-34-3 | – | – | – | – | – | 2.5E+00 | 1.6E+04 | – | – | – | – | – | 4.9E+00 | 4.9E+02 |
| Dichloroethane, 1,2- | 107-06-2 | 7.2E-03 | 6.7E+01 | – | – | – | 4.6E-02 | 6.4E+03 | – | – | – | 1.0E-02 | 1.0E+00 | 1.9E+00 | 1.9E+02 |
| Dichloroethylene, 1,1- | 75-35-4 | – | – | – | – | – | 3.5E-01 | 4.1E+03 | – | – | – | – | – | 1.2E+00 | 1.2E+02 |
| Dichloroethylene, cis-1,2- | 156-59-2 | – | – | – | – | – | 6.3E-02 | 1.6E+02 | – | – | – | – | – | 4.9E-02 | 4.9E+00 |
| Dichloroethylene, trans-1,2 | 156-60-5 | – | – | – | – | – | 6.3E-02 | 1.6E+03 | – | – | – | – | – | 4.9E-01 | 4.9E+01 |
| Dichlorofluoromethane | 75-43-4 | – | – | – | – | – | – | 1.6E+04 | – | – | – | – | – | 4.9E+00 | 4.9E+02 |
| Dichlorophenol, 2,3- | 576-24-9 | – | – | – | – | – | – | 2.5E+02 | 1.1E+03 | – | – | – | – | 7.3E-02 | 7.3E+00 |
| Dichlorophenol, 2,4- | 120-83-2 | – | – | – | – | – | – | 2.5E+02 | 1.1E+03 | – | – | – | – | 7.3E-02 | 7.3E+00 |
| Dichlorophenol, 2,5- | 583-78-8 | – | – | – | – | – | – | 2.5E+02 | 1.1E+03 | – | – | – | – | 7.3E-02 | 7.3E+00 |
| Dichlorophenol, 2,6- | 87-65-0 | – | – | – | – | – | – | 8.2E+01 | 3.6E+02 | – | – | – | – | 2.4E-02 | 2.4E+00 |
| Dichlorophenol, 3,4- | 95-77-2 | – | – | – | – | – | – | 2.5E+02 | 1.1E+03 | – | – | – | – | 7.3E-02 | 7.3E+00 |
| Dichlorophenol, 3,5- | 591-35-5 | – | – | – | – | – | – | 2.5E+02 | 1.1E+03 | – | – | – | – | 7.3E-02 | 7.3E+00 |
| Dichlorophenoxy, 2,4- butyric acid, 4- (2,4-DB) | 94-82-6 | – | – | – | – | – | – | 6.6E+02 | 2.8E+03 | – | – | – | – | 2.0E-01 | 2.0E+01 |
| Dichlorophenoxyacetic acid, 2,4- (2,4-D) | 94-75-7 | – | – | – | – | – | – | 8.2E+02 | 7.1E+03 | – | – | – | – | 2.4E-01 | 2.4E+01 |
| Dichloroprop (2-(2,4-dichlorophenoxy) propanoic acid) | 120-36-5 | – | – | – | – | – | – | 8.2E+02 | 3.6E+03 | – | – | – | – | 2.4E-01 | 2.4E+01 |
| Dichloropropane, 1,2- | 78-87-5 | 2.6E-02 | 1.6E+02 | – | – | – | 4.2E-03 | 1.1E+04 | – | – | – | 2.5E-02 | 2.5E+00 | 3.2E+00 | 3.2E+02 |
| Dichloropropane, 1,3- | 142-28-9 | 6.1E-03 | 6.1E+01 | – | – | – | 2.1E-02 | 1.6E+03 | – | – | – | 9.1E-03 | 9.1E-01 | 4.9E-01 | 4.9E+01 |
| Dichloropropane, 2,2- | 594-20-7 | – | 8.9E+01 | – | – | – | 4.2E-03 | 7.4E+03 | – | – | – | 1.3E-02 | 1.3E+00 | 2.2E+00 | 2.2E+02 |
| Dichloropropanol, 2,3- | 616-23-9 | – | – | – | – | – | – | 2.5E+02 | 1.1E+03 | – | – | – | – | 7.3E-02 | 7.3E+00 |
| Dichloropropene, 1,1- | 563-58-6 | 6.1E-03 | 6.1E+01 | – | – | – | 2.1E-02 | 2.5E+03 | – | – | – | 9.1E-03 | 9.1E-01 | 7.3E-01 | 7.3E+01 |

# Table 9
# Individual RBELs Residential

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | Soil | | | | | | | | | | Groundwater | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Carcinogenic | | | | | Noncarcinogenic | | | | | Carcinogenic | | Noncarcinogenic | |
| | | $^{Air}RBEL_{Inh}$ (mg/m3) | $^{Soil}RBEL_{Ing}$ (mg/kg) | $^{Soil}RBEL_{Derm}$ (mg/kg) | $^{AbgVeg}RBEL_{Ing}$ above-ground (mg/kg) | $^{BgVeg}RBEL_{Ing}$ below-ground (mg/kg) | $^{Air}RBEL_{Inh}$ (mg/m3) | $^{Soil}RBEL_{Ing}$ (mg/kg) | $^{Soil}RBEL_{Derm}$ (mg/kg) | $^{AbgVeg}RBEL_{Ing}$ above-ground (mg/kg) | $^{BgVeg}RBEL_{Ing}$ below-ground (mg/kg) | $^{GW}RBEL_{Ing}$ [1] (mg/L) | $^{GW}RBEL_{Class\ 3}$ [2] (mg/L) | $^{GW}RBEL_{Ing}$ [1] (mg/L) | $^{GW}RBEL_{Class\ 3}$ [2] (mg/L) |
| Dichloropropene, 1,3- (mixed isomers) | 542-75-6 | 6.1E-03 | 6.1E+01 | – | – | – | 2.1E-02 | 2.5E+03 | – | – | – | 9.1E-03 | 9.1E-01 | 7.3E-01 | 7.3E+01 |
| Dichloropropene, cis 1,3- | 10061-01-5 | – | 1.1E+01 | – | – | – | 2.1E-02 | 8.2E+00 | – | – | – | 1.7E-03 | 1.7E-01 | 2.4E-03 | 2.4E-01 |
| Dichloropropene, trans 1,3- | 10061-02-6 | 6.1E-03 | 6.1E+01 | – | – | – | 2.1E-02 | 2.5E+03 | – | – | – | 9.1E-03 | 9.1E-01 | 7.3E-01 | 7.3E+01 |
| Dichlorvos | 62-73-7 | – | 2.1E+01 | 7.2E+01 | – | – | 5.2E-04 | 4.1E+01 | 1.8E+02 | – | – | 3.1E-03 | 3.1E-01 | 1.2E-02 | 1.2E+00 |
| Dicrotophos (bidrin) | 141-66-2 | – | – | – | – | – | – | 8.2E+00 | 3.6E+01 | – | – | – | – | 2.4E-03 | 2.4E-01 |
| Dicyclopentadiene | 77-73-6 | – | – | – | – | – | – | 6.6E+03 | – | – | – | – | – | 2.0E+00 | 2.0E+02 |
| Dieldrin | 60-57-1 | 5.3E-06 | 3.8E-01 | 1.3E+00 | – | 3.7E-02 | – | 4.1E+00 | 1.8E+01 | – | 7.8E-01 | 5.7E-05 | 5.7E-03 | 1.2E-03 | 1.2E-01 |
| Diethanolamine | 111-42-2 | – | – | – | – | – | 2.6E-02 | 4.1E+01 | 1.8E+02 | – | – | – | – | 1.2E-02 | 1.2E+00 |
| Diethyldithiocarbamate, sodium salt | 148-18-5 | – | 2.2E+01 | – | – | – | – | 2.5E+03 | – | – | – | 3.4E-03 | 3.4E-01 | 7.3E-01 | 7.3E+01 |
| Diethyl phthalate | 84-66-2 | – | – | – | – | – | – | 6.6E+04 | 2.8E+05 | – | – | – | – | 2.0E+01 | 2.0E+03 |
| Diethylene glycol | 111-46-6 | – | – | – | – | – | – | 1.6E+05 | 7.1E+05 | – | – | – | – | 4.9E+01 | 4.9E+03 |
| Diethylene glycol monobutyl ether | 112-34-5 | – | – | – | – | – | 1.0E-04 | 2.5E+03 | 1.1E+04 | – | – | – | – | 7.3E-01 | 7.3E+01 |
| Diethylhexyl adipate | 103-23-1 | – | 5.1E+03 | 1.7E+04 | – | – | – | 4.9E+04 | 2.1E+05 | – | – | 7.6E-01 | 7.6E+01 | 1.5E+01 | 1.5E+03 |
| Diethylstilbestrol | 56-53-1 | – | 1.3E-03 | 4.4E-03 | – | 1.2E-04 | – | – | – | – | – | 1.9E-07 | 1.9E-05 | – | – |
| Diisobutylene (trimethyl-1-pentene, 2,4,4-) | 107-39-1 | – | – | – | – | – | 2.1E-01 | 4.9E+03 | – | – | – | – | – | 1.5E+00 | 1.5E+02 |
| Diisopropylbenzene, p- | 100-18-5 | – | – | – | – | – | – | 8.2E+02 | 3.6E+03 | – | – | – | – | 2.4E-01 | 2.4E+01 |
| Diisopropyl ether (2,2'-oxybis-propane) | 108-20-3 | – | – | – | – | – | 7.3E-01 | 8.2E+03 | – | – | – | – | – | 2.4E+00 | 2.4E+02 |
| Dimethenamid | 87674-68-8 | – | – | – | – | – | – | 1.2E+03 | 5.3E+03 | – | – | – | – | 3.7E-01 | 3.7E+01 |
| Dimethoate | 60-51-5 | – | – | – | – | – | – | 1.6E+01 | 7.1E+01 | – | – | – | – | 4.9E-03 | 4.9E-01 |
| Dimethoxybenzidine, 3,3'- | 119-90-4 | – | 4.3E+02 | 1.5E+03 | – | – | – | – | – | – | – | 6.5E-02 | 6.5E+00 | – | – |
| Dimethyl-2-nitrobenzene, 1,3- | 81-20-9 | – | – | – | – | – | 9.4E-03 | 1.6E+02 | 7.1E+02 | – | – | – | – | 4.9E-02 | 4.9E+00 |
| Dimethyl-3-nitrobenzene, 1,2- | 83-41-0 | – | – | – | – | – | 9.4E-03 | 1.6E+02 | 7.1E+02 | – | – | – | – | 4.9E-02 | 4.9E+00 |
| Dimethyl-4-nitrobenzene, 1-2- | 99-51-4 | – | – | – | – | – | 9.4E-03 | 1.6E+02 | 7.1E+02 | – | – | – | – | 4.9E-02 | 4.9E+00 |
| Dimethyl-5-nitrobenzene, 1,3- | 99-12-7 | – | – | – | – | – | 9.4E-03 | 1.6E+02 | 7.1E+02 | – | – | – | – | 4.9E-02 | 4.9E+00 |
| Dimethylphenethylamine, alpha, alpha- | 122-09-8 | – | – | – | – | – | – | 1.6E+02 | 7.1E+02 | – | – | – | – | 4.9E-02 | 4.9E+00 |
| Dimethyl phenol, 2,4- | 105-67-9 | – | – | – | – | – | – | 1.6E+03 | 7.1E+03 | – | – | – | – | 4.9E-01 | 4.9E+01 |
| Dimethylaminoazobenzene, p- | 60-11-7 | – | – | – | – | – | – | 8.2E-01 | 3.6E+00 | – | 1.6E-01 | – | – | 2.4E-04 | 2.4E-02 |
| Dimethylbenz-a-anthracene, 7,12- | 57-97-6 | 1.0E-06 | 2.4E-02 | 6.4E-02 | – | 2.3E-03 | – | – | – | – | – | 3.7E-06 | 3.7E-04 | – | – |
| Dimethylbenzidine, 3,3'- | 119-93-7 | – | 5.5E-01 | 1.9E+00 | – | – | – | – | – | – | – | 8.3E-05 | 8.3E-03 | – | – |
| Dimethylformamide, N,N- | 68-12-2 | – | – | – | – | – | 3.1E-02 | 8.2E+03 | – | – | – | – | – | 2.4E+00 | 2.4E+02 |
| Dimethylnaphthalene, 1,3- | 575-41-7 | – | – | – | – | – | – | 3.3E+03 | 1.1E+04 | – | 6.3E+02 | – | – | 9.8E-01 | 9.8E+01 |
| Dimethylphthalate | 131-11-3 | – | – | – | – | – | – | 6.6E+04 | 2.8E+05 | – | – | – | – | 2.0E+01 | 2.0E+03 |
| Di-n-butyl phthalate | 84-74-2 | – | – | – | – | – | – | 8.2E+03 | 3.6E+04 | – | 1.6E+03 | – | – | 2.4E+00 | 2.4E+02 |
| Dinitro-2-methylphenol, 4,6- (dinitro-o-cresol, 4, 6-) | 534-52-1 | – | – | – | – | – | – | 8.2E+00 | 3.6E+01 | – | – | – | – | 2.4E-03 | 2.4E-01 |
| Dinitrobenzene, 1,3- (dinitrobenzene, 2,4-) | 99-65-0 | – | – | – | – | – | – | 8.2E+00 | 3.6E+01 | – | – | – | – | 2.4E-03 | 2.4E-01 |
| Dinitrobenzene, 1,4- | 100-25-4 | – | – | – | – | – | – | 8.2E+00 | 3.6E+01 | – | – | – | – | 2.4E-03 | 2.4E-01 |
| Dinitrophenol, 2,4- | 51-28-5 | – | – | – | – | – | – | 1.6E+02 | 7.1E+02 | – | – | – | – | 4.9E-02 | 4.9E+00 |
| Dinitrophenol, 2,5- | 329-71-5 | – | – | – | – | – | – | 1.6E+02 | 7.1E+02 | – | – | – | – | 4.9E-02 | 4.9E+00 |
| Dinitrotoluene, 2,4- | 121-14-2 | – | 8.9E+00 | 3.1E+01 | – | – | – | 1.6E+02 | 7.1E+02 | – | – | 1.3E-03 | 1.3E-01 | 4.9E-02 | 4.9E+00 |
| Dinitrotoluene, 2,6- | 606-20-2 | – | 8.9E+00 | 3.1E+01 | – | – | – | 8.2E+01 | 3.6E+02 | – | – | 1.3E-03 | 1.3E-01 | 2.4E-02 | 2.4E+00 |

# Table 9
# Individual RBELs Residential

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | Soil | | | | | | | | | | Groundwater | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Carcinogenic | | | | | Noncarcinogenic | | | | | Carcinogenic | | Noncarcinogenic | |
| | | $^{Air}RBEL_{Inh}$ (mg/m3) | $^{Soil}RBEL_{Ing}$ (mg/kg) | $^{Soil}RBEL_{Derm}$ (mg/kg) | $^{AbgVeg}RBEL_{Ing}$ above-ground (mg/kg) | $^{BgVeg}RBEL_{Ing}$ below-ground (mg/kg) | $^{Air}RBEL_{Inh}$ (mg/m3) | $^{Soil}RBEL_{Ing}$ (mg/kg) | $^{Soil}RBEL_{Derm}$ (mg/kg) | $^{AbgVeg}RBEL_{Ing}$ above-ground (mg/kg) | $^{BgVeg}RBEL_{Ing}$ below-ground (mg/kg) | $^{GW}RBEL_{Ing}$ [1] (mg/L) | $^{GW}RBEL_{Class\ 3}$ [2] (mg/L) | $^{GW}RBEL_{Ing}$ [1] (mg/L) | $^{GW}RBEL_{Class\ 3}$ [2] (mg/L) |
| Di-n-octyl phthalate | 117-84-0 | – | – | – | – | – | – | 8.2E+02 | 3.6E+03 | – | 1.6E+02 | – | – | 2.4E-01 | 2.4E+01 |
| Dinoseb | 88-85-7 | – | – | – | – | – | – | 8.2E+01 | 3.6E+02 | – | – | – | – | 2.4E-02 | 2.4E+00 |
| Dioxane 1,4- | 123-91-1 | 4.9E-03 | 6.1E+01 | – | – | – | 1.1E-01 | 2.5E+03 | – | – | – | 9.1E-03 | 9.1E-01 | 7.3E-01 | 7.3E+01 |
| Dioxin (as 2,3,7,8-TCDD toxicity equivalent quotients (TEQs)) | 1746-01-6 | – | – | – | – | – | – | – | – | – | – | – | – | – | – |
| Diphenyl ether | 101-84-8 | – | – | – | – | – | – | 5.1E+02 | 2.2E+03 | – | 9.7E+01 | – | – | 1.5E-01 | 1.5E+01 |
| Diphenylamine | 122-39-4 | – | – | – | – | – | – | 2.0E+03 | 8.9E+03 | – | – | – | – | 6.1E-01 | 6.1E+01 |
| Diphenylhydrazine, 1,2- | 122-66-7 | 1.1E-04 | 7.6E+00 | 2.6E+01 | – | – | – | – | – | – | – | 1.1E-03 | 1.1E-01 | – | – |
| Dipropylene glycol | 110-98-5 | – | – | – | – | – | – | 9.8E+03 | 4.3E+04 | – | – | – | – | 2.9E+00 | 2.9E+02 |
| Diquat | 85-00-7 | – | – | – | – | – | – | 1.8E+02 | 7.8E+02 | – | – | – | – | 5.4E-02 | 5.4E+00 |
| Disodium iminodiacetate (iminodiacetic acid, disodium salt) | 142-73-4 | – | – | – | – | – | – | 8.2E+02 | 3.6E+03 | – | – | – | – | 2.4E-01 | 2.4E+01 |
| Disulfoton | 298-04-4 | – | – | – | – | – | – | 3.3E+00 | 1.4E+01 | – | – | – | – | 9.8E-04 | 9.8E-02 |
| Diuron | 330-54-1 | – | – | – | – | – | – | 1.6E+02 | 7.1E+02 | – | – | – | – | 4.9E-02 | 4.9E+00 |
| Dodecylphenol, 4- | 104-43-8 | – | – | – | – | – | – | 4.1E+03 | 1.8E+04 | – | 7.8E+02 | – | – | 1.2E+00 | 1.2E+02 |
| Endosulfan | 115-29-7 | – | – | – | – | – | – | 4.9E+02 | 2.1E+03 | – | – | – | – | 1.5E-01 | 1.5E+01 |
| Endosulfan I | 959-98-8 | – | – | – | – | – | – | 1.6E+02 | 7.1E+02 | – | 3.1E+01 | – | – | 4.9E-02 | 4.9E+00 |
| Endosulfan II | 33213-65-9 | – | – | – | – | – | – | 4.9E+02 | 2.1E+03 | – | 9.4E+01 | – | – | 1.5E-01 | 1.5E+01 |
| Endosulfan sulfate | 1031-07-8 | – | – | – | – | – | – | 4.9E+02 | 2.1E+03 | – | 9.4E+01 | – | – | 1.5E-01 | 1.5E+01 |
| Endothall | 145-73-3 | – | – | – | – | – | – | 1.6E+03 | 7.1E+03 | – | – | – | – | 4.9E-01 | 4.9E+01 |
| Endrin | 72-20-8 | – | – | – | – | – | – | 2.5E+01 | 1.1E+02 | – | 4.7E+00 | – | – | 7.3E-03 | 7.3E-01 |
| Endrin aldehyde | 7421-93-4 | – | – | – | – | – | – | 2.5E+01 | 1.1E+02 | – | 4.7E+00 | – | – | 7.3E-03 | 7.3E-01 |
| Endrin ketone | 53494-70-5 | – | – | – | – | – | – | 2.5E+01 | 1.1E+02 | – | 4.7E+00 | – | – | 7.3E-03 | 7.3E-01 |
| Epichlorohydrin | 106-89-8 | 2.0E-02 | 6.1E+02 | – | – | – | 1.0E-03 | 4.9E+02 | – | – | – | 9.2E-02 | 9.2E+00 | 1.5E-01 | 1.5E+01 |
| EPN (o-ethyl o-(4-nitrophenyl)phenylphosphonothioate) | 2104-64-5 | – | – | – | – | – | – | 8.2E-01 | 3.6E+00 | – | – | – | – | 2.4E-04 | 2.4E-02 |
| Esfenvalerate | 66230-04-4 | – | – | – | – | – | – | 1.6E+02 | 7.1E+02 | – | 3.1E+01 | – | – | 4.9E-02 | 4.9E+00 |
| Ethalfluralin (sonolan) | 55283-68-6 | – | 6.8E+01 | 2.3E+02 | – | 6.6E+00 | – | 3.3E+03 | 1.4E+04 | – | 6.3E+02 | 1.0E-02 | 1.0E+00 | 9.8E-01 | 9.8E+01 |
| Ethanol | 64-17-5 | – | – | – | – | – | – | 1.0E+06 | – | – | – | – | – | 8.1E+02 | 8.1E+04 |
| Ethanol, 2-amino- | 141-43-5 | – | – | – | – | – | 2.4E-02 | 1.4E+02 | 6.0E+02 | – | – | – | – | 4.2E-02 | 4.2E+00 |
| Ethanol, 2-(2-aminoethoxy)- | 929-06-6 | – | – | – | – | – | – | 4.1E+01 | 1.8E+02 | – | – | – | – | 1.2E-02 | 1.2E+00 |
| Ethanol, 2-(2-ethoxyethoxy)- | 111-90-0 | – | – | – | – | – | – | 1.6E+05 | 7.1E+05 | – | – | – | – | 4.9E+01 | 4.9E+03 |
| Ethanol, 2-(methylamino)- | 109-83-1 | – | – | – | – | – | 4.8E-02 | 1.3E+03 | 5.7E+03 | – | – | – | – | 3.9E-01 | 3.9E+01 |
| Ethion | 563-12-2 | – | – | – | – | – | – | 4.1E+01 | 1.8E+02 | – | 7.8E+00 | – | – | 1.2E-02 | 1.2E+00 |
| Ethoprop | 13194-48-4 | – | 2.2E+02 | 7.4E+02 | – | – | – | 8.2E+00 | 3.6E+01 | – | – | 3.2E-02 | 3.2E+00 | 2.4E-03 | 2.4E-01 |
| Ethoxy ethanol, 2- | 110-80-5 | – | – | – | – | – | 2.1E-01 | 7.4E+03 | – | – | – | – | – | 2.2E+00 | 2.2E+02 |
| Ethyl acetate | 141-78-6 | – | – | – | – | – | 2.4E-01 | 7.4E+04 | – | – | – | – | – | 2.2E+01 | 2.2E+03 |
| Ethyl acrylate | 140-88-5 | – | 1.3E+02 | – | – | – | 8.3E-03 | 4.1E+02 | – | – | – | 1.9E-02 | 1.9E+00 | 1.2E-01 | 1.2E+01 |
| Ethyl benzene | 100-41-4 | – | – | – | – | – | 2.0E+00 | 8.2E+03 | – | – | – | – | – | 2.4E+00 | 2.4E+02 |
| Ethyl dipropylthiocarbamate, S- | 759-94-4 | – | – | – | – | – | – | 2.0E+03 | 8.9E+03 | – | – | – | – | 6.1E-01 | 6.1E+01 |
| Ethyl ether | 60-29-7 | – | – | – | – | – | – | 1.6E+04 | – | – | – | – | – | 4.9E+00 | 4.9E+02 |
| Ethyl methacrylate | 97-63-2 | – | – | – | – | – | 3.1E-01 | 7.4E+03 | – | – | – | – | – | 2.2E+00 | 2.2E+02 |
| Ethyl methanesulfonate | 62-50-0 | 8.7E-04 | 6.1E+01 | 2.1E+02 | – | – | – | – | – | – | – | 9.2E-03 | 9.2E-01 | – | – |

**Table 9**
**Individual RBELs Residential**

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | Soil | | | | | | | | | | Groundwater | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Carcinogenic | | | | | Noncarcinogenic | | | | | Carcinogenic | | Noncarcinogenic | |
| | | $^{Air}RBEL_{Inh}$ (mg/m3) | $^{Soil}RBEL_{Ing}$ (mg/kg) | $^{Soil}RBEL_{Derm}$ (mg/kg) | $^{AbgVeg}RBEL_{Ing}$ above-ground (mg/kg) | $^{BgVeg}RBEL_{Ing}$ below-ground (mg/kg) | $^{Air}RBEL_{Inh}$ (mg/m3) | $^{Soil}RBEL_{Ing}$ (mg/kg) | $^{Soil}RBEL_{Derm}$ (mg/kg) | $^{AbgVeg}RBEL_{Ing}$ above-ground (mg/kg) | $^{BgVeg}RBEL_{Ing}$ below-ground (mg/kg) | $^{GW}RBEL_{Ing}$ [1] (mg/L) | $^{GW}RBEL_{Class\ 3}$ [2] (mg/L) | $^{GW}RBEL_{Ing}$ [1] (mg/L) | $^{GW}RBEL_{Class\ 3}$ [2] (mg/L) |
| Ethyl tert-butyl ether (2-ethyl-2-ethoxypropane) | 637-92-3 | – | – | – | – | – | 3.1E-01 | 8.2E+01 | – | – | – | – | – | 2.4E-02 | 2.4E+00 |
| Ethyl-1-hexanol, 2- | 104-76-7 | – | – | – | – | – | – | 1.2E+04 | 5.3E+04 | – | – | – | – | 3.7E+00 | 3.7E+02 |
| Ethyl-2-hexenal, 2- | 645-62-5 | – | – | – | – | – | – | 1.2E+04 | – | – | – | – | – | 3.7E+00 | 3.7E+02 |
| Ethyl-2-methyl benzene, 1- | 611-14-3 | – | – | – | – | – | 4.2E-01 | 4.1E+03 | – | – | – | – | – | 1.2E+00 | 1.2E+02 |
| Ethyl-4-methyl benzene, 1- | 622-96-8 | – | – | – | – | – | 4.2E-01 | 4.1E+03 | – | – | – | – | – | 1.2E+00 | 1.2E+02 |
| Ethylene* | 74-85-1 | – | – | – | – | – | – | – | – | – | – | – | – | – | – |
| Ethylene dibromide (dibromoethane, 1,2- ) | 106-93-4 | 5.5E-04 | 3.0E+00 | – | – | – | 7.0E-02 | 7.4E+02 | – | – | – | 4.6E-04 | 4.6E-02 | 2.2E-01 | 2.2E+01 |
| Ethylene glycol | 107-21-1 | – | – | – | – | – | – | 1.6E+05 | 7.1E+05 | – | – | – | – | 4.9E+01 | 4.9E+03 |
| Ethylene oxide | 75-21-8 | 3.2E-04 | 6.0E+00 | – | – | – | – | – | – | – | – | 8.9E-04 | 8.9E-02 | – | – |
| Ethylene thiourea | 96-45-7 | – | 5.5E+01 | 1.9E+02 | – | – | – | 6.6E+00 | 2.8E+01 | – | – | 8.3E-03 | 8.3E-01 | 2.0E-03 | 2.0E-01 |
| Ethylenediamine | 107-15-3 | – | – | – | – | – | – | 7.4E+03 | – | – | – | – | – | 2.2E+00 | 2.2E+02 |
| Ethylenimine | 151-56-4 | 1.3E-06 | 9.3E-02 | – | – | – | – | – | – | – | – | 1.4E-05 | 1.4E-03 | – | – |
| Ethylhexyl acrylate, 2- | 103-11-7 | – | 1.3E+02 | 4.3E+02 | – | – | – | – | – | – | – | 1.9E-02 | 1.9E+00 | – | – |
| Famphur | 52-85-7 | – | – | – | – | – | – | 2.5E+00 | 1.1E+01 | – | – | – | – | 7.3E-04 | 7.3E-02 |
| Fensulfothion | 115-90-2 | – | – | – | – | – | – | 8.2E+01 | 3.6E+02 | – | – | – | – | 2.4E-02 | 2.4E+00 |
| Fenthion | 55-38-9 | – | – | – | – | – | – | 5.7E+00 | 2.5E+01 | – | – | – | – | 1.7E-03 | 1.7E-01 |
| Fenuron | 101-42-8 | – | – | – | – | – | – | 5.7E+03 | 2.5E+04 | – | – | – | – | 1.7E+00 | 1.7E+02 |
| Fluoranthene | 206-44-0 | – | – | – | – | – | – | 3.3E+03 | 1.1E+04 | – | 6.3E+02 | – | – | 9.8E-01 | 9.8E+01 |
| Fluorene | 86-73-7 | – | – | – | – | – | – | 3.3E+03 | 1.1E+04 | – | 6.3E+02 | – | – | 9.8E-01 | 9.8E+01 |
| Fluorine (soluble fluoride) | 7782-41-4 | – | – | – | – | – | 2.8E-02 | 4.9E+03 | 2.1E+05 | – | – | – | – | 1.5E+00 | 1.5E+02 |
| Fluorochloridone | 61213-25-0 | – | – | – | – | – | – | 6.1E+02 | 2.7E+03 | – | – | – | – | 1.8E-01 | 1.8E+01 |
| Fonofos | 944-22-9 | – | – | – | – | – | – | 1.6E+02 | 7.1E+02 | – | – | – | – | 4.9E-02 | 4.9E+00 |
| Formaldehyde | 50-00-0 | – | – | – | – | – | 1.1E-02 | 1.6E+04 | – | – | – | – | – | 4.9E+00 | 4.9E+02 |
| Formic acid | 64-18-6 | – | – | – | – | – | 3.1E-03 | 7.4E+04 | – | – | – | – | – | 2.2E+01 | 2.2E+03 |
| Furan | 110-00-9 | – | – | – | – | – | – | 8.2E+01 | – | – | – | – | – | 2.4E-02 | 2.4E+00 |
| Furfural | 98-01-1 | – | – | – | – | – | – | 2.5E+02 | – | – | – | – | – | 7.3E-02 | 7.3E+00 |
| Glycidylaldehyde | 765-34-4 | – | – | – | – | – | 1.0E-03 | 3.3E+01 | – | – | – | – | – | 9.8E-03 | 9.8E-01 |
| Glyphosate | 1071-83-6 | – | – | – | – | – | – | 8.2E+03 | 3.6E+04 | – | – | – | – | 2.4E+00 | 2.4E+02 |
| Heptachlor | 76-44-8 | 1.9E-05 | 1.3E+00 | 4.6E+00 | – | 1.3E-01 | – | 4.1E+01 | 1.8E+02 | – | 7.8E+00 | 2.0E-04 | 2.0E-02 | 1.2E-02 | 1.2E+00 |
| Heptachlor epoxide | 1024-57-3 | 9.4E-06 | 6.7E-01 | 2.3E+00 | – | 6.4E-02 | – | 1.1E+00 | 4.6E+00 | – | 2.0E-01 | 1.0E-04 | 1.0E-02 | 3.2E-04 | 3.2E-02 |
| Heptane, n- | 142-82-5 | – | – | – | – | – | 9.4E+00 | 4.9E+03 | – | – | – | – | – | 1.5E+00 | 1.5E+02 |
| Heptanoic acid, n- | 111-14-8 | – | – | – | – | – | 1.0E-03 | 4.1E+04 | 1.8E+05 | – | – | – | – | 1.2E+01 | 1.2E+03 |
| Hexachlorobenzene | 118-74-1 | 5.3E-05 | 3.8E+00 | 1.3E+01 | – | 3.7E-01 | – | 6.6E+01 | 2.8E+02 | – | 1.3E+01 | 5.7E-04 | 5.7E-02 | 2.0E-02 | 2.0E+00 |
| Hexachlorobutadiene | 87-68-3 | 1.1E-03 | 7.8E+01 | 2.7E+02 | – | – | – | 8.2E+01 | 3.6E+02 | – | – | 1.2E-02 | 1.2E+00 | 2.4E-02 | 2.4E+00 |
| Hexachlorocyclohexane, alpha (alpha-BHC) | 319-84-6 | 1.4E-05 | 9.6E-01 | 8.2E+00 | – | 9.3E-02 | – | 6.6E+02 | 7.1E+03 | – | 1.3E+02 | 1.4E-04 | 1.4E-02 | 2.0E-01 | 2.0E+01 |
| Hexachlorocyclohexane, beta (beta-BHC) | 319-85-7 | 4.6E-05 | 3.4E+00 | 2.9E+01 | – | 3.2E-01 | – | – | – | – | – | 5.1E-04 | 5.1E-02 | – | – |
| Hexachlorocyclohexane, delta (delta-BHC) | 319-86-8 | 4.8E-05 | 3.4E+00 | 2.9E+01 | – | – | – | 2.5E+01 | 2.7E+02 | – | – | 5.1E-04 | 5.1E-02 | 7.3E-03 | 7.3E-01 |
| Hexachlorocyclohexane, gamma (lindane; gamma-BHC) | 58-89-9 | – | 4.7E+00 | 4.0E+01 | – | 4.5E-01 | – | 2.5E+01 | 2.7E+02 | – | 4.7E+00 | 7.0E-04 | 7.0E-02 | 7.3E-03 | 7.3E-01 |
| Hexachlorocyclohexane, techn (technical-BHC) | 608-73-1 | 4.8E-05 | 3.4E+00 | 2.9E+01 | – | 3.2E-01 | – | – | – | – | – | 5.1E-04 | 5.1E-02 | – | – |
| Hexachlorocyclopentadiene | 77-47-4 | – | – | – | – | – | 2.1E-04 | 4.9E+02 | 2.1E+03 | – | – | – | – | 1.5E-01 | 1.5E+01 |

# Table 9
# Individual RBELs Residential

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | Soil | | | | | | | | | | Groundwater | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Carcinogenic | | | | | Noncarcinogenic | | | | | Carcinogenic | | Noncarcinogenic | |
| | | $^{Air}RBEL_{Inh}$ (mg/m3) | $^{Soil}RBEL_{Ing}$ (mg/kg) | $^{Soil}RBEL_{Derm}$ (mg/kg) | $^{AbgVeg}RBEL_{Ing}$ above-ground (mg/kg) | $^{BgVeg}RBEL_{Ing}$ below-ground (mg/kg) | $^{Air}RBEL_{Inh}$ (mg/m3) | $^{Soil}RBEL_{Ing}$ (mg/kg) | $^{Soil}RBEL_{Derm}$ (mg/kg) | $^{AbgVeg}RBEL_{Ing}$ above-ground (mg/kg) | $^{BgVeg}RBEL_{Ing}$ below-ground (mg/kg) | $^{GW}RBEL_{Ing}$ [1] (mg/L) | $^{GW}RBEL_{Class\ 3}$ [2] (mg/L) | $^{GW}RBEL_{Ing}$ [1] (mg/L) | $^{GW}RBEL_{Class\ 3}$ [2] (mg/L) |
| Hexachloroethane | 67-72-1 | – | 1.5E+02 | 5.2E+02 | – | – | 3.1E-02 | 5.7E+01 | 2.5E+02 | – | – | 2.3E-02 | 2.3E+00 | 1.7E-02 | 1.7E+00 |
| Hexachlorophene | 70-30-4 | – | – | – | – | – | – | 2.5E+01 | 1.1E+02 | – | 4.7E+00 | – | – | 7.3E-03 | 7.3E-01 |
| Hexachloropropylene | 1888-71-7 | – | 1.5E+02 | 5.2E+02 | – | – | 3.1E-02 | 5.7E+01 | 2.5E+02 | – | – | 2.3E-02 | 2.3E+00 | 1.7E-02 | 1.7E+00 |
| Hexanal, 2-ethyl- | 123-05-7 | – | – | – | – | – | – | 1.2E+04 | 5.3E+04 | – | – | – | – | 3.7E+00 | 3.7E+02 |
| Hexane, n- | 110-54-3 | – | – | – | – | – | 7.0E-01 | 4.9E+03 | – | – | – | – | – | 1.5E+00 | 1.5E+02 |
| Hexanediamine, 1,6- | 124-09-4 | – | – | – | – | – | – | 4.1E+02 | 1.8E+03 | – | – | – | – | 1.2E-01 | 1.2E+01 |
| Hexanedinitrile | 111-69-3 | – | – | – | – | – | 6.3E-03 | 1.1E+02 | 5.0E+02 | – | – | – | – | 3.4E-02 | 3.4E+00 |
| Hexanediol, 1,6- | 629-11-8 | – | – | – | – | – | 1.9E+01 | 4.1E+05 | 1.0E+06 | – | – | – | – | 1.2E+02 | 1.2E+04 |
| Hexanoic acid | 142-62-1 | – | – | – | – | – | 1.0E-03 | 5.2E+03 | 2.3E+04 | – | – | – | – | 1.6E+00 | 1.6E+02 |
| Hexanone, 2- | 591-78-6 | – | – | – | – | – | 3.1E-02 | 4.1E+02 | – | – | – | – | – | 1.2E-01 | 1.2E+01 |
| Hexazinone | 51235-04-2 | – | – | – | – | – | – | 2.7E+03 | 1.2E+04 | – | – | – | – | 8.1E-01 | 8.1E+01 |
| Hexene, 1- | 592-41-6 | – | – | – | – | – | 1.1E-01 | 2.7E+04 | – | – | – | – | – | 8.1E+00 | 8.1E+02 |
| Hexene, cis-2- | 7688-21-3 | – | – | – | – | – | 1.1E-01 | 2.7E+04 | – | – | – | – | – | 8.1E+00 | 8.1E+02 |
| Hexylene glycol (2-methyl-2,4-pentanediol) | 107-41-5 | – | – | – | – | – | – | 2.5E+04 | 1.1E+05 | – | – | – | – | 7.3E+00 | 7.3E+02 |
| Hydrazine | 302-01-2 | 5.0E-06 | 2.0E+00 | – | – | – | 3.1E-05 | – | – | – | – | 3.0E-04 | 3.0E-02 | – | – |
| Hydrocaproic acid, 6- (6-hydroxyhexanoic acid) | 1191-25-9 | – | – | – | – | – | 1.0E-03 | 5.2E+03 | 2.3E+04 | – | – | – | – | 1.6E+00 | 1.6E+02 |
| Hydrogen chloride (hydrochloric acid)* | 7647-01-0 | – | – | – | – | – | – | – | – | – | – | – | – | – | – |
| Hydroquinone | 123-31-9 | – | 1.0E+02 | 3.5E+02 | – | – | – | 3.3E+03 | 1.4E+04 | – | – | 1.5E-02 | 1.5E+00 | 9.8E-01 | 9.8E+01 |
| Indene | 95-13-6 | – | – | – | – | – | 3.1E-03 | 1.6E+03 | – | – | – | – | – | 4.9E-01 | 4.9E+01 |
| Indeno-1,2,3-cd-pyrene | 193-39-5 | 4.1E-04 | 6.1E+01 | 1.6E+02 | – | 5.8E+00 | – | – | – | – | – | 9.1E-03 | 9.1E-01 | – | – |
| Iron* | 7439-89-6 | – | – | – | – | – | – | – | – | – | – | – | – | – | – |
| Isoamyl alcohol | 123-51-3 | – | – | – | – | – | – | 4.1E+02 | – | – | – | – | – | 1.2E-01 | 1.2E+01 |
| Isobutyl alcohol | 78-83-1 | – | – | – | – | – | – | 2.5E+04 | – | – | – | – | – | 7.3E+00 | 7.3E+02 |
| Isobutylene (2-methyl-1-propene) | 115-11-7 | – | – | – | – | – | 1.1E+02 | 3.0E+02 | – | – | – | – | – | 9.0E-02 | 9.0E+00 |
| Isobutyric acid (2-methylpropanoic acid) | 79-31-2 | – | – | – | – | – | – | 4.1E+04 | 1.8E+05 | – | – | – | – | 1.2E+01 | 1.2E+03 |
| Isodecanol | 25339-17-7 | – | – | – | – | – | – | 1.3E+02 | 5.7E+02 | – | 2.5E+01 | – | – | 3.9E-02 | 3.9E+00 |
| Isodrin | 465-73-6 | 5.0E-07 | 3.6E-02 | 1.2E-01 | – | – | – | 2.5E-01 | 1.1E+00 | – | – | 5.4E-06 | 5.4E-04 | 7.3E-05 | 7.3E-03 |
| Isopentane | 78-78-4 | – | – | – | – | – | 2.5E+01 | 4.9E+03 | – | – | – | – | – | 1.5E+00 | 1.5E+02 |
| Isophorone | 78-59-1 | – | 6.4E+03 | 2.2E+04 | – | – | – | 1.6E+04 | 7.1E+04 | – | – | 9.6E-01 | 9.6E+01 | 4.9E+00 | 4.9E+02 |
| Isopropyl acetate | 108-21-4 | – | – | – | – | – | – | 5.7E+03 | – | – | – | – | – | 1.7E+00 | 1.7E+02 |
| Isopropyl alcohol | 67-63-0 | – | – | – | – | – | 2.1E-01 | 1.6E+05 | – | – | – | – | – | 4.9E+01 | 4.9E+03 |
| Isosafrole | 120-58-1 | 3.9E-04 | 2.8E+01 | 9.4E+01 | – | – | – | – | – | – | – | 4.1E-03 | 4.1E-01 | – | – |
| Kelthane (dicofol) | 115-32-2 | – | – | – | – | – | – | 4.9E+02 | 2.1E+03 | – | 9.4E+01 | – | – | 1.5E-01 | 1.5E+01 |
| Kepone (chlordecone) | 143-50-0 | 5.3E-06 | 6.1E-01 | 2.1E+00 | – | 5.8E-02 | – | 2.5E+01 | 1.1E+02 | – | 4.7E+00 | 9.1E-05 | 9.1E-03 | 7.3E-03 | 7.3E-01 |
| Lead (inorganic) | 7439-92-1 | – | – | – | – | – | – | – | – | – | – | – | – | – | – |
| Leptophos | 21609-90-5 | – | – | – | – | – | 1.9E-06 | 4.1E-01 | 1.8E+00 | – | 7.8E-02 | – | – | 1.2E-04 | 1.2E-02 |
| Limonene, d-* | 5989-27-5 | – | – | – | – | – | – | – | – | – | – | – | – | – | – |
| Lithium | 7439-93-2 | – | – | – | – | – | – | 1.6E+02 | 7.1E+03 | 1.3E+01 | 3.1E+01 | – | – | 4.9E-02 | 4.9E+00 |
| Magnesium* | 7439-95-4 | – | – | – | – | – | – | – | – | – | – | – | – | – | – |
| Malathion | 121-75-5 | – | – | – | – | – | 2.1E-04 | 1.6E+03 | 7.1E+03 | – | – | – | – | 4.9E-01 | 4.9E+01 |

# Table 9
# Individual RBELs Residential

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | Soil | | | | | | | | | | Groundwater | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Carcinogenic | | | | | Noncarcinogenic | | | | | Carcinogenic | | Noncarcinogenic | |
| | | $^{Air}RBEL_{Inh}$ (mg/m3) | $^{Soil}RBEL_{Ing}$ (mg/kg) | $^{Soil}RBEL_{Derm}$ (mg/kg) | $^{AbgVeg}RBEL_{Ing}$ above-ground (mg/kg) | $^{BgVeg}RBEL_{Ing}$ below-ground (mg/kg) | $^{Air}RBEL_{Inh}$ (mg/m3) | $^{Soil}RBEL_{Ing}$ (mg/kg) | $^{Soil}RBEL_{Derm}$ (mg/kg) | $^{AbgVeg}RBEL_{Ing}$ above-ground (mg/kg) | $^{BgVeg}RBEL_{Ing}$ below-ground (mg/kg) | $^{GW}RBEL_{Ing}$ [1] (mg/L) | $^{GW}RBEL_{Class\ 3}$ [2] (mg/L) | $^{GW}RBEL_{Ing}$ [1] (mg/L) | $^{GW}RBEL_{Class\ 3}$ [2] (mg/L) |
| Maleic anhydride | 108-31-6 | – | – | – | – | – | – | 8.2E+03 | 3.6E+04 | – | – | – | – | 2.4E+00 | 2.4E+02 |
| Maleic hydrazide | 123-33-1 | – | – | – | – | – | – | 4.1E+04 | 1.8E+05 | – | – | – | – | 1.2E+01 | 1.2E+03 |
| Malononitrile | 109-77-3 | – | – | – | – | – | – | 8.2E+00 | 3.6E+01 | – | – | – | – | 2.4E-03 | 2.4E-01 |
| Mancozeb | 8018-01-7 | – | – | – | – | – | – | 2.5E+03 | 1.1E+04 | – | – | – | – | 7.3E-01 | 7.3E+01 |
| Manganese | 7439-96-5 | – | – | – | – | – | 8.8E-04 | 1.1E+04 | 3.0E+04 | 9.1E+02 | 2.2E+03 | – | – | 1.1E+00 | 1.1E+02 |
| MCPA (4-(chloro-2-methylphenoxy) acetic acid) | 94-74-6 | – | – | – | – | – | – | 4.1E+01 | 1.8E+02 | – | – | – | – | 1.2E-02 | 1.2E+00 |
| MCPP (2-(4-chloro-2-methylphenoxy) propanoic acid) | 93-65-2 | – | – | – | – | – | – | 8.2E+01 | 3.6E+02 | – | – | – | – | 2.4E-02 | 2.4E+00 |
| Mercury (pH = 4.9) | 7439-97-6 | – | – | – | – | – | 3.1E-04 | 2.5E+01 | 7.5E+01 | 2.0E+00 | – | – | – | 7.3E-03 | 7.3E-01 |
| Mercury (pH=6.8) | 7439-97-6A | – | – | – | – | – | 3.1E-04 | 2.5E+01 | 7.5E+01 | 2.0E+00 | – | – | – | 7.3E-03 | 7.3E-01 |
| Merphos | 150-50-5 | – | – | – | – | – | – | 2.5E+00 | 1.1E+01 | – | – | – | – | 7.3E-04 | 7.3E-02 |
| Methacrylic acid (2-methyl-2-propenoic acid) | 79-41-4 | – | – | – | – | – | – | 8.2E+02 | – | – | – | – | – | 2.4E-01 | 2.4E+01 |
| Methacrylonitrile | 126-98-7 | – | – | – | – | – | 3.1E-02 | 4.1E+03 | – | – | – | – | – | 1.2E+00 | 1.2E+02 |
| Methanol | 67-56-1 | – | – | – | – | – | 7.5E+00 | 1.6E+05 | – | – | – | – | – | 4.9E+01 | 4.9E+03 |
| Methapyrilene | 91-80-5 | – | 1.3E+00 | 4.4E+00 | – | – | – | – | – | – | – | 1.9E-04 | 1.9E-02 | – | – |
| Methomyl | 16752-77-5 | – | – | – | – | – | – | 2.0E+03 | 8.9E+03 | – | – | – | – | 6.1E-01 | 6.1E+01 |
| Methoxychlor | 72-43-5 | – | – | – | – | – | – | 4.1E+02 | 1.8E+03 | – | 7.8E+01 | – | – | 1.2E-01 | 1.2E+01 |
| Methoxyethanol, 2- | 109-86-4 | – | – | – | – | – | 2.1E-02 | 2.2E+03 | – | – | – | – | – | 6.6E-01 | 6.6E+01 |
| Methyl acetate (acetic acid, methyl ester) | 79-20-9 | – | – | – | – | – | – | 8.2E+04 | – | – | – | – | – | 2.4E+01 | 2.4E+03 |
| Methyl acrylate | 96-33-3 | – | – | – | – | – | 2.1E-02 | 1.6E+02 | – | – | – | – | – | 4.9E-02 | 4.9E+00 |
| Methyl amyl ketone (2-heptanone) | 110-43-0 | – | – | – | – | – | 2.9E+00 | 4.1E+03 | – | – | – | – | – | 1.2E+00 | 1.2E+02 |
| Methyl chrysene, 1- | 3351-28-8 | 2.8E-02 | 8.3E+02 | 2.2E+03 | – | 8.0E+01 | – | – | – | – | – | 1.3E-01 | 1.3E+01 | – | – |
| Methyl chrysene, 2- | 3351-32-4 | 2.8E-02 | 8.3E+02 | 2.2E+03 | – | 8.0E+01 | – | – | – | – | – | 1.3E-01 | 1.3E+01 | – | – |
| Methyl chrysene, 6- | 1705-85-7 | 2.8E-03 | 8.3E+01 | 2.2E+02 | – | 8.0E+00 | – | – | – | – | – | 1.3E-02 | 1.3E+00 | – | – |
| Methyl cyclohexane | 108-87-2 | – | – | – | – | – | 3.1E+00 | 4.1E+05 | – | – | – | – | – | 1.2E+02 | 1.2E+04 |
| Methyl ethyl ketone (2-butanone) | 78-93-3 | – | – | – | – | – | 9.2E+00 | 4.9E+04 | – | – | – | – | – | 1.5E+01 | 1.5E+03 |
| Methyl iodide (iodomethane) | 74-88-4 | – | – | – | – | – | – | 1.1E+02 | – | – | – | – | – | 3.4E-02 | 3.4E+00 |
| Methyl isobutyl ketone (4-methyl-2-pentanone) | 108-10-1 | – | – | – | – | – | 3.1E+00 | 6.6E+03 | – | – | – | – | – | 2.0E+00 | 2.0E+02 |
| Methyl mercury | 22967-92-6 | – | – | – | – | – | – | 8.2E+00 | 3.6E+02 | – | – | – | – | 2.4E-03 | 2.4E-01 |
| Methyl methacrylate | 80-62-6 | – | – | – | – | – | 7.3E-01 | 1.1E+05 | – | – | – | – | – | 3.4E+01 | 3.4E+03 |
| Methyl methanesulfonate | 66-27-3 | 8.7E-04 | 6.1E+01 | 2.1E+02 | – | – | – | – | – | – | – | 9.2E-03 | 9.2E-01 | – | – |
| Methyl parathion | 298-00-0 | – | – | – | – | – | – | 2.0E+01 | 8.9E+01 | – | – | – | – | 6.1E-03 | 6.1E-01 |
| Methyl-1-butene, 2- | 563-46-2 | – | – | – | – | – | 1.9E+01 | 4.9E+03 | – | – | – | – | – | 1.5E+00 | 1.5E+02 |
| Methyl-1-propanal, 2- (isobutyraldehyde) | 78-84-2 | – | – | – | – | – | – | 3.3E+03 | – | – | – | – | – | 9.8E-01 | 9.8E+01 |
| Methyl-2-butene, 2- | 513-35-9 | – | – | – | – | – | 1.9E+01 | 4.9E+03 | – | – | – | – | – | 1.5E+00 | 1.5E+02 |
| Methyl-2-pentenal, 2- | 623-36-9 | – | 3.2E+00 | – | – | – | – | – | – | – | – | 4.8E-04 | 4.8E-02 | – | – |
| Methylcholanthrene, 3- | 56-49-5 | 1.2E-05 | 2.8E-01 | 7.3E-01 | – | 2.7E-02 | – | – | – | – | – | 4.1E-05 | 4.1E-03 | – | – |
| Methylene bromide (dibromomethane) | 74-95-3 | – | 8.1E+02 | – | – | – | 4.2E-03 | 4.9E+03 | – | – | – | 1.2E-01 | 1.2E+01 | 1.5E+00 | 1.5E+02 |
| Methylene chloride (dichloromethane) | 75-09-2 | 8.7E-01 | 6.2E+04 | – | – | – | 1.4E+00 | 1.7E+03 | – | – | – | 9.3E+00 | 9.3E+02 | 5.1E-01 | 5.1E+01 |
| Methylene-bis (2-chloroaniline) 4,4'- | 101-14-4 | 6.6E-04 | 6.1E+01 | 2.1E+02 | – | – | – | 1.6E+02 | 7.1E+02 | – | – | 9.1E-03 | 9.1E-01 | 4.9E-02 | 4.9E+00 |
| Methylmecury hydroxide | 1184-57-2 | – | – | – | – | – | – | 8.2E+00 | 3.6E+01 | – | – | – | – | 2.4E-03 | 2.4E-01 |

## Table 9
## Individual RBELs Residential

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | Soil | | | | | | | | | | Groundwater | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Carcinogenic | | | | | Noncarcinogenic | | | | | Carcinogenic | | Noncarcinogenic | |
| | | $^{Air}RBEL_{Inh}$ (mg/m3) | $^{Soil}RBEL_{Ing}$ (mg/kg) | $^{Soil}RBEL_{Derm}$ (mg/kg) | $^{AbgVeg}RBEL_{Ing}$ above-ground (mg/kg) | $^{BgVeg}RBEL_{Ing}$ below-ground (mg/kg) | $^{Air}RBEL_{Inh}$ (mg/m3) | $^{Soil}RBEL_{Ing}$ (mg/kg) | $^{Soil}RBEL_{Derm}$ (mg/kg) | $^{AbgVeg}RBEL_{Ing}$ above-ground (mg/kg) | $^{BgVeg}RBEL_{Ing}$ below-ground (mg/kg) | $^{GW}RBEL_{Ing}$ [1] (mg/L) | $^{GW}RBEL_{Class\ 3}$ [2] (mg/L) | $^{GW}RBEL_{Ing}$ [1] (mg/L) | $^{GW}RBEL_{Class\ 3}$ [2] (mg/L) |
| Methylnaphthalene, 1- | 90-12-0 | – | 2.1E+02 | 5.5E+02 | – | – | – | 5.7E+03 | 1.9E+04 | – | – | 3.1E-02 | 3.1E+00 | 1.7E+00 | 1.7E+02 |
| Methylnaphthalene, 2- | 91-57-6 | – | – | – | – | – | – | 3.3E+02 | 1.1E+03 | – | – | – | – | 9.8E-02 | 9.8E+00 |
| Methylpyrrolidone, N- | 872-50-4 | – | – | – | – | – | – | 1.6E+03 | 7.1E+03 | – | – | – | – | 4.9E-01 | 4.9E+01 |
| Methylstyrene, alpha- | 98-83-9 | – | – | – | – | – | 2.6E-02 | 6.8E+02 | – | – | – | – | – | 2.0E-01 | 2.0E+01 |
| Methyltetrahydrofuran, 2- | 96-47-9 | 1.3E-02 | 8.0E+02 | – | – | – | – | 1.6E+04 | – | – | – | 1.2E-01 | 1.2E+01 | 4.9E+00 | 4.9E+02 |
| Methyltetrahydropyran, 2- | 10141-72-7 | 1.3E-02 | 8.0E+02 | – | – | – | – | 1.6E+04 | – | – | – | 1.2E-01 | 1.2E+01 | 4.9E+00 | 4.9E+02 |
| Metolachlor | 51218-45-2 | – | – | – | – | – | – | 1.2E+04 | 5.3E+04 | – | – | – | – | 3.7E+00 | 3.7E+02 |
| Metribuzin | 21087-64-9 | – | – | – | – | – | – | 2.0E+03 | 8.9E+03 | – | – | – | – | 6.1E-01 | 6.1E+01 |
| Mirex | 2385-85-5 | – | – | – | – | – | – | 1.6E+01 | 7.1E+01 | – | – | – | – | 4.9E-03 | 4.9E-01 |
| Molinate | 2212-67-1 | – | – | – | – | – | – | 1.6E+02 | 7.1E+02 | – | – | – | – | 4.9E-02 | 4.9E+00 |
| Molybdenum | 7439-98-7 | – | – | – | – | – | – | 4.1E+02 | 6.8E+03 | 3.3E+01 | 7.8E+01 | – | – | 1.2E-01 | 1.2E+01 |
| Monocrotophos | 2157-98-4 | – | – | – | – | – | – | 4.9E+01 | 2.1E+02 | – | – | – | – | 1.5E-02 | 1.5E+00 |
| Morpholine | 110-91-8 | – | – | – | – | – | – | 1.0E+06 | – | – | – | – | – | 1.2E+04 | 1.2E+06 |
| Morpholine, N-butyl- | 1005-67-0 | – | – | – | – | – | – | 1.9E+02 | 8.2E+02 | – | – | – | – | 5.6E-02 | 5.6E+00 |
| MTBE (methyl tert-butyl ether) | 1634-04-4 | 9.4E-02 | 3.4E+03 | – | – | – | 3.1E+00 | 8.2E+02 | – | – | – | 5.1E-01 | 5.1E+01 | 2.4E-01 | 2.4E+01 |
| Naled | 300-76-5 | – | – | – | – | – | – | 1.6E+02 | 7.1E+02 | – | – | – | – | 4.9E-02 | 4.9E+00 |
| Naphthalene | 91-20-3 | – | – | – | – | – | 3.1E-03 | 1.6E+03 | 5.5E+03 | – | – | – | – | 4.9E-01 | 4.9E+01 |
| Naphthoquinone, 1,4- | 130-15-4 | – | – | – | – | – | – | 5.7E+02 | 2.5E+03 | – | – | – | – | 1.7E-01 | 1.7E+01 |
| Naphthylamine, 1- | 134-32-7 | – | – | – | – | – | – | 1.6E+03 | 7.1E+03 | – | – | – | – | 4.9E-01 | 4.9E+01 |
| Naphthylamine, 2- | 91-59-8 | – | 3.4E+00 | 1.2E+01 | – | – | – | – | – | – | – | 5.1E-04 | 5.1E-02 | – | – |
| Napropamide | 15299-99-7 | – | – | – | – | – | – | 8.2E+03 | 3.6E+04 | – | – | – | – | 2.4E+00 | 2.4E+02 |
| Neopentyl glycol | 126-30-7 | – | – | – | – | – | – | 2.5E+04 | 1.1E+05 | – | – | – | – | 7.3E+00 | 7.3E+02 |
| Nickel and compounds | 7440-02-0 | 1.4E-04 | – | – | – | – | 2.4E-04 | 1.6E+03 | 2.8E+03 | 1.3E+02 | 3.1E+02 | – | – | 4.9E-01 | 4.9E+01 |
| Nitrate-N | 14797-55-8 | – | – | – | – | – | – | 1.3E+05 | 1.0E+06 | – | – | – | – | 3.9E+01 | 3.9E+03 |
| Nitrite-N | 14797-65-0 | – | – | – | – | – | – | 8.2E+03 | 3.6E+05 | – | – | – | – | 2.4E+00 | 2.4E+02 |
| Nitroaniline, 2- | 88-74-4 | – | – | – | – | – | 2.1E-04 | 2.5E+01 | 1.1E+02 | – | – | – | – | 7.3E-03 | 7.3E-01 |
| Nitroaniline, 3- | 99-09-2 | – | 1.6E+02 | 5.5E+02 | – | – | 2.1E-04 | 2.5E+01 | 1.1E+02 | – | – | 2.4E-02 | 2.4E+00 | 7.3E-03 | 7.3E-01 |
| Nitroaniline, 4- | 100-01-6 | – | 3.0E+02 | 1.0E+03 | – | – | 6.3E-03 | 3.3E+02 | 1.4E+03 | – | – | 4.6E-02 | 4.6E+00 | 9.8E-02 | 9.8E+00 |
| Nitrobenzene | 98-95-3 | 6.1E-04 | – | – | – | – | 9.4E-03 | 1.6E+02 | 7.1E+02 | – | – | – | – | 4.9E-02 | 4.9E+00 |
| Nitroglycerin | 55-63-0 | – | 3.6E+02 | 1.2E+03 | – | – | – | 8.2E+00 | 3.6E+01 | – | – | 5.4E-02 | 5.4E+00 | 2.4E-03 | 2.4E-01 |
| Nitrophenol, 2- | 88-75-5 | – | – | – | – | – | – | 1.6E+02 | 7.1E+02 | – | – | – | – | 4.9E-02 | 4.9E+00 |
| Nitrophenol, 3- | 554-84-7 | – | – | – | – | – | – | 1.6E+02 | 7.1E+02 | – | – | – | – | 4.9E-02 | 4.9E+00 |
| Nitrophenol, 4- | 100-02-7 | – | – | – | – | – | – | 1.6E+02 | 7.1E+02 | – | – | – | – | 4.9E-02 | 4.9E+00 |
| Nitropropane, 2- | 79-46-9 | 9.0E-06 | – | – | – | – | 2.1E-02 | 1.1E+01 | – | – | – | – | – | 3.4E-03 | 3.4E-01 |
| Nitroquinoline-N-oxide, 4- | 56-57-5 | 9.0E-06 | 6.5E-01 | 2.2E+00 | – | – | – | – | – | – | – | 9.7E-05 | 9.7E-03 | – | – |
| Nitrosodiethanolamine | 1116-54-7 | – | 2.2E+00 | 7.4E+00 | – | – | – | – | – | – | – | 3.3E-04 | 3.3E-02 | – | – |
| Nitrosodiethylamine, n- | 55-18-5 | 5.7E-07 | 4.0E-02 | – | – | – | – | – | – | – | – | 6.1E-06 | 6.1E-04 | – | – |
| Nitrosodimethylamine, n- | 62-75-9 | 1.7E-06 | 1.2E-01 | – | – | – | 4.2E-05 | 6.6E-01 | – | – | – | 1.8E-05 | 1.8E-03 | 2.0E-04 | 2.0E-02 |
| Nitrosodi-n-butylamine, n- | 924-16-3 | 1.5E-05 | 1.1E+00 | 3.8E+00 | – | – | – | – | – | – | – | 1.7E-04 | 1.7E-02 | – | – |
| Nitrosodi-n-propylamine, n- | 621-64-7 | – | 8.7E-01 | 7.4E-01 | – | – | – | – | – | – | – | 1.3E-04 | 1.3E-02 | – | – |

# Table 9
# Individual RBELs Residential

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | Soil | | | | | | | | | | Groundwater | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Carcinogenic | | | | | Noncarcinogenic | | | | | Carcinogenic | | Noncarcinogenic | |
| | | $^{Air}RBEL_{Inh}$ (mg/m3) | $^{Soil}RBEL_{Ing}$ (mg/kg) | $^{Soil}RBEL_{Derm}$ (mg/kg) | $^{AbgVeg}RBEL_{Ing}$ above-ground (mg/kg) | $^{BgVeg}RBEL_{Ing}$ below-ground (mg/kg) | $^{Air}RBEL_{Inh}$ (mg/m3) | $^{Soil}RBEL_{Ing}$ (mg/kg) | $^{Soil}RBEL_{Derm}$ (mg/kg) | $^{AbgVeg}RBEL_{Ing}$ above-ground (mg/kg) | $^{BgVeg}RBEL_{Ing}$ below-ground (mg/kg) | $^{GW}RBEL_{Ing}$ [1] (mg/L) | $^{GW}RBEL_{Class\ 3}$ [2] (mg/L) | $^{GW}RBEL_{Ing}$ [1] (mg/L) | $^{GW}RBEL_{Class\ 3}$ [2] (mg/L) |
| Nitrosodiphenylamine | 86-30-6 | – | 1.2E+03 | 1.1E+03 | – | – | – | – | – | – | – | 1.9E-01 | 1.9E+01 | – | – |
| Nitroso-methyl-ethyl-amine, n- | 10595-95-6 | – | 2.8E-01 | – | – | – | – | – | – | – | – | 4.1E-05 | 4.1E-03 | – | – |
| Nitrosomorpholine, N- | 59-89-2 | 1.3E-05 | 9.1E-01 | 3.1E+00 | – | – | – | – | – | – | – | 1.4E-04 | 1.4E-02 | – | – |
| Nitroso-n-ethylurea, n- | 759-73-9 | – | 4.3E-02 | 1.5E-01 | – | – | – | – | – | – | – | 6.5E-06 | 6.5E-04 | – | – |
| Nitrosopiperidine, N- | 100-75-4 | 9.0E-06 | 6.5E-01 | 2.2E+00 | – | – | – | – | – | – | – | 9.7E-05 | 9.7E-03 | – | – |
| Nitrosopyrrolidine, n- | 930-55-2 | 4.0E-05 | 2.9E+00 | 9.9E+00 | – | – | – | – | – | – | – | 4.3E-04 | 4.3E-02 | – | – |
| Nitrotoluene, m- | 99-08-1 | – | – | – | – | – | – | 8.2E+02 | 3.6E+03 | – | – | – | – | 2.4E-01 | 2.4E+01 |
| Nitrotoluene, o- | 88-72-2 | – | 2.8E+01 | 9.4E+01 | – | – | – | 7.4E+01 | 3.2E+02 | – | – | 4.1E-03 | 4.1E-01 | 2.2E-02 | 2.2E+00 |
| Nitrotoluene, p- | 99-99-0 | – | 3.8E+02 | 1.3E+03 | – | – | – | 3.3E+02 | 1.4E+03 | – | – | 5.7E-02 | 5.7E+00 | 9.8E-02 | 9.8E+00 |
| Nonachlor, cis- | 5103-73-1 | 2.4E-04 | 1.7E+01 | 5.9E+01 | – | 1.7E+00 | 7.3E-04 | 4.1E+01 | 1.8E+02 | – | 7.8E+00 | 2.6E-03 | 2.6E-01 | 1.2E-02 | 1.2E+00 |
| Nonachlor, trans- | 39765-80-5 | 2.4E-04 | 1.7E+01 | 5.9E+01 | – | 1.7E+00 | 7.3E-04 | 4.1E+01 | 1.8E+02 | – | 7.8E+00 | 2.6E-03 | 2.6E-01 | 1.2E-02 | 1.2E+00 |
| Nonanal | 124-19-6 | – | – | – | – | – | – | 1.6E+04 | 7.1E+04 | – | – | – | – | 4.9E+00 | 4.9E+02 |
| Nonene, 1-n | 124-11-8 | – | – | – | – | – | – | 8.2E+03 | – | – | – | – | – | 2.4E+00 | 2.4E+02 |
| Nonylphenol, 4-n- | 104-40-5 | – | – | – | – | – | – | 8.2E+03 | 3.6E+04 | – | 1.6E+03 | – | – | 2.4E+00 | 2.4E+02 |
| Nonylphenol ethoxylate | 9016-45-9 | – | – | – | – | – | – | 8.2E+03 | 3.6E+04 | – | 1.6E+03 | – | – | 2.4E+00 | 2.4E+02 |
| Octamethylpyrophosphoramide | 152-16-9 | – | – | – | – | – | – | 1.6E+02 | 7.1E+02 | – | – | – | – | 4.9E-02 | 4.9E+00 |
| Octanone | 106-68-3 | – | – | – | – | – | 1.9E+01 | 4.9E+03 | – | – | – | – | – | 1.5E+00 | 1.5E+02 |
| Oxamyl | 23135-22-0 | – | – | – | – | – | – | 2.0E+03 | 8.9E+03 | – | – | – | – | 6.1E-01 | 6.1E+01 |
| Oxychlordane | 27304-13-8 | 2.4E-04 | 1.7E+01 | 5.9E+01 | – | 1.7E+00 | 7.3E-04 | 4.1E+01 | 1.8E+02 | – | 7.8E+00 | 2.6E-03 | 2.6E-01 | 1.2E-02 | 1.2E+00 |
| Paraquat | 1910-42-5 | – | – | – | – | – | – | 3.7E+02 | 1.6E+03 | – | – | – | – | 1.1E-01 | 1.1E+01 |
| Parathion (ethyl parathion) | 56-38-2 | – | – | – | – | – | – | 4.9E+02 | 2.1E+03 | – | – | – | – | 1.5E-01 | 1.5E+01 |
| Pebulate | 1114-71-2 | – | – | – | – | – | – | 4.1E+03 | 1.8E+04 | – | – | – | – | 1.2E+00 | 1.2E+02 |
| Pendimethalin | 40487-42-1 | – | – | – | – | – | – | 3.3E+03 | 1.4E+04 | – | 6.3E+02 | – | – | 9.8E-01 | 9.8E+01 |
| Pentachlorobenzene | 608-93-5 | – | – | – | – | – | – | 6.6E+01 | 2.8E+02 | – | – | – | – | 2.0E-02 | 2.0E+00 |
| Pentachloroethane | 76-01-7 | 3.3E-03 | 6.7E+01 | – | – | – | – | 2.5E+03 | – | – | – | 1.0E-02 | 1.0E+00 | 7.3E-01 | 7.3E+01 |
| Pentachloronitrobenzene | 82-68-8 | – | 2.3E+01 | 8.0E+01 | – | 2.2E+00 | – | 2.5E+02 | 1.1E+03 | – | 4.7E+01 | 3.5E-03 | 3.5E-01 | 7.3E-02 | 7.3E+00 |
| Pentachlorophenol | 87-86-5 | – | 1.5E+01 | 2.1E+01 | – | 1.5E+00 | – | 4.1E+02 | 7.1E+02 | – | 7.8E+01 | 2.3E-03 | 2.3E-01 | 1.2E-01 | 1.2E+01 |
| Pentadiene, 1,3-cis- | 1574-41-0 | – | – | – | – | – | 1.9E+01 | 4.9E+03 | – | – | – | – | – | 1.5E+00 | 1.5E+02 |
| Pentadiene, 1,3-trans- | 2004-70-8 | – | – | – | – | – | 1.9E+01 | 4.9E+03 | – | – | – | – | – | 1.5E+00 | 1.5E+02 |
| Pentaerythritol tetranitrate (PETN) | 78-11-5 | – | – | – | – | – | – | 1.6E+02 | 7.1E+02 | – | – | – | – | 4.9E-02 | 4.9E+00 |
| Pentane | 109-66-0 | – | – | – | – | – | 2.5E+01 | 4.9E+03 | – | – | – | – | – | 1.5E+00 | 1.5E+02 |
| Pentane, 2-methyl- | 107-83-5 | – | – | – | – | – | 1.9E+01 | 4.9E+03 | – | – | – | – | – | 1.5E+00 | 1.5E+02 |
| Pentane, 3-methyl- | 96-14-0 | – | – | – | – | – | 1.9E+01 | 4.9E+03 | – | – | – | – | – | 1.5E+00 | 1.5E+02 |
| Pentanediol, 1,5- | 111-29-5 | – | – | – | – | – | 1.9E+01 | 4.1E+05 | 1.0E+06 | – | – | – | – | 1.2E+02 | 1.2E+04 |
| Pentanol, 1- | 71-41-0 | – | – | – | – | – | – | 2.7E+03 | – | – | – | – | – | 8.1E-01 | 8.1E+01 |
| Pentanol, 4-methyl-2- | 108-11-2 | – | – | – | – | – | – | 2.1E+03 | – | – | – | – | – | 6.4E-01 | 6.4E+01 |
| Pentanone, 2- | 107-87-9 | – | – | – | – | – | – | 3.3E+03 | – | – | – | – | – | 9.8E-01 | 9.8E+01 |
| Pentene, 2- | 109-68-2 | – | – | – | – | – | 1.9E+01 | 4.9E+03 | – | – | – | – | – | 1.5E+00 | 1.5E+02 |
| Pentyne, 1- | 627-19-0 | – | – | – | – | – | 1.9E+01 | 4.9E+03 | – | – | – | – | – | 1.5E+00 | 1.5E+02 |
| Perchlorate | 14797-73-0 | – | – | – | – | – | – | 5.7E+01 | 5.0E+02 | – | – | – | – | 1.7E-02 | 1.7E+00 |

# Table 9
# Individual RBELs Residential

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | Soil | | | | | | | | | | Groundwater | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Carcinogenic | | | | | Noncarcinogenic | | | | | Carcinogenic | | Noncarcinogenic | |
| | | $^{Air}RBEL_{Inh}$ (mg/m3) | $^{Soil}RBEL_{Ing}$ (mg/kg) | $^{Soil}RBEL_{Derm}$ (mg/kg) | $^{AbgVeg}RBEL_{Ing}$ above-ground (mg/kg) | $^{BgVeg}RBEL_{Ing}$ below-ground (mg/kg) | $^{Air}RBEL_{Inh}$ (mg/m3) | $^{Soil}RBEL_{Ing}$ (mg/kg) | $^{Soil}RBEL_{Derm}$ (mg/kg) | $^{AbgVeg}RBEL_{Ing}$ above-ground (mg/kg) | $^{BgVeg}RBEL_{Ing}$ below-ground (mg/kg) | $^{GW}RBEL_{Ing}$ [1] (mg/L) | $^{GW}RBEL_{Class\ 3}$ [2] (mg/L) | $^{GW}RBEL_{Ing}$ [1] (mg/L) | $^{GW}RBEL_{Class\ 3}$ [2] (mg/L) |
| Perfluorooctanoic sulfonic acid (1-Octanesulfonic acid, heptadecafluoro-1-) | 1763-23-1 | – | – | – | – | – | 8.4E-05 | 1.9E+00 | 8.2E+00 | – | – | – | – | 5.6E-04 | 5.6E-02 |
| Perfluoroundecanoic acid (Undecanoic acid, uncosafluoro-) | 2058-94-8 | – | – | – | – | – | – | 9.8E-01 | 4.3E+00 | – | – | – | – | 2.9E-04 | 2.9E-02 |
| Perfluoropentanoic acid (Pentanoic acid, nonafluoro-) | 2706-90-3 | – | – | – | – | – | – | 3.1E-01 | 1.4E+00 | – | – | – | – | 9.3E-05 | 9.3E-03 |
| Perfluorohexanoic acid (Hexanoic acid, undecafluoro-) | 307-24-4 | – | – | – | – | – | – | 3.1E-01 | 1.4E+00 | – | – | – | – | 9.3E-05 | 9.3E-03 |
| Perfluorododecanoic acid (Dodecanoic acid, tricosafluoro-) | 307-55-1 | – | – | – | – | – | 4.4E-05 | 9.8E-01 | 4.3E+00 | – | – | – | – | 2.9E-04 | 2.9E-02 |
| Perfluorooctanoic acid (Octanoic acid, pentadecafluoro-) | 335-67-1 | – | – | – | – | – | 4.3E-06 | 9.8E-01 | 4.3E+00 | – | – | – | – | 2.9E-04 | 2.9E-02 |
| Perfluorodecanoic acid (Decanoic acid, nonadecafluoro-) | 335-76-2 | – | – | – | – | – | 5.5E-05 | 1.2E+00 | 5.3E+00 | – | – | – | – | 3.7E-04 | 3.7E-02 |
| Perfluorodecane sulfonic acid (1-Decanesulfonic acid, heneicosafluoro-) | 335-77-3 | – | – | – | – | – | – | 9.8E-01 | 4.3E+00 | – | – | – | – | 2.9E-04 | 2.9E-02 |
| Perfluorohexane sulfonic acid (1-Hexanesulfonic acid, tridecafluoro-) | 355-46-4 | – | – | – | – | – | 1.4E-05 | 3.1E-01 | 1.4E+00 | – | – | – | – | 9.3E-05 | 9.3E-03 |
| Perfluorobutyric acid (Butanoic acid, heptafluoro-) | 375-22-4 | – | – | – | – | – | 1.0E-02 | 2.4E+02 | 1.0E+03 | – | – | – | – | 7.1E-02 | 7.1E+00 |
| Perfluorobutane sulfonic acid (1-Butanesulfonic acid, nonafluoro-) | 375-73-5 | – | – | – | – | – | 5.1E-03 | 1.1E+02 | 5.0E+02 | – | – | – | – | 3.4E-02 | 3.4E+00 |
| Perfluoroheptanoic acid (Heptanoic acid, tridecafluoro-) | 375-85-9 | – | – | – | – | – | – | 1.9E+00 | 8.2E+00 | – | – | – | – | 5.6E-04 | 5.6E-02 |
| Perfluorononanoic acid (Nonanoic acid, heptadecafluoro-) | 375-95-1 | – | – | – | – | – | 2.9E-05 | 9.8E-01 | 4.3E+00 | – | – | – | – | 2.9E-04 | 2.9E-02 |
| Perfluorotetradecanoic acid (Tetradecanoic acid, heptacosafluoro-) | 376-06-7 | – | – | – | – | – | – | 9.8E-01 | 4.3E+00 | – | 1.9E-01 | – | – | 2.9E-04 | 2.9E-02 |
| Perfluorotridecanoic acid (Tridecanoic acid, pentacosafluoro-) | 72629-94-8 | – | – | – | – | – | – | 9.8E-01 | 4.3E+00 | – | 1.9E-01 | – | – | 2.9E-04 | 2.9E-02 |
| Perfluorooctane sulfonamide (1-Octanesulfonamide, hetpadecafluoro-) | 754-91-6 | – | – | – | – | – | 4.3E-06 | 9.8E-01 | 4.3E+00 | – | – | – | – | 2.9E-04 | 2.9E-02 |
| Perylene | 198-55-0 | – | – | – | – | – | – | 1.6E+03 | 7.1E+03 | – | 3.1E+02 | – | – | 4.9E-01 | 4.9E+01 |
| Phenacetin | 62-44-2 | 3.9E-02 | 2.8E+03 | 9.4E+03 | – | – | – | – | – | – | – | 4.1E-01 | 4.1E+01 | – | – |
| Phenanthrene | 85-01-8 | – | – | – | – | – | – | 2.5E+03 | 8.2E+03 | – | 4.7E+02 | – | – | 7.3E-01 | 7.3E+01 |
| Phenanthridine | 229-87-8 | – | – | – | – | – | – | 2.5E+02 | 1.1E+03 | – | – | – | – | 7.3E-02 | 7.3E+00 |
| Phenol | 108-95-2 | – | – | – | – | – | 1.1E-02 | 2.5E+04 | 1.1E+05 | – | – | – | – | 7.3E+00 | 7.3E+02 |
| Phenol, 4-tert-butyl- | 98-54-4 | – | – | – | – | – | – | 9.8E+03 | 4.3E+04 | – | – | – | – | 2.9E+00 | 2.9E+02 |
| Phenothiazine | 92-84-2 | – | – | – | – | – | – | 9.0E+01 | 3.9E+02 | – | 1.7E+01 | – | – | 2.7E-02 | 2.7E+00 |
| Phenyl mercuric acetate | 62-38-4 | – | – | – | – | – | – | 6.6E+00 | 2.8E+01 | – | – | – | – | 2.0E-03 | 2.0E-01 |
| Phenylene diamine, m- | 108-45-2 | – | – | – | – | – | – | 4.9E+02 | 2.1E+03 | – | – | – | – | 1.5E-01 | 1.5E+01 |
| Phenylene diamine, p- | 106-50-3 | – | – | – | – | – | – | 1.6E+04 | 6.8E+04 | – | – | – | – | 4.6E+00 | 4.6E+02 |
| Phorate | 298-02-2 | – | – | – | – | – | – | 1.6E+01 | 7.1E+01 | – | – | – | – | 4.9E-03 | 4.9E-01 |
| Phosalone | 2310-17-0 | – | – | – | – | – | – | 1.6E+02 | 7.1E+02 | – | – | – | – | 4.9E-02 | 4.9E+00 |
| Phosdrin (mevinphos) | 7786-34-7 | – | – | – | – | – | – | 2.0E+00 | 8.9E+00 | – | – | – | – | 6.1E-04 | 6.1E-02 |
| Phosmet | 732-11-6 | – | – | – | – | – | – | 1.6E+03 | 7.1E+03 | – | – | – | – | 4.9E-01 | 4.9E+01 |
| Phosphine | 7803-51-2 | – | – | – | – | – | 3.1E-04 | 2.5E+01 | 2.1E+02 | – | – | – | – | 7.3E-03 | 7.3E-01 |
| Phosphorotrithioic acid, S,S,S-tributyl ester | 78-48-8 | – | 7.2E+01 | 2.5E+02 | – | 7.0E+00 | – | 8.2E+01 | 3.6E+02 | – | 1.6E+01 | 1.1E-02 | 1.1E+00 | 2.4E-02 | 2.4E+00 |
| Phosphorus, total* | 7723-14-0 | – | – | – | – | – | – | – | – | – | – | – | – | – | – |
| Phosphorus, white | 7723-14-0 | – | – | – | – | – | – | 1.6E+00 | 1.4E+01 | – | – | – | – | 4.9E-04 | 4.9E-02 |
| Phthalic anhydride | 85-44-9 | – | – | – | – | – | 1.3E-01 | 1.6E+05 | 7.1E+05 | – | – | – | – | 4.9E+01 | 4.9E+03 |
| Picloram | 1918-02-1 | – | – | – | – | – | – | 5.7E+03 | 2.5E+04 | – | – | – | – | 1.7E+00 | 1.7E+02 |
| Picoline, 2- (2-methylpyridine) | 109-06-8 | – | – | – | – | – | – | 7.4E+02 | – | – | – | – | – | 2.2E-01 | 2.2E+01 |
| Polybrominated biphenyls (PBBs) | 67774-32-7 | – | 6.8E-01 | 2.3E+00 | – | 6.6E-02 | – | 5.7E-01 | 2.5E+00 | – | 1.1E-01 | 1.0E-04 | 1.0E-02 | 1.7E-04 | 1.7E-02 |

# Table 9
# Individual RBELs Residential

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | Soil | | | | | | | | | | Groundwater | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Carcinogenic | | | | | Noncarcinogenic | | | | | Carcinogenic | | Noncarcinogenic | |
| | | $^{Air}RBEL_{Inh}$ (mg/m3) | $^{Soil}RBEL_{Ing}$ (mg/kg) | $^{Soil}RBEL_{Derm}$ (mg/kg) | $^{AbgVeg}RBEL_{Ing}$ above-ground (mg/kg) | $^{BgVeg}RBEL_{Ing}$ below-ground (mg/kg) | $^{Air}RBEL_{Inh}$ (mg/m3) | $^{Soil}RBEL_{Ing}$ (mg/kg) | $^{Soil}RBEL_{Derm}$ (mg/kg) | $^{AbgVeg}RBEL_{Ing}$ above-ground (mg/kg) | $^{BgVeg}RBEL_{Ing}$ below-ground (mg/kg) | $^{GW}RBEL_{Ing}$ [1] (mg/L) | $^{GW}RBEL_{Class\ 3}$ [2] (mg/L) | $^{GW}RBEL_{Ing}$ [1] (mg/L) | $^{GW}RBEL_{Class\ 3}$ [2] (mg/L) |
| Polychlorinated biphenyls (PCBs) | 1336-36-3 | 4.3E-05 | 3.0E+00 | 7.4E+00 | – | 2.9E-01 | – | 1.6E+00 | 5.1E+00 | – | 3.1E-01 | 4.6E-04 | 4.6E-02 | 4.9E-04 | 4.9E-02 |
| Potassium* | 7440-09-7 | – | – | – | – | – | – | – | – | – | – | – | – | – | – |
| Primene | 68955-53-3 | – | – | – | – | – | – | 4.9E+02 | 2.1E+03 | – | 9.4E+01 | – | – | 1.5E-01 | 1.5E+01 |
| Prometon (pramitol) | 1610-18-0 | – | – | – | – | – | – | 1.2E+03 | 5.3E+03 | – | – | – | – | 3.7E-01 | 3.7E+01 |
| Prometryn | 7287-19-6 | – | – | – | – | – | – | 3.3E+03 | 1.4E+04 | – | – | – | – | 9.8E-01 | 9.8E+01 |
| Pronamide | 23950-58-5 | – | – | – | – | – | – | 6.1E+03 | 2.7E+04 | – | – | – | – | 1.8E+00 | 1.8E+02 |
| Propanal (propionaldehyde) | 123-38-6 | – | – | – | – | – | 8.3E-03 | 6.6E+02 | – | – | – | – | – | 2.0E-01 | 2.0E+01 |
| Propane, 1-bromo- | 106-94-5 | – | – | – | – | – | – | 2.9E+03 | – | – | – | – | – | 8.8E-01 | 8.8E+01 |
| Propanil | 709-98-8 | – | – | – | – | – | – | 4.1E+02 | 1.8E+03 | – | – | – | – | 1.2E-01 | 1.2E+01 |
| Propanoic acid (propionic acid) | 79-09-4 | – | – | – | – | – | – | 4.1E+04 | – | – | – | – | – | 1.2E+01 | 1.2E+03 |
| Propanol, 1- | 71-23-8 | – | – | – | – | – | – | 1.6E+04 | – | – | – | – | – | 4.9E+00 | 4.9E+02 |
| Propargite | 2312-35-8 | – | – | – | – | – | – | 1.6E+03 | 7.1E+03 | – | – | – | – | 4.9E-01 | 4.9E+01 |
| Propargyl alcohol | 107-19-7 | – | – | – | – | – | – | 1.6E+02 | – | – | – | – | – | 4.9E-02 | 4.9E+00 |
| Propazine | 139-40-2 | – | 1.4E+02 | 4.7E+02 | – | – | – | 1.6E+03 | 7.1E+03 | – | – | 2.1E-02 | 2.1E+00 | 4.9E-01 | 4.9E+01 |
| Propham | 122-42-9 | – | – | – | – | – | – | 1.6E+03 | 7.1E+03 | – | – | – | – | 4.9E-01 | 4.9E+01 |
| Propionitrile (propane nitrile) | 107-12-0 | – | – | – | – | – | – | 3.3E+01 | – | – | – | – | – | 9.8E-03 | 9.8E-01 |
| Propyl acetate, n- | 109-60-4 | – | – | – | – | – | – | 7.4E+03 | – | – | – | – | – | 2.2E+00 | 2.2E+02 |
| Propylbenzene, n- | 103-65-1 | – | – | – | – | – | 4.2E-01 | 3.3E+03 | – | – | – | – | – | 9.8E-01 | 9.8E+01 |
| Propylene glycol | 57-55-6 | – | – | – | – | – | 3.1E-03 | 1.0E+06 | 1.0E+06 | – | – | – | – | 4.9E+02 | 4.9E+04 |
| Propylene glycol monomethyl ether | 107-98-2 | – | – | – | – | – | 2.1E+00 | 5.7E+04 | – | – | – | – | – | 1.7E+01 | 1.7E+03 |
| Propylene oxide | 75-56-9 | 6.6E-03 | 2.5E+01 | – | – | – | 3.1E-02 | – | – | – | – | 3.8E-03 | 3.8E-01 | – | – |
| Propylene tetramer | 6842-15-5 | – | – | – | – | – | 1.0E+00 | 8.2E+03 | 3.6E+04 | – | – | – | – | 2.4E+00 | 2.4E+02 |
| Prothiofos (Tokuthion) | 34643-46-4 | – | – | – | – | – | – | 8.2E+00 | 3.6E+01 | – | 1.6E+00 | – | – | 2.4E-03 | 2.4E-01 |
| Pyrene | 129-00-0 | – | – | – | – | – | – | 2.5E+03 | 8.2E+03 | – | 4.7E+02 | – | – | 7.3E-01 | 7.3E+01 |
| Pyridine | 110-86-1 | – | – | – | – | – | – | 8.2E+01 | – | – | – | – | – | 2.4E-02 | 2.4E+00 |
| Quinoline | 91-22-5 | – | 2.0E+00 | 6.9E+00 | – | – | – | – | – | – | – | 3.0E-04 | 3.0E-02 | – | – |
| Ronnel | 299-84-3 | – | – | – | – | – | – | 4.1E+03 | 1.8E+04 | – | 7.8E+02 | – | – | 1.2E+00 | 1.2E+02 |
| Safrole | 94-59-7 | 3.9E-04 | 2.8E+01 | 9.4E+01 | – | – | – | – | – | – | – | 4.1E-03 | 4.1E-01 | – | – |
| Selenium | 7782-49-2 | – | – | – | – | – | – | 4.1E+02 | 1.8E+04 | 3.3E+01 | 7.8E+01 | – | – | 1.2E-01 | 1.2E+01 |
| Selenourea | 630-10-4 | – | – | – | – | – | – | 4.1E+02 | – | – | – | – | – | 1.2E-01 | 1.2E+01 |
| Silver | 7440-22-4 | – | – | – | – | – | – | 4.1E+02 | 7.1E+02 | 3.3E+01 | 7.8E+01 | – | – | 1.2E-01 | 1.2E+01 |
| Simazine | 122-34-9 | – | 5.1E+01 | 1.7E+02 | – | – | – | 4.1E+02 | 1.8E+03 | – | – | 7.6E-03 | 7.6E-01 | 1.2E-01 | 1.2E+01 |
| Sodium* | 7440-23-5 | – | – | – | – | – | – | – | – | – | – | – | – | – | – |
| Sodium hypochlorite | 7681-52-9 | – | – | – | – | – | 3.2E-04 | 1.7E+04 | 1.5E+05 | – | – | – | – | 5.1E+00 | 5.1E+02 |
| Sodium polyacrylate | 9003-04-7 | – | – | – | – | – | 1.0E-03 | 4.1E+04 | – | – | – | – | – | 1.2E+01 | 1.2E+03 |
| Strontium | 7440-24-6 | – | – | – | – | – | – | 4.9E+04 | 4.3E+05 | 3.9E+03 | 9.4E+03 | – | – | 1.5E+01 | 1.5E+03 |
| Strychnine | 57-24-9 | – | – | – | – | – | – | 2.5E+01 | 1.1E+02 | – | – | – | – | 7.3E-03 | 7.3E-01 |
| Styrene | 100-42-5 | – | – | – | – | – | 4.9E-01 | 1.6E+04 | – | – | – | – | – | 4.9E+00 | 4.9E+02 |
| Sulfate* | 14808-79-8 | – | – | – | – | – | – | – | – | – | – | – | – | – | – |
| Sulfide* | 18496-25-8 | – | – | – | – | – | – | – | – | – | – | – | – | – | – |

# Table 9
# Individual RBELs Residential

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | Soil | | | | | | | | | | Groundwater | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Carcinogenic | | | | | Noncarcinogenic | | | | | Carcinogenic | | Noncarcinogenic | |
| | | $^{Air}RBEL_{Inh}$ (mg/m3) | $^{Soil}RBEL_{Ing}$ (mg/kg) | $^{Soil}RBEL_{Derm}$ (mg/kg) | $^{AbgVeg}RBEL_{Ing}$ above-ground (mg/kg) | $^{BgVeg}RBEL_{Ing}$ below-ground (mg/kg) | $^{Air}RBEL_{Inh}$ (mg/m3) | $^{Soil}RBEL_{Ing}$ (mg/kg) | $^{Soil}RBEL_{Derm}$ (mg/kg) | $^{AbgVeg}RBEL_{Ing}$ above-ground (mg/kg) | $^{BgVeg}RBEL_{Ing}$ below-ground (mg/kg) | $^{GW}RBEL_{Ing}$ [1] (mg/L) | $^{GW}RBEL_{Class\ 3}$ [2] (mg/L) | $^{GW}RBEL_{Ing}$ [1] (mg/L) | $^{GW}RBEL_{Class\ 3}$ [2] (mg/L) |
| Sulfolane | 126-33-0 | – | – | – | – | – | 6.7E-03 | 1.1E+03 | 4.6E+03 | – | – | – | – | 3.2E-01 | 3.2E+01 |
| Sulfur* | 7704-34-9 | – | – | – | – | – | – | – | – | – | – | – | – | – | – |
| Sulprofos (Bolstar) | 35400-43-2 | – | – | – | – | – | – | 2.5E+02 | 1.1E+03 | – | 4.7E+01 | – | – | 7.3E-02 | 7.3E+00 |
| Tebuconazole | 107534-96-3 | – | – | – | – | – | – | 2.5E+03 | 1.1E+04 | – | – | – | – | 7.3E-01 | 7.3E+01 |
| Tebuthiuron | 34014-18-1 | – | – | – | – | – | – | 5.7E+03 | 2.5E+04 | – | – | – | – | 1.7E+00 | 1.7E+02 |
| Terbufos | 13071-79-9 | – | – | – | – | – | – | 2.0E+00 | 8.9E+00 | – | – | – | – | 6.1E-04 | 6.1E-02 |
| Tert-amyl ethyl ether (TAEE) | 919-94-8 | – | – | – | – | – | – | 3.3E+03 | – | – | – | – | – | 9.8E-01 | 9.8E+01 |
| Tert-amyl-methyl ether (TAME) | 994-05-8 | – | – | – | – | – | – | 3.3E+03 | – | – | – | – | – | 9.8E-01 | 9.8E+01 |
| Tert-butyl alcohol (2-methyl-2-propanol) | 75-65-0 | – | – | – | – | – | – | 7.4E+03 | – | – | – | – | – | 2.2E+00 | 2.2E+02 |
| Tetrachlorobenzene, 1,2,3,4- | 634-66-2 | – | – | – | – | – | – | 2.5E+01 | 1.1E+02 | – | – | – | – | 7.3E-03 | 7.3E-01 |
| Tetrachlorobenzene, 1,2,3,5- | 634-90-2 | – | – | – | – | – | – | 2.5E+01 | 1.1E+02 | – | 4.7E+00 | – | – | 7.3E-03 | 7.3E-01 |
| Tetrachlorobenzene, 1,2,4,5- | 95-94-3 | – | – | – | – | – | – | 2.5E+01 | 1.1E+02 | – | – | – | – | 7.3E-03 | 7.3E-01 |
| Tetrachloroethane, 1,1,1,2- | 630-20-6 | 3.3E-03 | 2.3E+02 | – | – | – | – | 2.5E+03 | – | – | – | 3.5E-02 | 3.5E+00 | 7.3E-01 | 7.3E+01 |
| Tetrachloroethane, 1,1,2,2- | 79-34-5 | – | 3.0E+01 | – | – | – | – | 1.6E+03 | – | – | – | 4.6E-03 | 4.6E-01 | 4.9E-01 | 4.9E+01 |
| Tetrachloroethylene | 127-18-4 | 6.4E-02 | 2.9E+03 | – | – | – | 3.9E-01 | 1.7E+03 | – | – | – | 4.3E-01 | 4.3E+01 | 5.1E-01 | 5.1E+01 |
| Tetrachlorophenol, 2,3,4,5- | 4901-51-3 | – | – | – | – | – | – | 2.5E+03 | 1.1E+04 | – | 4.7E+02 | – | – | 7.3E-01 | 7.3E+01 |
| Tetrachlorophenol, 2,3,4,6- | 58-90-2 | – | – | – | – | – | – | 2.5E+03 | 1.1E+04 | – | 4.7E+02 | – | – | 7.3E-01 | 7.3E+01 |
| Tetrachlorophenol, 2,3,5,6- | 935-95-5 | – | – | – | – | – | – | 2.5E+03 | 1.1E+04 | – | 4.7E+02 | – | – | 7.3E-01 | 7.3E+01 |
| Tetrachlorvinphos (Stirophos) | 22248-79-9 | – | – | – | – | – | – | 3.4E+03 | 1.5E+04 | – | 6.6E+02 | – | – | 1.0E+00 | 1.0E+02 |
| Tetradifon | 116-29-0 | – | – | – | – | – | – | 1.6E+03 | 7.1E+03 | – | 3.1E+02 | – | – | 4.9E-01 | 4.9E+01 |
| Tetraethyl dithiopyrophosphate (sulfotep) | 3689-24-5 | – | – | – | – | – | – | 4.1E+01 | 1.8E+02 | – | – | – | – | 1.2E-02 | 1.2E+00 |
| Tetraethyl lead | 78-00-2 | – | – | – | – | – | – | 8.2E-03 | 3.6E-02 | – | – | – | – | 2.4E-06 | 2.4E-04 |
| Tetraethyl pyrophosphate (TEPP) | 107-49-3 | – | – | – | – | – | – | 9.0E-01 | 3.9E+00 | – | – | – | – | 2.7E-04 | 2.7E-02 |
| Tetraethylene glycol | 112-60-7 | – | – | – | – | – | – | 2.7E+04 | 1.2E+05 | – | – | – | – | 8.1E+00 | 8.1E+02 |
| Tetrahydrofuran | 109-99-9 | 1.3E-02 | 8.0E+02 | – | – | – | 2.1E+00 | 7.4E+04 | – | – | – | 1.2E-01 | 1.2E+01 | 2.2E+01 | 2.2E+03 |
| Tetrahydropyran | 142-68-7 | 1.3E-02 | 8.0E+02 | – | – | – | – | 1.6E+04 | – | – | – | 1.2E-01 | 1.2E+01 | 4.9E+00 | 4.9E+02 |
| Tetraoxadodecane, 2,5,8,11- | 112-49-2 | – | – | – | – | – | – | 2.0E+03 | 8.9E+03 | – | – | – | – | 6.1E-01 | 6.1E+01 |
| Thallium | 7440-28-0 | – | – | – | – | – | – | 5.5E+00 | 2.4E+02 | 4.4E-01 | 1.0E+00 | – | – | 1.6E-03 | 1.6E-01 |
| Thiofanox | 39196-18-4 | – | – | – | – | – | – | 2.5E+01 | 1.1E+02 | – | – | – | – | 7.3E-03 | 7.3E-01 |
| Thionazin | 297-97-2 | – | – | – | – | – | – | 5.7E+00 | 2.5E+01 | – | – | – | – | 1.7E-03 | 1.7E-01 |
| Thiophanate-methyl | 23564-05-8 | – | – | – | – | – | – | 6.6E+03 | 2.8E+04 | – | – | – | – | 2.0E+00 | 2.0E+02 |
| Thiram | 137-26-8 | – | – | – | – | – | – | 4.1E+02 | 1.8E+03 | – | – | – | – | 1.2E-01 | 1.2E+01 |
| Tin | 7440-31-5 | – | – | – | – | – | – | 4.9E+04 | 2.1E+05 | 3.9E+03 | 9.4E+03 | – | – | 1.5E+01 | 1.5E+03 |
| Titanium | 7440-32-6 | – | – | – | – | – | – | 4.1E+05 | 5.3E+05 | 3.3E+04 | 7.8E+04 | – | – | 1.2E+02 | 1.2E+04 |
| Toluene | 108-88-3 | – | – | – | – | – | 4.3E+00 | 6.6E+03 | – | – | – | – | – | 2.0E+00 | 2.0E+02 |
| Toluene diisocyanate, 2,4/2,6- | 26471-62-5 | – | – | – | – | – | 7.3E-05 | – | – | – | – | – | – | – | – |
| Toluenediamine, 2,4- | 95-80-7 | – | 1.9E+00 | 6.5E+00 | – | – | – | – | – | – | – | 2.9E-04 | 2.9E-02 | – | – |
| Toluenediamine, 2,6- | 823-40-5 | – | – | – | – | – | – | 2.5E+03 | 1.1E+04 | – | – | – | – | 7.3E-01 | 7.3E+01 |
| Toluidine, o- | 95-53-4 | 4.8E-04 | 3.8E+02 | 8.7E+01 | – | – | – | – | – | – | – | 5.7E-02 | 5.7E+00 | – | – |
| Toluidine, p- | 106-49-0 | – | 2.0E+02 | 1.1E+02 | – | – | – | – | – | – | – | 3.0E-02 | 3.0E+00 | – | – |

# Table 9
# Individual RBELs Residential

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | Soil | | | | | | | | | | Groundwater | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Carcinogenic | | | | | Noncarcinogenic | | | | | Carcinogenic | | Noncarcinogenic | |
| | | $^{Air}RBEL_{Inh}$ (mg/m3) | $^{Soil}RBEL_{Ing}$ (mg/kg) | $^{Soil}RBEL_{Derm}$ (mg/kg) | $^{AbgVeg}RBEL_{Ing}$ above-ground (mg/kg) | $^{BgVeg}RBEL_{Ing}$ below-ground (mg/kg) | $^{Air}RBEL_{Inh}$ (mg/m3) | $^{Soil}RBEL_{Ing}$ (mg/kg) | $^{Soil}RBEL_{Derm}$ (mg/kg) | $^{AbgVeg}RBEL_{Ing}$ above-ground (mg/kg) | $^{BgVeg}RBEL_{Ing}$ below-ground (mg/kg) | $^{GW}RBEL_{Ing}$ [1] (mg/L) | $^{GW}RBEL_{Class\ 3}$ [2] (mg/L) | $^{GW}RBEL_{Ing}$ [1] (mg/L) | $^{GW}RBEL_{Class\ 3}$ [2] (mg/L) |
| Toxaphene | 8001-35-2 | 7.6E-05 | 5.5E+00 | 1.9E+01 | – | 5.3E-01 | – | 2.5E+01 | 1.1E+02 | – | 4.8E+00 | 8.3E-04 | 8.3E-02 | 7.6E-03 | 7.6E-01 |
| TPH, TX1005, C6-C12 | TPH-1005-1 | – | – | – | – | – | 2.1E-01 | 3.3E+03 | – | – | – | – | – | 9.8E-01 | 9.8E+01 |
| TPH, TX1005, >C12-C28 | TPH-1005-2 | – | – | – | – | – | 2.1E-01 | 3.3E+03 | 1.4E+04 | – | – | – | – | 9.8E-01 | 9.8E+01 |
| TPH, TX1005, >C12-C35 | TPH-1005-3 | – | – | – | – | – | 2.1E-01 | 3.3E+03 | 1.4E+04 | – | – | – | – | 9.8E-01 | 9.8E+01 |
| TPH, TX1005, >C28-C35 | TPH-1005-4 | – | – | – | – | – | 2.1E-01 | 3.3E+03 | 1.4E+04 | – | – | – | – | 9.8E-01 | 9.8E+01 |
| TP Silvex, 2,4,5- | 93-72-1 | – | – | – | – | – | – | 6.6E+02 | 2.8E+03 | – | – | – | – | 2.0E-01 | 2.0E+01 |
| Triademenol | 55219-65-3 | – | – | – | – | – | – | 2.5E+03 | 1.1E+04 | – | – | – | – | 7.3E-01 | 7.3E+01 |
| Triallate | 2303-17-5 | – | – | – | – | – | – | 1.1E+03 | 4.6E+03 | – | 2.0E+02 | – | – | 3.2E-01 | 3.2E+01 |
| Triaminotrinitrobenzene (TATB) | 3058-38-6 | – | – | – | – | – | – | 2.5E+02 | 1.1E+03 | – | – | – | – | 7.3E-02 | 7.3E+00 |
| Tributyltin oxide | 56-35-9 | – | – | – | – | – | – | 2.5E+01 | 1.1E+02 | – | 4.7E+00 | – | – | 7.3E-03 | 7.3E-01 |
| Trichloro-1,2,2-trifluoroethane, 1,1,2- | 76-13-1 | – | – | – | – | – | 5.2E+00 | 1.0E+06 | – | – | – | – | – | 7.3E+02 | 7.3E+04 |
| Trichlorobenzene, 1,2,3- | 87-61-6 | – | – | – | – | – | 2.1E-03 | 2.5E+02 | 1.1E+03 | – | – | – | – | 7.3E-02 | 7.3E+00 |
| Trichlorobenzene, 1,2,4- | 120-82-1 | – | 2.1E+02 | 7.2E+02 | – | – | 2.1E-03 | 8.2E+02 | 3.6E+03 | – | – | 3.1E-02 | 3.1E+00 | 2.4E-01 | 2.4E+01 |
| Trichlorobenzene, 1,3,5- | 108-70-3 | – | – | – | – | – | 2.1E-03 | 2.5E+02 | 1.1E+03 | – | – | – | – | 7.3E-02 | 7.3E+00 |
| Trichloroethane, 1,1,1- | 71-55-6 | – | – | – | – | – | 5.3E+00 | 1.6E+05 | – | – | – | – | – | 4.9E+01 | 4.9E+03 |
| Trichloroethane, 1,1,2- | 79-00-5 | 1.5E-03 | 1.1E+02 | – | – | – | – | 3.3E+02 | – | – | – | 1.6E-02 | 1.6E+00 | 9.8E-02 | 9.8E+00 |
| Trichloroethylene | 79-01-6 | 5.9E-03 | 1.3E+02 | – | – | – | 2.1E-03 | 4.1E+01 | – | – | – | 2.0E-02 | 2.0E+00 | 1.2E-02 | 1.2E+00 |
| Trichlorofluoromethane | 75-69-4 | – | – | – | – | – | – | 2.5E+04 | – | – | – | – | – | 7.3E+00 | 7.3E+02 |
| Trichloronate | 327-98-0 | – | – | – | – | – | – | 2.5E+02 | 1.1E+03 | – | 4.7E+01 | – | – | 7.3E-02 | 7.3E+00 |
| Trichlorophenol, 2,3,4- | 15950-66-0 | – | – | – | – | – | – | 8.2E+03 | 3.6E+04 | – | – | – | – | 2.4E+00 | 2.4E+02 |
| Trichlorophenol, 2,3,5- | 933-78-8 | – | – | – | – | – | – | 8.2E+03 | 3.6E+04 | – | – | – | – | 2.4E+00 | 2.4E+02 |
| Trichlorophenol, 2,3,6- | 933-75-5 | – | – | – | – | – | – | 8.2E+03 | 3.6E+04 | – | 1.6E+03 | – | – | 2.4E+00 | 2.4E+02 |
| Trichlorophenol, 2,4,5- | 95-95-4 | – | – | – | – | – | – | 8.2E+03 | 3.6E+04 | – | – | – | – | 2.4E+00 | 2.4E+02 |
| Trichlorophenol, 2,4,6- | 88-06-2 | 7.8E-03 | 5.5E+02 | 1.9E+03 | – | – | – | 8.2E+01 | 3.6E+02 | – | – | 8.3E-02 | 8.3E+00 | 2.4E-02 | 2.4E+00 |
| Trichlorophenol, 3,4,5- | 609-19-8 | – | – | – | – | – | – | 8.2E+03 | 3.6E+04 | – | – | – | – | 2.4E+00 | 2.4E+02 |
| Trichlorophenoxyacetic acid, 2,4,5- | 93-76-5 | – | – | – | – | – | – | 8.2E+02 | 3.6E+03 | – | – | – | – | 2.4E-01 | 2.4E+01 |
| Trichloropropane, 1,1,2- | 598-77-6 | – | – | – | – | – | 3.1E-04 | 4.1E+02 | – | – | – | – | – | 1.2E-01 | 1.2E+01 |
| Trichloropropane, 1,2,3- | 96-18-4 | – | 2.0E-01 | – | – | – | 3.1E-04 | 3.3E+02 | – | – | – | 3.0E-05 | 3.0E-03 | 9.8E-02 | 9.8E+00 |
| Triethanolamine | 102-71-6 | – | – | – | – | – | 2.6E-02 | 1.6E+04 | 7.1E+04 | – | – | – | – | 4.9E+00 | 4.9E+02 |
| Triethylamine | 121-44-8 | – | – | – | – | – | 7.3E-03 | – | – | – | – | – | – | – | – |
| Triethylene glycol | 112-27-6 | – | – | – | – | – | – | 1.6E+05 | 7.1E+05 | – | – | – | – | 4.9E+01 | 4.9E+03 |
| Triethylphosphorothioate, O, O, O- | 126-68-1 | – | – | – | – | – | – | 6.8E-01 | 3.0E+00 | – | – | – | – | 2.0E-04 | 2.0E-02 |
| Trifluralin | 1582-09-8 | – | 7.9E+02 | 2.7E+03 | – | 7.6E+01 | – | 6.1E+02 | 2.7E+03 | – | 1.2E+02 | 1.2E-01 | 1.2E+01 | 1.8E-01 | 1.8E+01 |
| Trimethylamine | 75-50-3 | – | – | – | – | – | 7.3E-03 | – | – | – | – | – | – | – | – |
| Trimethylbenzene, 1,2,3- | 526-73-8 | – | – | – | – | – | 1.9E-01 | 2.8E+03 | – | – | – | – | – | 8.3E-01 | 8.3E+01 |
| Trimethylbenzene, 1,2,4- | 95-63-6 | – | – | – | – | – | 1.9E-01 | 2.8E+03 | – | – | – | – | – | 8.3E-01 | 8.3E+01 |
| Trimethylbenzene, 1,3,5- | 108-67-8 | – | – | – | – | – | 1.9E-01 | 2.8E+03 | – | – | – | – | – | 8.3E-01 | 8.3E+01 |
| Trinitrobenzene, 1,3,5- | 99-35-4 | – | – | – | – | – | – | 2.5E+03 | 1.1E+04 | – | – | – | – | 7.3E-01 | 7.3E+01 |
| Trinitrophenylmethylnitramine (tetryl; nitramine) | 479-45-8 | – | – | – | – | – | – | 1.6E+02 | 1.4E+03 | – | – | – | – | 4.9E-02 | 4.9E+00 |
| Trinitrotoluene, 2,4,6- | 118-96-7 | – | 2.0E+02 | 6.9E+02 | – | – | – | 4.1E+01 | 1.8E+02 | – | – | 3.0E-02 | 3.0E+00 | 1.2E-02 | 1.2E+00 |

# Table 9
# Individual RBELs Residential

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | Soil | | | | | | | | | | Groundwater | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Carcinogenic | | | | | Noncarcinogenic | | | | | Carcinogenic | | Noncarcinogenic | |
| | | $^{Air}RBEL_{Inh}$ (mg/m3) | $^{Soil}RBEL_{Ing}$ (mg/kg) | $^{Soil}RBEL_{Derm}$ (mg/kg) | $^{AbgVeg}RBEL_{Ing}$ above-ground (mg/kg) | $^{BgVeg}RBEL_{Ing}$ below-ground (mg/kg) | $^{Air}RBEL_{Inh}$ (mg/m3) | $^{Soil}RBEL_{Ing}$ (mg/kg) | $^{Soil}RBEL_{Derm}$ (mg/kg) | $^{AbgVeg}RBEL_{Ing}$ above-ground (mg/kg) | $^{BgVeg}RBEL_{Ing}$ below-ground (mg/kg) | $^{GW}RBEL_{Ing}$ [1] (mg/L) | $^{GW}RBEL_{Class\ 3}$ [2] (mg/L) | $^{GW}RBEL_{Ing}$ [1] (mg/L) | $^{GW}RBEL_{Class\ 3}$ [2] (mg/L) |
| Tungsten (as sodium tungstate dihydride) | 7440-33-7 | – | – | – | – | – | 5.5E-03 | 8.2E+01 | 7.1E+02 | 6.5E+00 | 1.6E+01 | – | – | 2.4E-02 | 2.4E+00 |
| Uranium (soluble salts) | 7440-61-1 | – | – | – | – | – | 4.2E-05 | 2.5E+02 | 1.1E+04 | 2.0E+01 | 4.7E+01 | – | – | 7.3E-02 | 7.3E+00 |
| Valeric acid (pentanoic acid) | 109-52-4 | – | – | – | – | – | 1.0E-03 | 4.1E+04 | 1.8E+05 | – | – | – | – | 1.2E+01 | 1.2E+03 |
| Vanadium | 7440-62-2 | – | – | – | – | – | 3.1E-05 | 1.5E+02 | 1.7E+02 | 1.2E+01 | 2.8E+01 | – | – | 4.4E-02 | 4.4E+00 |
| Vernam | 1929-77-7 | – | – | – | – | – | – | 8.2E+01 | 3.6E+02 | – | – | – | – | 2.4E-02 | 2.4E+00 |
| Vinyl acetate | 108-05-4 | – | – | – | – | – | 2.1E-01 | 8.2E+04 | – | – | – | – | – | 2.4E+01 | 2.4E+03 |
| Vinyl chloride | 75-01-4 | 2.9E-03 | 4.0E+00 | – | – | – | 6.3E-02 | 2.5E+02 | – | – | – | 6.1E-04 | 6.1E-02 | 7.3E-02 | 7.3E+00 |
| Vinylcyclohexane | 695-12-5 | – | – | – | – | – | – | 4.1E+04 | – | – | – | – | – | 1.2E+01 | 1.2E+03 |
| Warfarin | 81-81-2 | – | – | – | – | – | – | 2.5E+01 | 1.1E+02 | – | – | – | – | 7.3E-03 | 7.3E-01 |
| Xylene, m- | 108-38-3 | – | – | – | – | – | 6.4E-01 | 1.6E+05 | – | – | – | – | – | 4.9E+01 | 4.9E+03 |
| Xylene, o- | 95-47-6 | – | – | – | – | – | 6.4E-01 | 1.6E+05 | – | – | – | – | – | 4.9E+01 | 4.9E+03 |
| Xylene, p- | 106-42-3 | – | – | – | – | – | 6.4E-01 | 1.6E+05 | – | – | – | – | – | 4.9E+01 | 4.9E+03 |
| Xylenes | 1330-20-7 | – | – | – | – | – | 6.4E-01 | 1.6E+04 | – | – | – | – | – | 4.9E+00 | 4.9E+02 |
| Zinc | 7440-66-6 | – | – | – | – | – | – | 2.5E+04 | 2.1E+05 | 2.0E+03 | 4.7E+03 | – | – | 7.3E+00 | 7.3E+02 |
| 6 C aliphatics (TPH) (>53% n-hexane content) | NA | – | – | – | – | – | 7.0E-01 | 4.9E+03 | – | – | – | – | – | 1.5E+00 | 1.5E+02 |
| 6 C aliphatics (TPH) (<53% n-hexane content) | NA | – | – | – | – | – | 1.9E+01 | 4.9E+03 | – | – | – | – | – | 1.5E+00 | 1.5E+02 |
| >6-8 C aliphatics (TPH) (>53% n-hexane content) | NA | – | – | – | – | – | 7.0E-01 | 4.9E+03 | – | – | – | – | – | 1.5E+00 | 1.5E+02 |
| >6-8 C aliphatics (TPH) (<53% n-hexane content) | NA | – | – | – | – | – | 1.9E+01 | 4.9E+03 | – | – | – | – | – | 1.5E+00 | 1.5E+02 |
| >8-10 C aliphatics (TPH) | NA | – | – | – | – | – | 5.2E-01 | 8.2E+03 | – | – | – | – | – | 2.4E+00 | 2.4E+02 |
| >10-12 C aliphatics (TPH) | NA | – | – | – | – | – | 5.2E-01 | 8.2E+03 | 3.6E+04 | – | – | – | – | 2.4E+00 | 2.4E+02 |
| >12-16 C aliphatics (TPH) | NA | – | – | – | – | – | 5.2E-01 | 8.2E+03 | 3.6E+04 | – | – | – | – | 2.4E+00 | 2.4E+02 |
| >16-21 C aliphatics (TPH) | NA | – | – | – | – | – | – | 1.6E+05 | 7.1E+05 | – | – | – | – | 4.9E+01 | 4.9E+03 |
| >16-21 C aliphatics (TPH) (for transformer mineral oil releases only) | NA | – | – | – | – | – | – | 1.3E+05 | 7.1E+05 | – | – | – | – | 3.9E+01 | 3.9E+03 |
| >21-35 C aliphatics (TPH) | NA | – | – | – | – | – | – | 1.6E+05 | 5.7E+05 | – | – | – | – | 4.9E+01 | 4.9E+03 |
| >21-35 C aliphatics (TPH) (for transformer mineral oil releases only) | NA | – | – | – | – | – | – | 1.3E+05 | 5.7E+05 | – | – | – | – | 3.9E+01 | 3.9E+03 |
| >7-8 C aromatics (TPH) | NA | – | – | – | – | – | 2.0E+00 | 8.2E+03 | – | – | – | – | – | 2.4E+00 | 2.4E+02 |
| >8-10 C aromatics (TPH) | NA | – | – | – | – | – | 2.1E-01 | 3.3E+03 | – | – | – | – | – | 9.8E-01 | 9.8E+01 |
| >10-12 C aromatics (TPH) | NA | – | – | – | – | – | 2.1E-01 | 3.3E+03 | 1.4E+04 | – | – | – | – | 9.8E-01 | 9.8E+01 |
| >12-16 C aromatics (TPH) | NA | – | – | – | – | – | 2.1E-01 | 3.3E+03 | 1.4E+04 | – | – | – | – | 9.8E-01 | 9.8E+01 |
| >16-21 C aromatics (TPH) | NA | – | – | – | – | – | – | 2.5E+03 | 1.1E+04 | – | – | – | – | 7.3E-01 | 7.3E+01 |
| >21-35 C aromatics (TPH) | NA | – | – | – | – | – | – | 2.5E+03 | 1.1E+04 | – | – | – | – | 7.3E-01 | 7.3E+01 |

**Footnotes**

**1** Based on primary MCLs when available

**2** 100 x $^{GW}GW_{Ing}$

**3** The total MCL for trihalomethanes (bromodichloromethane, bromoform, chloroform, and dibromochloromethane) is 0.08 mg/L.

***** These compounds are not necessarily of concern from a human health standpoint, therefore calculation of human health-based values is not required. However, aesthetics and ecological criteria would still apply. See table entitled "Compounds for which Calculation of a Human Health PCL is Not Required" available on the TCEQ website at http://www.tceq.state.tx.us/remediation/trrp/trrp.html.

NA = not applicable

All values capped at 1E+06

This table shows the residential risk-based exposure levels for soil and groundwater with carcinogenic and non-carcinogenic values depicted.

end of worksheet

# Table 10
# Individual RBELs Commercial/Industrial

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | Soil | | | | | | Groundwater | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Carcinogenic | | | Noncarcinogenic | | | Carcinogenic | | Noncarcinogenic | |
| | | $^{Air}RBEL_{Inh}$ (mg/m3) | $^{Soil}RBEL_{Ing}$ (mg/kg) | $^{Soil}RBEL_{Derm}$ (mg/kg) | $^{Air}RBEL_{Inh}$ (mg/m3) | $^{Soil}RBEL_{Ing}$ (mg/kg) | $^{Soil}RBEL_{Derm}$ (mg/kg) | $^{GW}RBEL_{Ing}$ [1] (mg/L) | $^{GW}RBEL_{Class\ 3}$ [2] (mg/L) | $^{GW}RBEL_{Ing}$ [1] (mg/L) | $^{GW}RBEL_{Class\ 3}$ [2] (mg/L) |
| Acenaphthene | 83-32-9 | – | – | – | – | 6.1E+04 | 9.4E+04 | – | – | 4.4E+00 | 4.4E+02 |
| Acenaphthylene | 208-96-8 | – | – | – | – | 6.1E+04 | 9.4E+04 | – | – | 4.4E+00 | 4.4E+02 |
| Acetaldehyde | 75-07-0 | 1.9E-02 | – | – | 1.3E-02 | 1.0E+05 | – | – | – | 7.3E+00 | 7.3E+02 |
| Acetate, 2-ethoxyethanol | 111-15-9 | – | – | – | 8.8E-02 | 1.0E+05 | – | – | – | 7.3E+00 | 7.3E+02 |
| Acetate, isoamyl | 123-92-2 | – | – | – | – | 7.4E+04 | – | – | – | 5.3E+00 | 5.3E+02 |
| Acetate, isobutyl | 110-19-0 | – | – | – | – | 4.9E+04 | – | – | – | 3.5E+00 | 3.5E+02 |
| Acetate, sec-butyl | 105-46-4 | – | – | – | – | 4.9E+04 | – | – | – | 3.5E+00 | 3.5E+02 |
| Acetic acid* | 64-19-7 | – | – | – | – | – | – | – | – | – | – |
| Acetone (2-propanone) | 67-64-1 | – | – | – | 4.5E+01 | 9.2E+05 | – | – | – | 6.6E+01 | 6.6E+03 |
| Acetone cyanohydrin | 75-86-5 | – | – | – | 8.8E-02 | 3.1E+03 | 6.1E+03 | – | – | 2.2E-01 | 2.2E+01 |
| Acetonitrile | 75-05-8 | – | – | – | 8.8E-02 | 3.3E+04 | – | – | – | 2.3E+00 | 2.3E+02 |
| Acetophenone | 98-86-2 | – | – | – | – | 1.0E+05 | 2.0E+05 | – | – | 7.3E+00 | 7.3E+02 |
| Acetylaminofluorene, 2- | 53-96-3 | 3.1E-05 | 7.5E+00 | 1.5E+01 | – | – | – | 5.4E-04 | 5.4E-02 | – | – |
| Acifluorfen, sodium | 62476-59-9 | – | – | – | – | 1.3E+04 | 2.7E+04 | – | – | 9.5E-01 | 9.5E+01 |
| Acridine | 260-94-6 | – | – | – | – | 3.1E+03 | 6.1E+03 | – | – | 2.2E-01 | 2.2E+01 |
| Acrolein | 107-02-8 | – | – | – | 3.9E-03 | 5.1E+02 | – | – | – | 3.7E-02 | 3.7E+00 |
| Acrylamide | 79-06-1 | 4.1E-04 | 5.7E+01 | 1.1E+02 | 8.8E-03 | 2.0E+03 | 4.1E+03 | 4.1E-03 | 4.1E-01 | 1.5E-01 | 1.5E+01 |
| Acrylic acid | 79-10-7 | – | – | – | 1.5E-03 | 5.1E+05 | – | – | – | 3.7E+01 | 3.7E+03 |
| Acrylonitrile | 107-13-1 | 6.0E-04 | 5.3E+01 | – | 2.9E-03 | 1.0E+03 | – | 3.8E-03 | 3.8E-01 | 7.3E-02 | 7.3E+00 |
| Adipic acid (hexanedioic acid) | 124-04-9 | – | – | – | – | 1.0E+06 | 1.0E+06 | – | – | 1.5E+02 | 1.5E+04 |
| Alachlor | 15972-60-8 | – | 3.6E+02 | 7.2E+02 | – | 1.0E+04 | 2.0E+04 | 2.6E-02 | 2.6E+00 | 7.3E-01 | 7.3E+01 |
| Aldicarb | 116-06-3 | – | – | – | – | 1.0E+03 | 2.0E+03 | – | – | 7.3E-02 | 7.3E+00 |
| Aldicarb sulfone | 1646-88-4 | – | – | – | – | 1.0E+03 | 2.0E+03 | – | – | 7.3E-02 | 7.3E+00 |
| Aldrin | 309-00-2 | 8.3E-06 | 1.7E+00 | 3.4E+00 | – | 3.1E+01 | 6.1E+01 | 1.2E-04 | 1.2E-02 | 2.2E-03 | 2.2E-01 |
| Allyl alcohol | 107-18-6 | – | – | – | 1.5E-04 | 5.1E+03 | – | – | – | 3.7E-01 | 3.7E+01 |
| Allyl chloride | 107-05-1 | – | – | – | 1.5E-03 | 1.0E+04 | – | – | – | 7.3E-01 | 7.3E+01 |
| Aluminum | 7429-90-5 | – | – | – | 7.3E-03 | 1.0E+06 | 1.0E+06 | – | – | 7.3E+01 | 7.3E+03 |
| Ametryn | 834-12-8 | – | – | – | – | 9.2E+03 | 1.8E+04 | – | – | 6.6E-01 | 6.6E+01 |
| Amino-2,6-dinitrotoluene, 4- | 19406-51-0 | – | 2.9E+03 | 5.7E+03 | – | 1.7E+02 | 3.4E+02 | 2.0E-01 | 2.0E+01 | 1.2E-02 | 1.2E+00 |
| Amino-4,6-dinitrotoluene, 2- | 35572-78-2 | – | 2.9E+03 | 5.7E+03 | – | 1.7E+02 | 3.4E+02 | 2.0E-01 | 2.0E+01 | 1.2E-02 | 1.2E+00 |
| Aminobiphenyl, 4- (1,1-biphenyl-4-amine) | 92-67-1 | – | 4.7E+00 | 9.4E+00 | – | – | – | 3.4E-04 | 3.4E-02 | – | – |
| Aminopyridine, 4- | 504-24-5 | – | – | – | – | 2.0E+01 | 4.1E+01 | – | – | 1.5E-03 | 1.5E-01 |
| Ammonia | 7664-41-7 | – | – | – | 4.7E-01 | – | – | – | – | – | – |

# Table 10
# Individual RBELs Commercial/Industrial

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | Soil | | | | | | Groundwater | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Carcinogenic | | | Noncarcinogenic | | | Carcinogenic | | Noncarcinogenic | |
| | | $^{Air}RBEL_{Inh}$ (mg/m3) | $^{Soil}RBEL_{Ing}$ (mg/kg) | $^{Soil}RBEL_{Derm}$ (mg/kg) | $^{Air}RBEL_{Inh}$ (mg/m3) | $^{Soil}RBEL_{Ing}$ (mg/kg) | $^{Soil}RBEL_{Derm}$ (mg/kg) | $^{GW}RBEL_{Ing}$ [1] (mg/L) | $^{GW}RBEL_{Class\ 3}$ [2] (mg/L) | $^{GW}RBEL_{Ing}$ [1] (mg/L) | $^{GW}RBEL_{Class\ 3}$ [2] (mg/L) |
| Ammonium polyphosphate* | 6833-79-9 | – | – | – | – | – | – | – | – | – | – |
| Ammonium salts* | AMMONIUM | – | – | – | – | – | – | – | – | – | – |
| Aniline | 62-53-3 | – | 5.0E+03 | 1.0E+04 | 1.5E-03 | 7.2E+03 | 1.4E+04 | 3.6E-01 | 3.6E+01 | 5.1E-01 | 5.1E+01 |
| Anthracene | 120-12-7 | – | – | – | – | 3.1E+05 | 4.7E+05 | – | – | 2.2E+01 | 2.2E+03 |
| Anthraquinone, 9,10- | 84-65-1 | – | 7.3E+02 | 1.5E+03 | – | 2.0E+04 | 4.1E+04 | 5.2E-02 | 5.2E+00 | 1.5E+00 | 1.5E+02 |
| Antimony | 7440-36-0 | – | – | – | – | 4.1E+02 | 1.2E+03 | – | – | 2.9E-02 | 2.9E+00 |
| Aramite | 140-57-8 | 5.8E-03 | 1.1E+03 | 2.3E+03 | – | 5.1E+04 | 1.0E+05 | 8.2E-02 | 8.2E+00 | 3.7E+00 | 3.7E+02 |
| Arsenic | 7440-38-2 | 2.7E-04 | 2.4E+02 | 1.3E+03 | – | 3.9E+02 | 2.0E+03 | 1.4E-02 | 1.4E+00 | 2.2E-02 | 2.2E+00 |
| Arsine | 7784-42-1 | – | – | – | 7.3E-05 | – | – | – | – | – | – |
| Atrazine | 1912-24-9 | – | 1.3E+02 | 2.6E+02 | – | 3.6E+04 | 7.2E+04 | 9.2E-03 | 9.2E-01 | 2.6E+00 | 2.6E+02 |
| Azinphos-methyl (guthion) | 86-50-0 | – | – | – | – | 1.5E+03 | 3.1E+03 | – | – | 1.1E-01 | 1.1E+01 |
| Azobenzene | 103-33-3 | 1.3E-03 | 2.6E+02 | 5.2E+02 | – | – | – | 1.9E-02 | 1.9E+00 | – | – |
| Barium | 7440-39-3 | – | – | – | – | 2.0E+05 | 2.9E+05 | – | – | 1.5E+01 | 1.5E+03 |
| Bayleton | 43121-43-3 | – | – | – | – | 3.1E+04 | 6.1E+04 | – | – | 2.2E+00 | 2.2E+02 |
| Benefin (benfluralin) | 1861-40-1 | – | – | – | – | 3.1E+05 | 6.1E+05 | – | – | 2.2E+01 | 2.2E+03 |
| Benomyl | 17804-35-2 | – | – | – | – | 5.1E+04 | 1.0E+05 | – | – | 3.7E+00 | 3.7E+02 |
| Benz-a-anthracene | 56-55-3 | 6.8E-04 | 2.9E+02 | 4.4E+02 | – | – | – | 2.0E-02 | 2.0E+00 | – | – |
| Benzaldehyde | 100-52-7 | – | – | – | – | 1.0E+05 | – | – | – | 7.3E+00 | 7.3E+02 |
| Benzene | 71-43-2 | 1.9E-02 | 1.9E+03 | – | 4.1E-01 | 4.1E+03 | – | 1.4E-01 | 1.4E+01 | 2.9E-01 | 2.9E+01 |
| Benzenedicarbonitrile, 1,3- | 626-17-5 | – | – | – | – | 6.1E+03 | 1.2E+04 | – | – | 4.4E-01 | 4.4E+01 |
| Benzenedicarboxylic acid, 1,2-disodecyl ester | 26761-40-0 | – | – | – | 7.3E-03 | 4.1E+04 | 8.2E+04 | – | – | 2.9E+00 | 2.9E+02 |
| Benzenethiol | 108-98-5 | – | – | – | – | 1.0E+03 | – | – | – | 7.3E-02 | 7.3E+00 |
| Benzidine | 92-87-5 | 6.1E-07 | 1.2E-01 | 2.5E-01 | – | 3.1E+03 | 6.1E+03 | 8.9E-06 | 8.9E-04 | 2.2E-01 | 2.2E+01 |
| Benzo-a-pyrene | 50-32-8 | 6.8E-05 | 2.9E+01 | 4.4E+01 | 2.9E-06 | 3.1E+02 | 4.7E+02 | 2.0E-03 | 2.0E-01 | 2.2E-02 | 2.2E+00 |
| Benzo-b-fluoranthene | 205-99-2 | 6.8E-04 | 2.9E+02 | 4.4E+02 | – | – | – | 2.0E-02 | 2.0E+00 | – | – |
| Benzo-e-pyrene | 192-97-2 | – | – | – | – | 3.1E+04 | 4.7E+04 | – | – | 2.2E+00 | 2.2E+02 |
| Benzo-g,h,i-perylene | 191-24-2 | – | – | – | – | 3.1E+04 | 4.7E+04 | – | – | 2.2E+00 | 2.2E+02 |
| Benzoic acid | 65-85-0 | – | – | – | – | 1.0E+06 | 1.0E+06 | – | – | 2.9E+02 | 2.9E+04 |
| Benzo-j-fluoranthene | 205-82-3 | 6.8E-04 | 2.9E+02 | 4.4E+02 | – | – | – | 2.0E-02 | 2.0E+00 | – | – |
| Benzo-k-fluoranthene | 207-08-9 | 6.8E-03 | 2.9E+03 | 4.4E+03 | – | – | – | 2.0E-01 | 2.0E+01 | – | – |
| Benzophenone | 119-61-9 | – | – | – | – | 6.8E+03 | 1.4E+04 | – | – | 4.9E-01 | 4.9E+01 |
| Benzotrichloride | 98-07-7 | – | 2.2E+00 | 4.4E+00 | – | – | – | 1.6E-04 | 1.6E-02 | – | – |
| Benzoyl peroxide | 94-36-0 | – | – | – | – | 5.1E+04 | 1.0E+05 | – | – | 3.7E+00 | 3.7E+02 |

# Table 10
# Individual RBELs Commercial/Industrial

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | Soil | | | | | | Groundwater | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Carcinogenic | | | Noncarcinogenic | | | Carcinogenic | | Noncarcinogenic | |
| | | $^{Air}RBEL_{Inh}$ (mg/m3) | $^{Soil}RBEL_{Ing}$ (mg/kg) | $^{Soil}RBEL_{Derm}$ (mg/kg) | $^{Air}RBEL_{Inh}$ (mg/m3) | $^{Soil}RBEL_{Ing}$ (mg/kg) | $^{Soil}RBEL_{Derm}$ (mg/kg) | $^{GW}RBEL_{Ing}$ [1] (mg/L) | $^{GW}RBEL_{Class\ 3}$ [2] (mg/L) | $^{GW}RBEL_{Ing}$ [1] (mg/L) | $^{GW}RBEL_{Class\ 3}$ [2] (mg/L) |
| Benzyl alcohol | 100-51-6 | – | – | – | – | 1.0E+05 | 2.0E+05 | – | – | 7.3E+00 | 7.3E+02 |
| Benzyl chloride | 100-44-7 | – | 1.7E+02 | – | 1.5E-03 | 2.0E+03 | – | 1.2E-02 | 1.2E+00 | 1.5E-01 | 1.5E+01 |
| Benzyl dichloride | 98-87-3 | – | 1.7E+02 | 3.4E+02 | 1.5E-03 | 2.0E+03 | 4.1E+03 | 1.2E-02 | 1.2E+00 | 1.5E-01 | 1.5E+01 |
| Beryllium | 7440-41-7 | 1.7E-05 | – | – | 2.9E-05 | 2.0E+03 | 2.9E+02 | – | – | 1.5E-01 | 1.5E+01 |
| Biphenyl, 1,1- | 92-52-4 | – | – | – | – | 5.1E+05 | 1.0E+05 | – | – | 3.7E+01 | 3.7E+03 |
| Biphenyl, 1,1'-, 2-phenoxy- | 6738-04-1 | – | – | – | – | 5.1E+04 | 1.0E+05 | – | – | 3.7E+00 | 3.7E+02 |
| Biquinoline, 2,2'- | 119-91-5 | – | – | – | – | 3.1E+03 | 6.1E+03 | – | – | 2.2E-01 | 2.2E+01 |
| Bis (2-chloroethoxy) methane | 111-91-1 | 1.2E-04 | 2.6E+01 | 5.2E+01 | – | 3.1E+03 | 6.1E+03 | 1.9E-03 | 1.9E-01 | 2.2E-01 | 2.2E+01 |
| Bis (2-chloroethyl) ether | 111-44-4 | 1.2E-04 | 2.6E+01 | – | – | – | – | 1.9E-03 | 1.9E-01 | – | – |
| Bis (2-chloro-1-methyl) ether | 108-60-1 | 4.1E-03 | 4.1E+02 | 8.2E+02 | – | 4.1E+04 | 8.2E+04 | 2.9E-02 | 2.9E+00 | 2.9E+00 | 2.9E+02 |
| Bis (2-chloromethyl) ether | 542-88-1 | 6.6E-07 | 1.3E-01 | – | – | – | – | 9.3E-06 | 9.3E-04 | – | – |
| Bis (2-ethyl-hexyl) phthalate | 117-81-7 | – | 2.0E+03 | 7.8E+02 | – | 2.0E+04 | 7.8E+03 | 1.5E-01 | 1.5E+01 | 1.5E+00 | 1.5E+02 |
| Bismuth | 7440-69-9 | – | – | – | – | 5.1E+05 | 1.0E+06 | – | – | 3.7E+01 | 3.7E+03 |
| Bisphenol A | 80-05-7 | – | – | – | – | 5.1E+04 | 1.0E+05 | – | – | 3.7E+00 | 3.7E+02 |
| Boron | 7440-42-8 | – | – | – | 2.9E-02 | 2.0E+05 | 1.0E+06 | – | – | 1.5E+01 | 1.5E+03 |
| Bromacil | 314-40-9 | – | – | – | – | 1.0E+05 | 2.0E+05 | – | – | 7.3E+00 | 7.3E+02 |
| Bromo-2-chloroethane, 1- | 107-04-0 | – | – | – | – | 4.1E+04 | – | – | – | 2.9E+00 | 2.9E+02 |
| Bromobenzene | 108-86-1 | – | – | – | 8.8E-02 | 8.2E+03 | – | – | – | 5.8E-01 | 5.8E+01 |
| Bromodichloromethane[3] | 75-27-4 | – | 4.6E+02 | – | – | 2.0E+04 | – | 3.3E-02 | 3.3E+00 | 1.5E+00 | 1.5E+02 |
| Bromoform[3] | 75-25-2 | 3.7E-02 | 3.6E+03 | – | – | 2.0E+04 | – | 2.6E-01 | 2.6E+01 | 1.5E+00 | 1.5E+02 |
| Bromomethane | 74-83-9 | – | – | – | 7.3E-03 | 1.4E+03 | – | – | – | 1.0E-01 | 1.0E+01 |
| Bromophenyl phenylether, 4- | 101-55-3 | 1.2E-05 | 1.9E+00 | 3.8E+00 | – | – | – | 1.4E-04 | 1.4E-02 | – | – |
| Butadiene, 1,3- | 106-99-0 | 8.2E-02 | – | – | 4.8E-02 | – | – | – | – | – | – |
| Butadiene, 2-methyl-1,3- (isoprene) | 78-79-5 | – | – | – | 2.6E+01 | 6.1E+04 | – | – | – | 4.4E+00 | 4.4E+02 |
| Butanal (butyraldehyde) | 123-72-8 | – | – | – | 1.5E-01 | 6.1E+04 | – | – | – | 4.4E+00 | 4.4E+02 |
| Butane, 2,3-dimethyl- | 79-29-8 | – | – | – | 2.6E+01 | 6.1E+04 | – | – | – | 4.4E+00 | 4.4E+02 |
| Butanoic acid (butyric acid) | 107-92-6 | – | – | – | 1.5E-03 | 5.1E+05 | 1.0E+06 | – | – | 3.7E+01 | 3.7E+03 |
| Butanol, 2- | 78-92-2 | – | – | – | 4.4E+01 | 1.0E+06 | – | – | – | 1.5E+02 | 1.5E+04 |
| Butanol, 2-methyl-1- | 137-32-6 | – | – | – | – | 1.0E+04 | – | – | – | 7.3E-01 | 7.3E+01 |
| Butanol, 2-methyl-2- | 75-85-4 | – | – | – | – | 1.0E+04 | – | – | – | 7.3E-01 | 7.3E+01 |
| Butanol, n- | 71-36-3 | – | – | – | – | 1.0E+05 | – | – | – | 7.3E+00 | 7.3E+02 |
| Butene, 1- | 106-98-9 | – | – | – | 7.7E+00 | 6.1E+04 | – | – | – | 4.4E+00 | 4.4E+02 |
| Butene, cis-2- | 590-18-1 | – | – | – | 2.3E+00 | 6.1E+04 | – | – | – | 4.4E+00 | 4.4E+02 |

# Table 10
# Individual RBELs Commercial/Industrial

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | Soil | | | | | | Groundwater | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Carcinogenic | | | Noncarcinogenic | | | Carcinogenic | | Noncarcinogenic | |
| | | $^{Air}RBEL_{Inh}$ (mg/m3) | $^{Soil}RBEL_{Ing}$ (mg/kg) | $^{Soil}RBEL_{Derm}$ (mg/kg) | $^{Air}RBEL_{Inh}$ (mg/m3) | $^{Soil}RBEL_{Ing}$ (mg/kg) | $^{Soil}RBEL_{Derm}$ (mg/kg) | $^{GW}RBEL_{Ing}$ [1] (mg/L) | $^{GW}RBEL_{Class\ 3}$ [2] (mg/L) | $^{GW}RBEL_{Ing}$ [1] (mg/L) | $^{GW}RBEL_{Class\ 3}$ [2] (mg/L) |
| Butene, trans-2- | 624-64-6 | – | – | – | 2.3E+00 | 6.1E+04 | – | – | – | 4.4E+00 | 4.4E+02 |
| Butoxy ethanol, 2- (Ethylene glycol monobutyl ether; EGBE) | 111-76-2 | – | – | – | 2.3E+00 | 1.0E+05 | 2.0E+05 | – | – | 7.3E+00 | 7.3E+02 |
| Butyl acetate | 123-86-4 | – | – | – | 6.9E+00 | 1.4E+05 | – | – | – | 1.0E+01 | 1.0E+03 |
| Butyl acrylate | 141-32-2 | – | – | – | – | 9.2E+03 | – | – | – | 6.6E-01 | 6.6E+01 |
| Butyl benzyl phthalate | 85-68-7 | – | 1.5E+04 | 3.0E+04 | – | 2.0E+05 | 4.1E+05 | 1.1E+00 | 1.1E+02 | 1.5E+01 | 1.5E+03 |
| Butyl ether, n- (dibutyl ether) | 142-96-1 | – | – | – | – | 1.0E+05 | – | – | – | 7.3E+00 | 7.3E+02 |
| Butyl methacrylate | 97-88-1 | – | – | – | – | 9.2E+04 | 3.7E+04 | – | – | 6.6E+00 | 6.6E+02 |
| Butylate | 2008-41-5 | – | – | – | – | 5.1E+04 | 1.0E+05 | – | – | 3.7E+00 | 3.7E+02 |
| Butylbenzene, n- | 104-51-8 | – | – | – | – | 5.1E+04 | 1.0E+05 | – | – | 3.7E+00 | 3.7E+02 |
| Butylbenzene, sec- | 135-98-8 | – | – | – | – | 4.1E+04 | – | – | – | 2.9E+00 | 2.9E+02 |
| Butylbenzene, tert- | 98-06-6 | – | – | – | – | 4.1E+04 | – | – | – | 2.9E+00 | 2.9E+02 |
| Cacodylic acid | 75-60-5 | – | – | – | – | 3.1E+03 | 6.1E+03 | – | – | 2.2E-01 | 2.2E+01 |
| Cadmium | 7440-43-9 | 8.3E-05 | – | – | 1.6E-05 | 1.0E+03 | 5.1E+03 | – | – | 7.3E-02 | 7.3E+00 |
| Calcium* | 7440-70-2 | – | – | – | – | – | – | – | – | – | – |
| Caprolactam | 105-60-2 | – | – | – | – | 5.1E+05 | 1.0E+06 | – | – | 3.7E+01 | 3.7E+03 |
| Captan | 133-06-2 | – | 8.2E+03 | 1.6E+04 | – | 1.3E+05 | 2.7E+05 | 5.8E-01 | 5.8E+01 | 9.5E+00 | 9.5E+02 |
| Carbaryl | 63-25-2 | – | – | – | – | 1.0E+05 | 2.0E+05 | – | – | 7.3E+00 | 7.3E+02 |
| Carbazole | 86-74-8 | – | 1.4E+03 | 2.9E+03 | – | – | – | 1.0E-01 | 1.0E+01 | – | – |
| Carbofuran | 1563-66-2 | – | – | – | – | 5.1E+03 | 1.0E+04 | – | – | 3.7E-01 | 3.7E+01 |
| Carbon disulfide | 75-15-0 | – | – | – | 1.0E+00 | 1.0E+05 | – | – | – | 7.3E+00 | 7.3E+02 |
| Carbon tetrachloride | 56-23-5 | 6.8E-03 | 4.1E+02 | – | 1.5E-01 | 4.1E+03 | – | 2.9E-02 | 2.9E+00 | 2.9E-01 | 2.9E+01 |
| Carbophenothion | 786-19-6 | – | – | – | – | 1.3E+04 | 2.7E+04 | – | – | 9.5E-01 | 9.5E+01 |
| Carbosulfan | 55285-14-8 | – | – | – | – | 1.0E+04 | 2.0E+04 | – | – | 7.3E-01 | 7.3E+01 |
| Carboxin | 5234-68-4 | – | – | – | – | 1.0E+05 | 2.0E+05 | – | – | 7.3E+00 | 7.3E+02 |
| Chloral | 75-87-6 | – | – | – | – | 1.0E+05 | – | – | – | 7.3E+00 | 7.3E+02 |
| Chloral hydrate (1,1-ethanediol, 2,2,2-trichloro-) | 302-17-0 | – | – | – | – | 1.0E+05 | 2.0E+05 | – | – | 7.3E+00 | 7.3E+02 |
| Chloramben (amiben; 3-amino-2,5-dichlorobenzoic acid) | 133-90-4 | – | – | – | – | 1.5E+04 | 3.1E+04 | – | – | 1.1E+00 | 1.1E+02 |
| Chlordane (technical) | 12789-03-6 | 4.1E-04 | 8.2E+01 | 4.1E+02 | 1.0E-03 | 5.1E+02 | 2.6E+03 | 5.8E-03 | 5.8E-01 | 3.7E-02 | 3.7E+00 |
| Chlordane, cis- (alpha chlordane) | 5103-71-9 | 4.1E-04 | 8.2E+01 | 1.6E+02 | 1.0E-03 | 5.1E+02 | 1.0E+03 | 5.8E-03 | 5.8E-01 | 3.7E-02 | 3.7E+00 |
| Chlordane, trans- (gamma chordane) | 5103-74-2 | 4.1E-04 | 8.2E+01 | 1.6E+02 | 1.0E-03 | 5.1E+02 | 1.0E+03 | 5.8E-03 | 5.8E-01 | 3.7E-02 | 3.7E+00 |
| Chlorfenvinphos | 470-90-6 | – | – | – | 2.9E-03 | 7.2E+02 | 1.4E+03 | – | – | 5.1E-02 | 5.1E+00 |
| Chloride* | 16887-00-6 | – | – | – | – | – | – | – | – | – | – |
| Chlorine | 7782-50-5 | – | – | – | 1.3E-02 | 1.0E+05 | 4.1E+05 | – | – | 7.3E+00 | 7.3E+02 |

# Table 10
# Individual RBELs Commercial/Industrial

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | Soil | | | | | | Groundwater | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Carcinogenic | | | Noncarcinogenic | | | Carcinogenic | | Noncarcinogenic | |
| | | $^{Air}RBEL_{Inh}$ (mg/m3) | $^{Soil}RBEL_{Ing}$ (mg/kg) | $^{Soil}RBEL_{Derm}$ (mg/kg) | $^{Air}RBEL_{Inh}$ (mg/m3) | $^{Soil}RBEL_{Ing}$ (mg/kg) | $^{Soil}RBEL_{Derm}$ (mg/kg) | $^{GW}RBEL_{Ing}$ [1] (mg/L) | $^{GW}RBEL_{Class\ 3}$ [2] (mg/L) | $^{GW}RBEL_{Ing}$ [1] (mg/L) | $^{GW}RBEL_{Class\ 3}$ [2] (mg/L) |
| Chloro-1,3-butadiene, 2- | 126-99-8 | 1.4E-04 | – | – | 2.9E-02 | – | – | – | – | – | – |
| Chloro-2-propanol, 1- | 127-00-4 | – | – | – | – | 2.0E+04 | – | – | – | 1.5E+00 | 1.5E+02 |
| Chloro-3-methylphenol, 4- | 59-50-7 | – | – | – | – | 5.1E+03 | 1.0E+04 | – | – | 3.7E-01 | 3.7E+01 |
| Chloroaniline, p- | 106-47-8 | – | 1.4E+02 | 2.9E+02 | – | 4.1E+03 | 8.2E+03 | 1.0E-02 | 1.0E+00 | 2.9E-01 | 2.9E+01 |
| Chlorobenzene | 108-90-7 | – | – | – | 7.3E-02 | 2.0E+04 | – | – | – | 1.5E+00 | 1.5E+02 |
| Chlorobenzilate | 510-15-6 | 5.2E-04 | 1.1E+02 | 2.1E+02 | – | 2.0E+04 | 4.1E+04 | 7.6E-03 | 7.6E-01 | 1.5E+00 | 1.5E+02 |
| Chlorobromomethane (bromochloromethane) | 74-97-5 | – | – | – | – | 4.1E+04 | – | – | – | 2.9E+00 | 2.9E+02 |
| Chlorodifluoromethane | 75-45-6 | – | – | – | 7.3E+01 | – | – | – | – | – | – |
| Chloroethane (ethyl chloride) | 75-00-3 | – | – | – | 1.5E+01 | 4.1E+05 | – | – | – | 2.9E+01 | 2.9E+03 |
| Chloroethanol, 2- | 107-07-3 | – | – | – | – | 2.0E+04 | – | – | – | 1.5E+00 | 1.5E+02 |
| Chloroethoxy ethene, 2- (2-chloroethylvinylether) | 110-75-8 | – | 2.6E+01 | – | 4.4E-04 | 2.0E+03 | – | 1.9E-03 | 1.9E-01 | 1.5E-01 | 1.5E+01 |
| Chloroform[3] | 67-66-3 | 1.8E-03 | – | – | 1.4E-01 | 1.0E+04 | – | – | – | 7.3E-01 | 7.3E+01 |
| Chlorohexane, 1- | 544-10-5 | – | – | – | 1.5E+00 | 4.1E+04 | – | – | – | 2.9E+00 | 2.9E+02 |
| Chloromethane (methyl chloride) | 74-87-3 | 2.3E-02 | 2.2E+03 | – | 1.3E-01 | 3.7E+03 | – | 1.6E-01 | 1.6E+01 | 2.6E-01 | 2.6E+01 |
| Chloronaphthalene, 1- (Chloronaphthalene, alpha-) | 90-13-1 | – | – | – | – | 8.2E+04 | 1.3E+05 | – | – | 5.8E+00 | 5.8E+02 |
| Chloronaphthalene, 2- (chloronaphthalene, beta) | 91-58-7 | – | – | – | – | 8.2E+04 | 1.3E+05 | – | – | 5.8E+00 | 5.8E+02 |
| Chloronitrobenzene, p- (1-chloro-4-nitrobenzene) | 100-00-5 | – | 4.5E+03 | 9.1E+03 | 8.8E-04 | 1.0E+03 | 2.0E+03 | 3.2E-01 | 3.2E+01 | 7.3E-02 | 7.3E+00 |
| Chlorophenol, 2- | 95-57-8 | – | – | – | – | 5.1E+03 | – | – | – | 3.7E-01 | 3.7E+01 |
| Chlorophenol, 3- | 108-43-0 | – | – | – | – | 5.1E+03 | 1.0E+04 | – | – | 3.7E-01 | 3.7E+01 |
| Chlorophenol, 4- | 106-48-9 | – | – | – | – | 5.1E+03 | 1.0E+04 | – | – | 3.7E-01 | 3.7E+01 |
| Chlorophenyl phenylether, 4- | 7005-72-3 | 1.2E-05 | 1.9E+00 | 3.8E+00 | – | – | – | 1.4E-04 | 1.4E-02 | – | – |
| Chloropropane, 2- | 75-29-6 | – | – | – | 1.5E-01 | 3.1E+04 | – | – | – | 2.2E+00 | 2.2E+02 |
| Chlorothalonil | 1897-45-6 | – | 2.6E+03 | 5.2E+03 | – | 1.5E+04 | 3.1E+04 | 1.9E-01 | 1.9E+01 | 1.1E+00 | 1.1E+02 |
| Chlorotoluene, o- (2-chlorotoluene) | 95-49-8 | – | – | – | 1.2E+00 | 2.0E+04 | 4.1E+04 | – | – | 1.5E+00 | 1.5E+02 |
| Chlorotoluene, p- (4-chlorotoluene) | 106-43-4 | – | – | – | – | 2.0E+04 | – | – | – | 1.5E+00 | 1.5E+02 |
| Chlorpyrifos | 2921-88-2 | – | – | – | – | 3.1E+03 | 6.1E+03 | – | – | 2.2E-01 | 2.2E+01 |
| Chromium (III) | 16065-83-1 | – | – | – | 2.0E-04 | 1.0E+06 | 4.0E+05 | – | – | 1.1E+02 | 1.1E+04 |
| Chromium (total) | 7440-47-3 | – | – | – | 2.0E-04 | 1.0E+06 | 4.0E+05 | – | – | 1.1E+02 | 1.1E+04 |
| Chromium (VI) | 18540-29-9 | 1.8E-05 | – | – | 3.2E-04 | 3.2E+03 | 1.5E+03 | – | – | 2.3E-01 | 2.3E+01 |
| Chrysene | 218-01-9 | 6.8E-02 | 2.9E+04 | 4.4E+04 | – | – | – | 2.0E+00 | 2.0E+02 | – | – |
| Cobalt | 7440-48-4 | 6.8E-06 | – | – | 9.2E-05 | 1.0E+04 | 2.0E+05 | – | – | 7.3E-01 | 7.3E+01 |
| Copolymer acrylamide | 69418-26-4 | – | – | – | – | 2.0E+02 | 4.1E+02 | – | – | 1.5E-02 | 1.5E+00 |
| Copper | 7440-50-8 | – | – | – | – | 9.9E+04 | 1.0E+06 | – | – | 7.1E+00 | 7.1E+02 |

# Table 10
# Individual RBELs Commercial/Industrial

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | Soil | | | | | | Groundwater | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Carcinogenic | | | Noncarcinogenic | | | Carcinogenic | | Noncarcinogenic | |
| | | $^{Air}RBEL_{Inh}$ (mg/m3) | $^{Soil}RBEL_{Ing}$ (mg/kg) | $^{Soil}RBEL_{Derm}$ (mg/kg) | $^{Air}RBEL_{Inh}$ (mg/m3) | $^{Soil}RBEL_{Ing}$ (mg/kg) | $^{Soil}RBEL_{Derm}$ (mg/kg) | $^{GW}RBEL_{Ing}$ [1] (mg/L) | $^{GW}RBEL_{Class\ 3}$ [2] (mg/L) | $^{GW}RBEL_{Ing}$ [1] (mg/L) | $^{GW}RBEL_{Class\ 3}$ [2] (mg/L) |
| Coronene | 191-07-1 | – | – | – | – | 2.0E+03 | 4.1E+03 | – | – | 1.5E-01 | 1.5E+01 |
| Coumaphos | 56-72-4 | – | – | – | – | 7.2E+03 | 1.4E+04 | – | – | 5.1E-01 | 5.1E+01 |
| Cresol | 1319-77-3 | – | – | – | – | 5.1E+04 | 1.0E+05 | – | – | 3.7E+00 | 3.7E+02 |
| Cresol, m- (3-methylphenol) | 108-39-4 | – | – | – | – | 5.1E+04 | 1.0E+05 | – | – | 3.7E+00 | 3.7E+02 |
| Cresol, o- (2-methylphenol) | 95-48-7 | – | – | – | – | 5.1E+04 | 1.0E+05 | – | – | 3.7E+00 | 3.7E+02 |
| Cresol, p- (4-methylphenol) | 106-44-5 | – | – | – | – | 5.1E+03 | 1.0E+04 | – | – | 3.7E-01 | 3.7E+01 |
| Crotonaldehyde | 123-73-9 | – | 1.5E+01 | – | – | 1.0E+03 | – | 1.1E-03 | 1.1E-01 | 7.3E-02 | 7.3E+00 |
| Cumene (isopropylbenzene) | 98-82-8 | – | – | – | 5.8E-01 | 1.0E+05 | – | – | – | 7.3E+00 | 7.3E+02 |
| Cyanazine | 21725-46-2 | – | 3.4E+01 | 6.8E+01 | – | 2.0E+03 | 4.1E+03 | 2.4E-03 | 2.4E-01 | 1.5E-01 | 1.5E+01 |
| Cyanide | 57-12-5 | – | – | – | 1.2E-03 | 6.1E+02 | 1.2E+04 | – | – | 4.4E-02 | 4.4E+00 |
| Cyanogen | 460-19-5 | – | – | – | 1.2E-03 | 1.0E+03 | – | – | – | 7.3E-02 | 7.3E+00 |
| Cycloate | 1134-23-2 | – | – | – | – | 5.6E+04 | 1.1E+05 | – | – | 4.0E+00 | 4.0E+02 |
| Cyclohexane | 110-82-7 | – | – | – | 8.8E+00 | 1.0E+06 | – | – | – | 3.7E+02 | 3.7E+04 |
| Cyclohexanol | 108-93-0 | – | – | – | – | 1.0E+06 | 1.0E+06 | – | – | 3.7E+02 | 3.7E+04 |
| Cyclohexanone | 108-94-1 | – | – | – | 1.0E+00 | 1.0E+06 | – | – | – | 3.7E+02 | 3.7E+04 |
| Cyclohexene, 1-methanol-3- | 1679-51-2 | – | – | – | – | 2.0E+04 | 4.1E+04 | – | – | 1.5E+00 | 1.5E+02 |
| Cyclohexene, 4-vinyl-1- | 100-40-3 | – | – | – | 4.8E-01 | 2.2E+04 | – | – | – | 1.6E+00 | 1.6E+02 |
| Cyclopentane | 287-92-3 | – | – | – | 3.5E+01 | 6.1E+04 | – | – | – | 4.4E+00 | 4.4E+02 |
| Cyclopentane, methyl- | 96-37-7 | – | – | – | 1.5E+00 | 1.0E+05 | – | – | – | 7.3E+00 | 7.3E+02 |
| Cyclopentene | 142-29-0 | – | – | – | – | 1.0E+06 | – | – | – | 3.7E+02 | 3.7E+04 |
| Cyclotetramethylenetetranitramine (HMX) | 2691-41-0 | – | – | – | – | 5.1E+04 | 1.5E+04 | – | – | 3.7E+00 | 3.7E+02 |
| Cyclotrimethylenetrinitramine (RDX) | 121-82-4 | – | 3.6E+02 | 7.2E+02 | – | 4.1E+03 | 8.2E+03 | 2.6E-02 | 2.6E+00 | 2.9E-01 | 2.9E+01 |
| Cymene (isopropyltoluene) | 99-87-6 | – | – | – | – | 1.0E+05 | – | – | – | 7.3E+00 | 7.3E+02 |
| Cymoxanil | 57966-95-7 | – | – | – | – | 1.3E+04 | 2.7E+04 | – | – | 9.5E-01 | 9.5E+01 |
| Dacthal (DCPA) | 1861-32-1 | – | – | – | – | 1.0E+04 | 2.0E+04 | – | – | 7.3E-01 | 7.3E+01 |
| Dalapon, sodium salt (2,2-dichloropropanoic acid) | 75-99-0 | – | – | – | – | 3.1E+04 | 6.1E+04 | – | – | 2.2E+00 | 2.2E+02 |
| DDD | 72-54-8 | – | 1.2E+02 | 7.9E+02 | – | – | – | 8.5E-03 | 8.5E-01 | – | – |
| DDE | 72-55-9 | – | 8.4E+01 | 5.6E+02 | – | – | – | 6.0E-03 | 6.0E-01 | – | – |
| DDT | 50-29-3 | 4.2E-04 | 8.4E+01 | 5.6E+02 | – | 5.1E+02 | 3.4E+03 | 6.0E-03 | 6.0E-01 | 3.7E-02 | 3.7E+00 |
| Demeton | 8065-48-3 | – | – | – | – | 4.1E+01 | 8.2E+01 | – | – | 2.9E-03 | 2.9E-01 |
| Desethylatrazine | 6190-65-4 | – | – | – | – | 3.6E+04 | 7.2E+04 | – | – | 2.6E+00 | 2.6E+02 |
| Diacetone alcohol (4-hydroxy-4-methyl-2-pentanone) | 123-42-2 | – | – | – | – | 4.1E+04 | 8.2E+04 | – | – | 2.9E+00 | 2.9E+02 |
| Diallate | 2303-16-4 | – | 4.7E+02 | 9.4E+02 | – | – | – | 3.4E-02 | 3.4E+00 | – | – |

# Table 10
# Individual RBELs Commercial/Industrial

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | Soil | | | | | | Groundwater | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Carcinogenic | | | Noncarcinogenic | | | Carcinogenic | | Noncarcinogenic | |
| | | $^{Air}RBEL_{Inh}$ (mg/m3) | $^{Soil}RBEL_{Ing}$ (mg/kg) | $^{Soil}RBEL_{Derm}$ (mg/kg) | $^{Air}RBEL_{Inh}$ (mg/m3) | $^{Soil}RBEL_{Ing}$ (mg/kg) | $^{Soil}RBEL_{Derm}$ (mg/kg) | $^{GW}RBEL_{Ing}$ [1] (mg/L) | $^{GW}RBEL_{Class\ 3}$ [2] (mg/L) | $^{GW}RBEL_{Ing}$ [1] (mg/L) | $^{GW}RBEL_{Class\ 3}$ [2] (mg/L) |
| Diazinon | 333-41-5 | – | – | – | 1.5E-04 | 9.2E+02 | 1.8E+03 | – | – | 6.6E-02 | 6.6E+00 |
| Dibenz(a,h)acridine | 226-36-8 | 3.7E-04 | 2.4E+01 | 4.8E+01 | – | – | – | 1.7E-03 | 1.7E-01 | – | – |
| Dibenz(a,j)acridine | 224-42-0 | 4.6E-04 | 3.9E+01 | 6.0E+01 | – | – | – | 2.8E-03 | 2.8E-01 | – | – |
| Dibenz-a,h-anthracene | 53-70-3 | 6.8E-05 | 2.9E+01 | 4.4E+01 | – | – | – | 2.0E-03 | 2.0E-01 | – | – |
| Dibenzo(a,e)pyrene | 192-65-4 | 4.6E-05 | 3.9E+00 | 7.8E+00 | – | – | – | 2.8E-04 | 2.8E-02 | – | – |
| Dibenzo(a,h)pyrene | 189-64-0 | 4.6E-06 | 3.9E-01 | 7.8E-01 | – | – | – | 2.8E-05 | 2.8E-03 | – | – |
| Dibenzo(a,i)pyrene | 189-55-9 | 4.6E-06 | 3.9E-01 | 7.8E-01 | – | – | – | 2.8E-05 | 2.8E-03 | – | – |
| Dibenzofuran | 132-64-9 | – | – | – | – | 4.1E+03 | 8.2E+03 | – | – | 2.9E-01 | 2.9E+01 |
| Dibenzothiophene | 132-65-0 | – | – | – | – | 1.0E+04 | 6.1E+03 | – | – | 7.3E-01 | 7.3E+01 |
| Dibromo-3-chloropropane, 1,2- | 96-12-8 | 6.8E-06 | 3.6E+01 | 7.2E+01 | 2.9E-04 | 2.0E+02 | 4.1E+02 | 2.6E-03 | 2.6E-01 | 1.5E-02 | 1.5E+00 |
| Dibromochloromethane (chlorodibromomethane)[3] | 124-48-1 | – | 3.4E+02 | – | – | 2.0E+04 | – | 2.4E-02 | 2.4E+00 | 1.5E+00 | 1.5E+02 |
| Dibromofluoromethane | 1868-53-7 | – | – | – | – | 2.0E+05 | – | – | – | 1.5E+01 | 1.5E+03 |
| Dicamba | 1918-00-9 | – | – | – | – | 3.1E+04 | 6.1E+04 | – | – | 2.2E+00 | 2.2E+02 |
| Dichlormid | 37764-25-3 | – | – | – | – | 2.6E+04 | 5.1E+04 | – | – | 1.8E+00 | 1.8E+02 |
| Dichloro-2-butene, 1,4- | 764-41-0 | 9.7E-06 | – | – | – | – | – | – | – | – | – |
| Dichloro-2-butene, 1,4- trans | 110-57-6 | 9.7E-06 | – | – | – | – | – | – | – | – | – |
| Dichlorobenzene, 1,2- | 95-50-1 | – | – | – | 4.4E-02 | 9.2E+04 | – | – | – | 6.6E+00 | 6.6E+02 |
| Dichlorobenzene, 1,3- | 541-73-1 | – | – | – | 1.2E-02 | 3.1E+04 | – | – | – | 2.2E+00 | 2.2E+02 |
| Dichlorobenzene, 1,4- | 106-46-7 | – | 1.2E+03 | – | 7.7E-01 | – | – | 8.5E-02 | 8.5E+00 | – | – |
| Dichlorobenzidine, 3,3- | 91-94-1 | – | 6.4E+01 | 1.3E+02 | – | – | – | 4.5E-03 | 4.5E-01 | – | – |
| Dichlorobutane, 2,3- | 7581-97-7 | – | – | – | 1.0E-02 | 1.0E+04 | – | – | – | 7.3E-01 | 7.3E+01 |
| Dichlorodifluoromethane | 75-71-8 | – | – | – | 1.5E-01 | 2.0E+05 | – | – | – | 1.5E+01 | 1.5E+03 |
| Dichloroethane, 1,1- | 75-34-3 | – | – | – | 3.5E+00 | 2.0E+05 | – | – | – | 1.5E+01 | 1.5E+03 |
| Dichloroethane, 1,2- | 107-06-2 | 1.2E-02 | 3.1E+02 | – | 6.4E-02 | 8.0E+04 | – | 2.2E-02 | 2.2E+00 | 5.7E+00 | 5.7E+02 |
| Dichloroethylene, 1,1- | 75-35-4 | – | – | – | 5.0E-01 | 5.1E+04 | – | – | – | 3.7E+00 | 3.7E+02 |
| Dichloroethylene, cis-1,2- | 156-59-2 | – | – | – | 8.8E-02 | 2.0E+03 | – | – | – | 1.5E-01 | 1.5E+01 |
| Dichloroethylene, trans-1,2 | 156-60-5 | – | – | – | 8.8E-02 | 2.0E+04 | – | – | – | 1.5E+00 | 1.5E+02 |
| Dichlorofluoromethane | 75-43-4 | – | – | – | – | 2.0E+05 | – | – | – | 1.5E+01 | 1.5E+03 |
| Dichlorophenol, 2,3- | 576-24-9 | – | – | – | – | 3.1E+03 | 6.1E+03 | – | – | 2.2E-01 | 2.2E+01 |
| Dichlorophenol, 2,4- | 120-83-2 | – | – | – | – | 3.1E+03 | 6.1E+03 | – | – | 2.2E-01 | 2.2E+01 |
| Dichlorophenol, 2,5- | 583-78-8 | – | – | – | – | 3.1E+03 | 6.1E+03 | – | – | 2.2E-01 | 2.2E+01 |
| Dichlorophenol, 2,6- | 87-65-0 | – | – | – | – | 1.0E+03 | 2.0E+03 | – | – | 7.3E-02 | 7.3E+00 |
| Dichlorophenol, 3,4- | 95-77-2 | – | – | – | – | 3.1E+03 | 6.1E+03 | – | – | 2.2E-01 | 2.2E+01 |

# Table 10
# Individual RBELs Commercial/Industrial

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | Soil | | | | | | Groundwater | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Carcinogenic | | | Noncarcinogenic | | | Carcinogenic | | Noncarcinogenic | |
| | | $^{Air}RBEL_{Inh}$ (mg/m3) | $^{Soil}RBEL_{Ing}$ (mg/kg) | $^{Soil}RBEL_{Derm}$ (mg/kg) | $^{Air}RBEL_{Inh}$ (mg/m3) | $^{Soil}RBEL_{Ing}$ (mg/kg) | $^{Soil}RBEL_{Derm}$ (mg/kg) | $^{GW}RBEL_{Ing}$ [1] (mg/L) | $^{GW}RBEL_{Class\ 3}$ [2] (mg/L) | $^{GW}RBEL_{Ing}$ [1] (mg/L) | $^{GW}RBEL_{Class\ 3}$ [2] (mg/L) |
| Dichlorophenol, 3,5- | 591-35-5 | – | – | – | – | 3.1E+03 | 6.1E+03 | – | – | 2.2E-01 | 2.2E+01 |
| Dichlorophenoxy, 2,4- butyric acid, 4- (2,4-DB) | 94-82-6 | – | – | – | – | 8.2E+03 | 1.6E+04 | – | – | 5.8E-01 | 5.8E+01 |
| Dichlorophenoxyacetic acid, 2,4- (2,4-D) | 94-75-7 | – | – | – | – | 1.0E+04 | 4.1E+04 | – | – | 7.3E-01 | 7.3E+01 |
| Dichloroprop (2-(2,4-dichlorophenoxy) propanoic acid) | 120-36-5 | – | – | – | – | 1.0E+04 | 2.0E+04 | – | – | 7.3E-01 | 7.3E+01 |
| Dichloropropane, 1,2- | 78-87-5 | 4.4E-02 | 7.7E+02 | – | 5.8E-03 | 1.3E+05 | – | 5.5E-02 | 5.5E+00 | 9.5E+00 | 9.5E+02 |
| Dichloropropane, 1,3- | 142-28-9 | 1.0E-02 | 2.9E+02 | – | 2.9E-02 | 2.0E+04 | – | 2.0E-02 | 2.0E+00 | 1.5E+00 | 1.5E+02 |
| Dichloropropane, 2,2- | 594-20-7 | – | 4.2E+02 | – | 5.8E-03 | 9.2E+04 | – | 3.0E-02 | 3.0E+00 | 6.6E+00 | 6.6E+02 |
| Dichloropropanol, 2,3- | 616-23-9 | – | – | – | – | 3.1E+03 | 6.1E+03 | – | – | 2.2E-01 | 2.2E+01 |
| Dichloropropene, 1,1- | 563-58-6 | 1.0E-02 | 2.9E+02 | – | 2.9E-02 | 3.1E+04 | – | 2.0E-02 | 2.0E+00 | 2.2E+00 | 2.2E+02 |
| Dichloropropene, 1,3- (mixed isomers) | 542-75-6 | 1.0E-02 | 2.9E+02 | – | 2.9E-02 | 3.1E+04 | – | 2.0E-02 | 2.0E+00 | 2.2E+00 | 2.2E+02 |
| Dichloropropene, cis 1,3- | 10061-01-5 | – | 5.3E+01 | – | 2.9E-02 | 1.0E+02 | – | 3.8E-03 | 3.8E-01 | 7.3E-03 | 7.3E-01 |
| Dichloropropene, trans 1,3- | 10061-02-6 | 1.0E-02 | 2.9E+02 | – | 2.9E-02 | 3.1E+04 | – | 2.0E-02 | 2.0E+00 | 2.2E+00 | 2.2E+02 |
| Dichlorvos | 62-73-7 | – | 9.9E+01 | 2.0E+02 | 7.3E-04 | 5.1E+02 | 1.0E+03 | 7.0E-03 | 7.0E-01 | 3.7E-02 | 3.7E+00 |
| Dicrotophos (bidrin) | 141-66-2 | – | – | – | – | 1.0E+02 | 2.0E+02 | – | – | 7.3E-03 | 7.3E-01 |
| Dicyclopentadiene | 77-73-6 | – | – | – | – | 8.2E+04 | – | – | – | 5.8E+00 | 5.8E+02 |
| Dieldrin | 60-57-1 | 8.9E-06 | 1.8E+00 | 3.6E+00 | – | 5.1E+01 | 1.0E+02 | 1.3E-04 | 1.3E-02 | 3.7E-03 | 3.7E-01 |
| Diethanolamine | 111-42-2 | – | – | – | 3.7E-02 | 5.1E+02 | 1.0E+03 | – | – | 3.7E-02 | 3.7E+00 |
| Diethyldithiocarbamate, sodium salt | 148-18-5 | – | 1.1E+02 | – | – | 3.1E+04 | – | 7.6E-03 | 7.6E-01 | 2.2E+00 | 2.2E+02 |
| Diethyl phthalate | 84-66-2 | – | – | – | – | 8.2E+05 | 1.0E+06 | – | – | 5.8E+01 | 5.8E+03 |
| Diethylene glycol | 111-46-6 | – | – | – | – | 1.0E+06 | 1.0E+06 | – | – | 1.5E+02 | 1.5E+04 |
| Diethylene glycol monobutyl ether | 112-34-5 | – | – | – | 1.5E-04 | 3.1E+04 | 6.1E+04 | – | – | 2.2E+00 | 2.2E+02 |
| Diethylhexyl adipate | 103-23-1 | – | 2.4E+04 | 4.8E+04 | – | 6.1E+05 | 1.0E+06 | 1.7E+00 | 1.7E+02 | 4.4E+01 | 4.4E+03 |
| Diethylstilbestrol | 56-53-1 | – | 6.1E-03 | 1.2E-02 | – | – | – | 4.3E-07 | 4.3E-05 | – | – |
| Diisobutylene (trimethyl-1-pentene, 2,4,4-) | 107-39-1 | – | – | – | 2.9E-01 | 6.1E+04 | – | – | – | 4.4E+00 | 4.4E+02 |
| Diisopropylbenzene, p- | 100-18-5 | – | – | – | – | 1.0E+04 | 2.0E+04 | – | – | 7.3E-01 | 7.3E+01 |
| Diisopropyl ether (2,2'-oxybis-propane) | 108-20-3 | – | – | – | 1.0E+00 | 1.0E+05 | – | – | – | 7.3E+00 | 7.3E+02 |
| Dimethenamid | 87674-68-8 | – | – | – | – | 1.5E+04 | 3.1E+04 | – | – | 1.1E+00 | 1.1E+02 |
| Dimethoate | 60-51-5 | – | – | – | – | 2.0E+02 | 4.1E+02 | – | – | 1.5E-02 | 1.5E+00 |
| Dimethoxybenzidine, 3,3'- | 119-90-4 | – | 2.0E+03 | 4.1E+03 | – | – | – | 1.5E-01 | 1.5E+01 | – | – |
| Dimethyl-2-nitrobenzene, 1,3- | 81-20-9 | – | – | – | 1.3E-02 | 2.0E+03 | 4.1E+03 | – | – | 1.5E-01 | 1.5E+01 |
| Dimethyl-3-nitrobenzene, 1,2- | 83-41-0 | – | – | – | 1.3E-02 | 2.0E+03 | 4.1E+03 | – | – | 1.5E-01 | 1.5E+01 |
| Dimethyl-4-nitrobenzene, 1-2- | 99-51-4 | – | – | – | 1.3E-02 | 2.0E+03 | 4.1E+03 | – | – | 1.5E-01 | 1.5E+01 |
| Dimethyl-5-nitrobenzene, 1,3- | 99-12-7 | – | – | – | 1.3E-02 | 2.0E+03 | 4.1E+03 | – | – | 1.5E-01 | 1.5E+01 |

# Table 10
# Individual RBELs Commercial/Industrial

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | Soil | | | | | | Groundwater | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Carcinogenic | | | Noncarcinogenic | | | Carcinogenic | | Noncarcinogenic | |
| | | $^{Air}RBEL_{Inh}$ (mg/m3) | $^{Soil}RBEL_{Ing}$ (mg/kg) | $^{Soil}RBEL_{Derm}$ (mg/kg) | $^{Air}RBEL_{Inh}$ (mg/m3) | $^{Soil}RBEL_{Ing}$ (mg/kg) | $^{Soil}RBEL_{Derm}$ (mg/kg) | $^{GW}RBEL_{Ing}$ [1] (mg/L) | $^{GW}RBEL_{Class\ 3}$ [2] (mg/L) | $^{GW}RBEL_{Ing}$ [1] (mg/L) | $^{GW}RBEL_{Class\ 3}$ [2] (mg/L) |
| Dimethylphenethylamine, alpha, alpha- | 122-09-8 | – | – | – | – | 2.0E+03 | 4.1E+03 | – | – | 1.5E-01 | 1.5E+01 |
| Dimethyl phenol, 2,4- | 105-67-9 | – | – | – | – | 2.0E+04 | 4.1E+04 | – | – | 1.5E+00 | 1.5E+02 |
| Dimethylaminoazobenzene, p- | 60-11-7 | – | – | – | – | 1.0E+01 | 2.0E+01 | – | – | 7.3E-04 | 7.3E-02 |
| Dimethylbenz-a-anthracene, 7,12- | 57-97-6 | 1.7E-06 | 1.1E-01 | 1.8E-01 | – | – | – | 8.2E-06 | 8.2E-04 | – | – |
| Dimethylbenzidine, 3,3'- | 119-93-7 | – | 2.6E+00 | 5.2E+00 | – | – | – | 1.9E-04 | 1.9E-02 | – | – |
| Dimethylformamide, N,N- | 68-12-2 | – | – | – | 4.4E-02 | 1.0E+05 | – | – | – | 7.3E+00 | 7.3E+02 |
| Dimethylnaphthalene, 1,3- | 575-41-7 | – | – | – | – | 4.1E+04 | 6.3E+04 | – | – | 2.9E+00 | 2.9E+02 |
| Dimethylphthalate | 131-11-3 | – | – | – | – | 8.2E+05 | 1.0E+06 | – | – | 5.8E+01 | 5.8E+03 |
| Di-n-butyl phthalate | 84-74-2 | – | – | – | – | 1.0E+05 | 2.0E+05 | – | – | 7.3E+00 | 7.3E+02 |
| Dinitro-2-methylphenol, 4,6- (dinitro-o-cresol, 4, 6-) | 534-52-1 | – | – | – | – | 1.0E+02 | 2.0E+02 | – | – | 7.3E-03 | 7.3E-01 |
| Dinitrobenzene, 1,3- (dinitrobenzene, 2,4-) | 99-65-0 | – | – | – | – | 1.0E+02 | 2.0E+02 | – | – | 7.3E-03 | 7.3E-01 |
| Dinitrobenzene, 1,4- | 100-25-4 | – | – | – | – | 1.0E+02 | 2.0E+02 | – | – | 7.3E-03 | 7.3E-01 |
| Dinitrophenol, 2,4- | 51-28-5 | – | – | – | – | 2.0E+03 | 4.1E+03 | – | – | 1.5E-01 | 1.5E+01 |
| Dinitrophenol, 2,5- | 329-71-5 | – | – | – | – | 2.0E+03 | 4.1E+03 | – | – | 1.5E-01 | 1.5E+01 |
| Dinitrotoluene, 2,4- | 121-14-2 | – | 4.2E+01 | 8.4E+01 | – | 2.0E+03 | 4.1E+03 | 3.0E-03 | 3.0E-01 | 1.5E-01 | 1.5E+01 |
| Dinitrotoluene, 2,6- | 606-20-2 | – | 4.2E+01 | 8.4E+01 | – | 1.0E+03 | 2.0E+03 | 3.0E-03 | 3.0E-01 | 7.3E-02 | 7.3E+00 |
| Di-n-octyl phthalate | 117-84-0 | – | – | – | – | 1.0E+04 | 2.0E+04 | – | – | 7.3E-01 | 7.3E+01 |
| Dinoseb | 88-85-7 | – | – | – | – | 1.0E+03 | 2.0E+03 | – | – | 7.3E-02 | 7.3E+00 |
| Dioxane 1,4- | 123-91-1 | 8.2E-03 | 2.9E+02 | – | 1.6E-01 | 3.1E+04 | – | 2.0E-02 | 2.0E+00 | 2.2E+00 | 2.2E+02 |
| Dioxin (as 2,3,7,8-TCDD toxicity equivalent quotients (TEQs)) | 1746-01-6 | – | – | – | – | – | – | – | – | – | – |
| Diphenyl ether | 101-84-8 | – | – | – | – | 6.3E+03 | 1.3E+04 | – | – | 4.5E-01 | 4.5E+01 |
| Diphenylamine | 122-39-4 | – | – | – | – | 2.6E+04 | 5.1E+04 | – | – | 1.8E+00 | 1.8E+02 |
| Diphenylhydrazine, 1,2- | 122-66-7 | 1.9E-04 | 3.6E+01 | 7.2E+01 | – | – | – | 2.6E-03 | 2.6E-01 | – | – |
| Dipropylene glycol | 110-98-5 | – | – | – | – | 1.2E+05 | 2.5E+05 | – | – | 8.8E+00 | 8.8E+02 |
| Diquat | 85-00-7 | – | – | – | – | 2.2E+03 | 4.5E+03 | – | – | 1.6E-01 | 1.6E+01 |
| Disodium iminodiacetate (iminodiacetic acid, disodium salt) | 142-73-4 | – | – | – | – | 1.0E+04 | 2.0E+04 | – | – | 7.3E-01 | 7.3E+01 |
| Disulfoton | 298-04-4 | – | – | – | – | 4.1E+01 | 8.2E+01 | – | – | 2.9E-03 | 2.9E-01 |
| Diuron | 330-54-1 | – | – | – | – | 2.0E+03 | 4.1E+03 | – | – | 1.5E-01 | 1.5E+01 |
| Dodecylphenol, 4- | 104-43-8 | – | – | – | – | 5.1E+04 | 1.0E+05 | – | – | 3.7E+00 | 3.7E+02 |
| Endosulfan | 115-29-7 | – | – | – | – | 6.1E+03 | 1.2E+04 | – | – | 4.4E-01 | 4.4E+01 |
| Endosulfan I | 959-98-8 | – | – | – | – | 2.0E+03 | 4.1E+03 | – | – | 1.5E-01 | 1.5E+01 |
| Endosulfan II | 33213-65-9 | – | – | – | – | 6.1E+03 | 1.2E+04 | – | – | 4.4E-01 | 4.4E+01 |
| Endosulfan sulfate | 1031-07-8 | – | – | – | – | 6.1E+03 | 1.2E+04 | – | – | 4.4E-01 | 4.4E+01 |

# Table 10
# Individual RBELs Commercial/Industrial

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | Soil | | | | | | Groundwater | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Carcinogenic | | | Noncarcinogenic | | | Carcinogenic | | Noncarcinogenic | |
| | | $^{Air}RBEL_{Inh}$ (mg/m3) | $^{Soil}RBEL_{Ing}$ (mg/kg) | $^{Soil}RBEL_{Derm}$ (mg/kg) | $^{Air}RBEL_{Inh}$ (mg/m3) | $^{Soil}RBEL_{Ing}$ (mg/kg) | $^{Soil}RBEL_{Derm}$ (mg/kg) | $^{GW}RBEL_{Ing}$ [1] (mg/L) | $^{GW}RBEL_{Class\ 3}$ [2] (mg/L) | $^{GW}RBEL_{Ing}$ [1] (mg/L) | $^{GW}RBEL_{Class\ 3}$ [2] (mg/L) |
| Endothall | 145-73-3 | – | – | – | – | 2.0E+04 | 4.1E+04 | – | – | 1.5E+00 | 1.5E+02 |
| Endrin | 72-20-8 | – | – | – | – | 3.1E+02 | 6.1E+02 | – | – | 2.2E-02 | 2.2E+00 |
| Endrin aldehyde | 7421-93-4 | – | – | – | – | 3.1E+02 | 6.1E+02 | – | – | 2.2E-02 | 2.2E+00 |
| Endrin ketone | 53494-70-5 | – | – | – | – | 3.1E+02 | 6.1E+02 | – | – | 2.2E-02 | 2.2E+00 |
| Epichlorohydrin | 106-89-8 | 3.4E-02 | 2.9E+03 | – | 1.5E-03 | 6.1E+03 | – | 2.1E-01 | 2.1E+01 | 4.4E-01 | 4.4E+01 |
| EPN (o-ethyl o-(4-nitrophenyl)phenylphosphonothioate) | 2104-64-5 | – | – | – | – | 1.0E+01 | 2.0E+01 | – | – | 7.3E-04 | 7.3E-02 |
| Esfenvalerate | 66230-04-4 | – | – | – | – | 2.0E+03 | 4.1E+03 | – | – | 1.5E-01 | 1.5E+01 |
| Ethalfluralin (sonolan) | 55283-68-6 | – | 3.2E+02 | 6.4E+02 | – | 4.1E+04 | 8.2E+04 | 2.3E-02 | 2.3E+00 | 2.9E+00 | 2.9E+02 |
| Ethanol | 64-17-5 | – | – | – | – | 1.0E+06 | – | – | – | 2.4E+03 | 2.4E+05 |
| Ethanol, 2-amino- | 141-43-5 | – | – | – | 3.4E-02 | 1.7E+03 | 3.5E+03 | – | – | 1.2E-01 | 1.2E+01 |
| Ethanol, 2-(2-aminoethoxy)- | 929-06-6 | – | – | – | – | 5.1E+02 | 1.0E+03 | – | – | 3.7E-02 | 3.7E+00 |
| Ethanol, 2-(2-ethoxyethoxy)- | 111-90-0 | – | – | – | – | 1.0E+06 | 1.0E+06 | – | – | 1.5E+02 | 1.5E+04 |
| Ethanol, 2-(methylamino)- | 109-83-1 | – | – | – | 6.7E-02 | 1.6E+04 | 3.3E+04 | – | – | 1.2E+00 | 1.2E+02 |
| Ethion | 563-12-2 | – | – | – | – | 5.1E+02 | 1.0E+03 | – | – | 3.7E-02 | 3.7E+00 |
| Ethoprop | 13194-48-4 | – | 1.0E+03 | 2.0E+03 | – | 1.0E+02 | 2.0E+02 | 7.3E-02 | 7.3E+00 | 7.3E-03 | 7.3E-01 |
| Ethoxy ethanol, 2- | 110-80-5 | – | – | – | 2.9E-01 | 9.2E+04 | – | – | – | 6.6E+00 | 6.6E+02 |
| Ethyl acetate | 141-78-6 | – | – | – | 3.4E-01 | 9.2E+05 | – | – | – | 6.6E+01 | 6.6E+03 |
| Ethyl acrylate | 140-88-5 | – | 6.0E+02 | – | 1.2E-02 | 5.1E+03 | – | 4.3E-02 | 4.3E+00 | 3.7E-01 | 3.7E+01 |
| Ethyl benzene | 100-41-4 | – | – | – | 2.8E+00 | 1.0E+05 | – | – | – | 7.3E+00 | 7.3E+02 |
| Ethyl dipropylthiocarbamate, S- | 759-94-4 | – | – | – | – | 2.6E+04 | 5.1E+04 | – | – | 1.8E+00 | 1.8E+02 |
| Ethyl ether | 60-29-7 | – | – | – | – | 2.0E+05 | – | – | – | 1.5E+01 | 1.5E+03 |
| Ethyl methacrylate | 97-63-2 | – | – | – | 4.4E-01 | 9.2E+04 | – | – | – | 6.6E+00 | 6.6E+02 |
| Ethyl methanesulfonate | 62-50-0 | 1.5E-03 | 2.9E+02 | 5.8E+02 | – | – | – | 2.1E-02 | 2.1E+00 | – | – |
| Ethyl tert-butyl ether (2-ethyl-2-ethoxypropane) | 637-92-3 | – | – | – | 4.4E-01 | 1.0E+03 | – | – | – | 7.3E-02 | 7.3E+00 |
| Ethyl-1-hexanol, 2- | 104-76-7 | – | – | – | – | 1.5E+05 | 3.1E+05 | – | – | 1.1E+01 | 1.1E+03 |
| Ethyl-2-hexenal, 2- | 645-62-5 | – | – | – | – | 1.5E+05 | – | – | – | 1.1E+01 | 1.1E+03 |
| Ethyl-2-methyl benzene, 1- | 611-14-3 | – | – | – | 5.8E-01 | 5.1E+04 | – | – | – | 3.7E+00 | 3.7E+02 |
| Ethyl-4-methyl benzene, 1- | 622-96-8 | – | – | – | 5.8E-01 | 5.1E+04 | – | – | – | 3.7E+00 | 3.7E+02 |
| Ethylene* | 74-85-1 | – | – | – | – | – | – | – | – | – | – |
| Ethylene dibromide (dibromoethane, 1,2- ) | 106-93-4 | 9.3E-04 | 1.4E+01 | – | 9.8E-02 | 9.2E+03 | – | 1.0E-03 | 1.0E-01 | 6.6E-01 | 6.6E+01 |
| Ethylene glycol | 107-21-1 | – | – | – | – | 1.0E+06 | 1.0E+06 | – | – | 1.5E+02 | 1.5E+04 |
| Ethylene oxide | 75-21-8 | 5.4E-04 | 2.8E+01 | – | – | – | – | 2.0E-03 | 2.0E-01 | – | – |
| Ethylene thiourea | 96-45-7 | – | 2.6E+02 | 5.2E+02 | – | 8.2E+01 | 1.6E+02 | 1.9E-02 | 1.9E+00 | 5.8E-03 | 5.8E-01 |

# Table 10
# Individual RBELs Commercial/Industrial

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | Soil | | | | | | Groundwater | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Carcinogenic | | | Noncarcinogenic | | | Carcinogenic | | Noncarcinogenic | |
| | | $^{Air}RBEL_{Inh}$ (mg/m3) | $^{Soil}RBEL_{Ing}$ (mg/kg) | $^{Soil}RBEL_{Derm}$ (mg/kg) | $^{Air}RBEL_{Inh}$ (mg/m3) | $^{Soil}RBEL_{Ing}$ (mg/kg) | $^{Soil}RBEL_{Derm}$ (mg/kg) | $^{GW}RBEL_{Ing}$ [1] (mg/L) | $^{GW}RBEL_{Class\ 3}$ [2] (mg/L) | $^{GW}RBEL_{Ing}$ [1] (mg/L) | $^{GW}RBEL_{Class\ 3}$ [2] (mg/L) |
| Ethylenediamine | 107-15-3 | – | – | – | – | 9.2E+04 | – | – | – | 6.6E+00 | 6.6E+02 |
| Ethylenimine | 151-56-4 | 2.2E-06 | 4.4E-01 | – | – | – | – | 3.1E-05 | 3.1E-03 | – | – |
| Ethylhexyl acrylate, 2- | 103-11-7 | – | 6.0E+02 | 1.2E+03 | – | – | – | 4.3E-02 | 4.3E+00 | – | – |
| Famphur | 52-85-7 | – | – | – | – | 3.1E+01 | 6.1E+01 | – | – | 2.2E-03 | 2.2E-01 |
| Fensulfothion | 115-90-2 | – | – | – | – | 1.0E+03 | 2.0E+03 | – | – | 7.3E-02 | 7.3E+00 |
| Fenthion | 55-38-9 | – | – | – | – | 7.2E+01 | 1.4E+02 | – | – | 5.1E-03 | 5.1E-01 |
| Fenuron | 101-42-8 | – | – | – | – | 7.2E+04 | 1.4E+05 | – | – | 5.1E+00 | 5.1E+02 |
| Fluoranthene | 206-44-0 | – | – | – | – | 4.1E+04 | 6.3E+04 | – | – | 2.9E+00 | 2.9E+02 |
| Fluorene | 86-73-7 | – | – | – | – | 4.1E+04 | 6.3E+04 | – | – | 2.9E+00 | 2.9E+02 |
| Fluorine (soluble fluoride) | 7782-41-4 | – | – | – | 3.9E-02 | 6.1E+04 | 1.0E+06 | – | – | 4.4E+00 | 4.4E+02 |
| Fluorochloridone | 61213-25-0 | – | – | – | – | 7.7E+03 | 1.5E+04 | – | – | 5.5E-01 | 5.5E+01 |
| Fonofos | 944-22-9 | – | – | – | – | 2.0E+03 | 4.1E+03 | – | – | 1.5E-01 | 1.5E+01 |
| Formaldehyde | 50-00-0 | – | – | – | 1.6E-02 | 2.0E+05 | – | – | – | 1.5E+01 | 1.5E+03 |
| Formic acid | 64-18-6 | – | – | – | 4.4E-03 | 9.2E+05 | – | – | – | 6.6E+01 | 6.6E+03 |
| Furan | 110-00-9 | – | – | – | – | 1.0E+03 | – | – | – | 7.3E-02 | 7.3E+00 |
| Furfural | 98-01-1 | – | – | – | – | 3.1E+03 | – | – | – | 2.2E-01 | 2.2E+01 |
| Glycidylaldehyde | 765-34-4 | – | – | – | 1.5E-03 | 4.1E+02 | – | – | – | 2.9E-02 | 2.9E+00 |
| Glyphosate | 1071-83-6 | – | – | – | – | 1.0E+05 | 2.0E+05 | – | – | 7.3E+00 | 7.3E+02 |
| Heptachlor | 76-44-8 | 3.1E-05 | 6.4E+00 | 1.3E+01 | – | 5.1E+02 | 1.0E+03 | 4.5E-04 | 4.5E-02 | 3.7E-02 | 3.7E+00 |
| Heptachlor epoxide | 1024-57-3 | 1.6E-05 | 3.1E+00 | 6.3E+00 | – | 1.3E+01 | 2.7E+01 | 2.2E-04 | 2.2E-02 | 9.5E-04 | 9.5E-02 |
| Heptane, n- | 142-82-5 | – | – | – | 1.3E+01 | 6.1E+04 | – | – | – | 4.4E+00 | 4.4E+02 |
| Heptanoic acid, n- | 111-14-8 | – | – | – | 1.5E-03 | 5.1E+05 | 1.0E+06 | – | – | 3.7E+01 | 3.7E+03 |
| Hexachlorobenzene | 118-74-1 | 8.9E-05 | 1.8E+01 | 3.6E+01 | – | 8.2E+02 | 1.6E+03 | 1.3E-03 | 1.3E-01 | 5.8E-02 | 5.8E+00 |
| Hexachlorobutadiene | 87-68-3 | 1.9E-03 | 3.7E+02 | 7.3E+02 | – | 1.0E+03 | 2.0E+03 | 2.6E-02 | 2.6E+00 | 7.3E-02 | 7.3E+00 |
| Hexachlorocyclohexane, alpha (alpha-BHC) | 319-84-6 | 2.3E-05 | 4.5E+00 | 2.3E+01 | – | 8.2E+03 | 4.1E+04 | 3.2E-04 | 3.2E-02 | 5.8E-01 | 5.8E+01 |
| Hexachlorocyclohexane, beta (beta-BHC) | 319-85-7 | 7.7E-05 | 1.6E+01 | 7.9E+01 | – | – | – | 1.1E-03 | 1.1E-01 | – | – |
| Hexachlorocyclohexane, delta (delta-BHC) | 319-86-8 | 8.0E-05 | 1.6E+01 | 7.9E+01 | – | 3.1E+02 | 1.5E+03 | 1.1E-03 | 1.1E-01 | 2.2E-02 | 2.2E+00 |
| Hexachlorocyclohexane, gamma (lindane; gamma-BHC) | 58-89-9 | – | 2.2E+01 | 1.1E+02 | – | 3.1E+02 | 1.5E+03 | 1.6E-03 | 1.6E-01 | 2.2E-02 | 2.2E+00 |
| Hexachlorocyclohexane, techn (technical-BHC) | 608-73-1 | 8.0E-05 | 1.6E+01 | 7.9E+01 | – | – | – | 1.1E-03 | 1.1E-01 | – | – |
| Hexachlorocyclopentadiene | 77-47-4 | – | – | – | 2.9E-04 | 6.1E+03 | 1.2E+04 | – | – | 4.4E-01 | 4.4E+01 |
| Hexachloroethane | 67-72-1 | – | 7.2E+02 | 1.4E+03 | 4.4E-02 | 7.2E+02 | 1.4E+03 | 5.1E-02 | 5.1E+00 | 5.1E-02 | 5.1E+00 |
| Hexachlorophene | 70-30-4 | – | – | – | – | 3.1E+02 | 6.1E+02 | – | – | 2.2E-02 | 2.2E+00 |
| Hexachloropropylene | 1888-71-7 | – | 7.2E+02 | 1.4E+03 | 4.4E-02 | 7.2E+02 | 1.4E+03 | 5.1E-02 | 5.1E+00 | 5.1E-02 | 5.1E+00 |

# Table 10
# Individual RBELs Commercial/Industrial

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | Soil | | | | | | Groundwater | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Carcinogenic | | | Noncarcinogenic | | | Carcinogenic | | Noncarcinogenic | |
| | | $^{Air}RBEL_{Inh}$ (mg/m3) | $^{Soil}RBEL_{Ing}$ (mg/kg) | $^{Soil}RBEL_{Derm}$ (mg/kg) | $^{Air}RBEL_{Inh}$ (mg/m3) | $^{Soil}RBEL_{Ing}$ (mg/kg) | $^{Soil}RBEL_{Derm}$ (mg/kg) | $^{GW}RBEL_{Ing}$ [1] (mg/L) | $^{GW}RBEL_{Class\ 3}$ [2] (mg/L) | $^{GW}RBEL_{Ing}$ [1] (mg/L) | $^{GW}RBEL_{Class\ 3}$ [2] (mg/L) |
| Hexanal, 2-ethyl- | 123-05-7 | – | – | – | – | 1.5E+05 | 3.1E+05 | – | – | 1.1E+01 | 1.1E+03 |
| Hexane, n- | 110-54-3 | – | – | – | 9.8E-01 | 6.1E+04 | – | – | – | 4.4E+00 | 4.4E+02 |
| Hexanediamine, 1,6- | 124-09-4 | – | – | – | – | 5.1E+03 | 1.0E+04 | – | – | 3.7E-01 | 3.7E+01 |
| Hexanedinitrile | 111-69-3 | – | – | – | 8.8E-03 | 1.4E+03 | 2.9E+03 | – | – | 1.0E-01 | 1.0E+01 |
| Hexanediol, 1,6- | 629-11-8 | – | – | – | 2.7E+01 | 1.0E+06 | 1.0E+06 | – | – | 3.7E+02 | 3.7E+04 |
| Hexanoic acid | 142-62-1 | – | – | – | 1.5E-03 | 6.5E+04 | 1.3E+05 | – | – | 4.7E+00 | 4.7E+02 |
| Hexanone, 2- | 591-78-6 | – | – | – | 4.4E-02 | 5.1E+03 | – | – | – | 3.7E-01 | 3.7E+01 |
| Hexazinone | 51235-04-2 | – | – | – | – | 3.4E+04 | 6.7E+04 | – | – | 2.4E+00 | 2.4E+02 |
| Hexene, 1- | 592-41-6 | – | – | – | 1.6E-01 | 3.4E+05 | – | – | – | 2.4E+01 | 2.4E+03 |
| Hexene, cis-2- | 7688-21-3 | – | – | – | 1.6E-01 | 3.4E+05 | – | – | – | 2.4E+01 | 2.4E+03 |
| Hexylene glycol (2-methyl-2,4-pentanediol) | 107-41-5 | – | – | – | – | 3.1E+05 | 6.1E+05 | – | – | 2.2E+01 | 2.2E+03 |
| Hydrazine | 302-01-2 | 8.3E-06 | 9.5E+00 | – | 4.4E-05 | – | – | 6.8E-04 | 6.8E-02 | – | – |
| Hydrocaproic acid, 6- (6-hydroxyhexanoic acid) | 1191-25-9 | – | – | – | 1.5E-03 | 6.5E+04 | 1.3E+05 | – | – | 4.7E+00 | 4.7E+02 |
| Hydrogen chloride (hydrochloric acid)* | 7647-01-0 | – | – | – | – | – | – | – | – | – | – |
| Hydroquinone | 123-31-9 | – | 4.8E+02 | 9.5E+02 | – | 4.1E+04 | 8.2E+04 | 3.4E-02 | 3.4E+00 | 2.9E+00 | 2.9E+02 |
| Indene | 95-13-6 | – | – | – | 4.4E-03 | 2.0E+04 | – | – | – | 1.5E+00 | 1.5E+02 |
| Indeno-1,2,3-cd-pyrene | 193-39-5 | 6.8E-04 | 2.9E+02 | 4.4E+02 | – | – | – | 2.0E-02 | 2.0E+00 | – | – |
| Iron* | 7439-89-6 | – | – | – | – | – | – | – | – | – | – |
| Isoamyl alcohol | 123-51-3 | – | – | – | – | 5.1E+03 | – | – | – | 3.7E-01 | 3.7E+01 |
| Isobutyl alcohol | 78-83-1 | – | – | – | – | 3.1E+05 | – | – | – | 2.2E+01 | 2.2E+03 |
| Isobutylene (2-methyl-1-propene) | 115-11-7 | – | – | – | 1.6E+02 | 3.8E+03 | – | – | – | 2.7E-01 | 2.7E+01 |
| Isobutyric acid (2-methylpropanoic acid) | 79-31-2 | – | – | – | – | 5.1E+05 | 1.0E+06 | – | – | 3.7E+01 | 3.7E+03 |
| Isodecanol | 25339-17-7 | – | – | – | – | 1.6E+03 | 3.3E+03 | – | – | 1.2E-01 | 1.2E+01 |
| Isodrin | 465-73-6 | 8.3E-07 | 1.7E-01 | 3.4E-01 | – | 3.1E+00 | 6.1E+00 | 1.2E-05 | 1.2E-03 | 2.2E-04 | 2.2E-02 |
| Isopentane | 78-78-4 | – | – | – | 3.5E+01 | 6.1E+04 | – | – | – | 4.4E+00 | 4.4E+02 |
| Isophorone | 78-59-1 | – | 3.0E+04 | 6.0E+04 | – | 2.0E+05 | 4.1E+05 | 2.2E+00 | 2.2E+02 | 1.5E+01 | 1.5E+03 |
| Isopropyl acetate | 108-21-4 | – | – | – | – | 7.2E+04 | – | – | – | 5.1E+00 | 5.1E+02 |
| Isopropyl alcohol | 67-63-0 | – | – | – | 2.9E-01 | 1.0E+06 | – | – | – | 1.5E+02 | 1.5E+04 |
| Isosafrole | 120-58-1 | 6.5E-04 | 1.3E+02 | 2.6E+02 | – | – | – | 9.3E-03 | 9.3E-01 | – | – |
| Kelthane (dicofol) | 115-32-2 | – | – | – | – | 6.1E+03 | 1.2E+04 | – | – | 4.4E-01 | 4.4E+01 |
| Kepone (chlordecone) | 143-50-0 | 8.9E-06 | 2.9E+00 | 5.7E+00 | – | 3.1E+02 | 6.1E+02 | 2.0E-04 | 2.0E-02 | 2.2E-02 | 2.2E+00 |
| Lead (inorganic) | 7439-92-1 | – | – | – | – | – | – | – | – | – | – |
| Leptophos | 21609-90-5 | – | – | – | 2.6E-06 | 5.1E+00 | 1.0E+01 | – | – | 3.7E-04 | 3.7E-02 |

# Table 10
# Individual RBELs Commercial/Industrial

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | Soil | | | | | | Groundwater | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Carcinogenic | | | Noncarcinogenic | | | Carcinogenic | | Noncarcinogenic | |
| | | $^{Air}RBEL_{Inh}$ (mg/m3) | $^{Soil}RBEL_{Ing}$ (mg/kg) | $^{Soil}RBEL_{Derm}$ (mg/kg) | $^{Air}RBEL_{Inh}$ (mg/m3) | $^{Soil}RBEL_{Ing}$ (mg/kg) | $^{Soil}RBEL_{Derm}$ (mg/kg) | $^{GW}RBEL_{Ing}$ [1] (mg/L) | $^{GW}RBEL_{Class\ 3}$ [2] (mg/L) | $^{GW}RBEL_{Ing}$ [1] (mg/L) | $^{GW}RBEL_{Class\ 3}$ [2] (mg/L) |
| Limonene, d-* | 5989-27-5 | – | – | – | – | – | – | – | – | – | – |
| Lithium | 7439-93-2 | – | – | – | – | 2.0E+03 | 4.1E+04 | – | – | 1.5E-01 | 1.5E+01 |
| Magnesium* | 7439-95-4 | – | – | – | – | – | – | – | – | – | – |
| Malathion | 121-75-5 | – | – | – | 2.9E-04 | 2.0E+04 | 4.1E+04 | – | – | 1.5E+00 | 1.5E+02 |
| Maleic anhydride | 108-31-6 | – | – | – | – | 1.0E+05 | 2.0E+05 | – | – | 7.3E+00 | 7.3E+02 |
| Maleic hydrazide | 123-33-1 | – | – | – | – | 5.1E+05 | 1.0E+06 | – | – | 3.7E+01 | 3.7E+03 |
| Malononitrile | 109-77-3 | – | – | – | – | 1.0E+02 | 2.0E+02 | – | – | 7.3E-03 | 7.3E-01 |
| Mancozeb | 8018-01-7 | – | – | – | – | 3.1E+04 | 6.1E+04 | – | – | 2.2E+00 | 2.2E+02 |
| Manganese | 7439-96-5 | – | – | – | 1.2E-03 | 1.4E+05 | 1.7E+05 | – | – | 1.0E+01 | 1.0E+03 |
| MCPA (4-(chloro-2-methylphenoxy) acetic acid) | 94-74-6 | – | – | – | – | 5.1E+02 | 1.0E+03 | – | – | 3.7E-02 | 3.7E+00 |
| MCPP (2-(4-chloro-2-methylphenoxy) propanoic acid) | 93-65-2 | – | – | – | – | 1.0E+03 | 2.0E+03 | – | – | 7.3E-02 | 7.3E+00 |
| Mercury (pH = 4.9) | 7439-97-6 | – | – | – | 4.4E-04 | 3.1E+02 | 4.3E+02 | – | – | 2.2E-02 | 2.2E+00 |
| Mercury (pH=6.8) | 7439-97-6A | – | – | – | 4.4E-04 | 3.1E+02 | 4.3E+02 | – | – | 2.2E-02 | 2.2E+00 |
| Merphos | 150-50-5 | – | – | – | – | 3.1E+01 | 6.1E+01 | – | – | 2.2E-03 | 2.2E-01 |
| Methacrylic acid (2-methyl-2-propenoic acid) | 79-41-4 | – | – | – | – | 1.0E+04 | – | – | – | 7.3E-01 | 7.3E+01 |
| Methacrylonitrile | 126-98-7 | – | – | – | 4.4E-02 | 5.1E+04 | – | – | – | 3.7E+00 | 3.7E+02 |
| Methanol | 67-56-1 | – | – | – | 1.1E+01 | 1.0E+06 | – | – | – | 1.5E+02 | 1.5E+04 |
| Methapyrilene | 91-80-5 | – | 6.1E+00 | 1.2E+01 | – | – | – | 4.3E-04 | 4.3E-02 | – | – |
| Methomyl | 16752-77-5 | – | – | – | – | 2.6E+04 | 5.1E+04 | – | – | 1.8E+00 | 1.8E+02 |
| Methoxychlor | 72-43-5 | – | – | – | – | 5.1E+03 | 1.0E+04 | – | – | 3.7E-01 | 3.7E+01 |
| Methoxyethanol, 2- | 109-86-4 | – | – | – | 2.9E-02 | 2.8E+04 | – | – | – | 2.0E+00 | 2.0E+02 |
| Methyl acetate (acetic acid, methyl ester) | 79-20-9 | – | – | – | – | 1.0E+06 | – | – | – | 7.3E+01 | 7.3E+03 |
| Methyl acrylate | 96-33-3 | – | – | – | 2.9E-02 | 2.0E+03 | – | – | – | 1.5E-01 | 1.5E+01 |
| Methyl amyl ketone (2-heptanone) | 110-43-0 | – | – | – | 4.1E+00 | 5.1E+04 | – | – | – | 3.7E+00 | 3.7E+02 |
| Methyl chrysene, 1- | 3351-28-8 | 4.6E-02 | 3.9E+03 | 6.0E+03 | – | – | – | 2.8E-01 | 2.8E+01 | – | – |
| Methyl chrysene, 2- | 3351-32-4 | 4.6E-02 | 3.9E+03 | 6.0E+03 | – | – | – | 2.8E-01 | 2.8E+01 | – | – |
| Methyl chrysene, 6- | 1705-85-7 | 4.6E-03 | 3.9E+02 | 6.0E+02 | – | – | – | 2.8E-02 | 2.8E+00 | – | – |
| Methyl cyclohexane | 108-87-2 | – | – | – | 4.4E+00 | 1.0E+06 | – | – | – | 3.7E+02 | 3.7E+04 |
| Methyl ethyl ketone (2-butanone) | 78-93-3 | – | – | – | 1.3E+01 | 6.1E+05 | – | – | – | 4.4E+01 | 4.4E+03 |
| Methyl iodide (iodomethane) | 74-88-4 | – | – | – | – | 1.4E+03 | – | – | – | 1.0E-01 | 1.0E+01 |
| Methyl isobutyl ketone (4-methyl-2-pentanone) | 108-10-1 | – | – | – | 4.4E+00 | 8.2E+04 | – | – | – | 5.8E+00 | 5.8E+02 |
| Methyl mercury | 22967-92-6 | – | – | – | – | 1.0E+02 | 2.0E+03 | – | – | 7.3E-03 | 7.3E-01 |
| Methyl methacrylate | 80-62-6 | – | – | – | 1.0E+00 | 1.0E+06 | – | – | – | 1.0E+02 | 1.0E+04 |

# Table 10
# Individual RBELs Commercial/Industrial

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | Soil | | | | | | Groundwater | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Carcinogenic | | | Noncarcinogenic | | | Carcinogenic | | Noncarcinogenic | |
| | | $^{Air}RBEL_{Inh}$ (mg/m3) | $^{Soil}RBEL_{Ing}$ (mg/kg) | $^{Soil}RBEL_{Derm}$ (mg/kg) | $^{Air}RBEL_{Inh}$ (mg/m3) | $^{Soil}RBEL_{Ing}$ (mg/kg) | $^{Soil}RBEL_{Derm}$ (mg/kg) | $^{GW}RBEL_{Ing}$ [1] (mg/L) | $^{GW}RBEL_{Class\ 3}$ [2] (mg/L) | $^{GW}RBEL_{Ing}$ [1] (mg/L) | $^{GW}RBEL_{Class\ 3}$ [2] (mg/L) |
| Methyl methanesulfonate | 66-27-3 | 1.5E-03 | 2.9E+02 | 5.8E+02 | – | – | – | 2.1E-02 | 2.1E+00 | – | – |
| Methyl parathion | 298-00-0 | – | – | – | – | 2.6E+02 | 5.1E+02 | – | – | 1.8E-02 | 1.8E+00 |
| Methyl-1-butene, 2- | 563-46-2 | – | – | – | 2.6E+01 | 6.1E+04 | – | – | – | 4.4E+00 | 4.4E+02 |
| Methyl-1-propanal, 2- (isobutyraldehyde) | 78-84-2 | – | – | – | – | 4.1E+04 | – | – | – | 2.9E+00 | 2.9E+02 |
| Methyl-2-butene, 2- | 513-35-9 | – | – | – | 2.6E+01 | 6.1E+04 | – | – | – | 4.4E+00 | 4.4E+02 |
| Methyl-2-pentenal, 2- | 623-36-9 | – | 1.5E+01 | – | – | – | – | 1.1E-03 | 1.1E-01 | – | – |
| Methylcholanthrene, 3- | 56-49-5 | 1.9E-05 | 1.3E+00 | 2.0E+00 | – | – | – | 9.3E-05 | 9.3E-03 | – | – |
| Methylene bromide (dibromomethane) | 74-95-3 | – | 3.8E+03 | – | 5.8E-03 | 6.1E+04 | – | 2.7E-01 | 2.7E+01 | 4.4E+00 | 4.4E+02 |
| Methylene chloride (dichloromethane) | 75-09-2 | 1.5E+00 | 2.9E+05 | – | 1.9E+00 | 2.1E+04 | – | 2.1E+01 | 2.1E+03 | 1.5E+00 | 1.5E+02 |
| Methylene-bis (2-chloroaniline) 4,4'- | 101-14-4 | 1.1E-03 | 2.9E+02 | 5.7E+02 | – | 2.0E+03 | 4.1E+03 | 2.0E-02 | 2.0E+00 | 1.5E-01 | 1.5E+01 |
| Methylmecury hydroxide | 1184-57-2 | – | – | – | – | 1.0E+02 | 2.0E+02 | – | – | 7.3E-03 | 7.3E-01 |
| Methylnaphthalene, 1- | 90-12-0 | – | 9.9E+02 | 1.5E+03 | – | 7.2E+04 | 1.1E+05 | 7.0E-02 | 7.0E+00 | 5.1E+00 | 5.1E+02 |
| Methylnaphthalene, 2- | 91-57-6 | – | – | – | – | 4.1E+03 | 6.3E+03 | – | – | 2.9E-01 | 2.9E+01 |
| Methylpyrrolidone, N- | 872-50-4 | – | – | – | – | 2.0E+04 | 4.1E+04 | – | – | 1.5E+00 | 1.5E+02 |
| Methylstyrene, alpha- | 98-83-9 | – | – | – | 3.7E-02 | 8.5E+03 | – | – | – | 6.1E-01 | 6.1E+01 |
| Methyltetrahydrofuran, 2- | 96-47-9 | 2.2E-02 | 3.8E+03 | – | – | 2.0E+05 | – | 2.7E-01 | 2.7E+01 | 1.5E+01 | 1.5E+03 |
| Methyltetrahydropyran, 2- | 10141-72-7 | 2.2E-02 | 3.8E+03 | – | – | 2.0E+05 | – | 2.7E-01 | 2.7E+01 | 1.5E+01 | 1.5E+03 |
| Metolachlor | 51218-45-2 | – | – | – | – | 1.5E+05 | 3.1E+05 | – | – | 1.1E+01 | 1.1E+03 |
| Metribuzin | 21087-64-9 | – | – | – | – | 2.6E+04 | 5.1E+04 | – | – | 1.8E+00 | 1.8E+02 |
| Mirex | 2385-85-5 | – | – | – | – | 2.0E+02 | 4.1E+02 | – | – | 1.5E-02 | 1.5E+00 |
| Molinate | 2212-67-1 | – | – | – | – | 2.0E+03 | 4.1E+03 | – | – | 1.5E-01 | 1.5E+01 |
| Molybdenum | 7439-98-7 | – | – | – | – | 5.1E+03 | 3.9E+04 | – | – | 3.7E-01 | 3.7E+01 |
| Monocrotophos | 2157-98-4 | – | – | – | – | 6.1E+02 | 1.2E+03 | – | – | 4.4E-02 | 4.4E+00 |
| Morpholine | 110-91-8 | – | – | – | – | 1.0E+06 | – | – | – | 3.7E+04 | 3.7E+06 |
| Morpholine, N-butyl- | 1005-67-0 | – | – | – | – | 2.4E+03 | 4.7E+03 | – | – | 1.7E-01 | 1.7E+01 |
| MTBE (methyl tert-butyl ether) | 1634-04-4 | 1.6E-01 | 1.6E+04 | – | 4.4E+00 | 1.0E+04 | – | 1.1E+00 | 1.1E+02 | 7.3E-01 | 7.3E+01 |
| Naled | 300-76-5 | – | – | – | – | 2.0E+03 | 4.1E+03 | – | – | 1.5E-01 | 1.5E+01 |
| Naphthalene | 91-20-3 | – | – | – | 4.4E-03 | 2.0E+04 | 3.1E+04 | – | – | 1.5E+00 | 1.5E+02 |
| Naphthoquinone, 1,4- | 130-15-4 | – | – | – | – | 7.2E+03 | 1.4E+04 | – | – | 5.1E-01 | 5.1E+01 |
| Naphthylamine, 1- | 134-32-7 | – | – | – | – | 2.0E+04 | 4.1E+04 | – | – | 1.5E+00 | 1.5E+02 |
| Naphthylamine, 2- | 91-59-8 | – | 1.6E+01 | 3.2E+01 | – | – | – | 1.1E-03 | 1.1E-01 | – | – |
| Napropamide | 15299-99-7 | – | – | – | – | 1.0E+05 | 2.0E+05 | – | – | 7.3E+00 | 7.3E+02 |
| Neopentyl glycol | 126-30-7 | – | – | – | – | 3.1E+05 | 6.1E+05 | – | – | 2.2E+01 | 2.2E+03 |

# Table 10
# Individual RBELs Commercial/Industrial

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | Soil | | | | | | Groundwater | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Carcinogenic | | | Noncarcinogenic | | | Carcinogenic | | Noncarcinogenic | |
| | | $^{Air}RBEL_{Inh}$ (mg/m3) | $^{Soil}RBEL_{Ing}$ (mg/kg) | $^{Soil}RBEL_{Derm}$ (mg/kg) | $^{Air}RBEL_{Inh}$ (mg/m3) | $^{Soil}RBEL_{Ing}$ (mg/kg) | $^{Soil}RBEL_{Derm}$ (mg/kg) | $^{GW}RBEL_{Ing}$ [1] (mg/L) | $^{GW}RBEL_{Class\ 3}$ [2] (mg/L) | $^{GW}RBEL_{Ing}$ [1] (mg/L) | $^{GW}RBEL_{Class\ 3}$ [2] (mg/L) |
| Nickel and compounds | 7440-02-0 | 2.4E-04 | – | – | 3.4E-04 | 2.0E+04 | 1.6E+04 | – | – | 1.5E+00 | 1.5E+02 |
| Nitrate-N | 14797-55-8 | – | – | – | – | 1.0E+06 | 1.0E+06 | – | – | 1.2E+02 | 1.2E+04 |
| Nitrite-N | 14797-65-0 | – | – | – | – | 1.0E+05 | 1.0E+06 | – | – | 7.3E+00 | 7.3E+02 |
| Nitroaniline, 2- | 88-74-4 | – | – | – | 2.9E-04 | 3.1E+02 | 6.1E+02 | – | – | 2.2E-02 | 2.2E+00 |
| Nitroaniline, 3- | 99-09-2 | – | 7.5E+02 | 1.5E+03 | 2.9E-04 | 3.1E+02 | 6.1E+02 | 5.4E-02 | 5.4E+00 | 2.2E-02 | 2.2E+00 |
| Nitroaniline, 4- | 100-01-6 | – | 1.4E+03 | 2.9E+03 | 8.8E-03 | 4.1E+03 | 8.2E+03 | 1.0E-01 | 1.0E+01 | 2.9E-01 | 2.9E+01 |
| Nitrobenzene | 98-95-3 | 1.0E-03 | – | – | 1.3E-02 | 2.0E+03 | 4.1E+03 | – | – | 1.5E-01 | 1.5E+01 |
| Nitroglycerin | 55-63-0 | – | 1.7E+03 | 3.4E+03 | – | 1.0E+02 | 2.0E+02 | 1.2E-01 | 1.2E+01 | 7.3E-03 | 7.3E-01 |
| Nitrophenol, 2- | 88-75-5 | – | – | – | – | 2.0E+03 | 4.1E+03 | – | – | 1.5E-01 | 1.5E+01 |
| Nitrophenol, 3- | 554-84-7 | – | – | – | – | 2.0E+03 | 4.1E+03 | – | – | 1.5E-01 | 1.5E+01 |
| Nitrophenol, 4- | 100-02-7 | – | – | – | – | 2.0E+03 | 4.1E+03 | – | – | 1.5E-01 | 1.5E+01 |
| Nitropropane, 2- | 79-46-9 | 1.5E-05 | – | – | 2.9E-02 | 1.4E+02 | – | – | – | 1.0E-02 | 1.0E+00 |
| Nitroquinoline-N-oxide, 4- | 56-57-5 | 1.5E-05 | 3.0E+00 | 6.1E+00 | – | – | – | 2.2E-04 | 2.2E-02 | – | – |
| Nitrosodiethanolamine | 1116-54-7 | – | 1.0E+01 | 2.0E+01 | – | – | – | 7.3E-04 | 7.3E-02 | – | – |
| Nitrosodiethylamine, n- | 55-18-5 | 9.5E-07 | 1.9E-01 | – | – | – | – | 1.4E-05 | 1.4E-03 | – | – |
| Nitrosodimethylamine, n- | 62-75-9 | 2.9E-06 | 5.6E-01 | – | 5.8E-05 | 8.2E+00 | – | 4.0E-05 | 4.0E-03 | 5.8E-04 | 5.8E-02 |
| Nitrosodi-n-butylamine, n- | 924-16-3 | 2.6E-05 | 5.3E+00 | 1.1E+01 | – | – | – | 3.8E-04 | 3.8E-02 | – | – |
| Nitrosodi-n-propylamine, n- | 621-64-7 | – | 4.1E+00 | 2.0E+00 | – | – | – | 2.9E-04 | 2.9E-02 | – | – |
| Nitrosodiphenylamine | 86-30-6 | – | 5.8E+03 | 2.9E+03 | – | – | – | 4.2E-01 | 4.2E+01 | – | – |
| Nitroso-methyl-ethyl-amine, n- | 10595-95-6 | – | 1.3E+00 | – | – | – | – | 9.3E-05 | 9.3E-03 | – | – |
| Nitrosomorpholine, N- | 59-89-2 | 2.2E-05 | 4.3E+00 | 8.5E+00 | – | – | – | 3.1E-04 | 3.1E-02 | – | – |
| Nitroso-n-ethylurea, n- | 759-73-9 | – | 2.0E-01 | 4.1E-01 | – | – | – | 1.5E-05 | 1.5E-03 | – | – |
| Nitrosopiperidine, N- | 100-75-4 | 1.5E-05 | 3.0E+00 | 6.1E+00 | – | – | – | 2.2E-04 | 2.2E-02 | – | – |
| Nitrosopyrrolidine, n- | 930-55-2 | 6.7E-05 | 1.4E+01 | 2.7E+01 | – | – | – | 9.7E-04 | 9.7E-02 | – | – |
| Nitrotoluene, m- | 99-08-1 | – | – | – | – | 1.0E+04 | 2.0E+04 | – | – | 7.3E-01 | 7.3E+01 |
| Nitrotoluene, o- | 88-72-2 | – | 1.3E+02 | 2.6E+02 | – | 9.2E+02 | 1.8E+03 | 9.3E-03 | 9.3E-01 | 6.6E-02 | 6.6E+00 |
| Nitrotoluene, p- | 99-99-0 | – | 1.8E+03 | 3.6E+03 | – | 4.1E+03 | 8.2E+03 | 1.3E-01 | 1.3E+01 | 2.9E-01 | 2.9E+01 |
| Nonachlor, cis- | 5103-73-1 | 4.1E-04 | 8.2E+01 | 1.6E+02 | 1.0E-03 | 5.1E+02 | 1.0E+03 | 5.8E-03 | 5.8E-01 | 3.7E-02 | 3.7E+00 |
| Nonachlor, trans- | 39765-80-5 | 4.1E-04 | 8.2E+01 | 1.6E+02 | 1.0E-03 | 5.1E+02 | 1.0E+03 | 5.8E-03 | 5.8E-01 | 3.7E-02 | 3.7E+00 |
| Nonanal | 124-19-6 | – | – | – | – | 2.0E+05 | 4.1E+05 | – | – | 1.5E+01 | 1.5E+03 |
| Nonene, 1-n | 124-11-8 | – | – | – | – | 1.0E+05 | – | – | – | 7.3E+00 | 7.3E+02 |
| Nonylphenol, 4-n- | 104-40-5 | – | – | – | – | 1.0E+05 | 2.0E+05 | – | – | 7.3E+00 | 7.3E+02 |
| Nonylphenol ethoxylate | 9016-45-9 | – | – | – | – | 1.0E+05 | 2.0E+05 | – | – | 7.3E+00 | 7.3E+02 |

# Table 10
# Individual RBELs Commercial/Industrial

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | Soil | | | | | | Groundwater | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Carcinogenic | | | Noncarcinogenic | | | Carcinogenic | | Noncarcinogenic | |
| | | $^{Air}RBEL_{Inh}$ (mg/m3) | $^{Soil}RBEL_{Ing}$ (mg/kg) | $^{Soil}RBEL_{Derm}$ (mg/kg) | $^{Air}RBEL_{Inh}$ (mg/m3) | $^{Soil}RBEL_{Ing}$ (mg/kg) | $^{Soil}RBEL_{Derm}$ (mg/kg) | $^{GW}RBEL_{Ing}$ [1] (mg/L) | $^{GW}RBEL_{Class\ 3}$ [2] (mg/L) | $^{GW}RBEL_{Ing}$ [1] (mg/L) | $^{GW}RBEL_{Class\ 3}$ [2] (mg/L) |
| Octamethylpyrophosphoramide | 152-16-9 | – | – | – | – | 2.0E+03 | 4.1E+03 | – | – | 1.5E-01 | 1.5E+01 |
| Octanone | 106-68-3 | – | – | – | 2.6E+01 | 6.1E+04 | – | – | – | 4.4E+00 | 4.4E+02 |
| Oxamyl | 23135-22-0 | – | – | – | – | 2.6E+04 | 5.1E+04 | – | – | 1.8E+00 | 1.8E+02 |
| Oxychlordane | 27304-13-8 | 4.1E-04 | 8.2E+01 | 1.6E+02 | 1.0E-03 | 5.1E+02 | 1.0E+03 | 5.8E-03 | 5.8E-01 | 3.7E-02 | 3.7E+00 |
| Paraquat | 1910-42-5 | – | – | – | – | 4.6E+03 | 9.2E+03 | – | – | 3.3E-01 | 3.3E+01 |
| Parathion (ethyl parathion) | 56-38-2 | – | – | – | – | 6.1E+03 | 1.2E+04 | – | – | 4.4E-01 | 4.4E+01 |
| Pebulate | 1114-71-2 | – | – | – | – | 5.1E+04 | 1.0E+05 | – | – | 3.7E+00 | 3.7E+02 |
| Pendimethalin | 40487-42-1 | – | – | – | – | 4.1E+04 | 8.2E+04 | – | – | 2.9E+00 | 2.9E+02 |
| Pentachlorobenzene | 608-93-5 | – | – | – | – | 8.2E+02 | 1.6E+03 | – | – | 5.8E-02 | 5.8E+00 |
| Pentachloroethane | 76-01-7 | 5.5E-03 | 3.2E+02 | – | – | 3.1E+04 | – | 2.3E-02 | 2.3E+00 | 2.2E+00 | 2.2E+02 |
| Pentachloronitrobenzene | 82-68-8 | – | 1.1E+02 | 2.2E+02 | – | 3.1E+03 | 6.1E+03 | 7.9E-03 | 7.9E-01 | 2.2E-01 | 2.2E+01 |
| Pentachlorophenol | 87-86-5 | – | 7.2E+01 | 5.7E+01 | – | 5.1E+03 | 4.1E+03 | 5.1E-03 | 5.1E-01 | 3.7E-01 | 3.7E+01 |
| Pentadiene, 1,3-cis- | 1574-41-0 | – | – | – | 2.6E+01 | 6.1E+04 | – | – | – | 4.4E+00 | 4.4E+02 |
| Pentadiene, 1,3-trans- | 2004-70-8 | – | – | – | 2.6E+01 | 6.1E+04 | – | – | – | 4.4E+00 | 4.4E+02 |
| Pentaerythritol tetranitrate (PETN) | 78-11-5 | – | – | – | – | 2.0E+03 | 4.1E+03 | – | – | 1.5E-01 | 1.5E+01 |
| Pentane | 109-66-0 | – | – | – | 3.5E+01 | 6.1E+04 | – | – | – | 4.4E+00 | 4.4E+02 |
| Pentane, 2-methyl- | 107-83-5 | – | – | – | 2.6E+01 | 6.1E+04 | – | – | – | 4.4E+00 | 4.4E+02 |
| Pentane, 3-methyl- | 96-14-0 | – | – | – | 2.6E+01 | 6.1E+04 | – | – | – | 4.4E+00 | 4.4E+02 |
| Pentanediol, 1,5- | 111-29-5 | – | – | – | 2.7E+01 | 1.0E+06 | 1.0E+06 | – | – | 3.7E+02 | 3.7E+04 |
| Pentanol, 1- | 71-41-0 | – | – | – | – | 3.4E+04 | – | – | – | 2.4E+00 | 2.4E+02 |
| Pentanol, 4-methyl-2- | 108-11-2 | – | – | – | – | 2.7E+04 | – | – | – | 1.9E+00 | 1.9E+02 |
| Pentanone, 2- | 107-87-9 | – | – | – | – | 4.1E+04 | – | – | – | 2.9E+00 | 2.9E+02 |
| Pentene, 2- | 109-68-2 | – | – | – | 2.6E+01 | 6.1E+04 | – | – | – | 4.4E+00 | 4.4E+02 |
| Pentyne, 1- | 627-19-0 | – | – | – | 2.6E+01 | 6.1E+04 | – | – | – | 4.4E+00 | 4.4E+02 |
| Perchlorate | 14797-73-0 | – | – | – | – | 7.2E+02 | 2.9E+03 | – | – | 5.1E-02 | 5.1E+00 |
| Perfluorooctanoic sulfonic acid (1-Octanesulfonic acid, heptadecafluoro-1-) | 1763-23-1 | – | – | – | 1.2E-04 | 2.4E+01 | 4.7E+01 | – | – | 1.7E-03 | 1.7E-01 |
| Perfluoroundecanoic acid (Undecanoic acid, uncosafluoro-) | 2058-94-8 | – | – | – | – | 1.2E+01 | 2.5E+01 | – | – | 8.8E-04 | 8.8E-02 |
| Perfluoropentanoic acid (Pentanoic acid, nonafluoro-) | 2706-90-3 | – | – | – | – | 3.9E+00 | 7.8E+00 | – | – | 2.8E-04 | 2.8E-02 |
| Perfluorohexanoic acid (Hexanoic acid, undecafluoro-) | 307-24-4 | – | – | – | – | 3.9E+00 | 7.8E+00 | – | – | 2.8E-04 | 2.8E-02 |
| Perfluorododecanoic acid (Dodecanoic acid, tricosafluoro-) | 307-55-1 | – | – | – | 6.1E-05 | 1.2E+01 | 2.5E+01 | – | – | 8.8E-04 | 8.8E-02 |
| Perfluorooctanoic acid (Octanoic acid, pentadecafluoro-) | 335-67-1 | – | – | – | 6.0E-06 | 1.2E+01 | 2.5E+01 | – | – | 8.8E-04 | 8.8E-02 |
| Perfluorodecanoic acid (Decanoic acid, nonadecafluoro-) | 335-76-2 | – | – | – | 7.7E-05 | 1.5E+01 | 3.1E+01 | – | – | 1.1E-03 | 1.1E-01 |

# Table 10
# Individual RBELs Commercial/Industrial

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | Soil | | | | | | Groundwater | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Carcinogenic | | | Noncarcinogenic | | | Carcinogenic | | Noncarcinogenic | |
| | | $^{Air}RBEL_{Inh}$ (mg/m3) | $^{Soil}RBEL_{Ing}$ (mg/kg) | $^{Soil}RBEL_{Derm}$ (mg/kg) | $^{Air}RBEL_{Inh}$ (mg/m3) | $^{Soil}RBEL_{Ing}$ (mg/kg) | $^{Soil}RBEL_{Derm}$ (mg/kg) | $^{GW}RBEL_{Ing}$ [1] (mg/L) | $^{GW}RBEL_{Class\ 3}$ [2] (mg/L) | $^{GW}RBEL_{Ing}$ [1] (mg/L) | $^{GW}RBEL_{Class\ 3}$ [2] (mg/L) |
| Perfluorodecane sulfonic acid (1-Decanesulfonic acid, heneicosafluoro-) | 335-77-3 | – | – | – | – | 1.2E+01 | 2.5E+01 | – | – | 8.8E-04 | 8.8E-02 |
| Perfluorohexane sulfonic acid (1-Hexanesulfonic acid, triddecafluoro-) | 355-46-4 | – | – | – | 1.9E-05 | 3.9E+00 | 7.8E+00 | – | – | 2.8E-04 | 2.8E-02 |
| Perfluorobutyric acid (Butanoic acid, heptafluoro-) | 375-22-4 | – | – | – | 1.5E-02 | 3.0E+03 | 5.9E+03 | – | – | 2.1E-01 | 2.1E+01 |
| Perfluorobutane sulfonic acid (1-Butanesulfonic acid, nonafluoro-) | 375-73-5 | – | – | – | 7.2E-03 | 1.4E+03 | 2.9E+03 | – | – | 1.0E-01 | 1.0E+01 |
| Perfluoroheptanoic acid (Heptanoic acid, tridecafluoro-) | 375-85-9 | – | – | – | – | 2.4E+01 | 4.7E+01 | – | – | 1.7E-03 | 1.7E-01 |
| Perfluorononanoic acid (Nonanoic acid, heptadecafluoro-) | 375-95-1 | – | – | – | 4.1E-05 | 1.2E+01 | 2.5E+01 | – | – | 8.8E-04 | 8.8E-02 |
| Perfluorotetradecanoic acid (Tetradecanoic acid, heptacosafluoro-) | 376-06-7 | – | – | – | – | 1.2E+01 | 2.5E+01 | – | – | 8.8E-04 | 8.8E-02 |
| Perfluorotridecanoic acid (Tridecanoic acid, pentacosafluoro-) | 72629-94-8 | – | – | – | – | 1.2E+01 | 2.5E+01 | – | – | 8.8E-04 | 8.8E-02 |
| Perfluorooctane sulfonamide (1-Octanesulfonamide, hetpadecafluoro-) | 754-91-6 | – | – | – | 6.0E-06 | 1.2E+01 | 2.5E+01 | – | – | 8.8E-04 | 8.8E-02 |
| Perylene | 198-55-0 | – | – | – | – | 2.0E+04 | 4.1E+04 | – | – | 1.5E+00 | 1.5E+02 |
| Phenacetin | 62-44-2 | 6.5E-02 | 1.3E+04 | 2.6E+04 | – | – | – | 9.3E-01 | 9.3E+01 | – | – |
| Phenanthrene | 85-01-8 | – | – | – | – | 3.1E+04 | 4.7E+04 | – | – | 2.2E+00 | 2.2E+02 |
| Phenanthridine | 229-87-8 | – | – | – | – | 3.1E+03 | 6.1E+03 | – | – | 2.2E-01 | 2.2E+01 |
| Phenol | 108-95-2 | – | – | – | 1.6E-02 | 3.1E+05 | 6.1E+05 | – | – | 2.2E+01 | 2.2E+03 |
| Phenol, 4-tert-butyl- | 98-54-4 | – | – | – | – | 1.2E+05 | 2.5E+05 | – | – | 8.8E+00 | 8.8E+02 |
| Phenothiazine | 92-84-2 | – | – | – | – | 1.1E+03 | 2.2E+03 | – | – | 8.0E-02 | 8.0E+00 |
| Phenyl mercuric acetate | 62-38-4 | – | – | – | – | 8.2E+01 | 1.6E+02 | – | – | 5.8E-03 | 5.8E-01 |
| Phenylene diamine, m- | 108-45-2 | – | – | – | – | 6.1E+03 | 1.2E+04 | – | – | 4.4E-01 | 4.4E+01 |
| Phenylene diamine, p- | 106-50-3 | – | – | – | – | 1.9E+05 | 3.9E+05 | – | – | 1.4E+01 | 1.4E+03 |
| Phorate | 298-02-2 | – | – | – | – | 2.0E+02 | 4.1E+02 | – | – | 1.5E-02 | 1.5E+00 |
| Phosalone | 2310-17-0 | – | – | – | – | 2.0E+03 | 4.1E+03 | – | – | 1.5E-01 | 1.5E+01 |
| Phosdrin (mevinphos) | 7786-34-7 | – | – | – | – | 2.6E+01 | 5.1E+01 | – | – | 1.8E-03 | 1.8E-01 |
| Phosmet | 732-11-6 | – | – | – | – | 2.0E+04 | 4.1E+04 | – | – | 1.5E+00 | 1.5E+02 |
| Phosphine | 7803-51-2 | – | – | – | 4.4E-04 | 3.1E+02 | 1.2E+03 | – | – | 2.2E-02 | 2.2E+00 |
| Phosphorotrithioic acid, S,S,S-tributyl ester | 78-48-8 | – | 3.4E+02 | 6.8E+02 | – | 1.0E+03 | 2.0E+03 | 2.4E-02 | 2.4E+00 | 7.3E-02 | 7.3E+00 |
| Phosphorus, total* | 7723-14-0 | – | – | – | – | – | – | – | – | – | – |
| Phosphorus, white | 7723-14-0 | – | – | – | – | 2.0E+01 | 8.2E+01 | – | – | 1.5E-03 | 1.5E-01 |
| Phthalic anhydride | 85-44-9 | – | – | – | 1.8E-01 | 1.0E+06 | 1.0E+06 | – | – | 1.5E+02 | 1.5E+04 |
| Picloram | 1918-02-1 | – | – | – | – | 7.2E+04 | 1.4E+05 | – | – | 5.1E+00 | 5.1E+02 |
| Picoline, 2- (2-methylpyridine) | 109-06-8 | – | – | – | – | 9.2E+03 | – | – | – | 6.6E-01 | 6.6E+01 |
| Polybrominated biphenyls (PBBs) | 67774-32-7 | – | 3.2E+00 | 6.4E+00 | – | 7.2E+00 | 1.4E+01 | 2.3E-04 | 2.3E-02 | 5.1E-04 | 5.1E-02 |

# Table 10
# Individual RBELs Commercial/Industrial

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | Soil | | | | | | Groundwater | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Carcinogenic | | | Noncarcinogenic | | | Carcinogenic | | Noncarcinogenic | |
| | | $^{Air}RBEL_{Inh}$ (mg/m3) | $^{Soil}RBEL_{Ing}$ (mg/kg) | $^{Soil}RBEL_{Derm}$ (mg/kg) | $^{Air}RBEL_{Inh}$ (mg/m3) | $^{Soil}RBEL_{Ing}$ (mg/kg) | $^{Soil}RBEL_{Derm}$ (mg/kg) | $^{GW}RBEL_{Ing}$ [1] (mg/L) | $^{GW}RBEL_{Class\ 3}$ [2] (mg/L) | $^{GW}RBEL_{Ing}$ [1] (mg/L) | $^{GW}RBEL_{Class\ 3}$ [2] (mg/L) |
| Polychlorinated biphenyls (PCBs) | 1336-36-3 | 7.2E-05 | 1.4E+01 | 2.0E+01 | – | 2.0E+01 | 2.9E+01 | 1.0E-03 | 1.0E-01 | 1.5E-03 | 1.5E-01 |
| Potassium* | 7440-09-7 | – | – | – | – | – | – | – | – | – | – |
| Primene | 68955-53-3 | – | – | – | – | 6.1E+03 | 1.2E+04 | – | – | 4.4E-01 | 4.4E+01 |
| Prometon (pramitol) | 1610-18-0 | – | – | – | – | 1.5E+04 | 3.1E+04 | – | – | 1.1E+00 | 1.1E+02 |
| Prometryn | 7287-19-6 | – | – | – | – | 4.1E+04 | 8.2E+04 | – | – | 2.9E+00 | 2.9E+02 |
| Pronamide | 23950-58-5 | – | – | – | – | 7.7E+04 | 1.5E+05 | – | – | 5.5E+00 | 5.5E+02 |
| Propanal (propionaldehyde) | 123-38-6 | – | – | – | 1.2E-02 | 8.2E+03 | – | – | – | 5.8E-01 | 5.8E+01 |
| Propane, 1-bromo- | 106-94-5 | – | – | – | – | 3.7E+04 | – | – | – | 2.6E+00 | 2.6E+02 |
| Propanil | 709-98-8 | – | – | – | – | 5.1E+03 | 1.0E+04 | – | – | 3.7E-01 | 3.7E+01 |
| Propanoic acid (propionic acid) | 79-09-4 | – | – | – | – | 5.1E+05 | – | – | – | 3.7E+01 | 3.7E+03 |
| Propanol, 1- | 71-23-8 | – | – | – | – | 2.0E+05 | – | – | – | 1.5E+01 | 1.5E+03 |
| Propargite | 2312-35-8 | – | – | – | – | 2.0E+04 | 4.1E+04 | – | – | 1.5E+00 | 1.5E+02 |
| Propargyl alcohol | 107-19-7 | – | – | – | – | 2.0E+03 | – | – | – | 1.5E-01 | 1.5E+01 |
| Propazine | 139-40-2 | – | 6.4E+02 | 1.3E+03 | – | 2.0E+04 | 4.1E+04 | 4.6E-02 | 4.6E+00 | 1.5E+00 | 1.5E+02 |
| Propham | 122-42-9 | – | – | – | – | 2.0E+04 | 4.1E+04 | – | – | 1.5E+00 | 1.5E+02 |
| Propionitrile (propane nitrile) | 107-12-0 | – | – | – | – | 4.1E+02 | – | – | – | 2.9E-02 | 2.9E+00 |
| Propyl acetate, n- | 109-60-4 | – | – | – | – | 9.2E+04 | – | – | – | 6.6E+00 | 6.6E+02 |
| Propylbenzene, n- | 103-65-1 | – | – | – | 5.8E-01 | 4.1E+04 | – | – | – | 2.9E+00 | 2.9E+02 |
| Propylene glycol | 57-55-6 | – | – | – | 4.4E-03 | 1.0E+06 | 1.0E+06 | – | – | 1.5E+03 | 1.5E+05 |
| Propylene glycol monomethyl ether | 107-98-2 | – | – | – | 2.9E+00 | 7.2E+05 | – | – | – | 5.1E+01 | 5.1E+03 |
| Propylene oxide | 75-56-9 | 1.1E-02 | 1.2E+02 | – | 4.4E-02 | – | – | 8.5E-03 | 8.5E-01 | – | – |
| Propylene tetramer | 6842-15-5 | – | – | – | 1.5E+00 | 1.0E+05 | 2.0E+05 | – | – | 7.3E+00 | 7.3E+02 |
| Prothiofos (Tokuthion) | 34643-46-4 | – | – | – | – | 1.0E+02 | 2.0E+02 | – | – | 7.3E-03 | 7.3E-01 |
| Pyrene | 129-00-0 | – | – | – | – | 3.1E+04 | 4.7E+04 | – | – | 2.2E+00 | 2.2E+02 |
| Pyridine | 110-86-1 | – | – | – | – | 1.0E+03 | – | – | – | 7.3E-02 | 7.3E+00 |
| Quinoline | 91-22-5 | – | 9.5E+00 | 1.9E+01 | – | – | – | 6.8E-04 | 6.8E-02 | – | – |
| Ronnel | 299-84-3 | – | – | – | – | 5.1E+04 | 1.0E+05 | – | – | 3.7E+00 | 3.7E+02 |
| Safrole | 94-59-7 | 6.5E-04 | 1.3E+02 | 2.6E+02 | – | – | – | 9.3E-03 | 9.3E-01 | – | – |
| Selenium | 7782-49-2 | – | – | – | – | 5.1E+03 | 1.0E+05 | – | – | 3.7E-01 | 3.7E+01 |
| Selenourea | 630-10-4 | – | – | – | – | 5.1E+03 | – | – | – | 3.7E-01 | 3.7E+01 |
| Silver | 7440-22-4 | – | – | – | – | 5.1E+03 | 4.1E+03 | – | – | 3.7E-01 | 3.7E+01 |
| Simazine | 122-34-9 | – | 2.4E+02 | 4.8E+02 | – | 5.1E+03 | 1.0E+04 | 1.7E-02 | 1.7E+00 | 3.7E-01 | 3.7E+01 |
| Sodium* | 7440-23-5 | – | – | – | – | – | – | – | – | – | – |

# Table 10
# Individual RBELs Commercial/Industrial

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | Soil | | | | | | Groundwater | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Carcinogenic | | | Noncarcinogenic | | | Carcinogenic | | Noncarcinogenic | |
| | | $^{Air}RBEL_{Inh}$ (mg/m3) | $^{Soil}RBEL_{Ing}$ (mg/kg) | $^{Soil}RBEL_{Derm}$ (mg/kg) | $^{Air}RBEL_{Inh}$ (mg/m3) | $^{Soil}RBEL_{Ing}$ (mg/kg) | $^{Soil}RBEL_{Derm}$ (mg/kg) | $^{GW}RBEL_{Ing}$ [1] (mg/L) | $^{GW}RBEL_{Class\ 3}$ [2] (mg/L) | $^{GW}RBEL_{Ing}$ [1] (mg/L) | $^{GW}RBEL_{Class\ 3}$ [2] (mg/L) |
| Sodium hypochlorite | 7681-52-9 | – | – | – | 4.5E-04 | 2.1E+05 | 8.6E+05 | – | – | 1.5E+01 | 1.5E+03 |
| Sodium polyacrylate | 9003-04-7 | – | – | – | 1.5E-03 | 5.1E+05 | – | – | – | 3.7E+01 | 3.7E+03 |
| Strontium | 7440-24-6 | – | – | – | – | 6.1E+05 | 1.0E+06 | – | – | 4.4E+01 | 4.4E+03 |
| Strychnine | 57-24-9 | – | – | – | – | 3.1E+02 | 6.1E+02 | – | – | 2.2E-02 | 2.2E+00 |
| Styrene | 100-42-5 | – | – | – | 6.9E-01 | 2.0E+05 | – | – | – | 1.5E+01 | 1.5E+03 |
| Sulfate* | 14808-79-8 | – | – | – | – | – | – | – | – | – | – |
| Sulfide* | 18496-25-8 | – | – | – | – | – | – | – | – | – | – |
| Sulfolane | 126-33-0 | – | – | – | 9.3E-03 | 1.3E+04 | 2.7E+04 | – | – | 9.5E-01 | 9.5E+01 |
| Sulfur* | 7704-34-9 | – | – | – | – | – | – | – | – | – | – |
| Sulprofos (Bolstar) | 35400-43-2 | – | – | – | – | 3.1E+03 | 6.1E+03 | – | – | 2.2E-01 | 2.2E+01 |
| Tebuconazole | 107534-96-3 | – | – | – | – | 3.1E+04 | 6.1E+04 | – | – | 2.2E+00 | 2.2E+02 |
| Tebuthiuron | 34014-18-1 | – | – | – | – | 7.2E+04 | 1.4E+05 | – | – | 5.1E+00 | 5.1E+02 |
| Terbufos | 13071-79-9 | – | – | – | – | 2.6E+01 | 5.1E+01 | – | – | 1.8E-03 | 1.8E-01 |
| Tert-amyl ethyl ether (TAEE) | 919-94-8 | – | – | – | – | 4.1E+04 | – | – | – | 2.9E+00 | 2.9E+02 |
| Tert-amyl-methyl ether (TAME) | 994-05-8 | – | – | – | – | 4.1E+04 | – | – | – | 2.9E+00 | 2.9E+02 |
| Tert-butyl alcohol (2-methyl-2-propanol) | 75-65-0 | – | – | – | – | 9.2E+04 | – | – | – | 6.6E+00 | 6.6E+02 |
| Tetrachlorobenzene, 1,2,3,4- | 634-66-2 | – | – | – | – | 3.1E+02 | 6.1E+02 | – | – | 2.2E-02 | 2.2E+00 |
| Tetrachlorobenzene, 1,2,3,5- | 634-90-2 | – | – | – | – | 3.1E+02 | 6.1E+02 | – | – | 2.2E-02 | 2.2E+00 |
| Tetrachlorobenzene, 1,2,4,5- | 95-94-3 | – | – | – | – | 3.1E+02 | 6.1E+02 | – | – | 2.2E-02 | 2.2E+00 |
| Tetrachloroethane, 1,1,1,2- | 630-20-6 | 5.5E-03 | 1.1E+03 | – | – | 3.1E+04 | – | 7.9E-02 | 7.9E+00 | 2.2E+00 | 2.2E+02 |
| Tetrachloroethane, 1,1,2,2- | 79-34-5 | – | 1.4E+02 | – | – | 2.0E+04 | – | 1.0E-02 | 1.0E+00 | 1.5E+00 | 1.5E+02 |
| Tetrachloroethylene | 127-18-4 | 1.1E-01 | 1.4E+04 | – | 5.4E-01 | 2.1E+04 | – | 9.7E-01 | 9.7E+01 | 1.5E+00 | 1.5E+02 |
| Tetrachlorophenol, 2,3,4,5- | 4901-51-3 | – | – | – | – | 3.1E+04 | 6.1E+04 | – | – | 2.2E+00 | 2.2E+02 |
| Tetrachlorophenol, 2,3,4,6- | 58-90-2 | – | – | – | – | 3.1E+04 | 6.1E+04 | – | – | 2.2E+00 | 2.2E+02 |
| Tetrachlorophenol, 2,3,5,6- | 935-95-5 | – | – | – | – | 3.1E+04 | 6.1E+04 | – | – | 2.2E+00 | 2.2E+02 |
| Tetrachlorvinphos (Stirophos) | 22248-79-9 | – | – | – | – | 4.3E+04 | 8.6E+04 | – | – | 3.1E+00 | 3.1E+02 |
| Tetradifon | 116-29-0 | – | – | – | – | 2.0E+04 | 4.1E+04 | – | – | 1.5E+00 | 1.5E+02 |
| Tetraethyl dithiopyrophosphate (sulfotep) | 3689-24-5 | – | – | – | – | 5.1E+02 | 1.0E+03 | – | – | 3.7E-02 | 3.7E+00 |
| Tetraethyl lead | 78-00-2 | – | – | – | – | 1.0E-01 | 2.0E-01 | – | – | 7.3E-06 | 7.3E-04 |
| Tetraethyl pyrophosphate (TEPP) | 107-49-3 | – | – | – | – | 1.1E+01 | 2.2E+01 | – | – | 8.0E-04 | 8.0E-02 |
| Tetraethylene glycol | 112-60-7 | – | – | – | – | 3.4E+05 | 6.7E+05 | – | – | 2.4E+01 | 2.4E+03 |
| Tetrahydrofuran | 109-99-9 | 2.2E-02 | 3.8E+03 | – | 2.9E+00 | 9.2E+05 | – | 2.7E-01 | 2.7E+01 | 6.6E+01 | 6.6E+03 |
| Tetrahydropyran | 142-68-7 | 2.2E-02 | 3.8E+03 | – | – | 2.0E+05 | – | 2.7E-01 | 2.7E+01 | 1.5E+01 | 1.5E+03 |

# Table 10
# Individual RBELs Commercial/Industrial

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | Soil | | | | | | Groundwater | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Carcinogenic | | | Noncarcinogenic | | | Carcinogenic | | Noncarcinogenic | |
| | | $^{Air}RBEL_{Inh}$ (mg/m3) | $^{Soil}RBEL_{Ing}$ (mg/kg) | $^{Soil}RBEL_{Derm}$ (mg/kg) | $^{Air}RBEL_{Inh}$ (mg/m3) | $^{Soil}RBEL_{Ing}$ (mg/kg) | $^{Soil}RBEL_{Derm}$ (mg/kg) | $^{GW}RBEL_{Ing}$ [1] (mg/L) | $^{GW}RBEL_{Class\ 3}$ [2] (mg/L) | $^{GW}RBEL_{Ing}$ [1] (mg/L) | $^{GW}RBEL_{Class\ 3}$ [2] (mg/L) |
| Tetraoxadodecane, 2,5,8,11- | 112-49-2 | – | – | – | – | 2.6E+04 | 5.1E+04 | – | – | 1.8E+00 | 1.8E+02 |
| Thallium | 7440-28-0 | – | – | – | – | 6.8E+01 | 1.4E+03 | – | – | 4.9E-03 | 4.9E-01 |
| Thiofanox | 39196-18-4 | – | – | – | – | 3.1E+02 | 6.1E+02 | – | – | 2.2E-02 | 2.2E+00 |
| Thionazin | 297-97-2 | – | – | – | – | 7.2E+01 | 1.4E+02 | – | – | 5.1E-03 | 5.1E-01 |
| Thiophanate-methyl | 23564-05-8 | – | – | – | – | 8.2E+04 | 1.6E+05 | – | – | 5.8E+00 | 5.8E+02 |
| Thiram | 137-26-8 | – | – | – | – | 5.1E+03 | 1.0E+04 | – | – | 3.7E-01 | 3.7E+01 |
| Tin | 7440-31-5 | – | – | – | – | 6.1E+05 | 1.0E+06 | – | – | 4.4E+01 | 4.4E+03 |
| Titanium | 7440-32-6 | – | – | – | – | 1.0E+06 | 1.0E+06 | – | – | 3.7E+02 | 3.7E+04 |
| Toluene | 108-88-3 | – | – | – | 6.0E+00 | 8.2E+04 | – | – | – | 5.8E+00 | 5.8E+02 |
| Toluene diisocyanate, 2,4/2,6- | 26471-62-5 | – | – | – | 1.0E-04 | – | – | – | – | – | – |
| Toluenediamine, 2,4- | 95-80-7 | – | 8.9E+00 | 1.8E+01 | – | – | – | 6.4E-04 | 6.4E-02 | – | – |
| Toluenediamine, 2,6- | 823-40-5 | – | – | – | – | 3.1E+04 | 6.1E+04 | – | – | 2.2E+00 | 2.2E+02 |
| Toluidine, o- | 95-53-4 | 8.0E-04 | 1.8E+03 | 2.4E+02 | – | – | – | 1.3E-01 | 1.3E+01 | – | – |
| Toluidine, p- | 106-49-0 | – | 9.5E+02 | 3.0E+02 | – | – | – | 6.8E-02 | 6.8E+00 | – | – |
| Toxaphene | 8001-35-2 | 1.3E-04 | 2.6E+01 | 5.2E+01 | – | 3.2E+02 | 6.3E+02 | 1.9E-03 | 1.9E-01 | 2.3E-02 | 2.3E+00 |
| TPH, TX1005, C6-C12 | TPH-1005-1 | – | – | – | 2.9E-01 | 4.1E+04 | – | – | – | 2.9E+00 | 2.9E+02 |
| TPH, TX1005, >C12-C28 | TPH-1005-2 | – | – | – | 2.9E-01 | 4.1E+04 | 8.2E+04 | – | – | 2.9E+00 | 2.9E+02 |
| TPH, TX1005, >C12-C35 | TPH-1005-3 | – | – | – | 2.9E-01 | 4.1E+04 | 8.2E+04 | – | – | 2.9E+00 | 2.9E+02 |
| TPH, TX1005, >C28-C35 | TPH-1005-4 | – | – | – | 2.9E-01 | 4.1E+04 | 8.2E+04 | – | – | 2.9E+00 | 2.9E+02 |
| TP Silvex, 2,4,5- | 93-72-1 | – | – | – | – | 8.2E+03 | 1.6E+04 | – | – | 5.8E-01 | 5.8E+01 |
| Triademenol | 55219-65-3 | – | – | – | – | 3.1E+04 | 6.1E+04 | – | – | 2.2E+00 | 2.2E+02 |
| Triallate | 2303-17-5 | – | – | – | – | 1.3E+04 | 2.7E+04 | – | – | 9.5E-01 | 9.5E+01 |
| Triaminotrinitrobenzene (TATB) | 3058-38-6 | – | – | – | – | 3.1E+03 | 6.1E+03 | – | – | 2.2E-01 | 2.2E+01 |
| Tributyltin oxide | 56-35-9 | – | – | – | – | 3.1E+02 | 6.1E+02 | – | – | 2.2E-02 | 2.2E+00 |
| Trichloro-1,2,2-trifluoroethane, 1,1,2- | 76-13-1 | – | – | – | 7.3E+00 | 1.0E+06 | – | – | – | 2.2E+03 | 2.2E+05 |
| Trichlorobenzene, 1,2,3- | 87-61-6 | – | – | – | 2.9E-03 | 3.1E+03 | 6.1E+03 | – | – | 2.2E-01 | 2.2E+01 |
| Trichlorobenzene, 1,2,4- | 120-82-1 | – | 9.9E+02 | 2.0E+03 | 2.9E-03 | 1.0E+04 | 2.0E+04 | 7.0E-02 | 7.0E+00 | 7.3E-01 | 7.3E+01 |
| Trichlorobenzene, 1,3,5- | 108-70-3 | – | – | – | 2.9E-03 | 3.1E+03 | 6.1E+03 | – | – | 2.2E-01 | 2.2E+01 |
| Trichloroethane, 1,1,1- | 71-55-6 | – | – | – | 7.4E+00 | 1.0E+06 | – | – | – | 1.5E+02 | 1.5E+04 |
| Trichloroethane, 1,1,2- | 79-00-5 | 2.6E-03 | 5.0E+02 | – | – | 4.1E+03 | – | 3.6E-02 | 3.6E+00 | 2.9E-01 | 2.9E+01 |
| Trichloroethylene | 79-01-6 | 1.0E-02 | 6.2E+02 | – | 2.9E-03 | 5.1E+02 | – | 4.4E-02 | 4.4E+00 | 3.7E-02 | 3.7E+00 |
| Trichlorofluoromethane | 75-69-4 | – | – | – | – | 3.1E+05 | – | – | – | 2.2E+01 | 2.2E+03 |
| Trichloronate | 327-98-0 | – | – | – | – | 3.1E+03 | 6.1E+03 | – | – | 2.2E-01 | 2.2E+01 |

# Table 10
# Individual RBELs Commercial/Industrial

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | Soil | | | | | | Groundwater | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Carcinogenic | | | Noncarcinogenic | | | Carcinogenic | | Noncarcinogenic | |
| | | $^{Air}RBEL_{Inh}$ (mg/m3) | $^{Soil}RBEL_{Ing}$ (mg/kg) | $^{Soil}RBEL_{Derm}$ (mg/kg) | $^{Air}RBEL_{Inh}$ (mg/m3) | $^{Soil}RBEL_{Ing}$ (mg/kg) | $^{Soil}RBEL_{Derm}$ (mg/kg) | $^{GW}RBEL_{Ing}$ [1] (mg/L) | $^{GW}RBEL_{Class\ 3}$ [2] (mg/L) | $^{GW}RBEL_{Ing}$ [1] (mg/L) | $^{GW}RBEL_{Class\ 3}$ [2] (mg/L) |
| Trichlorophenol, 2,3,4- | 15950-66-0 | – | – | – | – | 1.0E+05 | 2.0E+05 | – | – | 7.3E+00 | 7.3E+02 |
| Trichlorophenol, 2,3,5- | 933-78-8 | – | – | – | – | 1.0E+05 | 2.0E+05 | – | – | 7.3E+00 | 7.3E+02 |
| Trichlorophenol, 2,3,6- | 933-75-5 | – | – | – | – | 1.0E+05 | 2.0E+05 | – | – | 7.3E+00 | 7.3E+02 |
| Trichlorophenol, 2,4,5- | 95-95-4 | – | – | – | – | 1.0E+05 | 2.0E+05 | – | – | 7.3E+00 | 7.3E+02 |
| Trichlorophenol, 2,4,6- | 88-06-2 | 1.3E-02 | 2.6E+03 | 5.2E+03 | – | 1.0E+03 | 2.0E+03 | 1.9E-01 | 1.9E+01 | 7.3E-02 | 7.3E+00 |
| Trichlorophenol, 3,4,5- | 609-19-8 | – | – | – | – | 1.0E+05 | 2.0E+05 | – | – | 7.3E+00 | 7.3E+02 |
| Trichlorophenoxyacetic acid, 2,4,5- | 93-76-5 | – | – | – | – | 1.0E+04 | 2.0E+04 | – | – | 7.3E-01 | 7.3E+01 |
| Trichloropropane, 1,1,2- | 598-77-6 | – | – | – | 4.4E-04 | 5.1E+03 | – | – | – | 3.7E-01 | 3.7E+01 |
| Trichloropropane, 1,2,3- | 96-18-4 | – | 9.5E-01 | – | 4.4E-04 | 4.1E+03 | – | 6.8E-05 | 6.8E-03 | 2.9E-01 | 2.9E+01 |
| Triethanolamine | 102-71-6 | – | – | – | 3.7E-02 | 2.0E+05 | 4.1E+05 | – | – | 1.5E+01 | 1.5E+03 |
| Triethylamine | 121-44-8 | – | – | – | 1.0E-02 | – | – | – | – | – | – |
| Triethylene glycol | 112-27-6 | – | – | – | – | 1.0E+06 | 1.0E+06 | – | – | 1.5E+02 | 1.5E+04 |
| Triethylphosphorothioate, O, O, O- | 126-68-1 | – | – | – | – | 8.5E+00 | 1.7E+01 | – | – | 6.1E-04 | 6.1E-02 |
| Trifluralin | 1582-09-8 | – | 3.7E+03 | 7.4E+03 | – | 7.7E+03 | 1.5E+04 | 2.7E-01 | 2.7E+01 | 5.5E-01 | 5.5E+01 |
| Trimethylamine | 75-50-3 | – | – | – | 1.0E-02 | – | – | – | – | – | – |
| Trimethylbenzene, 1,2,3- | 526-73-8 | – | – | – | 2.6E-01 | 3.5E+04 | – | – | – | 2.5E+00 | 2.5E+02 |
| Trimethylbenzene, 1,2,4- | 95-63-6 | – | – | – | 2.6E-01 | 3.5E+04 | – | – | – | 2.5E+00 | 2.5E+02 |
| Trimethylbenzene, 1,3,5- | 108-67-8 | – | – | – | 2.6E-01 | 3.5E+04 | – | – | – | 2.5E+00 | 2.5E+02 |
| Trinitrobenzene, 1,3,5- | 99-35-4 | – | – | – | – | 3.1E+04 | 6.1E+04 | – | – | 2.2E+00 | 2.2E+02 |
| Trinitrophenylmethylnitramine (tetryl; nitramine) | 479-45-8 | – | – | – | – | 2.0E+03 | 8.2E+03 | – | – | 1.5E-01 | 1.5E+01 |
| Trinitrotoluene, 2,4,6- | 118-96-7 | – | 9.5E+02 | 1.9E+03 | – | 5.1E+02 | 1.0E+03 | 6.8E-02 | 6.8E+00 | 3.7E-02 | 3.7E+00 |
| Tungsten (as sodium tungstate dihydride) | 7440-33-7 | – | – | – | 7.7E-03 | 1.0E+03 | 4.1E+03 | – | – | 7.3E-02 | 7.3E+00 |
| Uranium (soluble salts) | 7440-61-1 | – | – | – | 5.8E-05 | 3.1E+03 | 6.1E+04 | – | – | 2.2E-01 | 2.2E+01 |
| Valeric acid (pentanoic acid) | 109-52-4 | – | – | – | 1.5E-03 | 5.1E+05 | 1.0E+06 | – | – | 3.7E+01 | 3.7E+03 |
| Vanadium | 7440-62-2 | – | – | – | 4.4E-05 | 1.8E+03 | 9.6E+02 | – | – | 1.3E-01 | 1.3E+01 |
| Vernam | 1929-77-7 | – | – | – | – | 1.0E+03 | 2.0E+03 | – | – | 7.3E-02 | 7.3E+00 |
| Vinyl acetate | 108-05-4 | – | – | – | 2.9E-01 | 1.0E+06 | – | – | – | 7.3E+01 | 7.3E+03 |
| Vinyl chloride | 75-01-4 | 4.9E-03 | 1.9E+01 | – | 8.8E-02 | 3.1E+03 | – | 1.4E-03 | 1.4E-01 | 2.2E-01 | 2.2E+01 |
| Vinylcyclohexane | 695-12-5 | – | – | – | – | 5.1E+05 | – | – | – | 3.7E+01 | 3.7E+03 |
| Warfarin | 81-81-2 | – | – | – | – | 3.1E+02 | 6.1E+02 | – | – | 2.2E-02 | 2.2E+00 |
| Xylene, m- | 108-38-3 | – | – | – | 8.9E-01 | 1.0E+06 | – | – | – | 1.5E+02 | 1.5E+04 |
| Xylene, o- | 95-47-6 | – | – | – | 8.9E-01 | 1.0E+06 | – | – | – | 1.5E+02 | 1.5E+04 |
| Xylene, p- | 106-42-3 | – | – | – | 8.9E-01 | 1.0E+06 | – | – | – | 1.5E+02 | 1.5E+04 |

# Table 10
# Individual RBELs Commercial/Industrial

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | Soil | | | | | | Groundwater | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Carcinogenic | | | Noncarcinogenic | | | Carcinogenic | | Noncarcinogenic | |
| | | $^{Air}RBEL_{Inh}$ (mg/m3) | $^{Soil}RBEL_{Ing}$ (mg/kg) | $^{Soil}RBEL_{Derm}$ (mg/kg) | $^{Air}RBEL_{Inh}$ (mg/m3) | $^{Soil}RBEL_{Ing}$ (mg/kg) | $^{Soil}RBEL_{Derm}$ (mg/kg) | $^{GW}RBEL_{Ing}$ [1] (mg/L) | $^{GW}RBEL_{Class\ 3}$ [2] (mg/L) | $^{GW}RBEL_{Ing}$ [1] (mg/L) | $^{GW}RBEL_{Class\ 3}$ [2] (mg/L) |
| Xylenes | 1330-20-7 | – | – | – | 8.9E-01 | 2.0E+05 | – | – | – | 1.5E+01 | 1.5E+03 |
| Zinc | 7440-66-6 | – | – | – | – | 3.1E+05 | 1.0E+06 | – | – | 2.2E+01 | 2.2E+03 |
| 6 C aliphatics (TPH) (>53% n-hexane content) | NA | – | – | – | 9.8E-01 | 6.1E+04 | – | – | – | 4.4E+00 | 4.4E+02 |
| 6 C aliphatics (TPH) (<53% n-hexane content) | NA | – | – | – | 2.7E+01 | 6.1E+04 | – | – | – | 4.4E+00 | 4.4E+02 |
| >6-8 C aliphatics (TPH) (>53% n-hexane content) | NA | – | – | – | 9.8E-01 | 6.1E+04 | – | – | – | 4.4E+00 | 4.4E+02 |
| >6-8 C aliphatics (TPH) (<53% n-hexane content) | NA | – | – | – | 2.7E+01 | 6.1E+04 | – | – | – | 4.4E+00 | 4.4E+02 |
| >8-10 C aliphatics (TPH) | NA | – | – | – | 7.3E-01 | 1.0E+05 | – | – | – | 7.3E+00 | 7.3E+02 |
| >10-12 C aliphatics (TPH) | NA | – | – | – | 7.3E-01 | 1.0E+05 | 2.0E+05 | – | – | 7.3E+00 | 7.3E+02 |
| >12-16 C aliphatics (TPH) | NA | – | – | – | 7.3E-01 | 1.0E+05 | 2.0E+05 | – | – | 7.3E+00 | 7.3E+02 |
| >16-21 C aliphatics (TPH) | NA | – | – | – | – | 1.0E+06 | 1.0E+06 | – | – | 1.5E+02 | 1.5E+04 |
| >16-21 C aliphatics (TPH) (for transformer mineral oil releases only) | NA | – | – | – | – | 1.0E+06 | 1.0E+06 | – | – | 1.2E+02 | 1.2E+04 |
| >21-35 C aliphatics (TPH) | NA | – | – | – | – | 1.0E+06 | 1.0E+06 | – | – | 1.5E+02 | 1.5E+04 |
| >21-35 C aliphatics (TPH) (for transformer mineral oil releases only) | NA | – | – | – | – | 1.0E+06 | 1.0E+06 | – | – | 1.2E+02 | 1.2E+04 |
| >7-8 C aromatics (TPH) | NA | – | – | – | 2.8E+00 | 1.0E+05 | – | – | – | 7.3E+00 | 7.3E+02 |
| >8-10 C aromatics (TPH) | NA | – | – | – | 2.9E-01 | 4.1E+04 | – | – | – | 2.9E+00 | 2.9E+02 |
| >10-12 C aromatics (TPH) | NA | – | – | – | 2.9E-01 | 4.1E+04 | 8.2E+04 | – | – | 2.9E+00 | 2.9E+02 |
| >12-16 C aromatics (TPH) | NA | – | – | – | 2.9E-01 | 4.1E+04 | 8.2E+04 | – | – | 2.9E+00 | 2.9E+02 |
| >16-21 C aromatics (TPH) | NA | – | – | – | – | 3.1E+04 | 6.1E+04 | – | – | 2.2E+00 | 2.2E+02 |
| >21-35 C aromatics (TPH) | NA | – | – | – | – | 3.1E+04 | 6.1E+04 | – | – | 2.2E+00 | 2.2E+02 |

**Footnotes**

**1** Based on primary MCLs when available

**2** 100 x $^{GW}GW_{Ing}$

**3** The total MCL for trihalomethanes (bromodichloromethane, bromoform, chloroform, and dibromochloromethane) is 0.08 mg/L.

***** These compounds are not necessarily of concern from a human health standpoint, therefore calculation of human health-based values is not required. However, aesthetics and ecological criteria would still apply. See table entitled "Compounds for which Calculation of a Human Health PCL is Not Required" available on the TCEQ website at http://www.tceq.state.tx.us/remediation/trrp/trrp.html.

NA = not applicable

All values capped at 1E+06

This table shows the commercial and industrial risk-based exposure levels for soil and groundwater with carcinogenic and non-carcinogenic values depicted.

end of worksheet

# Toxicity Factors[1]

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | Class[2] | Ref[3] | SFo (mg/kg-day)-1 | Ref[3] | RfDo (mg/kg-day) | Ref[3] | URF $(\mu g/m^3)^{-1}$ | Ref[3] | RfC $(mg/m^3)$ | Ref[3] |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Acenaphthene | 83-32-9 | IIACP | PPRTV | – | – | 6.0E-02 | I | – | – | – | – |
| Acenaphthylene | 208-96-8 | D | I | – | – | 6.0E-02 | T | – | – | – | – |
| Acetaldehyde | 75-07-0 | B2 | I | – | – | 1.0E-01 | T | 2.2E-06 | I | 9.0E-03 | I |
| Acetate, 2-ethoxyethanol | 111-15-9 | – | – | – | – | 1.0E-01 | PPRTV | – | – | 6.0E-02 | PPRTV |
| Acetate, isoamyl | 123-92-2 | – | – | – | – | 7.2E-02 | T | – | – | – | – |
| Acetate, isobutyl | 110-19-0 | – | – | – | – | 4.8E-02 | T | – | – | – | – |
| Acetate, sec-butyl | 105-46-4 | – | – | – | – | 4.8E-02 | T | – | – | – | – |
| Acetic acid* | 64-19-7 | – | | – | – | – | – | – | – | – | – |
| Acetone (2-propanone) | 67-64-1 | D | I | – | – | 9.0E-01 | I | – | – | 3.1E+01 | A |
| Acetone cyanohydrin | 75-86-5 | IIACP | PPRTV | – | – | 3.0E-03 | PPRTV | – | – | 6.0E-02 | PPRTV |
| Acetonitrile | 75-05-8 | D | I | – | – | 3.2E-02 | T | – | – | 6.0E-02 | I |
| Acetophenone | 98-86-2 | D | I | – | – | 1.0E-01 | I | – | – | – | – |
| Acetylaminofluorene, 2- | 53-96-3 | – | – | 3.8E+00 | OEHHA | – | – | 1.3E-03 | OEHHA | – | – |
| Acifluorfen, sodium | 62476-59-9 | – | – | – | – | 1.3E-02 | I | – | – | – | – |
| Acridine | 260-94-6 | – | – | – | – | 3.0E-03 | T | – | – | – | – |
| Acrolein | 107-02-8 | D | I | – | – | 5.0E-04 | I | – | – | 2.7E-03 | T |
| Acrylamide | 79-06-1 | LC | I | 5.0E-01 | I | 2.0E-03 | I | 1.0E-04 | I | 6.0E-03 | I |
| Acrylic acid | 79-10-7 | – | – | – | – | 5.0E-01 | I | – | – | 1.0E-03 | I |
| Acrylonitrile | 107-13-1 | B1 | I | 5.4E-01 | I | 1.0E-03 | H | 6.8E-05 | I | 2.0E-03 | I |
| Adipic acid (hexanedioic acid) | 124-04-9 | – | – | – | – | 2.0E+00 | PPRTV | – | – | – | – |
| Alachlor | 15972-60-8 | B2 | H | 8.0E-02 | H | 1.0E-02 | I | – | – | – | – |
| Aldicarb | 116-06-3 | D | I | – | – | 1.0E-03 | I | – | – | – | – |
| Aldicarb sulfone | 1646-88-4 | – | – | – | – | 1.0E-03 | I | – | – | – | – |
| Aldrin | 309-00-2 | B2 | I | 1.7E+01 | I | 3.0E-05 | I | 4.9E-03 | I | – | – |
| Allyl alcohol | 107-18-6 | – | – | – | – | 5.0E-03 | I | – | – | 1.0E-04 | PPRTV |
| Allyl chloride | 107-05-1 | C | I | – | – | 1.0E-02 | I | – | – | 1.0E-03 | I |
| Aluminum | 7429-90-5 | – | – | – | – | 1.0E+00 | PPRTV | – | – | 5.0E-03 | PPRTV |
| Ametryn | 834-12-8 | – | – | – | – | 9.0E-03 | I | – | – | – | – |
| Amino-2,6-dinitrotoluene, 4- | 19406-51-0 | – | – | 1.0E-02 | T | 1.7E-04 | T | – | – | – | – |
| Amino-4,6-dinitrotoluene, 2- | 35572-78-2 | – | – | 1.0E-02 | T | 1.7E-04 | T | – | – | – | – |
| Aminobiphenyl, 4- (1,1-biphenyl-4-amine) | 92-67-1 | A | T | 6.1E+00 | T | – | – | – | – | – | – |
| Aminopyridine, 4- | 504-24-5 | D | I | – | – | 2.0E-05 | H | – | – | – | – |
| Ammonia | 7664-41-7 | IIACP | T | – | – | – | – | – | – | 3.2E-01 | T |
| Ammonium polyphosphate* | 6833-79-9 | – | – | – | – | – | – | – | – | – | – |
| Ammonium salts* | NA | – | – | – | – | – | – | – | – | – | – |
| Aniline | 62-53-3 | B2 | I | 5.7E-03 | I | 7.0E-03 | N | – | – | 1.0E-03 | I |
| Anthracene | 120-12-7 | D | I | – | – | 3.0E-01 | I | – | – | – | – |
| Anthraquinone, 9,10- | 84-65-1 | LC | PPRTV | 3.9E-02 | PPRTV | 2.0E-02 | T | – | – | – | – |
| Antimony | 7440-36-0 | – | – | – | – | 4.0E-04 | I | – | – | – | – |
| Aramite | 140-57-8 | B2 | I | 2.5E-02 | I | 5.0E-02 | H | 7.1E-06 | I | – | – |
| Arsenic | 7440-38-2 | A | I | 1.5E+00 | I | 3.0E-04 | I | 1.5E-04 | T | – | – |
| Arsine | 7784-42-1 | – | – | – | – | – | – | – | – | 5.0E-05 | I |
| Atrazine | 1912-24-9 | C | H | 2.2E-01 | H | 3.5E-02 | I | – | – | – | – |
| Azinphos-methyl (guthion) | 86-50-0 | – | – | – | – | 1.5E-03 | EPA –99 | – | – | – | – |
| Azobenzene | 103-33-3 | B2 | I | 1.1E-01 | I | – | – | 3.1E-05 | I | – | – |
| Barium | 7440-39-3 | D | I | – | – | 2.0E-01 | I | – | – | – | – |
| Bayleton | 43121-43-3 | – | | – | – | 3.0E-02 | I | – | – | – | – |
| Benefin (benfluralin) | 1861-40-1 | – | | – | – | 3.0E-01 | I | – | – | – | – |
| Benomyl | 17804-35-2 | – | I | – | – | 5.0E-02 | I | – | – | – | – |
| Benz-a-anthracene | 56-55-3 | CH | I | 1.0E-01 | EPA –93 | – | – | 6.0E-05 | EPA –93 | – | – |
| Benzaldehyde | 100-52-7 | – | – | – | – | 1.0E-01 | I | – | – | – | – |
| Benzene | 71-43-2 | A | I | 1.5E-02 | T | 4.0E-03 | I | 2.2E-06 | T | 2.8E-01 | T |
| Benzenedicarbonitrile, 1,3- | 626-17-5 | – | – | – | – | 6.0E-03 | T | – | – | – | – |

# Toxicity Factors[1]

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | Class[2] | Ref[3] | SFo (mg/kg-day)-1 | Ref[3] | RfDo (mg/kg-day) | Ref[3] | URF $(\mu g/m^3)^{-1}$ | Ref[3] | RfC ($mg/m^3$) | Ref[3] |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzenedicarboxylic acid, 1,2-disodecyl ester | 26761-40-0 | – | – | – | – | 4.0E-02 | – | – | – | 5.0E-03 | – |
| Benzenethiol | 108-98-5 | – | – | – | – | 1.0E-03 | PPRTV | – | – | – | – |
| Benzidine | 92-87-5 | A | I | 2.3E+02 | I | 3.0E-03 | I | 6.7E-02 | I | – | – |
| Benzo-a-pyrene | 50-32-8 | CH | I | 1.0E+00 | I | 3.0E-04 | I | 6.0E-04 | I | 2.0E-06 | I |
| Benzo-b-fluoranthene | 205-99-2 | CH | I | 1.0E-01 | EPA –93 | – | – | 6.0E-05 | EPA –93 | – | – |
| Benzo-e-pyrene | 192-97-2 | – | | – | – | 3.0E-02 | T | – | – | – | – |
| Benzo-g,h,i-perylene | 191-24-2 | D | I | – | – | 3.0E-02 | T | – | – | – | – |
| Benzoic acid | 65-85-0 | D | I | – | – | 4.0E+00 | I | – | – | – | – |
| Benzo-j-fluoranthene | 205-82-3 | – | – | 1.0E-01 | T | – | – | 6.0E-05 | T | – | – |
| Benzo-k-fluoranthene | 207-08-9 | CH | I | 1.0E-02 | EPA –93 | – | – | 6.0E-06 | EPA –93 | – | – |
| Benzophenone | 119-61-9 | – | – | – | – | 6.7E-03 | T | – | – | – | – |
| Benzotrichloride | 98-07-7 | B2 | I | 1.3E+01 | I | – | – | – | – | – | – |
| Benzoyl peroxide | 94-36-0 | – | – | – | – | 5.0E-02 | T | – | – | – | – |
| Benzyl alcohol | 100-51-6 | – | – | – | – | 1.0E-01 | PPRTV | – | – | – | – |
| Benzyl chloride | 100-44-7 | B2 | I | 1.7E-01 | I | 2.0E-03 | PPRTV | – | – | 1.0E-03 | PPRTV |
| Benzyl dichloride | 98-87-3 | B2 | T | 1.7E-01 | T | 2.0E-03 | T | – | – | 1.0E-03 | T |
| Beryllium | 7440-41-7 | B1 | I | – | – | 2.0E-03 | I | 2.4E-03 | I | 2.0E-05 | I |
| Biphenyl, 1,1- | 92-52-4 | SEC | PPRTV | – | – | 5.0E-01 | I | – | – | – | – |
| Biphenyl, 1,1'-, 2-phenoxy- | 6738-04-1 | – | – | – | – | 5.0E-02 | T | – | – | – | – |
| Biquinoline, 2,2'- | 119-91-5 | – | – | – | – | 3.0E-03 | T | – | – | – | – |
| Bis (2-chloroethoxy) methane | 111-91-1 | B2 | T | 1.1E+00 | T | 3.0E-03 | PPRTV | 3.3E-04 | T | – | – |
| Bis (2-chloroethyl) ether | 111-44-4 | B2 | I | 1.1E+00 | I | – | – | 3.3E-04 | I | – | – |
| Bis (2-chloro-1-methyl) ether | 108-60-1 | C | H | 7.0E-02 | H | 4.0E-02 | H | 1.0E-05 | H | – | – |
| Bis (2-chloromethyl) ether | 542-88-1 | A | I | 2.2E+02 | I | – | – | 6.2E-02 | I | – | – |
| Bis (2-ethyl-hexyl) phthalate | 117-81-7 | B2 | I | 1.4E-02 | I | 2.0E-02 | I | – | – | – | – |
| Bismuth | 7440-69-9 | – | – | – | – | 5.0E-01 | T | – | – | – | – |
| Bisphenol A | 80-05-7 | – | – | – | – | 5.0E-02 | I | – | – | – | – |
| Boron | 7440-42-8 | D | I | – | – | 2.0E-01 | I | – | – | 2.0E-02 | H |
| Bromacil | 314-40-9 | – | – | – | – | 1.0E-01 | T | – | – | – | – |
| Bromo-2-chloroethane, 1- | 107-04-0 | – | – | – | – | 4.0E-02 | T | – | – | – | – |
| Bromobenzene | 108-86-1 | IIACP | I | – | – | 8.0E-03 | I | – | – | 6.0E-02 | I |
| Bromodichloromethane | 75-27-4 | B2 | I | 6.2E-02 | I | 2.0E-02 | I | – | – | – | – |
| Bromoform | 75-25-2 | B2 | I | 7.9E-03 | I | 2.0E-02 | I | 1.1E-06 | I | – | – |
| Bromomethane | 74-83-9 | D | I | – | – | 1.4E-03 | I | – | – | 5.0E-03 | I |
| Bromophenyl phenylether, 4- | 101-55-3 | – | – | 1.5E+01 | T | – | – | 3.3E-03 | T | – | – |
| Butadiene, 1,3- | 106-99-0 | A | I | – | – | – | – | 5.0E-07 | T | 3.3E-02 | T |
| Butadiene, 2-methyl-1,3- (isoprene) | 78-79-5 | – | – | – | – | 6.0E-02 | T | – | – | 1.8E+01 | T |
| Butanal (butyraldehyde) | 123-72-8 | – | – | – | – | 6.0E-02 | T | – | – | 1.0E-01 | T |
| Butane, 2,3-dimethyl- | 79-29-8 | – | – | – | – | 6.0E-02 | T | – | – | 1.8E+01 | T |
| Butanoic acid (butyric acid) | 107-92-6 | – | – | – | – | 5.0E-01 | T | – | – | 1.0E-03 | T |
| Butanol, 2- | 78-92-2 | – | – | – | – | 2.0E+00 | PPRTV | – | – | 3.0E+01 | PPRTV |
| Butanol, 2-methyl-1- | 137-32-6 | – | – | – | – | 1.0E-02 | T | – | – | – | – |
| Butanol, 2-methyl-2- | 75-85-4 | – | – | – | – | 1.0E-02 | T | – | – | – | – |
| Butanol, n- | 71-36-3 | D | I | – | – | 1.0E-01 | I | – | – | – | – |
| Butene, 1- | 106-98-9 | – | – | – | – | 6.0E-02 | T | – | – | 5.3E+00 | T |
| Butene, cis-2- | 590-18-1 | – | – | – | – | 6.0E-02 | T | – | – | 1.6E+00 | T |
| Butene, trans-2- | 624-64-6 | – | – | – | – | 6.0E-02 | T | – | – | 1.6E+00 | T |
| Butoxy ethanol, 2- (Ethylene glycol monobutyl ether; EGBE) | 111-76-2 | NLC | I | – | – | 1.0E-01 | I | – | – | 1.6E+00 | I |
| Butyl acetate | 123-86-4 | – | – | – | – | 1.4E-01 | T | – | – | 4.7E+00 | T |
| Butyl acrylate | 141-32-2 | – | – | – | – | 9.0E-03 | T | – | – | – | – |
| Butyl benzyl phthalate | 85-68-7 | LC | PPRTV | 1.9E-03 | PPRTV | 2.0E-01 | I | – | – | – | – |
| Butyl ether, n- (dibutyl ether) | 142-96-1 | D | N | – | – | 1.0E-01 | T | – | – | – | – |
| Butyl methacrylate | 97-88-1 | – | – | – | – | 9.0E-02 | T | – | – | – | – |

# Toxicity Factors[1]

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | Class[2] | Ref[3] | SFo (mg/kg-day)-1 | Ref[3] | RfDo (mg/kg-day) | Ref[3] | URF $(\mu g/m^3)^{-1}$ | Ref[3] | RfC $(mg/m^3)$ | Ref[3] |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Butylate | 2008-41-5 | – | – | – | – | 5.0E-02 | I | – | – | – | – |
| Butylbenzene, n- | 104-51-8 | D | N | – | – | 5.0E-02 | PPRTV | – | – | – | – |
| Butylbenzene, sec- | 135-98-8 | IIACP | PPRTV | – | – | 4.0E-02 | N | – | – | – | – |
| Butylbenzene, tert- | 98-06-6 | IIACP | PPRTV | – | – | 4.0E-02 | N | – | – | – | – |
| Cacodylic acid | 75-60-5 | D | I | – | – | 3.0E-03 | H | – | – | – | – |
| Cadmium[4] | 7440-43-9 | LC | T | – | – | 1.0E-03/ 5.0E-04 | I | 4.9E-04 | T | 1.1E-05 | T |
| Calcium* | 7440-70-2 | – | – | – | – | – | – | – | – | – | – |
| Caprolactam | 105-60-2 | – | – | – | – | 5.0E-01 | I | – | – | – | – |
| Captan | 133-06-2 | B2 | H | 3.5E-03 | H | 1.3E-01 | I | – | – | – | – |
| Carbaryl | 63-25-2 | – | – | – | – | 1.0E-01 | I | – | – | – | – |
| Carbazole | 86-74-8 | B2 | H | 2.0E-02 | H | – | – | – | – | – | – |
| Carbofuran | 1563-66-2 | – | – | – | – | 5.0E-03 | I | – | – | – | – |
| Carbon disulfide | 75-15-0 | – | – | – | – | 1.0E-01 | I | – | – | 7.0E-01 | I |
| Carbon tetrachloride | 56-23-5 | LC | I | 7.0E-02 | I | 4.0E-03 | I | 6.0E-06 | I | 1.0E-01 | I |
| Carbophenothion | 786-19-6 | – | – | – | – | 1.3E-02 | CU | – | – | – | – |
| Carbosulfan | 55285-14-8 | – | – | – | – | 1.0E-02 | I | – | – | – | – |
| Carboxin | 5234-68-4 | – | – | – | – | 1.0E-01 | I | – | – | – | – |
| Chloral | 75-87-6 | C | I | – | – | 1.0E-01 | I | – | – | – | – |
| Chloral hydrate (1,1-ethanediol, 2,2,2-trichloro-) | 302-17-0 | C | I | – | – | 1.0E-01 | I | – | – | – | – |
| Chloramben (amiben; 3-amino-2,5-dichlorobenzoic acid) | 133-90-4 | – | – | – | – | 1.5E-02 | I | – | – | – | – |
| Chlordane (technical) | 12789-03-6 | B2 | I | 3.5E-01 | I | 5.0E-04 | I | 1.0E-04 | I | 7.0E-04 | I |
| Chlordane, cis- (alpha chlordane) | 5103-71-9 | B2 | T | 3.5E-01 | T | 5.0E-04 | T | 1.0E-04 | T | 7.0E-04 | T |
| Chlordane, trans- (gamma chlordane) | 57-74-9 | B2 | T | 3.5E-01 | T | 5.0E-04 | T | 1.0E-04 | T | 7.0E-04 | T |
| Chlorfenvinphos | 470-90-6 | – | – | – | – | 7.0E-04 | A | – | – | 2.0E-03 | T |
| Chloride* | 16887-00-6 | – | – | – | – | – | – | – | – | – | – |
| Chlorine | 7782-50-5 | – | – | – | – | 1.0E-01 | I | – | – | 8.7E-03 | T |
| Chloro-1,3-butadiene, 2- | 126-99-8 | LC | I | – | – | – | – | 3.0E-04 | I | 2.0E-02 | I |
| Chloro-2-propanol, 1- | 127-00-4 | – | – | – | – | 2.0E-02 | T | – | – | – | – |
| Chloro-3-methylphenol, 4- | 59-50-7 | – | – | – | – | 5.0E-03 | T | – | – | – | – |
| Chloroaniline, p- | 106-47-8 | LC | PPRTV | 2.0E-01 | PPRTV | 4.0E-03 | I | – | – | – | – |
| Chlorobenzene | 108-90-7 | D | I | – | – | 2.0E-02 | I | – | – | 5.0E-02 | PPRTV |
| Chlorobenzilate | 510-15-6 | B2 | H | 2.7E-01 | H | 2.0E-02 | I | 7.8E-05 | H | – | – |
| Chlorobromomethane (bromochloromethane) | 74-97-5 | – | – | – | – | 4.0E-02 | T | – | – | – | – |
| Chlorodifluoromethane | 75-45-6 | – | – | – | – | – | – | – | – | 5.0E+01 | I |
| Chloroethane (ethyl chloride) | 75-00-3 | – | – | – | – | 4.0E-01 | N | – | – | 1.0E+01 | I |
| Chloroethanol, 2- | 107-07-3 | IIACP | PPRTV | – | – | 2.0E-02 | PPRTV | – | – | – | – |
| Chloroethoxy ethene, 2- (2-chloroethylvinylether) | 110-75-8 | – | – | 1.1E+00 | T | 2.0E-03 | T | – | – | 3.0E-04 | T |
| Chloroform | 67-66-3 | B2 | I | – | – | 1.0E-02 | I | 2.3E-05 | I | 9.7E-02 | A |
| Chlorohexane, 1- | 544-10-5 | – | – | – | – | 4.0E-02 | T | – | – | 1.0E+00 | T |
| Chloromethane (methyl chloride) | 74-87-3 | IIACP | PPRTV | 1.3E-02 | H | 3.6E-03 | T | 1.8E-06 | H | 9.0E-02 | I |
| Chloronaphthalene, 1- (Chloronaphthalene, alpha-) | 90-13-1 | – | – | – | – | 8.0E-02 | I | – | – | – | – |
| Chloronaphthalene, 2- (chloronaphthalene, beta) | 91-58-7 | – | – | – | – | 8.0E-02 | I | – | – | – | – |
| Chloronitrobenzene, p- (1-chloro-4-nitrobenzene) | 100-00-5 | LC | PPRTV | 6.3E-03 | PPRTV | 1.0E-03 | PPRTV | – | – | 6.0E-04 | PPRTV |
| Chlorophenol, 2- | 95-57-8 | – | – | – | – | 5.0E-03 | I | – | – | – | – |
| Chlorophenol, 3- | 108-43-0 | – | – | – | – | 5.0E-03 | T | – | – | – | – |
| Chlorophenol, 4- | 106-48-9 | – | – | – | – | 5.0E-03 | T | – | – | – | – |
| Chlorophenyl phenylether, 4- | 7005-72-3 | – | – | 1.5E+01 | T | – | – | 3.3E-03 | T | – | – |
| Chloropropane, 2- | 75-29-6 | – | – | – | – | 3.0E-02 | T | – | – | 1.0E-01 | H |
| Chlorothalonil | 1897-45-6 | B2 | H | 1.1E-02 | H | 1.5E-02 | I | – | – | – | – |
| Chlorotoluene, o- (2-chlorotoluene) | 95-49-8 | – | – | – | – | 2.0E-02 | I | – | – | 8.0E-01 | PPRTV |
| Chlorotoluene, p- (4-chlorotoluene) | 106-43-4 | – | – | – | – | 2.0E-02 | PPRTV | – | – | – | – |

# Toxicity Factors[1]

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | Class[2] | Ref[3] | SFo (mg/kg-day)-1 | Ref[3] | RfDo (mg/kg-day) | Ref[3] | URF $(\mu g/m^3)^{-1}$ | Ref[3] | RfC $(mg/m^3)$ | Ref[3] |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chlorpyrifos | 2921-88-2 | – | – | – | – | 3.0E-03 | I | – | – | – | – |
| Chromium (III) | 16065-83-1 | – | – | – | – | 1.5E+00 | I | – | – | 1.4E-04 | T |
| Chromium (total) | 7440-47-3 | – | – | – | – | 1.5E+00 | I | – | – | 1.4E-04 | T |
| Chromium (VI) | 18540-29-9 | CH | T | – | – | 3.1E-03 | T | 2.3E-03 | T | 2.2E-04 | T |
| Chrysene | 218-01-9 | CH | I | 1.0E-03 | EPA –93 | – | – | 6.0E-07 | EPA –93 | – | – |
| Cobalt | 7440-48-4 | LC | T | – | – | 1.0E-02 | T | 6.0E-03 | T | 6.3E-05 | T |
| Copolymer acrylamide | 69418-26-4 | – | – | – | – | 2.0E-04 | T | – | – | – | – |
| Copper | 7440-50-8 | D | I | – | – | 9.7E-02 | T | – | – | – | – |
| Coronene | 191-07-1 | – | – | – | – | 2.0E-03 | T | – | – | – | – |
| Coumaphos | 56-72-4 | – | – | – | – | 7.0E-03 | T | – | – | – | – |
| Cresol | 1319-77-3 | C | I | – | – | 5.0E-02 | I | – | – | – | – |
| Cresol, m- (3-methylphenol) | 108-39-4 | C | I | – | – | 5.0E-02 | I | – | – | – | – |
| Cresol, o- (2-methylphenol) | 95-48-7 | C | I | – | – | 5.0E-02 | I | – | – | – | – |
| Cresol, p- (4-methylphenol) | 106-44-5 | C | I | – | – | 5.0E-03 | H | – | – | – | – |
| Crotonaldehyde | 123-73-9 | C | I | 1.9E+00 | H | 1.0E-03 | PPRTV | – | – | – | – |
| Cumene (isopropylbenzene) | 98-82-8 | D | I | – | – | 1.0E-01 | I | – | – | 4.0E-01 | I |
| Cyanazine | 21725-46-2 | C | H | 8.4E-01 | H | 2.0E-03 | H | – | – | – | – |
| Cyanide | 57-12-5 | D | I | – | – | 6.0E-04 | I | – | – | 8.0E-04 | I |
| Cyanogen | 460-19-5 | – | – | – | – | 1.0E-03 | I | – | – | 8.0E-04 | I |
| Cycloate | 1134-23-2 | – | – | – | – | 5.5E-02 | CU | – | – | – | – |
| Cyclohexane | 110-82-7 | D | I | – | – | 5.0E+00 | T | – | – | 6.0E+00 | I |
| Cyclohexanol | 108-93-0 | – | – | – | – | 5.0E+00 | T | – | – | – | – |
| Cyclohexanone | 108-94-1 | – | – | – | – | 5.0E+00 | I | – | – | 7.0E-01 | PPRTV |
| Cyclohexene-1-methanol, 3- | 1679-51-2 | – | – | – | – | 2.0E-02 | T | – | – | – | – |
| Cyclohexene, 4-vinyl-1- | 100-40-3 | – | – | – | – | 2.2E-02 | T | – | – | 3.3E-01 | T |
| Cyclopentane | 287-92-3 | – | – | – | – | 6.0E-02 | T | – | – | 2.4E+01 | T |
| Cyclopentane, methyl- | 96-37-7 | – | – | – | – | 1.0E-01 | T | – | – | 1.0E+00 | T |
| Cyclopentene | 142-29-0 | – | – | – | – | 5.0E+00 | T | – | – | – | – |
| Cyclotetramethylenetetranitramine (HMX) | 2691-41-0 | D | I | – | – | 5.0E-02 | I | – | – | – | – |
| Cyclotrimethylenetrinitramine (RDX) | 121-82-4 | SEC | I | 8.0E-02 | I | 4.0E-03 | I | – | – | – | – |
| Cymene (isopropyltoluene) | 99-87-6 | – | – | – | – | 1.0E-01 | T | – | – | – | – |
| Cymoxanil | 57966-95-7 | – | – | – | – | 1.3E-02 | EPA –OP | – | – | – | – |
| Dacthal (DCPA) | 1861-32-1 | – | – | – | – | 1.0E-02 | I | – | – | – | – |
| Dalapon, sodium salt (2,2-dichloropropanoic acid) | 75-99-0 | – | – | – | – | 3.0E-02 | I | – | – | – | – |
| DDD | 72-54-8 | B2 | I | 2.4E-01 | I | – | – | – | – | – | – |
| DDE | 72-55-9 | B2 | I | 3.4E-01 | I | – | – | – | – | – | – |
| DDT | 50-29-3 | B2 | I | 3.4E-01 | I | 5.0E-04 | I | 9.7E-05 | I | – | – |
| Demeton | 8065-48-3 | – | – | – | – | 4.0E-05 | I | – | – | – | – |
| Desethylatrazine | 6190-65-4 | – | – | – | – | 3.5E-02 | T | – | – | – | – |
| Diacetone alcohol (4-hydroxy-4-methyl-2-pentanone) | 123-42-2 | – | – | – | – | 4.0E-02 | T | – | – | – | – |
| Diallate | 2303-16-4 | B2 | H | 6.1E-02 | H | – | – | – | – | – | – |
| Diazinon | 333-41-5 | – | – | – | – | 9.0E-04 | H | – | – | 1.0E-04 | T |
| Dibenz(a,h)acridine | 226-36-8 | C | OEHHA | 1.2E+00 | OEHHA | – | – | 1.1E-04 | OEHHA | – | – |
| Dibenz(a,j)acridine | 224-42-0 | – | – | 7.3E-01 | T | – | – | 8.8E-05 | T | – | – |
| Dibenz-a,h-anthracene | 53-70-3 | CH | I | 1.0E+00 | EPA –93 | – | – | 6.0E-04 | EPA –93 | – | – |
| Dibenzo(a,e)pyrene | 192-65-4 | – | – | 7.3E+00 | T | – | – | 8.8E-04 | T | – | – |
| Dibenzo(a,h)pyrene | 189-64-0 | – | – | 7.3E+01 | T | – | – | 8.8E-03 | T | – | – |
| Dibenzo(a,i)pyrene | 189-55-9 | – | – | 7.3E+01 | T | – | – | 8.8E-03 | T | – | – |
| Dibenzofuran | 132-64-9 | D | I | – | – | 4.0E-03 | N | – | – | – | – |
| Dibenzothiophene | 132-65-0 | IIACP | PPRTV | – | – | 1.0E-02 | PPRTV | – | – | – | – |
| Dibromo-3-chloropropane, 1,2- | 96-12-8 | LC | PPRTV | 8.0E-01 | PPRTV | 2.0E-04 | PPRTV | 6.0E-03 | PPRTV | 2.0E-04 | I |
| Dibromochloromethane (chlorodibromomethane) | 124-48-1 | C | I | 8.4E-02 | I | 2.0E-02 | I | – | – | – | – |

# Toxicity Factors[1]

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | Class[2] | Ref[3] | SFo (mg/kg-day)-1 | Ref[3] | RfDo (mg/kg-day) | Ref[3] | URF $(\mu g/m^3)^{-1}$ | Ref[3] | RfC $(mg/m^3)$ | Ref[3] |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Dibromofluoromethane | 1868-53-7 | – | – | – | – | 2.0E-01 | T | – | – | – | – |
| Dicamba | 1918-00-9 | – | – | – | – | 3.0E-02 | I | – | – | – | – |
| Dichlormid | 37764-25-3 | – | – | – | – | 2.5E-02 | T | – | – | – | – |
| Dichloro-2-butene, 1,4- | 764-41-0 | SEC | PPRTV | – | – | – | – | 4.2E-03 | PPRTV | – | – |
| Dichloro-2-butene, 1,4- trans | 110-57-6 | SEC | PPRTV | – | – | – | – | 4.2E-03 | PPRTV | – | – |
| Dichlorobenzene, 1,2- | 95-50-1 | D | I | – | – | 9.0E-02 | I | – | – | 3.0E-02 | N |
| Dichlorobenzene, 1,3- | 541-73-1 | D | I | – | – | 3.0E-02 | N | – | – | 8.0E-03 | N |
| Dichlorobenzene, 1,4- | 106-46-7 | C | H | 2.4E-02 | H | – | – | – | – | 5.3E-01 | T |
| Dichlorobenzidine, 3,3- | 91-94-1 | B2 | I | 4.5E-01 | I | – | – | – | – | – | – |
| Dichlorobutane, 2,3- | 7581-97-7 | – | – | – | – | 1.0E-02 | T | – | – | 7.0E-03 | T |
| Dichlorodifluoromethane | 75-71-8 | – | – | – | – | 2.0E-01 | I | – | – | 1.0E-01 | PPRTV |
| Dichloroethane, 1,1- | 75-34-3 | C | I | – | – | 2.0E-01 | PPRTV | – | – | 2.4E+00 | T |
| Dichloroethane, 1,2- | 107-06-2 | B2 | I | 9.1E-02 | I | 7.8E-02 | T | 3.4E-06 | T | 4.4E-02 | T |
| Dichloroethylene, 1,1- | 75-35-4 | C | I | – | – | 5.0E-02 | I | – | – | 3.4E-01 | T |
| Dichloroethylene, cis-1,2- | 156-59-2 | IIACP | I | – | – | 2.0E-03 | I | – | – | 6.0E-02 | T |
| Dichloroethylene, trans-1,2 | 156-60-5 | IIACP | I | – | – | 2.0E-02 | I | – | – | 6.0E-02 | PPRTV |
| Dichlorofluoromethane | 75-43-4 | – | – | – | – | 2.0E-01 | T | – | – | – | – |
| Dichlorophenol, 2,3- | 576-24-9 | – | – | – | – | 3.0E-03 | T | – | – | – | – |
| Dichlorophenol, 2,4- | 120-83-2 | – | – | – | – | 3.0E-03 | I | – | – | – | – |
| Dichlorophenol, 2,5- | 583-78-8 | – | – | – | – | 3.0E-03 | T | – | – | – | – |
| Dichlorophenol, 2,6- | 87-65-0 | – | – | – | – | 1.0E-03 | T | – | – | – | – |
| Dichlorophenol, 3,4- | 95-77-2 | – | – | – | – | 3.0E-03 | T | – | – | – | – |
| Dichlorophenol, 3,5- | 591-35-5 | – | – | – | – | 3.0E-03 | T | – | – | – | – |
| Dichlorophenoxy, 2,4- butyric acid, 4- (2,4-DB) | 94-82-6 | – | – | – | – | 8.0E-03 | I | – | – | – | – |
| Dichlorophenoxyacetic acid, 2,4- (2,4-D) | 94-75-7 | – | – | – | – | 1.0E-02 | I | – | – | – | – |
| Dichloroprop (2-(2,4-dichlorophenoxy) propanoic acid) | 120-36-5 | – | – | – | – | 1.0E-02 | T | – | – | – | – |
| Dichloropropane, 1,2- | 78-87-5 | LC | PPRTV | 3.7E-02 | PPRTV | 1.3E-01 | T | 9.2E-07 | T | 4.0E-03 | I |
| Dichloropropane, 1,3- | 142-28-9 | – | – | 1.0E-01 | T | 2.0E-02 | PPRTV | 4.0E-06 | T | 2.0E-02 | T |
| Dichloropropane, 2,2- | 594-20-7 | – | – | 6.8E-02 | T | 9.0E-02 | T | – | – | 4.0E-03 | T |
| Dichloropropanol, 2,3- | 616-23-9 | – | – | – | – | 3.0E-03 | I | – | – | – | – |
| Dichloropropene, 1,1- | 563-58-6 | B2 | T | 1.0E-01 | T | 3.0E-02 | T | 4.0E-06 | T | 2.0E-02 | T |
| Dichloropropene, 1,3- (mixed isomers) | 542-75-6 | B2 | I | 1.0E-01 | I | 3.0E-02 | I | 4.0E-06 | I | 2.0E-02 | I |
| Dichloropropene, cis 1,3- | 10061-01-5 | – | – | 5.4E-01 | T | 1.0E-04 | T | – | – | 2.0E-02 | I |
| Dichloropropene, trans 1,3- | 10061-02-6 | – | | 1.0E-01 | T | 3.0E-02 | T | 4.0E-06 | T | 2.0E-02 | I |
| Dichlorvos | 62-73-7 | B2 | I | 2.9E-01 | I | 5.0E-04 | I | – | – | 5.0E-04 | I |
| Dicrotophos (bidrin) | 141-66-2 | – | – | – | – | 1.0E-04 | I | – | – | – | – |
| Dicyclopentadiene | 77-73-6 | IIACP | PPRTV | – | – | 8.0E-02 | PPRTV | – | – | – | – |
| Dieldrin | 60-57-1 | B2 | I | 1.6E+01 | I | 5.0E-05 | I | 4.6E-03 | I | – | – |
| Diethanolamine | 111-42-2 | – | – | – | – | 5.0E-04 | T | – | – | 2.5E-02 | T |
| Diethyldithiocarbamate, sodium salt | 148-18-5 | C | H | 2.7E-01 | H | 3.0E-02 | I | – | – | – | – |
| Diethyl phthalate | 84-66-2 | D | I | – | – | 8.0E-01 | I | – | – | – | – |
| Diethylene glycol | 111-46-6 | – | – | – | – | 2.0E+00 | T | – | – | – | – |
| Diethylene glycol monobutyl ether | 112-34-5 | – | – | – | – | 3.0E-02 | PPRTV | – | – | 1.0E-04 | PPRTV |
| Diethylhexyl adipate | 103-23-1 | C | I | 1.2E-03 | I | 6.0E-01 | I | – | – | – | – |
| Diethylstilbestrol | 56-53-1 | A | H | 4.7E+03 | H | – | – | – | – | – | – |
| Diisobutylene (trimethyl-1-pentene, 2,4,4-) | 107-39-1 | – | – | – | – | 6.0E-02 | T | – | – | 2.0E-01 | T |
| Diisopropylbenzene, p- | 100-18-5 | – | – | – | – | 1.0E-02 | T | – | – | – | – |
| Diisopropyl ether (2,2'-oxybis-propane) | 108-20-3 | – | – | – | – | 1.0E-01 | T | – | – | 7.0E-01 | PPRTV |
| Dimethenamid | 87674-68-8 | – | – | – | – | 1.5E-02 | T | – | – | – | – |
| Dimethoate | 60-51-5 | – | – | – | – | 2.0E-04 | I | – | – | – | – |
| Dimethoxybenzidine, 3,3'- | 119-90-4 | B2 | H | 1.4E-02 | H | – | – | – | – | – | – |
| Dimethyl-2-nitrobenzene, 1,3- | 81-20-9 | – | – | – | – | 2.0E-03 | T | – | – | 9.0E-03 | T |

# Toxicity Factors[1]

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | Class[2] | Ref[3] | SFo (mg/kg-day)-1 | Ref[3] | RfDo (mg/kg-day) | Ref[3] | URF $(\mu g/m^3)^{-1}$ | Ref[3] | RfC ($mg/m^3$) | Ref[3] |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Dimethyl-3-nitrobenzene, 1,2- | 83-41-0 | – | – | – | – | 2.0E-03 | T | – | – | 9.0E-03 | T |
| Dimethyl-4-nitrobenzene, 1-2- | 99-51-4 | – | – | – | – | 2.0E-03 | T | – | – | 9.0E-03 | T |
| Dimethyl-5-nitrobenzene, 1,3- | 99-12-7 | – | – | – | – | 2.0E-03 | T | – | – | 9.0E-03 | T |
| Dimethylphenethylamine, alpha, alpha- | 122-09-8 | – | – | – | – | 2.0E-03 | T | – | – | – | – |
| Dimethyl phenol, 2,4- | 105-67-9 | – | – | – | – | 2.0E-02 | I | – | – | – | – |
| Dimethylaminoazobenzene, p- | 60-11-7 | – | – | – | – | 1.0E-05 | T | – | – | – | – |
| Dimethylbenz-a-anthracene, 7,12- | 57-97-6 | – | – | 2.5E+02 | T | – | – | 2.4E-02 | T | – | – |
| Dimethylbenzidine, 3,3'- | 119-93-7 | LC | PPRTV | 1.1E+01 | PPRTV | – | – | – | – | – | – |
| Dimethylformamide, N,N- | 68-12-2 | – | – | – | – | 1.0E-01 | PPRTV | – | – | 3.0E-02 | I |
| Dimethylnaphthalene, 1,3- | 575-41-7 | – | – | – | – | 4.0E-02 | T | – | – | – | – |
| Dimethylphthalate | 131-11-3 | D | I | – | – | 8.0E-01 | T | – | – | – | – |
| Di-n-butyl phthalate | 84-74-2 | D | I | – | – | 1.0E-01 | I | – | – | – | – |
| Dinitro-2-methylphenol, 4,6- (dinitro-o-cresol, 4, 6-) | 534-52-1 | – | – | – | – | 1.0E-04 | PPRTV | – | – | – | – |
| Dinitrobenzene, 1,3- (dinitrobenzene, 2,4-) | 99-65-0 | D | I | – | – | 1.0E-04 | I | – | – | – | – |
| Dinitrobenzene, 1,4- | 100-25-4 | – | – | – | – | 1.0E-04 | PPRTV | – | – | – | – |
| Dinitrophenol, 2,4- | 51-28-5 | – | – | – | – | 2.0E-03 | I | – | – | – | – |
| Dinitrophenol, 2,5- | 329-71-5 | – | – | – | – | 2.0E-03 | T | – | – | – | – |
| Dinitrotoluene, 2,4- | 121-14-2 | B2 | I | 6.8E-01 | mixed iso | 2.0E-03 | I | – | – | – | – |
| Dinitrotoluene, 2,6- | 606-20-2 | B2 | I | 6.8E-01 | mixed iso | 1.0E-03 | T | – | – | – | – |
| Di-n-octyl phthalate | 117-84-0 | IIACP | PPRTV | – | – | 1.0E-02 | PPRTV | – | – | – | – |
| Dinoseb | 88-85-7 | D | I | – | – | 1.0E-03 | I | – | – | – | – |
| Dioxane 1,4- | 123-91-1 | LC | I | 1.0E-01 | I | 3.0E-02 | I | 5.0E-06 | I | 1.1E-01 | A |
| Dioxins/furans, polychlorinated; (reported as 2,3,7,8-TCDD TEQ) | 1746-01-6 | – | – | – | – | – | – | – | – | – | – |
| Diphenyl ether | 101-84-8 | – | – | – | – | 6.2E-03 | T | – | – | – | – |
| Diphenylamine | 122-39-4 | – | – | – | – | 2.5E-02 | I | – | – | – | – |
| Diphenylhydrazine, 1,2- | 122-66-7 | B2 | I | 8.0E-01 | I | – | – | 2.2E-04 | I | – | – |
| Dipropylene glycol | 110-98-5 | – | – | – | – | 1.2E-01 | T | – | – | – | – |
| Diquat | 85-00-7 | – | – | – | – | 2.2E-03 | I | – | – | – | – |
| Disodium iminodiacetate (iminodiacetic acid, disodium salt) | 142-73-4 | – | – | – | – | 1.0E-02 | T | – | – | – | – |
| Disulfoton | 298-04-4 | – | – | – | – | 4.0E-05 | I | – | – | – | – |
| Diuron | 330-54-1 | – | – | – | – | 2.0E-03 | I | – | – | – | – |
| Dodecylphenol, 4- | 104-43-8 | – | – | – | – | 5.0E-02 | T | – | – | – | – |
| Endosulfan | 115-29-7 | – | – | – | – | 6.0E-03 | I | – | – | – | – |
| Endosulfan I | 959-98-8 | – | – | – | – | 2.0E-03 | T | – | – | – | – |
| Endosulfan II | 33213-65-9 | – | – | – | – | 6.0E-03 | T | – | – | – | – |
| Endosulfan sulfate | 1031-07-8 | – | – | – | – | 6.0E-03 | T | – | – | – | – |
| Endothall | 145-73-3 | – | – | – | – | 2.0E-02 | I | – | – | – | – |
| Endrin | 72-20-8 | D | I | – | – | 3.0E-04 | I | – | – | – | – |
| Endrin aldehyde | 7421-93-4 | D | T | – | – | 3.0E-04 | T | – | – | – | – |
| Endrin ketone | 53494-70-5 | D | T | – | – | 3.0E-04 | T | – | – | – | – |
| Epichlorohydrin | 106-89-8 | B2 | I | 9.9E-03 | I | 6.0E-03 | PPRTV | 1.2E-06 | I | 1.0E-03 | I |
| EPN (o-ethyl o-(4-nitrophenyl)phenylphosphonothioate) | 2104-64-5 | – | – | – | – | 1.0E-05 | I | – | – | – | – |
| Esfenvalerate | 66230-04-4 | – | – | – | – | 2.0E-03 | T | – | – | – | – |
| Ethalfluralin (sonolan) | 55283-68-6 | – | – | 8.9E-02 | EPA –97 | 4.0E-02 | EPA –97 | – | – | – | – |
| Ethanol | 64-17-5 | – | – | – | – | 3.3E+01 | T | – | – | – | – |
| Ethanol, 2-amino- | 141-43-5 | – | – | – | – | 1.7E-03 | T | – | – | 2.3E-02 | T |
| Ethanol, 2-(2-aminoethoxy)- | 929-06-6 | – | – | – | – | 5.0E-04 | T | – | – | – | – |
| Ethanol, 2-(2-ethoxyethoxy)- | 111-90-0 | – | – | – | – | 2.0E+00 | H | – | – | – | – |
| Ethanol, 2-(methylamino)- | 109-83-1 | – | – | – | – | 1.6E-02 | T | – | – | 4.6E-02 | T |
| Ethion | 563-12-2 | – | – | – | – | 5.0E-04 | I | – | – | – | – |
| Ethoprop | 13194-48-4 | B2 | EPA –OP | 2.8E-02 | EPA –OP | 1.0E-04 | EPA –OP | – | – | – | – |

# Toxicity Factors[1]

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | Class[2] | Ref[3] | SFo (mg/kg-day)-1 | Ref[3] | RfDo (mg/kg-day) | Ref[3] | URF $(\mu g/m^3)^{-1}$ | Ref[3] | RfC ($mg/m^3$) | Ref[3] |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Ethoxy ethanol, 2- | 110-80-5 | – | – | – | – | 9.0E-02 | PPRTV | – | – | 2.0E-01 | I |
| Ethyl acetate | 141-78-6 | IIACP | PPRTV | – | – | 9.0E-01 | I | – | – | 2.3E-01 | T |
| Ethyl acrylate | 140-88-5 | B2 | H | 4.8E-02 | H | 5.0E-03 | PPRTV | – | – | 8.0E-03 | PPRTV |
| Ethyl benzene | 100-41-4 | D | I | – | – | 1.0E-01 | I | – | – | 1.9E+00 | T |
| Ethyl dipropylthiocarbamate, S- | 759-94-4 | – | – | – | – | 2.5E-02 | I | – | – | – | – |
| Ethyl ether | 60-29-7 | – | – | – | – | 2.0E-01 | I | – | – | – | – |
| Ethyl methacrylate | 97-63-2 | – | – | – | – | 9.0E-02 | H | – | – | 3.0E-01 | PPRTV |
| Ethyl methanesulfonate | 62-50-0 | – | – | 9.9E-02 | T | – | – | 2.8E-05 | T | – | – |
| Ethyl tert-butyl ether (2-ethyl-2-ethoxypropane) | 637-92-3 | – | – | – | – | 1.0E-03 | T | – | – | 3.0E-01 | T |
| Ethyl-1-hexanol, 2- | 104-76-7 | – | – | – | – | 1.5E-01 | T | – | – | – | – |
| Ethyl-2-hexenal, 2- | 645-62-5 | – | – | – | – | 1.5E-01 | T | – | – | – | – |
| Ethyl-2-methyl benzene, 1- | 611-14-3 | D | T | – | – | 5.0E-02 | T | – | – | 4.0E-01 | T |
| Ethyl-4-methyl benzene, 1- | 622-96-8 | D | T | – | – | 5.0E-02 | T | – | – | 4.0E-01 | T |
| Ethylene* | 74-85-1 | – | – | – | – | – | – | – | – | – | - |
| Ethylene dibromide (dibromoethane, 1,2- ) | 106-93-4 | LC | T | 2.0E+00 | I | 9.0E-03 | I | 4.4E-05 | T | 6.7E-02 | T |
| Ethylene glycol | 107-21-1 | – | – | – | – | 2.0E+00 | I | – | – | – | – |
| Ethylene oxide | 75-21-8 | CH | I | 1.0E+00 | H | – | – | 7.6E-05 | T | – | – |
| Ethylene thiourea | 96-45-7 | B2 | H | 1.1E-01 | H | 8.0E-05 | I | – | – | – | – |
| Ethylenediamine | 107-15-3 | D | I | – | – | 9.0E-02 | PPRTV | – | – | – | – |
| Ethylenimine | 151-56-4 | C | T | 6.5E+01 | OEHHA | – | – | 1.9E-02 | OEHHA | – | – |
| Ethylhexyl acrylate, 2- | 103-11-7 | B2 | T | 4.8E-02 | T | – | – | – | – | – | – |
| Famphur | 52-85-7 | – | – | – | – | 3.0E-05 | T | – | – | – | – |
| Fensulfothion | 115-90-2 | – | – | – | – | 1.0E-03 | T | – | – | – | – |
| Fenthion | 55-38-9 | – | – | – | – | 7.0E-05 | EPA –OP | – | – | – | – |
| Fenuron | - | – | – | – | – | 7.0E-02 | T | – | – | – | – |
| Fluoranthene | 206-44-0 | IIACP | PPRTV | – | – | 4.0E-02 | I | – | – | – | – |
| Fluorene | 86-73-7 | D | I | – | – | 4.0E-02 | I | – | – | – | – |
| Fluorine (soluble fluoride) | 7782-41-4 | – | – | – | – | 6.0E-02 | I | – | – | 2.7E-02 | T |
| Fluorochloridone | 61213-25-0 | – | – | – | – | 7.5E-03 | T | – | – | – | – |
| Fonofos | 944-22-9 | – | – | – | – | 2.0E-03 | I | – | – | – | – |
| Formaldehyde[5] | 50-00-0 | B1 | I | – | – | 2.0E-01 | I | – | – | 1.1E-02 | T |
| Formic acid | 64-18-6 | – | – | – | – | 9.0E-01 | PPRTV | – | – | 3.0E-03 | PPRTV |
| Furan | 110-00-9 | – | – | – | – | 1.0E-03 | I | – | – | – | – |
| Furfural | 98-01-1 | – | – | – | – | 3.0E-03 | I | – | – | – | – |
| Glycidylaldehyde | 765-34-4 | B2 | I | – | – | 4.0E-04 | I | – | – | 1.0E-03 | H |
| Glyphosate | 1071-83-6 | D | I | – | – | 1.0E-01 | I | – | – | – | – |
| Heptachlor | 76-44-8 | B2 | I | 4.5E+00 | I | 5.0E-04 | I | 1.3E-03 | I | – | – |
| Heptachlor epoxide | 1024-57-3 | B2 | I | 9.1E+00 | I | 1.3E-05 | I | 2.6E-03 | I | – | – |
| Heptane, n- | 142-82-5 | D | I | – | – | 6.0E-02 | T | – | – | 9.0E+00 | T |
| Heptanoic acid, n- | 111-14-8 | – | – | – | – | 5.0E-01 | T | – | – | 1.0E-03 | T |
| Hexachlorobenzene | 118-74-1 | B2 | I | 1.6E+00 | I | 8.0E-04 | I | 4.6E-04 | I | – | – |
| Hexachlorobutadiene | 87-68-3 | C | I | 7.8E-02 | I | 1.0E-03 | PPRTV | 2.2E-05 | I | – | – |
| Hexachlorocyclohexane, alpha (alpha-BHC) | 319-84-6 | B2 | I | 6.3E+00 | I | 8.0E-03 | A | 1.8E-03 | I | – | – |
| Hexachlorocyclohexane, beta (beta-BHC) | 319-85-7 | C | I | 1.8E+00 | I | – | – | 5.3E-04 | I | – | – |
| Hexachlorocyclohexane, delta (delta-BHC) | 319-86-8 | B2 | T | 1.8E+00 | T | 3.0E-04 | T | 5.1E-04 | T | – | – |
| Hexachlorocyclohexane, gamma (lindane; gamma-BHC) | 58-89-9 | B2 | H | 1.3E+00 | H | 3.0E-04 | I | – | – | – | – |
| Hexachlorocyclohexane, techn (technical-BHC) | 608-73-1 | B2 | I | 1.8E+00 | I | – | – | 5.1E-04 | I | – | – |
| Hexachlorocyclopentadiene | 77-47-4 | E | I | – | – | 6.0E-03 | I | – | – | 2.0E-04 | I |
| Hexachloroethane | 67-72-1 | LC | I | 4.0E-02 | I | 7.0E-04 | I | – | – | 3.0E-02 | I |
| Hexachlorophene | 70-30-4 | – | – | – | – | 3.0E-04 | I | – | – | – | – |
| Hexachloropropylene | 1888-71-7 | – | – | 4.0E-02 | T | 7.0E-04 | T | – | – | 3.0E-02 | T |
| Hexanal, 2-ethyl- | 123-05-7 | – | – | – | – | 1.5E-01 | T | – | – | – | – |

# Toxicity Factors[1]

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | Class[2] | Ref[3] | SFo (mg/kg-day)-1 | Ref[3] | RfDo (mg/kg-day) | Ref[3] | URF $(\mu g/m^3)^{-1}$ | Ref[3] | RfC ($mg/m^3$) | Ref[3] |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexane, n- | 110-54-3 | D | I | – | – | 6.0E-02 | H | – | – | 6.7E-01 | T |
| Hexanediamine, 1,6- | 124-09-4 | – | – | – | – | 5.0E-03 | T | – | – | – | – |
| Hexanedinitrile | 111-69-3 | – | – | – | – | 1.4E-03 | T | – | – | 6.0E-03 | PPRTV |
| Hexanediol, 1,6- | 629-11-8 | – | – | – | – | 5.0E+00 | T | – | – | 1.8E+01 | T |
| Hexanoic acid | 142-62-1 | – | – | – | – | 6.4E-02 | T | – | – | 1.0E-03 | T |
| Hexanone, 2- | 591-78-6 | IIACP | I | – | – | 5.0E-03 | I | – | – | 3.0E-02 | I |
| Hexazinone | 51235-04-2 | – | – | – | – | 3.3E-02 | I | – | – | – | – |
| Hexene, 1- | 592-41-6 | – | – | – | – | 3.3E-01 | T | – | – | 1.1E-01 | T |
| Hexene, cis-2- | 7688-21-3 | – | – | – | – | 3.3E-01 | T | – | – | 1.1E-01 | T |
| Hexylene glycol (2-methyl-2,4-pentanediol) | 107-41-5 | – | – | – | – | 3.0E-01 | T | – | – | – | – |
| Hydrazine | 302-01-2 | B2 | I | 3.0E+00 | I | – | – | 4.9E-03 | I | 3.0E-05 | PPRTV |
| Hydrocaproic acid, 6- (6-hydroxyhexanoic acid) | 1191-25-9 | – | – | – | – | 6.4E-02 | T | – | – | 1.0E-03 | T |
| Hydrogen chloride (hydrochloric acid)* | 7647-01-0 | – | – | – | – | – | – | – | – | – | – |
| Hydroquinone | 123-31-9 | LC | PPRTV | 6.0E-02 | PPRTV | 4.0E-02 | PPRTV | – | – | – | – |
| Indene | 95-13-6 | – | – | – | – | 2.0E-02 | T | – | – | 3.0E-03 | T |
| Indeno-1,2,3-cd-pyrene | 193-39-5 | CH | I | 1.0E-01 | EPA –93 | – | – | 6.0E-05 | EPA –93 | – | – |
| Iron* | 7439-89-6 | – | – | – | – | – | – | – | – | – | – |
| Isoamyl alcohol | 123-51-3 | – | – | – | – | 5.0E-03 | T | – | – | – | – |
| Isobutyl alcohol | 78-83-1 | – | – | – | – | 3.0E-01 | I | – | – | – | – |
| Isobutylene (2-methyl-1-propene) | 115-11-7 | – | – | – | – | 3.7E-03 | T | – | – | 1.1E+02 | T |
| Isobutyric acid (2-methylpropanoic acid) | 79-31-2 | – | – | – | – | 5.0E-01 | T | – | – | – | – |
| Isodecanol | 25339-17-7 | – | – | – | – | 1.6E-03 | T | – | – | – | – |
| Isodrin | 465-73-6 | – | – | 1.7E+02 | T | 3.0E-06 | T | 4.9E-02 | T | – | – |
| Isopentane | 78-78-4 | – | – | – | – | 6.0E-02 | T | – | – | 2.4E+01 | T |
| Isophorone | 78-59-1 | C | I | 9.5E-04 | I | 2.0E-01 | I | – | – | – | – |
| Isopropyl acetate | 108-21-4 | – | – | – | – | 7.0E-02 | T | – | – | – | – |
| Isopropyl alcohol | 67-63-0 | – | – | – | – | 2.0E+00 | PPRTV | – | – | 2.0E-01 | PPRTV |
| Isosafrole | 120-58-1 | B2 | T | 2.2E-01 | T | – | – | 6.3E-05 | T | – | – |
| Kelthane (dicofol) | 115-32-2 | – | – | – | – | 6.0E-03 | T | – | – | – | – |
| Kepone (chlordecone) | 143-50-0 | LC | I | 1.0E+01 | I | 3.0E-04 | I | – | – | – | – |
| Lead (inorganic) | 7439-92-1 | – | – | – | – | – | – | – | – | – | – |
| Leptophos | 21609-90-5 | – | – | – | – | 5.0E-06 | T | – | – | 1.8E-06 | T |
| Limonene, d-* | 5989-27-5 | – | – | – | – | – | – | – | – | – | – |
| Lithium | 7439-93-2 | – | – | – | – | 2.0E-03 | PPRTV | – | – | – | – |
| Magnesium* | 7439-95-4 | – | – | – | – | – | – | – | – | – | – |
| Malathion | 121-75-5 | – | – | – | – | 2.0E-02 | I | – | – | 2.0E-04 | T |
| Maleic anhydride | 108-31-6 | – | – | – | – | 1.0E-01 | I | – | – | – | – |
| Maleic hydrazide | 123-33-1 | – | – | – | – | 5.0E-01 | I | – | – | – | – |
| Malononitrile | 109-77-3 | – | – | – | – | 1.0E-04 | PPRTV | – | – | – | – |
| Mancozeb | 8018-01-7 | – | – | – | – | 3.0E-02 | I | – | – | – | – |
| Manganese[6] | 7439-96-5 | D | I | – | – | 1.4E-01/ 4.7E-02 | I | – | – | 8.4E-04 | T |
| MCPA (4-(chloro-2-methylphenoxy) acetic acid) | 94-74-6 | – | – | – | – | 5.0E-04 | I | – | – | – | – |
| MCPP (2-(4-chloro-2-methylphenoxy) propanoic acid) | 93-65-2 | – | – | – | – | 1.0E-03 | I | – | – | – | – |
| Mercury (pH = 4.9)[7] | 7439-97-6 | D | I | – | – | 3.0E-04 | I | – | – | 3.0E-04 | I |
| Mercury (pH = 6.8)[7] | 7439-97-6 | D | I | – | – | 3.0E-04 | I | – | – | 3.0E-04 | I |
| Merphos | 150-50-5 | – | – | – | – | 3.0E-05 | I | – | – | – | – |
| Methacrylic acid (2-methyl-2-propenoic acid) | 79-41-4 | – | – | – | – | 1.0E-02 | T | – | – | – | – |
| Methacrylonitrile | 126-98-7 | NLC | PPRTV | – | – | 5.0E-02 | T | – | – | 3.0E-02 | PPRTV |
| Methanol | 67-56-1 | – | – | – | – | 2.0E+00 | I | – | – | 7.2E+00 | T |
| Methapyrilene | 91-80-5 | – | – | 4.7E+00 | NTP –00 | – | – | – | – | – | – |
| Methomyl | 16752-77-5 | – | – | – | – | 2.5E-02 | I | – | – | – | – |

# Toxicity Factors[1]

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | Class[2] | Ref[3] | SFo (mg/kg-day)-1 | Ref[3] | RfDo (mg/kg-day) | Ref[3] | URF $(\mu g/m^3)^{-1}$ | Ref[3] | RfC ($mg/m^3$) | Ref[3] |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Methoxychlor | 72-43-5 | D | I | – | – | 5.0E-03 | I | – | – | – | – |
| Methoxyethanol, 2- | 109-86-4 | – | – | – | – | 2.7E-02 | T | – | – | 2.0E-02 | I |
| Methyl acetate (acetic acid, methyl ester) | 79-20-9 | – | – | – | – | 1.0E+00 | H | – | – | – | – |
| Methyl acrylate | 96-33-3 | IIACP | PPRTV | – | – | 2.0E-03 | T | – | – | 2.0E-02 | PPRTV |
| Methyl amyl ketone (2-heptanone) | 110-43-0 | – | – | – | – | 5.0E-02 | T | – | – | 2.8E+00 | T |
| Methyl chrysene, 1- | 3351-28-8 | – | – | 7.3E-03 | T | – | – | 8.8E-07 | T | – | – |
| Methyl chrysene, 2- | 3351-32-4 | – | – | 7.3E-03 | T | – | – | 8.8E-07 | T | – | – |
| Methyl chrysene, 6- | 1705-85-7 | – | – | 7.3E-02 | T | – | – | 8.8E-06 | T | – | – |
| Methyl cyclohexane | 108-87-2 | IIACP | PPRTV | – | – | 5.0E+00 | T | – | – | 3.0E+00 | H |
| Methyl ethyl ketone (2-butanone) | 78-93-3 | D | I | – | – | 6.0E-01 | I | – | – | 8.8E+00 | T |
| Methyl iodide (iodomethane) | 74-88-4 | – | – | – | – | 1.4E-03 | T | – | – | – | – |
| Methyl isobutyl ketone (4-methyl-2-pentanone) | 108-10-1 | D | I | – | – | 8.0E-02 | H | – | – | 3.0E+00 | I |
| Methyl mercury | 22967-92-6 | C | I | – | – | 1.0E-04 | I | – | – | – | – |
| Methyl methacrylate | 80-62-6 | E | I | – | – | 1.4E+00 | I | – | – | 7.0E-01 | I |
| Methyl methanesulfonate | 66-27-3 | C | OEHHA | 9.9E-02 | OEHHA | – | – | 2.8E-05 | OEHHA | – | – |
| Methyl parathion | 298-00-0 | – | – | – | – | 2.5E-04 | I | – | – | – | – |
| Methyl-1-butene, 2- | 563-46-2 | – | – | – | – | 6.0E-02 | T | – | – | 1.8E+01 | T |
| Methyl-1-propanal, 2- (isobutyraldehyde) | 78-84-2 | – | – | – | – | 4.0E-02 | T | – | – | – | – |
| Methyl-2-butene, 2- | 513-35-9 | – | – | – | – | 6.0E-02 | T | – | – | 1.8E+01 | T |
| Methyl-2-pentenal, 2- | 623-36-9 | – | – | 1.9E+00 | T | – | – | – | – | – | – |
| Methylcholanthrene, 3- | 56-49-5 | – | – | 2.2E+01 | T | – | – | 2.1E-03 | T | – | – |
| Methylene bromide (dibromomethane) | 74-95-3 | – | – | 7.5E-03 | T | 6.0E-02 | T | – | – | 4.0E-03 | PPRTV |
| Methylene chloride (dichloromethane) | 75-09-2 | LC | T | 9.8E-05 | T | 2.1E-02 | T | 2.8E-08 | T | 1.3E+00 | T |
| Methylene-bis (2-chloroaniline) 4,4'- | 101-14-4 | LC | PPRTV | 1.0E-01 | PPRTV | 2.0E-03 | PPRTV | 3.7E-05 | H | – | – |
| Methylmecury hydroxide | 1184-57-2 | C | T | – | – | 1.0E-04 | T | – | – | – | – |
| Methylnaphthalene, 1- | 90-12-0 | SEC | PPRTV | 2.9E-02 | PPRTV | 7.0E-02 | A | – | – | – | – |
| Methylnaphthalene, 2- | 91-57-6 | D | I | – | – | 4.0E-03 | I | – | – | – | – |
| Methylpyrrolidone, N- | 872-50-4 | – | – | – | – | 2.0E-02 | T | – | – | – | – |
| Methylstyrene, alpha- | 98-83-9 | – | – | – | – | 8.3E-03 | T | – | – | 2.5E-02 | T |
| Methyltetrahydrofuran, 2- | 96-47-9 | – | – | 7.6E-03 | T | 2.0E-01 | T | 1.9E-06 | T | – | – |
| Methyltetrahydropyran, 2- | 10141-72-7 | – | – | 7.6E-03 | T | 2.0E-01 | T | 1.9E-06 | T | – | – |
| Metolachlor | 51218-45-2 | C | I | – | – | 1.5E-01 | I | – | – | – | – |
| Metribuzin | 21087-64-9 | D | I | – | – | 2.5E-02 | I | – | – | – | – |
| Mirex | 2385-85-5 | B2 | H | – | – | 2.0E-04 | I | – | – | – | – |
| Molinate | 2212-67-1 | – | – | – | – | 2.0E-03 | I | – | – | – | – |
| Molybdenum | 7439-98-7 | – | – | – | – | 5.0E-03 | I | – | – | – | – |
| Monocrotophos | 2157-98-4 | – | – | – | – | 6.0E-04 | T | – | – | – | – |
| Morpholine | 110-91-8 | – | – | – | – | 5.0E+02 | T | – | – | – | – |
| Morpholine, N-butyl- | 1005-67-0 | – | – | – | – | 2.3E-03 | T | – | – | – | – |
| MTBE (methyl tert-butyl ether) | 1634-04-4 | – | – | 1.8E-03 | OEHHA | 1.0E-02 | OEHHA | 2.6E-07 | OEHHA | 3.0E+00 | I |
| Naled | 300-76-5 | – | – | – | – | 2.0E-03 | I | – | – | – | – |
| Naphthalene | 91-20-3 | D | I | – | – | 2.0E-02 | I | – | – | 3.0E-03 | I |
| Naphthoquinone, 1,4- | 130-15-4 | – | – | – | – | 7.0E-03 | T | – | – | – | – |
| Naphthylamine, 1- | 134-32-7 | – | – | – | – | 2.0E-02 | T | – | – | – | – |
| Naphthylamine, 2- | 91-59-8 | – | – | 1.8E+00 | OEHHA | – | – | – | – | – | – |
| Napropamide | 15299-99-7 | – | – | – | – | 1.0E-01 | I | – | – | – | – |
| Neopentyl glycol | 126-30-7 | – | – | – | – | 3.0E-01 | T | – | – | – | – |
| Nickel and compounds | 7440-02-0 | CH | T | – | – | 2.0E-02 | I | 1.7E-04 | T | 2.3E-04 | T |
| Nitrate-N | 14797-55-8 | – | – | – | – | 1.6E+00 | I | – | – | – | – |
| Nitrite-N | 14797-65-0 | – | – | – | – | 1.0E-01 | I | – | – | – | – |
| Nitroaniline, 2- | 88-74-4 | D | N | – | – | 3.0E-04 | N | – | – | 2.0E-04 | H |
| Nitroaniline, 3- | 99-09-2 | C | N | 3.8E-02 | N | 3.0E-04 | PPRTV | – | – | 2.0E-04 | T |
| Nitroaniline, 4- | 100-01-6 | SEC | PPRTV | 2.0E-02 | PPRTV | 4.0E-03 | PPRTV | – | – | 6.0E-03 | PPRTV |

# Toxicity Factors[1]

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | Class[2] | Ref[3] | SFo (mg/kg-day)-1 | Ref[3] | RfDo (mg/kg-day) | Ref[3] | URF $(\mu g/m^3)^{-1}$ | Ref[3] | RfC ($mg/m^3$) | Ref[3] |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Nitrobenzene | 98-95-3 | LC | I | – | – | 2.0E-03 | I | 4.0E-05 | I | 9.0E-03 | I |
| Nitroglycerin | 55-63-0 | LC | PPRTV | 1.7E-02 | PPRTV | 1.0E-04 | PPRTV | – | – | – | – |
| Nitrophenol, 2- | 88-75-5 | – | – | – | – | 2.0E-03 | T | – | – | – | – |
| Nitrophenol, 3- | 554-84-7 | – | – | – | – | 2.0E-03 | T | – | – | – | – |
| Nitrophenol, 4- | 100-02-7 | – | – | – | – | 2.0E-03 | T | – | – | – | – |

# Toxicity Factors[1]

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | Class[2] | Ref[3] | SFo (mg/kg-day)-1 | Ref[3] | RfDo (mg/kg-day) | Ref[3] | URF $(\mu g/m^3)^{-1}$ | Ref[3] | RfC ($mg/m^3$) | Ref[3] |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Nitropropane, 2- | 79-46-9 | – | – | – | – | 1.4E-04 | T | 2.7E-03 | H | 2.0E-02 | I |
| Nitroquinoline-N-oxide, 4- | 56-57-5 | B2 | T | 9.4E+00 | T | – | – | 2.7E-03 | T | – | – |
| Nitrosodiethanolamine | 1116-54-7 | B2 | I | 2.8E+00 | I | – | – | – | – | – | – |
| Nitrosodiethylamine, n- | 55-18-5 | B2 | I | 1.5E+02 | I | – | – | 4.3E-02 | I | – | – |
| Nitrosodimethylamine, n- | 62-75-9 | B2 | I | 5.1E+01 | I | 8.0E-06 | PPRTV | 1.4E-02 | I | 4.0E-05 | PPRTV |
| Nitrosodi-n-butylamine, n- | 924-16-3 | B2 | I | 5.4E+00 | I | – | – | 1.6E-03 | I | – | – |
| Nitrosodi-n-propylamine, n- | 621-64-7 | B2 | I | 7.0E+00 | I | – | – | – | – | – | – |
| Nitrosodiphenylamine | 86-30-6 | B2 | I | 4.9E-03 | I | – | – | – | – | – | – |
| Nitroso-methyl-ethyl-amine, n- | 10595-95-6 | B2 | I | 2.2E+01 | I | – | – | – | – | – | – |
| Nitrosomorpholine, N- | 59-89-2 | C | OEHHA | 6.7E+00 | OEHHA | – | – | 1.9E-03 | OEHHA | – | – |
| Nitroso-n-ethylurea, n- | 759-73-9 | B2 | H | 1.4E+02 | H | – | – | – | – | – | – |
| Nitrosopiperidine, N- | 100-75-4 | C | OEHHA | 9.4E+00 | OEHHA | – | – | 2.7E-03 | OEHHA | – | – |
| Nitrosopyrrolidine, n- | 930-55-2 | B2 | I | 2.1E+00 | I | – | – | 6.1E-04 | I | – | – |
| Nitrotoluene, m- | 99-08-1 | – | – | – | – | 1.0E-02 | H | – | – | – | – |
| Nitrotoluene, o- | 88-72-2 | LC | PPRTV | 2.2E-01 | PPRTV | 9.0E-04 | PPRTV | – | – | – | – |
| Nitrotoluene, p- | 99-99-0 | LC | PPRTV | 1.6E-02 | PPRTV | 4.0E-03 | PPRTV | – | – | – | – |
| Nonachlor, cis- | 5103-73-1 | B2 | T | 3.5E-01 | T | 5.0E-04 | T | 1.0E-04 | T | 7.0E-04 | T |
| Nonachlor, trans- | 39765-80-5 | B2 | T | 3.5E-01 | T | 5.0E-04 | T | 1.0E-04 | T | 7.0E-04 | T |
| Nonanal | 124-19-6 | – | – | – | – | 2.0E-01 | T | – | – | – | – |
| Nonene, 1-n | 124-11-8 | – | – | – | – | 1.0E-01 | T | – | – | – | – |
| Nonylphenol, 4-n- | 104-40-5 | – | – | – | – | 1.0E-01 | T | – | – | – | – |
| Nonylphenol ethoxylate[8] | 9016-45-9 | – | – | – | – | 1.0E-01 | T | – | – | – | – |
| Octamethylpyrophosphoramide | 152-16-9 | – | – | – | – | 2.0E-03 | H | – | – | – | – |
| Octanone | 106-68-3 | – | – | – | – | 6.0E-02 | T | – | – | 1.8E+01 | T |
| Oxamyl | 23135-22-0 | – | – | – | – | 2.5E-02 | I | – | – | – | – |
| Oxychlordane | 27304-13-8 | B2 | T | 3.5E-01 | T | 5.0E-04 | T | 1.0E-04 | T | 7.0E-04 | T |
| Paraquat | 1910-42-5 | C | I | – | – | 4.5E-03 | I | – | – | – | – |
| Parathion (ethyl parathion) | 56-38-2 | C | I | – | – | 6.0E-03 | H | – | – | – | – |
| Pebulate | 1114-71-2 | – | – | – | – | 5.0E-02 | H | – | – | – | – |
| Pendimethalin | 40487-42-1 | – | – | – | – | 4.0E-02 | I | – | – | – | – |
| Pentachlorobenzene | 608-93-5 | D | I | – | – | 8.0E-04 | I | – | – | – | – |
| Pentachloroethane | 76-01-7 | LC | PPRTV | 9.0E-02 | PPRTV | 3.0E-02 | T | 7.4E-06 | T | – | – |
| Pentachloronitrobenzene | 82-68-8 | C | H | 2.6E-01 | H | 3.0E-03 | I | – | – | – | – |
| Pentachlorophenol | 87-86-5 | LC | I | 4.0E-01 | I | 5.0E-03 | I | – | – | – | – |
| Pentadiene, 1,3-cis- | 1574-41-0 | – | – | – | – | 6.0E-02 | T | – | – | 1.8E+01 | T |
| Pentadiene, 1,3-trans- | 2004-70-8 | – | – | – | – | 6.0E-02 | T | – | – | 1.8E+01 | T |

# Toxicity Factors[1]

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | Class[2] | Ref[3] | SFo (mg/kg-day)-1 | Ref[3] | RfDo (mg/kg-day) | Ref[3] | URF $(\mu g/m^3)^{-1}$ | Ref[3] | RfC ($mg/m^3$) | Ref[3] |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Pentaerythritol tetranitrate (PETN) | 78-11-5 | – | – | – | – | 2.0E-03 | PPRTV | – | – | – | – |
| Pentane | 109-66-0 | – | – | – | – | 6.0E-02 | T | – | – | 2.4E+01 | T |
| Pentane, 2-methyl- | 107-83-5 | – | – | – | – | 6.0E-02 | T | – | – | 1.8E+01 | T |
| Pentane, 3-methyl- | 96-14-0 | – | – | – | – | 6.0E-02 | T | – | – | 1.8E+01 | T |
| Pentanediol, 1,5- | 111-29-5 | – | – | – | – | 5.0E+00 | T | – | – | 1.8E+01 | T |
| Pentanol, 1- | 71-41-0 | – | – | – | – | 3.3E-02 | T | – | – | – | – |
| Pentanol, 4-methyl-2- | 108-11-2 | – | – | – | – | 2.6E-02 | T | – | – | – | – |
| Pentanone, 2- | 107-87-9 | – | – | – | – | 4.0E-02 | T | – | – | – | – |
| Pentene, 2- | 109-68-2 | – | – | – | – | 6.0E-02 | T | – | – | 1.8E+01 | T |
| Pentyne, 1- | 627-19-0 | – | – | – | – | 6.0E-02 | T | – | – | 1.8E+01 | T |
| Perchlorate | 14797-73-0 | – | – | – | – | 7.0E-04 | I | – | – | – | – |
| Perfluorooctanoic sulfonic acid (1-Octanesulfonic acid, heptadecafluoro-1-) | 1763-23-1 | – | – | – | – | 2.3E-05 | T | – | – | 8.1E-05 | T |
| Perfluoroundecanoic acid (Undecanoic acid, uncosafluoro-) | 2058-94-8 | – | – | – | – | 1.2E-05 | T | – | – | – | – |
| Perfluoropentanoic acid (Pentanoic acid, nonafluoro-) | 2706-90-3 | – | – | – | – | 3.8E-06 | T | – | – | – | – |
| Perfluorohexanoic acid (Hexanoic acid, undecafluoro-) | 307-24-4 | – | – | – | – | 3.8E-06 | T | – | – | – | – |
| Perfluorododecanoic acid (Dodecanoic acid, tricosafluoro-) | 307-55-1 | – | – | – | – | 1.2E-05 | T | – | – | 4.2E-05 | T |
| Perfluorooctanoic acid (Octanoic acid, pentadecafluoro-) | 335-67-1 | – | – | – | – | 1.2E-05 | T | – | – | 4.1E-06 | T |
| Perfluorodecanoic acid (Decanoic acid, nonadecafluoro-) | 335-76-2 | – | – | – | – | 1.5E-05 | T | – | – | 5.3E-05 | T |
| Perfluorodecane sulfonic acid (1-Decanesulfonic acid, heneicosafluoro-) | 335-77-3 | – | – | – | – | 1.2E-05 | T | – | – | – | – |
| Perfluorohexane sulfonic acid (1-Hexanesulfonic acid, triddecafluoro-) | 355-46-4 | – | – | – | – | 3.8E-06 | T | – | – | 1.3E-05 | T |
| Perfluorobutyric acid (Butanoic acid, heptafluoro-) | 375-22-4 | – | – | – | – | 2.9E-03 | T | – | – | 1.0E-02 | T |
| Perfluorobutane sulfonic acid (1-Butanesulfonic acid, nonafluoro-) | 375-73-5 | – | – | – | – | 1.4E-03 | T | – | – | 4.9E-03 | T |
| Perfluoroheptanoic acid (Heptanoic acid, tridecafluoro-) | 375-85-9 | – | – | – | – | 2.3E-05 | T | – | – | – | – |
| Perfluorononanoic acid (Nonanoic acid, heptadecafluoro-) | 375-95-1 | – | – | – | – | 1.2E-05 | T | – | – | 2.8E-05 | T |
| Perfluorotetradecanoic acid (Tetradecanoic acid, heptacosafluoro-) | 376-06-7 | – | – | – | – | 1.2E-05 | T | – | – | – | – |
| Perfluorotridecanoic acid (Tridecanoic acid, pentacosafluoro-) | 72629-94-8 | – | – | – | – | 1.2E-05 | T | – | – | – | – |
| Perfluorooctane sulfonamide (1-Octanesulfonamide, hetpadecafluoro-) | 754-91-6 | – | – | – | – | 1.2E-05 | T | – | – | 4.1E-06 | T |
| Perylene | 198-55-0 | – | – | – | – | 2.0E-02 | T | – | – | – | – |
| Phenacetin | 62-44-2 | B1 | OEHHA | 2.2E-03 | OEHHA | – | – | 6.3E-07 | OEHHA | – | – |

# Toxicity Factors[1]

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | Class[2] | Ref[3] | SFo (mg/kg-day)-1 | Ref[3] | RfDo (mg/kg-day) | Ref[3] | URF $(\mu g/m^3)^{-1}$ | Ref[3] | RfC $(mg/m^3)$ | Ref[3] |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Phenanthrene | 85-01-8 | D | I | – | – | 3.0E-02 | T | – | – | – | – |
| Phenanthridine | 229-87-8 | – | – | – | – | 3.0E-03 | T | – | – | – | – |
| Phenol | 108-95-2 | IIACP | T | – | – | 3.0E-01 | I | – | – | 1.1E-02 | T |
| Phenol, 4-tert-butyl- | 98-54-4 | – | – | – | – | 1.2E-01 | T | – | – | – | – |
| Phenothiazine | 92-84-2 | – | – | – | – | 1.1E-03 | T | – | – | – | – |
| Phenyl mercuric acetate | 62-38-4 | – | – | – | – | 8.0E-05 | I | – | – | – | – |
| Phenylene diamine, m- | 108-45-2 | – | – | – | – | 6.0E-03 | I | – | – | – | – |
| Phenylene diamine, p- | 106-50-3 | – | – | – | – | 1.9E-01 | H | – | – | – | – |
| Phorate | 298-02-2 | – | – | – | – | 2.0E-04 | H | – | – | – | – |
| Phosalone | 2310-17-0 | – | – | – | – | 2.0E-03 | EPA –OP | – | – | – | – |
| Phosdrin (mevinphos) | 7786-34-7 | – | – | – | – | 2.5E-05 | EPA –OP | – | – | – | – |
| Phosmet | 732-11-6 | – | – | – | – | 2.0E-02 | I | – | – | – | – |
| Phosphine | 7803-51-2 | D | I | – | – | 3.0E-04 | I | – | – | 3.0E-04 | I |
| Phosphorotrithioic acid, S,S,S-tributyl ester | 78-48-8 | – | – | 8.4E-02 | EPA –OP | 1.0E-03 | EPA –OP | – | – | – | – |
| Phosphorus, total* | 7723-14-0 | – | – | – | – | – | – | – | – | – | – |
| Phosphorus, white | 7723-14-0 | D | I | – | – | 2.0E-05 | I | – | – | – | – |
| Phthalic anhydride | 85-44-9 | – | – | – | – | 2.0E+00 | I | – | – | 1.2E-01 | H |
| Picloram | 1918-02-1 | – | – | – | – | 7.0E-02 | I | – | – | – | – |
| Picoline, 2- (2-methylpyridine) | 109-06-8 | – | – | – | – | 9.0E-03 | T | – | – | – | – |
| Polybrominated biphenyls (PBBs) | 67774-32-7 | B2 | H | 8.9E+00 | H | 7.0E-06 | H | – | – | – | – |
| Polychlorinated biphenyls (PCBs) | 1336-36-3 | B2 | I | 2.0E+00 | I | 2.0E-05 | I | 5.7E-04 | I | – | – |
| Potassium* | 7440-09-7 | – | – | – | – | – | – | – | – | – | – |
| Primene | 68955-53-3 | – | – | – | – | 6.0E-03 | T | – | – | – | – |
| Prometon (pramitol) | 1610-18-0 | – | – | – | – | 1.5E-02 | I | – | – | – | – |
| Prometryn | 7287-19-6 | – | – | – | – | 4.0E-02 | T | – | – | – | – |
| Pronamide | 23950-58-5 | – | – | – | – | 7.5E-02 | I | – | – | – | – |
| Propanal (propionaldehyde) | 123-38-6 | – | – | – | – | 8.0E-03 | T | – | – | 8.0E-03 | I |
| Propane, 1-bromo- | 106-94-5 | – | – | – | – | 3.6E-02 | T | – | – | – | – |
| Propanil | 709-98-8 | – | – | – | – | 5.0E-03 | I | – | – | – | – |
| Propanoic acid (propionic acid) | 79-09-4 | – | – | – | – | 5.0E-01 | T | – | – | – | – |
| Propanol, 1- | 71-23-8 | – | – | – | – | 2.0E-01 | T | – | – | – | – |
| Propargite | 2312-35-8 | – | – | – | – | 2.0E-02 | I | – | – | – | – |
| Propargyl alcohol | 107-19-7 | – | – | – | – | 2.0E-03 | I | – | – | – | – |
| Propazine | 139-40-2 | C | EPA –OP | 4.5E-02 | EPA –OP | 2.0E-02 | I | – | – | – | – |
| Propham | 122-42-9 | – | – | – | – | 2.0E-02 | I | – | – | – | – |
| Propionitrile (propane nitrile) | 107-12-0 | – | – | – | – | 4.0E-04 | T | – | – | – | – |
| Propyl acetate, n- | 109-60-4 | – | – | – | – | 9.0E-02 | T | – | – | – | – |
| Propylbenzene, n- | 103-65-1 | – | – | – | – | 4.0E-02 | N | – | – | 4.0E-01 | T |
| Propylene glycol | 57-55-6 | – | – | – | – | 2.0E+01 | PPRTV | – | – | 3.0E-03 | PPRTV |
| Propylene glycol monomethyl ether | 107-98-2 | – | – | – | – | 7.0E-01 | H | – | – | 2.0E+00 | I |
| Propylene oxide | 75-56-9 | B2 | I | 2.4E-01 | I | – | – | 3.7E-06 | I | 3.0E-02 | I |
| Propylene tetramer | 6842-15-5 | – | – | – | – | 1.0E-01 | T | – | – | 1.0E+00 | T |
| Prothiofos (Tokuthion) | 34643-46-4 | – | – | – | – | 1.0E-04 | T | – | – | – | – |
| Pyrene | 129-00-0 | D | I | – | – | 3.0E-02 | I | – | – | – | – |
| Pyridine | 110-86-1 | – | – | – | – | 1.0E-03 | I | – | – | – | – |
| Quinoline | 91-22-5 | B2 | I | 3.0E+00 | I | – | – | – | – | – | – |
| Ronnel | 299-84-3 | – | – | – | – | 5.0E-02 | H | – | – | – | – |
| Safrole | 94-59-7 | C | OEHHA | 2.2E-01 | OEHHA | – | – | 6.3E-05 | OEHHA | – | – |
| Selenium | 7782-49-2 | D | I | – | – | 5.0E-03 | I | – | – | – | – |
| Selenourea | 630-10-4 | – | – | – | – | 5.0E-03 | H | – | – | – | – |
| Silver | 7440-22-4 | D | I | – | – | 5.0E-03 | I | – | – | – | – |
| Simazine | 122-34-9 | C | H | 1.2E-01 | H | 5.0E-03 | I | – | – | – | – |
| Sodium* | 7440-23-5 | – | – | – | – | – | – | – | – | – | – |

# Toxicity Factors[1]

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | Class[2] | Ref[3] | SFo (mg/kg-day)-1 | Ref[3] | RfDo (mg/kg-day) | Ref[3] | URF $(\mu g/m^3)^{-1}$ | Ref[3] | RfC ($mg/m^3$) | Ref[3] |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sodium hypochlorite | 7681-52-9 | – | – | – | – | 2.1E-01 | T | – | – | 3.1E-04 | T |
| Sodium polyacrylate | 9003-04-7 | – | – | – | – | 5.0E-01 | T | – | – | 1.0E-03 | T |
| Strontium | 7440-24-6 | – | – | – | – | 6.0E-01 | I | – | – | – | – |
| Strychnine | 57-24-9 | – | – | – | – | 3.0E-04 | I | – | – | – | – |
| Styrene | 100-42-5 | – | – | – | – | 2.0E-01 | I | – | – | 4.7E-01 | T |
| Sulfate* | 14808-79-8 | – | – | – | – | – | – | – | – | – | – |
| Sulfide* | 18496-25-8 | – | – | – | – | – | – | – | – | – | – |
| Sulfolane | 126-33-0 | – | – | – | – | 1.3E-02 | T | – | – | 6.4E-03 | T |
| Sulfur* | 7704-34-9 | – | – | – | – | – | – | – | – | – | – |
| Sulprofos (Bolstar) | 35400-43-2 | – | – | – | – | 3.0E-03 | EPA –OP | – | – | – | – |
| Tebuconazole | 107534-96-3 | C | EPA –OP | – | – | 3.0E-02 | EPA –OP | – | – | – | – |
| Tebuthiuron | 34014-18-1 | – | – | – | – | 7.0E-02 | I | – | – | – | – |
| Terbufos | 13071-79-9 | – | – | – | – | 2.5E-05 | H | – | – | – | – |
| Tert-amyl ethyl ether (TAEE) | 919-94-8 | – | – | – | – | 4.0E-02 | T | – | – | – | – |
| Tert-amyl-methyl ether (TAME) | 994-05-8 | – | – | – | – | 4.0E-02 | T | – | – | – | – |
| Tert-butyl alcohol (2-methyl-2-propanol) | 75-65-0 | – | – | – | – | 9.0E-02 | T | – | – | – | – |
| Tetrachlorobenzene, 1,2,3,4- | 634-66-2 | – | – | – | – | 3.0E-04 | T | – | – | – | – |
| Tetrachlorobenzene, 1,2,3,5- | 634-90-2 | – | – | – | – | 3.0E-04 | T | – | – | – | – |
| Tetrachlorobenzene, 1,2,4,5- | 95-94-3 | – | – | – | – | 3.0E-04 | I | – | – | – | – |
| Tetrachloroethane, 1,1,1,2- | 630-20-6 | C | I | 2.6E-02 | I | 3.0E-02 | I | 7.4E-06 | I | – | – |
| Tetrachloroethane, 1,1,2,2- | 79-34-5 | LC | I | 2.0E-01 | I | 2.0E-02 | I | – | – | – | – |
| Tetrachloroethylene | 127-18-4 | LC | T | 2.1E-03 | I | 2.1E-02 | T | 3.8E-07 | T | 3.7E-01 | T |
| Tetrachlorophenol, 2,3,4,5- | 4901-51-3 | – | – | – | – | 3.0E-02 | T | – | – | – | – |
| Tetrachlorophenol, 2,3,4,6- | 58-90-2 | – | – | – | – | 3.0E-02 | I | – | – | – | – |
| Tetrachlorophenol, 2,3,5,6- | 935-95-5 | – | – | – | – | 3.0E-02 | T | – | – | – | – |
| Tetrachlorvinphos (Stirophos) | 22248-79-9 | – | – | – | – | 4.2E-02 | EPA –OP | – | – | – | – |
| Tetradifon | 116-29-0 | – | – | – | – | 2.0E-02 | T | – | – | – | – |
| Tetraethyl dithiopyrophosphate (sulfotep) | 3689-24-5 | – | – | – | – | 5.0E-04 | I | – | – | – | – |
| Tetraethyl lead | 78-00-2 | – | – | – | – | 1.0E-07 | I | – | – | – | – |
| Tetraethyl pyrophosphate (TEPP) | 107-49-3 | – | – | – | – | 1.1E-05 | T | – | – | – | – |
| Tetraethylene glycol | 112-60-7 | – | – | – | – | 3.3E-01 | T | – | – | – | – |
| Tetrahydrofuran | 109-99-9 | SEC | I | 7.6E-03 | N | 9.0E-01 | I | 1.9E-06 | N | 2.0E+00 | I |
| Tetrahydropyran | 142-68-7 | – | – | 7.6E-03 | T | 2.0E-01 | T | 1.9E-06 | T | – | – |
| Tetraoxadodecane, 2,5,8,11- | 112-49-2 | – | – | – | – | 2.5E-02 | T | – | – | – | – |
| Thallium | 7791-12-0 | D | I | – | – | 6.7E-05 | T | – | – | – | – |
| Thiofanox | 39196-18-4 | – | – | – | – | 3.0E-04 | H | – | – | – | – |
| Thionazin | 297-97-2 | – | – | – | – | 7.0E-05 | T | – | – | – | – |
| Thiophanate-methyl | 23564-05-8 | – | – | – | – | 8.0E-02 | I | – | – | – | – |
| Thiram | 137-26-8 | – | – | – | – | 5.0E-03 | I | – | – | – | – |
| Tin | 7440-31-5 | – | – | – | – | 6.0E-01 | H | – | – | – | – |
| Titanium | 7440-32-6 | – | – | – | – | 5.0E+00 | T | – | – | – | – |
| Toluene | 108-88-3 | D | I | – | – | 8.0E-02 | I | – | – | 4.1E+00 | T |
| Toluene diisocyanate, 2,4/2,6- | 26471-62-5 | – | – | – | – | – | – | – | – | 7.0E-05 | I |
| Toluenediamine, 2,4- | 95-80-7 | B2 | H | 3.2E+00 | H | – | – | – | – | – | – |

# Toxicity Factors[1]

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | Class[2] | Ref[3] | SFo (mg/kg-day)-1 | Ref[3] | RfDo (mg/kg-day) | Ref[3] | URF $(\mu g/m^3)^{-1}$ | Ref[3] | RfC ($mg/m^3$) | Ref[3] |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Toluenediamine, 2,6- | 823-40-5 | – | – | – | | 3.0E-02 | PPRTV | – | – | – | – |
| Toluidine, o- | 95-53-4 | LC | PPRTV | 1.6E-02 | PPRTV | – | – | 5.1E-05 | OEHHA | – | – |
| Toluidine, p- | 106-49-0 | SEC | PPRTV | 3.0E-02 | PPRTV | – | – | – | – | – | – |
| Toxaphene | 8001-35-2 | B2 | I | 1.1E+00 | I | 3.1E-04 | T | 3.2E-04 | I | – | – |
| TPH, TX1005, C6-C12 | NA | – | – | – | – | 4.0E-02 | – | – | – | 2.0E-01 | – |
| TPH, TX1005, >C12-C28 | NA | – | – | – | – | 4.0E-02 | – | – | – | 2.0E-01 | – |
| TPH, TX1005, >C12-C35 | NA | – | – | – | – | 4.0E-02 | – | – | – | 2.0E-01 | – |
| TPH, TX1005, >C28-C35 | NA | – | – | – | – | 4.0E-02 | – | – | – | 2.0E-01 | – |
| TP Silvex, 2,4,5- | 93-72-1 | D | I | – | | 8.0E-03 | I | – | – | – | – |
| Triademenol | 55219-65-3 | – | – | – | – | 3.0E-02 | T | – | – | – | – |
| Triallate | 2303-17-5 | – | – | – | – | 1.3E-02 | I | – | – | – | – |
| Triaminotrinitrobenzene (TATB) | 3058-38-6 | – | – | – | – | 3.0E-03 | T | – | – | – | – |
| Tributyltin oxide | 56-35-9 | D | I | – | – | 3.0E-04 | I | – | – | – | – |
| Trichloro-1,2,2-trifluoroethane, 1,1,2- | 76-13-1 | – | – | – | – | 3.0E+01 | I | – | – | 5.0E+00 | PPRTV |
| Trichlorobenzene, 1,2,3- | 87-61-6 | – | – | – | – | 3.0E-03 | T | – | – | 2.0E-03 | T |
| Trichlorobenzene, 1,2,4- | 120-82-1 | LC | PPRTV | 2.9E-02 | PPRTV | 1.0E-02 | I | – | – | 2.0E-03 | PPRTV |
| Trichlorobenzene, 1,3,5- | 108-70-3 | – | – | – | – | 3.0E-03 | T | – | – | 2.0E-03 | T |
| Trichloroethane, 1,1,1- | 71-55-6 | IIACP | T | – | – | 2.0E+00 | I | – | – | 5.1E+00 | T |
| Trichloroethane, 1,1,2- | 79-00-5 | C | I | 5.7E-02 | I | 4.0E-03 | I | 1.6E-05 | I | – | – |
| Trichloroethylene | 79-01-6 | CH | I | 4.6E-02 | I | 5.0E-04 | I | 4.1E-06 | I | 2.0E-03 | I |
| Trichlorofluoromethane | 75-69-4 | – | – | – | – | 3.0E-01 | I | – | – | – | – |
| Trichloronate | 327-98-0 | – | – | – | – | 3.0E-03 | T | – | – | – | – |
| Trichlorophenol, 2,3,4- | 15950-66-0 | – | – | – | – | 1.0E-01 | T | – | – | – | – |
| Trichlorophenol, 2,3,5- | 933-78-8 | – | – | – | – | 1.0E-01 | T | – | – | – | – |
| Trichlorophenol, 2,3,6- | 933-75-5 | – | – | – | – | 1.0E-01 | T | – | – | – | – |
| Trichlorophenol, 2,4,5- | 95-95-4 | – | – | – | – | 1.0E-01 | I | – | – | – | – |
| Trichlorophenol, 2,4,6- | 88-06-2 | B2 | I | 1.1E-02 | I | 1.0E-03 | PPRTV | 3.1E-06 | I | – | – |
| Trichlorophenol, 3,4,5- | 609-19-8 | – | – | – | – | 1.0E-01 | T | – | – | – | – |
| Trichlorophenoxyacetic acid, 2,4,5- | 93-76-5 | – | – | – | – | 1.0E-02 | I | – | – | – | – |

# Toxicity Factors[1]

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | Class[2] | Ref[3] | SFo (mg/kg-day)-1 | Ref[3] | RfDo (mg/kg-day) | Ref[3] | URF $(\mu g/m^3)^{-1}$ | Ref[3] | RfC ($mg/m^3$) | Ref[3] |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Trichloropropane, 1,1,2- | 598-77-6 | – | – | – | – | 5.0E-03 | I | – | – | 3.0E-04 | T |
| Trichloropropane, 1,2,3- | 96-18-4 | LC | I | 3.0E+01 | I | 4.0E-03 | I | – | – | 3.0E-04 | I |
| Triethanolamine | 102-71-6 | – | – | – | – | 2.0E-01 | T | – | – | 2.5E-02 | T |
| Triethylamine | 121-44-8 | – | – | – | – | – | | – | – | 7.0E-03 | I |
| Triethylene glycol | 112-27-6 | IIACP | PPRTV | – | – | 2.0E+00 | PPRTV | – | – | – | – |
| Triethylphosphorothioate, O, O, O- | 126-68-1 | – | – | – | – | 8.3E-06 | T | – | – | – | – |
| Trifluralin | 1582-09-8 | C | I | 7.7E-03 | I | 7.5E-03 | I | – | – | – | – |
| Trimethylamine | 75-50-3 | – | – | – | – | – | | – | – | 7.0E-03 | T |
| Trimethylbenzene, 1,2,3- | 526-73-8 | – | – | – | – | 3.4E-02 | T | – | – | 1.8E-01 | T |
| Trimethylbenzene, 1,2,4- | 95-63-6 | – | – | – | – | 3.4E-02 | T | – | – | 1.8E-01 | T |
| Trimethylbenzene, 1,3,5- | 108-67-8 | – | – | – | – | 3.4E-02 | T | – | – | 1.8E-01 | T |
| Trinitrobenzene, 1,3,5- | 99-35-4 | – | – | – | – | 3.0E-02 | I | – | – | – | – |
| Trinitrophenylmethylnitramine (tetryl; nitramine) | 479-45-8 | – | – | – | – | 2.0E-03 | PPRTV | – | – | – | – |
| Trinitrotoluene, 2,4,6- | 118-96-7 | C | I | 3.0E-02 | I | 5.0E-04 | I | – | – | – | – |
| Tungsten (as sodium tungstate dihydride) | 7440-33-7 | – | – | – | – | 1.0E-03 | T | – | – | 5.3E-03 | T |
| Uranium (soluble salts) | 7440-61-1 | – | – | – | – | 3.0E-03 | I | – | – | 4.0E-05 | A |
| Valeric acid (pentanoic acid) | 109-52-4 | – | – | – | – | 5.0E-01 | T | – | – | 1.0E-03 | T |
| Vanadium | 7440-62-2 | – | – | – | – | 1.8E-03 | T | – | – | 3.0E-05 | T |
| Vernam | 1929-77-7 | – | – | – | – | 1.0E-03 | I | – | – | – | |
| Vinyl acetate | 108-05-4 | – | – | – | – | 1.0E+00 | H | – | – | 2.0E-01 | I |
| Vinyl chloride | 75-01-4 | A | I | 1.5E+00 | I | 3.0E-03 | I | 8.4E-06 | T | 6.0E-02 | T |
| Vinylcyclohexane | 695-12-5 | – | – | – | – | 5.0E-01 | T | – | – | – | – |
| Warfarin | 81-81-2 | – | – | – | – | 3.0E-04 | I | – | – | – | – |
| Xylene, m- | 108-38-3 | – | – | – | – | 2.0E+00 | H | – | – | 6.1E-01 | T |
| Xylene, o- | 95-47-6 | – | – | – | – | 2.0E+00 | H | – | – | 6.1E-01 | T |
| Xylene, p- | 106-42-3 | – | – | – | – | 2.0E+00 | H | – | – | 6.1E-01 | T |
| Xylenes | 1330-20-7 | D | I | – | – | 2.0E-01 | I | – | – | 6.1E-01 | T |
| Zinc | 7440-66-6 | D | I | – | – | 3.0E-01 | I | – | – | – | – |

# Toxicity Factors[1]

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | Class[2] | Ref[3] | SFo (mg/kg-day)-1 | Ref[3] | RfDo (mg/kg-day) | Ref[3] | URF $(\mu g/m^3)^{-1}$ | Ref[3] | RfC ($mg/m^3$) | Ref[3] |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 6 C aliphatics (TPH) (>53% n-hexane content) | NA | – | – | – | – | 6.0E-02 | – | – | – | 6.7E-01 | – |
| 6 C aliphatics (TPH) (<53% n-hexane content) | NA | – | – | – | – | 6.0E-02 | – | – | – | 1.8E+01 | – |
| >6-8 C aliphatics (TPH) (>53% n-hexane content) | NA | – | – | – | – | 6.0E-02 | – | – | – | 6.7E-01 | – |
| >6-8 C aliphatics (TPH) (<53% n-hexane content) | NA | – | – | – | – | 6.0E-02 | – | – | – | 1.8E+01 | – |
| >8-10 C aliphatics (TPH) | NA | – | – | – | – | 1.0E-01 | – | – | – | 5.0E-01 | – |
| >10-12 C aliphatics (TPH) | NA | – | – | – | – | 1.0E-01 | – | – | – | 5.0E-01 | – |
| >12-16 C aliphatics (TPH) | NA | – | – | – | – | 1.0E-01 | – | – | – | 5.0E-01 | – |
| >16-21 C aliphatics (TPH) | NA | – | – | – | – | 2.0E+00 | – | – | – | – | – |
| >16-21 C aliphatics (TPH) (for transformer mineral oil releases only) | NA | – | – | – | – | 1.6E+00 | – | – | – | – | – |
| >21-35 C aliphatics (TPH) | NA | – | – | – | – | 2.0E+00 | – | – | – | – | – |
| >21-35 C aliphatics (TPH) (for transformer mineral oil releases only) | NA | – | – | – | – | 1.6E+00 | – | – | – | – | – |
| >7-8 C aromatics (TPH) | NA | – | – | – | – | 1.0E-01 | – | – | – | 1.9E+00 | – |
| >8-10 C aromatics (TPH) | NA | – | – | – | – | 4.0E-02 | – | – | – | 2.0E-01 | – |
| >10-12 C aromatics (TPH) | NA | – | – | – | – | 4.0E-02 | – | – | – | 2.0E-01 | – |
| >12-16 C aromatics (TPH) | NA | – | – | – | – | 4.0E-02 | – | – | – | 2.0E-01 | – |
| >16-21 C aromatics (TPH) | NA | – | – | – | – | 3.0E-02 | – | – | – | – | – |
| >21-35 C aromatics (TPH) | NA | – | – | – | – | 3.0E-02 | – | – | – | – | – |

**For questions on toxicity factors, contact the Toxicology Division at 877-992-8370.**

**Footnotes**

**1** The general hierarchy of the sources for the toxicity factors is: USEPA Integrated Risk Information System (IRIS); USEPA Provisional Peer Reviewed Toxicity Values (PPRTVs); USEPA Health Effects Assessment Summary Tables (HEAST); USEPA National Center for Environmental Assessment (NCEA); TCEQ Toxicology Division Chronic Remediation-Specific Effects Screening Levels (RS-ESLs); Agency for Toxic Substances Disease Registry Chronic Minimal Risk Levels (ATSDR MRLs); other scientifically valid sources as approved by the executive director on a chemical-specific basis.

**2** U.S. EPA 2005 carcinogen guideline class descriptors: CH = carcinogenic to humans; LC = likely to be carcinogenic to humans; SEC = suggestive evidence of carcinogenic potential; NLC = not likely to be carcinogenic to humans; IIACP = inadequate information to assess carcinogenic potential. These descriptors may be specific to the exposure pathway for which a carcinogenic toxicity factor was developed. U.S. EPA 1986 carcinogenic classes: A = human carcinogen; B1 = probable human carcinogen with limited evidence of carcinogenicity; B2 = probable human carcinogen with inadequate evidence of carcinogenicity; C = possible human carcinogen; D = not classifiable as to human carcinogenicity; E = evidence of non-carcinogenicity in humans.

**3** Reference (Ref): A = ATSDR chronic MRL; CU = Cornell University Pesticide Management Education Program; EPA-OP = EPA Office of Pesticide Programs; H = HEAST, July, 1997; I = IRIS; MA DEP = Massachusetts Department of Environmental Protection; N = NCEA; NYSDOH = New York State Department of Health; OEHHA = Cal/EPA Office of Environmental; PPRTV = EPA Provisional Peer Reviewed Toxicity Value; T = TCEQ Toxicology Division.

**4** The first value represents the toxicity value to be used for evaluating all residential and commercial/industrial soil pathways for cadmium; the second value represents the toxicity value to be used for evaluating the groundwater dermal pathway (if applicable) for cadmium; as an MCL is available, a risk-based calculation for the groundwater ingestion and groundwater protection pathways is not appropriate.

**5** The RfC value is considered protective of the carcinogenic effects of formaldehyde due to inhalation based on the TCEQ Development Support Document for Formaldehyde posted August 7, 2008.

**6** The first value represents the toxicity value to be used for evaluating all residential and commercial/industrial soil pathways and all commercial/industrial groundwater pathways for manganese; the second value represents the toxicity value to be used for evaluating all residential groundwater pathways for manganese.

**7** Site-specific PCLs for mercury may vary based on the pH-dependent Kd value (see Figure:30 TAC §350.73(f)(1)(C)).

**8** Compound with CAS# 104-35-8 nonylphenol ethoxylate in 2006 tox-trrp table has different CAS# 9016-45-9 nonylphenol ethoxylate beginning in the 2010 toxicity factors table.

***** These compounds, acetic acid, ammonium polyphosphate, ammonium salts, calcium, chloride, eyhtylene, hydrogen chloride (hydrochloric acid), iron, limonene, d-, magnesium, phosphorus, total, potassium, sodium, sulfate, sulfide, and sulfure, are not necessarily of concern from a human health standpoint, therefore calculation of human health-based values is not required. However, aesthetics and ecological criteria would still apply. See table entitled "Compounds for which Calculation of a Human Health PCL is Not Required" available on the TCEQ website at http://www.tceq.state.tx.us/remediation/trrp/trrp.htm.

**SFo** - Oral Slope Factor

**RfC** - Inhalation Reference Concentration

**RfDo** - Oral Reference Dose

**URF** - Inhalation Unit Risk Factor

This table shows the toxicity factors used to calculate protective concentration levels.

end of worksheet

# Chemical/Physical Properties

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | $Br_{abg}$ ((µg/g DW)/(µg/g soil)) | $Br_{bg}$ ((µg/g DW)/((µg/g soil)) | Physical State | Type | MW (g/mole) | H_unitless (unitless) | $LogK_{oc}$ (unitless) | $LogK_d$ (unitless) | $D_{air}$ ($cm^2/s$) | $D_{wat}$ ($cm^2/s$) | Solubility (mg/l) | Vapor_P (mm Hg) | $logK_{ow}$ (unitless) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Acenaphthene | 83-32-9 | – | – | s | O | 1.54E+02 | 6.44E-03 | 3.60E+00 | – | 4.21E-02 | 7.69E-06 | 4.24E+00 | 3.75E-03 | 4.15E+00 |
| Acenaphthylene | 208-96-8 | – | – | s | O | 1.52E+02 | 4.74E-03 | 3.84E+00 | – | 4.39E-02 | 7.06E-06 | 3.93E+00 | 2.90E-02 | 3.94E+00 |
| Acetaldehyde | 75-07-0 | – | – | g | O | 4.41E+01 | 2.75E-03 | 4.19E-01 | – | 1.24E-01 | 1.23E-05 | 1.00E+06 | 9.00E+02 | 4.30E-01 |
| Acetate, 2-ethoxyethanol | 111-15-9 | – | – | l | O | 1.32E+02 | 1.37E-04 | 8.17E-01 | – | 6.13E-02 | 6.70E-06 | 1.02E+05 | 1.93E+00 | 9.33E-01 |
| Acetate, isoamyl | 123-92-2 | – | – | l | O | 1.30E+02 | 2.04E-02 | 1.87E+00 | – | 6.01E-02 | 6.40E-06 | 1.13E+03 | 3.25E+00 | 2.27E+00 |
| Acetate, isobutyl | 110-19-0 | – | – | l | O | 1.16E+02 | 1.98E-02 | 1.46E+00 | – | 6.62E-02 | 6.88E-06 | 3.81E+03 | 1.19E+01 | 1.75E+00 |
| Acetate, sec-butyl | 105-46-4 | – | – | l | O | 1.16E+02 | 3.02E-02 | 1.54E+00 | – | 6.69E-02 | 6.91E-06 | 3.34E+03 | 1.59E+01 | 1.85E+00 |
| Acetic acid* | 64-19-7 | – | – | – | – | – | – | – | – | – | – | – | – | – |
| Acetone (2-propanone) | 67-64-1 | – | – | l | O | 5.81E+01 | 1.61E-03 | -2.44E-01 | – | 1.24E-01 | 1.14E-05 | 6.00E+05 | 2.27E+02 | -2.35E-01 |
| Acetone cyanohydrin | 75-86-5 | – | – | l | O | 8.51E+01 | 1.34E-04 | -2.16E-01 | – | 8.12E-02 | 9.09E-06 | 1.83E+06 | 8.00E-01 | -3.45E-02 |
| Acetonitrile | 75-05-8 | – | – | l | O | 4.11E+01 | 1.21E-03 | -3.30E-01 | – | 1.28E-01 | 1.44E-05 | 2.05E+05 | 9.00E+01 | -3.40E-01 |
| Acetophenone | 98-86-2 | – | – | l | O | 1.20E+02 | 4.45E-04 | 1.56E+00 | – | 6.00E-02 | 8.73E-06 | 5.50E+03 | 3.95E-01 | 1.67E+00 |
| Acetylaminofluorene, 2- | 53-96-3 | – | – | s | O | 2.23E+02 | 7.00E-10 | 2.63E+00 | – | 4.25E-02 | 6.08E-06 | 1.66E+00 | 9.52E-11 | 2.80E+00 |
| Acifluorfen, sodium | 62476-59-9 | – | – | s | O | 3.84E+02 | 8.31E-13 | 2.05E+00 | – | 1.45E-02 | 4.40E-06 | 2.50E+05 | 9.75E-09 | 3.73E-01 |
| Acridine | 260-94-6 | – | – | s | O | 1.79E+02 | 3.93E-06 | 3.40E+00 | – | 5.11E-02 | 6.66E-06 | 2.24E+01 | 8.96E-06 | 3.46E+00 |
| Acrolein | 107-02-8 | – | – | l | O | 5.61E+01 | 1.83E-04 | -2.80E-01 | – | 1.05E-01 | 1.12E-05 | 2.00E+05 | 2.65E+02 | -1.00E-01 |
| Acrylamide | 79-06-1 | – | – | s | O | 7.11E+01 | 1.33E-08 | -6.60E-01 | – | 9.70E-02 | 1.27E-05 | 2.20E+06 | 7.00E-03 | -8.07E-01 |
| Acrylic acid | 79-10-7 | – | – | l | O | 7.21E+01 | 1.32E-05 | 5.43E-02 | – | 9.08E-02 | 1.06E-05 | 1.00E+06 | 3.72E+00 | 4.42E-01 |
| Acrylonitrile | 107-13-1 | – | – | l | O | 5.31E+01 | 4.57E-03 | 4.00E-02 | – | 1.22E-01 | 1.34E-05 | 7.50E+04 | 1.10E+02 | 2.09E-01 |
| Adipic acid (hexanedioic acid) | 124-04-9 | – | – | s | O | 1.46E+02 | 1.80E-11 | -6.56E+00 | – | 6.13E-02 | 7.90E-06 | 7.72E+04 | 1.74E-07 | 1.25E-01 |
| Alachlor | 15972-60-8 | – | – | s | O | 2.70E+02 | 8.62E-07 | 2.28E+00 | – | 1.94E-02 | 5.83E-06 | 2.40E+02 | 2.20E-05 | 3.37E+00 |
| Aldicarb | 116-06-3 | – | – | s | O | 1.90E+02 | 5.82E-08 | 1.20E+00 | – | 3.05E-02 | 7.20E-06 | 6.00E+03 | 2.90E-05 | 1.36E+00 |
| Aldicarb sulfone | 1646-88-4 | – | – | s | O | 2.22E+02 | 1.10E-07 | 2.30E-01 | – | 5.55E-02 | 5.79E-06 | 8.00E+03 | 9.00E-05 | -6.66E-01 |
| Aldrin | 309-00-2 | – | – | s | O | 3.65E+02 | 7.07E-03 | 4.68E+00 | – | 1.32E-02 | 4.86E-06 | 7.84E-02 | 1.67E-05 | 6.75E+00 |
| Allyl alcohol | 107-18-6 | – | – | l | O | 5.81E+01 | 2.08E-04 | 5.10E-01 | – | 1.14E-01 | 1.10E-05 | 3.20E+05 | 2.63E+01 | 1.70E-01 |
| Allyl chloride | 107-05-1 | – | – | l | O | 7.65E+01 | 4.57E-01 | 1.43E+00 | – | 9.80E-02 | 1.08E-05 | 3.40E+03 | 3.60E+02 | 1.93E+00 |
| Aluminum | 7429-90-5 | 1.50E-03 | 6.50E-04 | s | M | 2.70E+01 | 0.00E+00 | – | 2.55E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.29E-01 |
| Ametryn | 834-12-8 | – | – | s | OB | 2.27E+02 | 7.33E-08 | 2.89E+00 | – | 4.24E-02 | 5.70E-06 | 1.85E+02 | 1.81E-07 | 2.88E+00 |
| Amino-2,6-dinitrotoluene, 4- | 19406-51-0 | – | – | s | O | 1.97E+02 | 1.74E-07 | 2.56E+00 | – | 5.60E-02 | 7.31E-06 | 3.64E+01 | 5.86E-07 | 2.62E+00 |
| Amino-4,6-dinitrotoluene, 2- | 35572-78-2 | – | – | s | O | 1.97E+02 | 1.19E-07 | 2.75E+00 | – | 5.60E-02 | 7.30E-06 | 1.73E+01 | 1.91E-07 | 2.80E+00 |
| Aminobiphenyl, 4- (1,1-biphenyl-4-amine) | 92-67-1 | – | – | s | O | 1.69E+02 | 1.84E-06 | 3.24E+00 | – | 5.25E-02 | 6.82E-06 | 7.14E+01 | 1.42E-05 | 3.24E+00 |
| Aminopyridine, 4- | 504-24-5 | – | – | s | O | 9.41E+01 | 2.44E-07 | -3.22E-01 | – | 8.02E-02 | 1.08E-05 | 7.66E+04 | 2.00E-03 | -1.12E-01 |
| Ammonia | 7664-41-7 | – | – | g | I | 1.70E+01 | 1.36E-02 | 4.90E-01 | – | 2.59E-01 | 6.93E-05 | 5.31E+05 | 7.47E+03 | 2.29E-01 |
| Ammonium polyphosphate* | 6833-79-9 | – | – | – | – | – | – | – | – | – | – | – | – | – |
| Ammonium salts* | Ammonium | – | – | – | – | – | – | – | – | – | – | – | – | – |
| Aniline | 62-53-3 | – | – | l | O | 9.31E+01 | 5.82E-05 | 9.60E-01 | – | 7.00E-02 | 8.30E-06 | 3.60E+04 | 6.69E-01 | 1.08E+00 |

# Chemical/Physical Properties

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | $Br_{abg}$ ((µg/g DW)/(µg/g soil)) | $Br_{bg}$ ((µg/g DW)/((µg/g soil)) | Physical State | Type | MW (g/mole) | H_unitless (unitless) | $LogK_{oc}$ (unitless) | $LogK_d$ (unitless) | $D_{air}$ ($cm^2/s$) | $D_{wat}$ ($cm^2/s$) | Solubility (mg/l) | Vapor_P (mm Hg) | $logK_{ow}$ (unitless) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Anthracene | 120-12-7 | – | – | s | O | 1.78E+02 | 4.61E-03 | 4.37E+00 | – | 3.24E-02 | 7.74E-06 | 4.34E-02 | 2.55E-05 | 4.34E+00 |
| Anthraquinone, 9,10- | 84-65-1 | – | – | s | O | 2.08E+02 | 3.58E-06 | 3.07E+00 | – | 4.81E-02 | 6.26E-06 | 1.22E-01 | 3.83E-08 | 3.12E+00 |
| Antimony | 7440-36-0 | 7.00E-02 | 3.00E-02 | s | M | 1.22E+02 | 0.00E+00 | – | 1.65E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Aramite | 140-57-8 | – | – | l | O | 3.35E+02 | – | 4.00E+00 | – | 4.23E-02 | 4.45E-06 | – | 1.23E-04 | 4.82E+00 |
| Arsenic | 7440-38-2 | 1.00E-02 | 8.00E-03 | s | M | 7.49E+01 | 0.00E+00 | – | 1.40E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 6.79E-01 |
| Arsine | 7784-42-1 | – | – | g | I | 7.79E+01 | 2.41E-01 | – | – | – | – | 2.00E+05 | 1.13E+04 | – |
| Atrazine | 1912-24-9 | – | – | s | O | 2.16E+02 | 1.09E-07 | 2.20E+00 | – | 5.64E-02 | 5.58E-06 | 3.00E+01 | 3.00E-07 | 2.82E+00 |
| Azinphos-methyl (guthion) | 86-50-0 | – | – | s | O | 3.17E+02 | 8.80E-11 | 2.40E+00 | – | 4.11E-02 | 5.34E-06 | 9.00E-02 | 4.70E-09 | 2.50E+00 |
| Azobenzene | 103-33-3 | – | – | l | O | 1.82E+02 | 1.89E-03 | 4.73E+00 | – | 4.96E-02 | 6.36E-06 | 1.60E+00 | 3.02E-04 | 4.77E+00 |
| Barium | 7440-39-3 | 4.90E-02 | 1.50E-02 | s | M | 1.37E+02 | 0.00E+00 | - | 1.04E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Bayleton | 43121-43-3 | – | – | s | O | 2.94E+02 | 2.76E-08 | 2.31E+00 | – | 4.00E-02 | 5.25E-06 | 4.74E+01 | 8.13E-08 | 2.47E+00 |
| Benefin (benfluralin) | 1861-40-1 | – | – | s | O | 3.35E+02 | 7.77E-06 | 5.22E+00 | – | 3.60E-02 | 4.92E-06 | 5.09E+00 | 2.16E-06 | 5.25E+00 |
| Benomyl | 17804-35-2 | – | – | s | O | 2.90E+02 | 2.08E-07 | 1.16E+00 | – | 4.49E-02 | 4.46E-06 | 2.90E+00 | 7.50E-09 | 1.37E+00 |
| Benz-a-anthracene | 56-55-3 | – | – | s | O | 2.28E+02 | 1.39E-04 | 5.55E+00 | – | 5.10E-02 | 9.00E-06 | 1.00E-02 | 1.54E-07 | 5.52E+00 |
| Benzaldehyde | 100-52-7 | – | – | l | O | 1.06E+02 | 2.04E-03 | 1.77E+00 | – | 7.28E-02 | 8.67E-06 | 3.58E+03 | 1.26E+00 | 1.90E+00 |
| Benzene | 71-43-2 | – | – | l | O | 7.81E+01 | 2.27E-01 | 1.82E+00 | – | 8.80E-02 | 9.80E-06 | 1.77E+03 | 9.50E+01 | 1.99E+00 |
| Benzenedicarbonitrile, 1,3- | 626-17-5 | – | – | s | O | 1.28E+02 | 1.88E-06 | 8.79E-01 | – | 6.71E-02 | 7.62E-06 | 1.28E+04 | 3.43E-03 | 1.03E+00 |
| Benzenedicarboxylic acid, 1,2-disodecyl ester | 26761-40-0 | – | – | l | O | 4.47E+02 | 6.07E-05 | 1.04E+01 | – | 2.52E-02 | 3.24E-06 | 1.17E-03 | 3.76E-12 | 1.06E+01 |
| Benzenethiol | 108-98-5 | – | – | l | O | 1.10E+02 | 1.83E-02 | 1.32E+00 | – | 7.60E-02 | 8.68E-06 | 7.60E+02 | 2.40E+00 | 2.69E+00 |
| Benzidine | 92-87-5 | – | – | s | O | 1.84E+02 | 1.62E-09 | 1.32E+00 | – | 3.40E-02 | 1.50E-05 | 5.20E+02 | 8.36E-08 | 1.34E+00 |
| Benzo-a-pyrene | 50-32-8 | – | – | s | O | 2.52E+02 | 4.70E-05 | 5.98E+00 | – | 4.30E-02 | 9.00E-06 | 1.62E-03 | 4.89E-09 | 6.11E+00 |
| Benzo-b-fluoranthene | 205-99-2 | – | – | s | O | 2.52E+02 | 4.99E-04 | 6.08E+00 | – | 2.26E-02 | 5.56E-06 | 1.50E-03 | 8.06E-08 | 6.11E+00 |
| Benzo-e-pyrene | 192-97-2 | – | – | s | O | 2.52E+02 | 2.38E-05 | 6.59E+00 | – | 4.05E-02 | 5.49E-06 | 8.60E-04 | 7.26E-10 | 6.70E+00 |
| Benzo-g,h,i-perylene | 191-24-2 | – | – | s | O | 2.76E+02 | 5.82E-06 | 6.20E+00 | – | 4.90E-02 | 5.65E-05 | 2.60E-04 | 1.00E-10 | 6.70E+00 |
| Benzoic acid | 65-85-0 | – | – | s | OA | 1.22E+02 | 1.39E-05 | -3.01E-01 | – | 5.36E-02 | 7.97E-06 | 3.50E+03 | 6.51E-03 | 1.87E+00 |
| Benzo-j-fluoranthene | 205-82-3 | – | – | s | O | 2.52E+02 | 4.63E-04 | 5.72E+00 | – | 4.15E-02 | 5.48E-06 | 2.50E-03 | 8.39E-08 | 6.11E+00 |
| Benzo-k-fluoranthene | 207-08-9 | – | – | s | O | 2.52E+02 | 4.45E-07 | 6.09E+00 | – | 2.26E-02 | 5.56E-06 | 5.50E-04 | 9.59E-11 | 6.11E+00 |
| Benzophenone | 119-61-9 | – | – | s | O | 1.82E+02 | 1.05E-04 | 3.40E+00 | – | 5.07E-02 | 6.03E-06 | 3.43E+01 | 3.61E-04 | 3.46E+00 |
| Benzotrichloride | 98-07-7 | – | – | l | O | 1.95E+02 | 2.03E-02 | 3.16E+00 | – | 5.91E-02 | 7.02E-06 | 1.00E+02 | 1.90E-01 | 3.90E+00 |
| Benzoyl peroxide | 94-36-0 | – | – | s | O | 2.42E+02 | 8.12E-06 | 3.02E+00 | – | 4.49E-02 | 5.48E-06 | 8.44E+00 | 5.17E-06 | 3.08E+00 |
| Benzyl alcohol | 100-51-6 | – | – | l | O | 1.08E+02 | 1.62E-05 | 1.08E+00 | – | 8.00E-02 | 8.00E-06 | 4.00E+04 | 1.06E-01 | 1.08E+00 |
| Benzyl chloride | 100-44-7 | – | – | l | O | 1.27E+02 | 1.66E-02 | 2.26E+00 | – | 7.50E-02 | 7.80E-06 | 4.93E+02 | 1.20E+00 | 2.79E+00 |
| Benzyl dichloride | 98-87-3 | – | – | l | O | 1.61E+02 | 8.28E-03 | 2.39E+00 | – | 6.14E-02 | 7.62E-06 | 2.09E+02 | 1.96E-01 | 2.92E+00 |
| Beryllium | 7440-41-7 | 3.60E-03 | 1.50E-03 | s | M | 9.01E+00 | 0.00E+00 | – | 1.36E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.71E-01 |
| Biphenyl, 1,1- | 92-52-4 | – | – | s | O | 1.54E+02 | 1.25E-02 | 3.71E+00 | – | 5.73E-02 | 6.71E-06 | 7.50E+00 | 2.94E-02 | 3.76E+00 |
| Biphenyl, 1,1'-, 2-phenoxy- | 6738-04-1 | – | – | s | O | 2.46E+02 | 2.82E-03 | 6.18E+00 | – | 4.08E-02 | 5.09E-06 | 1.92E-02 | 4.03E-06 | 6.29E+00 |

# Chemical/Physical Properties

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | $Br_{abg}$ ((µg/g DW)/ (µg/g soil)) | $Br_{bg}$ ((µg/g DW)/ ((µg/g soil)) | Physical State | Type | MW (g/mole) | H_unitless (unitless) | $LogK_{oc}$ (unitless) | $LogK_d$ (unitless) | $D_{air}$ ($cm^2/s$) | $D_{wat}$ ($cm^2/s$) | Solubility (mg/l) | Vapor_P (mm Hg) | $logK_{ow}$ (unitless) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Biquinoline, 2,2'- | 119-91-5 | – | – | s | O | 2.56E+02 | 2.85E-09 | 3.96E+00 | – | 4.18E-02 | 5.65E-06 | 1.70E+00 | 3.45E-10 | 4.02E+00 |
| Bis (2-chloroethoxy) methane | 111-91-1 | – | – | l | O | 1.73E+02 | 1.25E-03 | 2.49E+00 | – | 5.82E-02 | 7.11E-06 | 1.35E+03 | 1.78E-01 | 2.53E+00 |
| Bis (2-chloroethyl) ether | 111-44-4 | – | – | l | O | 1.43E+02 | 8.90E-04 | 1.19E+00 | – | 6.92E-02 | 7.53E-06 | 1.02E+04 | 1.34E+00 | 1.56E+00 |
| Bis (2-chloro-1-methyl) ether | 108-60-1 | – | – | l | O | 1.71E+02 | 4.16E-03 | 2.50E+00 | – | 6.00E-02 | 6.40E-06 | 1.70E+03 | 8.50E-01 | 2.58E+00 |
| Bis (2-chloromethyl) ether | 542-88-1 | – | – | l | O | 1.15E+02 | 4.99E-03 | 8.00E-02 | – | 8.32E-02 | 9.59E-06 | 3.80E+04 | 3.00E+01 | 5.75E-01 |
| Bis (2-ethyl-hexyl) phthalate | 117-81-7 | – | – | l | O | 3.91E+02 | 4.57E-04 | 5.83E+00 | – | 3.51E-02 | 3.66E-06 | 3.00E-01 | 6.45E-06 | 8.39E+00 |
| Bismuth | 7440-69-9 | – | – | s | M | 2.09E+02 | – | – | 7.30E-01 | – | – | – | – | – |
| Bisphenol A | 80-05-7 | – | – | – | O | 2.28E+02 | 2.18E-10 | 2.74E+00 | – | 5.09E-02 | 5.89E-06 | 1.00E+03 | 7.25E-07 | 3.32E+00 |
| Boron | 7440-42-8 | – | – | s | I | 1.08E+01 | 0.00E+00 | – | – | – | – | – | – | – |
| Bromacil | 314-40-9 | – | – | s | O | 2.61E+02 | 9.94E-09 | 2.11E+00 | – | 4.58E-02 | 5.80E-06 | 7.64E+02 | 6.32E-07 | 2.25E+00 |
| Bromo-2-chloroethane, 1- | 107-04-0 | – | – | l | O | 1.43E+02 | 3.79E-02 | 1.58E+00 | – | 8.35E-02 | 9.83E-06 | 4.93E+03 | 2.38E+01 | 1.90E+00 |
| Bromobenzene | 108-86-1 | – | – | l | O | 1.57E+02 | 8.38E-02 | 2.38E+00 | – | 7.05E-02 | 8.54E-06 | 2.98E+02 | 2.91E+00 | 2.91E+00 |
| Bromodichloromethane | 75-27-4 | – | – | l | O | 1.64E+02 | 1.32E-01 | 1.74E+00 | – | 2.98E-02 | 1.06E-05 | 4.50E+03 | 5.84E+01 | 1.61E+00 |
| Bromoform | 75-25-2 | – | – | l | O | 2.53E+02 | 2.56E-02 | 1.94E+00 | – | 1.49E-02 | 1.03E-05 | 3.20E+03 | 5.60E+00 | 1.79E+00 |
| Bromomethane | 74-83-9 | – | – | g | O | 9.49E+01 | 5.90E-01 | 1.02E+00 | – | 7.28E-02 | 1.21E-05 | 1.52E+04 | 1.64E+03 | 1.18E+00 |
| Bromophenyl phenylether, 4- | 101-55-3 | – | – | l | O | 2.49E+02 | 9.66E-03 | 5.16E+00 | – | 4.75E-02 | 6.28E-06 | 8.25E-01 | 5.85E-04 | 5.25E+00 |
| Butadiene, 1,3- | 106-99-0 | – | – | g | O | 5.41E+01 | 2.61E+00 | 2.11E+00 | – | 1.79E-01 | 1.02E-05 | 7.35E+02 | 2.11E+03 | 2.03E+00 |
| Butadiene, 2-methyl-1,3- (isoprene) | 78-79-5 | – | – | l | O | 6.81E+01 | 1.20E+00 | 1.82E+00 | – | 8.78E-02 | 8.10E-06 | 1.11E+03 | 3.58E+02 | 2.20E+00 |
| Butanal (butyraldehyde) | 123-72-8 | – | – | l | O | 7.21E+01 | 5.40E-03 | 7.44E-01 | – | 8.90E-02 | 9.48E-06 | 4.67E+04 | 6.35E+01 | 8.40E-01 |
| Butane, 2,3-dimethyl- | 79-29-8 | – | – | l | O | 8.62E+01 | 5.45E+01 | 3.14E+00 | – | 7.40E-02 | 6.94E-06 | 1.82E+01 | 2.11E+02 | 3.86E+00 |
| Butanoic acid (butyric acid) | 107-92-6 | – | – | l | O | 8.81E+01 | 7.86E-06 | -2.26E+00 | – | 7.80E-02 | 9.25E-06 | 8.96E+04 | 2.80E-01 | 1.02E+00 |
| Butanol, 2- | 78-92-2 | – | – | l | O | 7.41E+01 | 5.29E-04 | 7.35E-01 | – | 8.47E-02 | 8.60E-06 | 9.91E+04 | 1.29E+01 | 8.29E-01 |
| Butanol, 2-methyl-1- | 137-32-6 | – | – | l | O | 8.82E+01 | 5.70E-04 | 1.12E+00 | – | 7.40E-02 | 7.80E-06 | 3.25E+04 | 3.84E+00 | 1.31E+00 |
| Butanol, 2-methyl-2- | 75-85-4 | – | – | l | O | 8.81E+01 | 1.64E-03 | 1.09E+00 | – | 7.65E-02 | 7.72E-06 | 3.59E+04 | 1.22E+01 | 1.28E+00 |
| Butanol, n- | 71-36-3 | – | – | l | O | 7.41E+01 | 3.55E-04 | 7.70E-01 | – | 8.00E-02 | 9.30E-06 | 7.47E+04 | 6.54E+00 | 8.41E-01 |
| Butene, 1- | 106-98-9 | – | – | g | O | 5.61E+01 | 9.53E+00 | 2.02E+00 | – | 9.88E-02 | 8.42E-06 | 2.40E+02 | 1.61E+03 | 2.45E+00 |
| Butene, cis-2- | 590-18-1 | – | – | g | O | 5.61E+01 | 6.56E+00 | 1.95E+00 | – | 9.92E-02 | 8.50E-06 | 3.48E+02 | 1.46E+03 | 2.37E+00 |
| Butene, trans-2- | 624-64-6 | – | – | g | O | 5.61E+01 | 6.56E+00 | 1.95E+00 | – | 9.92E-02 | 8.50E-06 | 3.48E+02 | 1.46E+03 | 2.37E+00 |
| Butoxy ethanol, 2- (Ethylene glycol monobutyl ether; EGBE) | 111-76-2 | – | – | l | O | 1.18E+02 | 2.11E-05 | 1.09E+00 | – | 6.30E-02 | 7.46E-06 | 3.43E+04 | 1.12E-01 | 1.28E+00 |
| Butyl acetate | 123-86-4 | – | – | l | O | 1.16E+02 | 1.11E-02 | 1.42E+00 | – | 6.63E-02 | 7.45E-06 | 5.75E+03 | 1.00E+01 | 1.70E+00 |
| Butyl acrylate | 141-32-2 | – | – | l | O | 1.28E+02 | 1.16E-02 | 1.84E+00 | – | 6.00E-02 | 7.13E-06 | 1.43E+03 | 2.43E+00 | 2.22E+00 |
| Butyl benzyl phthalate | 85-68-7 | – | – | l | O | 3.12E+02 | 7.94E-05 | 4.14E+00 | – | 1.74E-02 | 4.83E-06 | 2.90E+00 | 1.20E-05 | 4.84E+00 |
| Butyl ether, n- (dibutyl ether) | 142-96-1 | – | – | l | O | 1.30E+02 | 4.84E-02 | 2.59E+00 | – | 5.65E-02 | 6.40E-06 | 4.90E+02 | 3.33E+00 | 3.18E+00 |
| Butyl methacrylate | 97-88-1 | – | – | l | O | 1.42E+02 | 1.98E-02 | 2.39E+00 | – | 5.69E-02 | 6.18E-06 | 3.68E+02 | 9.40E-01 | 2.92E+00 |
| Butylate | 2008-41-5 | – | – | l | O | 2.17E+02 | 3.50E-03 | 2.10E+00 | – | 4.89E-02 | 5.14E-06 | 4.60E+01 | 1.30E-02 | 3.85E+00 |
| Butylbenzene, n- | 104-51-8 | – | – | l | O | 1.34E+02 | 5.57E-01 | 3.48E+00 | – | 5.70E-02 | 6.74E-06 | 1.08E+01 | 8.14E-01 | 4.29E+00 |

# Chemical/Physical Properties

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | $Br_{abg}$ ((µg/g DW)/(µg/g soil)) | $Br_{bg}$ ((µg/g DW)/((µg/g soil)) | Physical State | Type | MW (g/mole) | H_unitless (unitless) | $LogK_{oc}$ (unitless) | $LogK_d$ (unitless) | $D_{air}$ ($cm^2/s$) | $D_{wat}$ ($cm^2/s$) | Solubility (mg/l) | Vapor_P (mm Hg) | $logK_{ow}$ (unitless) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Butylbenzene, sec- | 135-98-8 | – | – | l | O | 1.34E+02 | 5.07E-01 | 3.32E+00 | – | 5.75E-02 | 6.75E-06 | 1.81E+01 | 1.25E+00 | 4.09E+00 |
| Butylbenzene, tert- | 98-06-6 | – | – | l | O | 1.34E+02 | 8.56E-01 | 3.39E+00 | – | 5.84E-02 | 6.76E-06 | 1.51E+01 | 1.76E+00 | 4.18E+00 |
| Cacodylic acid | 75-60-5 | – | – | s | O | 1.38E+02 | 0.00E+00 | 3.80E-01 | – | – | – | 2.00E+06 | 0.00E+00 | 0.00E+00 |
| Cadmium | 7440-43-9 | 1.40E-01 | 6.40E-02 | s | M | 1.12E+02 | 0.00E+00 | – | 1.18E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | -7.10E-02 |
| Calcium* | 7440-70-2 | – | – | – | – | – | – | – | – | – | – | – | – | – |
| Caprolactam | 105-60-2 | – | – | s | O | 1.13E+02 | 2.19E-08 | 1.68E+00 | – | 6.71E-02 | 8.45E-06 | 3.40E+04 | 1.20E-04 | 5.62E-01 |
| Captan | 133-06-2 | – | – | s | O | 3.01E+02 | 2.99E-04 | 3.81E+00 | – | 1.83E-02 | 4.90E-06 | 5.00E-01 | 7.50E-06 | 1.84E+00 |
| Carbaryl | 63-25-2 | – | – | s | O | 2.01E+02 | 5.32E-07 | 2.37E+00 | – | 2.78E-02 | 5.60E-06 | 3.00E+01 | 1.36E-06 | 2.35E+00 |
| Carbazole | 86-74-8 | – | – | s | O | 1.67E+02 | 3.38E-03 | 3.39E+00 | – | 3.90E-02 | 7.03E-06 | 7.21E-01 | 2.66E-04 | 3.23E+00 |
| Carbofuran | 1563-66-2 | – | – | s | O | 2.21E+02 | 1.62E-07 | 1.46E+00 | – | 5.35E-02 | 5.40E-06 | 7.00E+02 | 8.30E-06 | 2.30E+00 |
| Carbon disulfide | 75-15-0 | – | – | l | O | 7.61E+01 | 6.13E-01 | 1.72E+00 | – | 1.04E-01 | 1.00E-05 | 2.30E+03 | 3.40E+02 | 1.94E+00 |
| Carbon tetrachloride | 56-23-5 | – | – | l | O | 1.54E+02 | 1.20E+00 | 2.27E+00 | – | 7.80E-02 | 8.80E-06 | 8.05E+02 | 1.12E+02 | 2.44E+00 |
| Carbophenothion | 786-19-6 | – | – | l | O | 3.43E+02 | 1.66E-04 | 5.07E+00 | – | 3.77E-02 | 5.00E-06 | 3.90E+00 | 3.45E-05 | 5.10E+00 |
| Carbosulfan | 55285-14-8 | – | – | l | O | 3.81E+02 | 2.15E-05 | 4.41E+00 | – | 3.76E-02 | 3.88E-06 | 3.00E-01 | 3.10E-07 | 5.57E+00 |
| Carboxin | 5234-68-4 | – | – | s | O | 2.35E+02 | 2.77E-08 | 2.93E+00 | – | 4.48E-02 | 6.14E-06 | 2.24E+01 | 4.82E-08 | 3.02E+00 |
| Chloral | 75-87-6 | – | – | l | O | 1.47E+02 | 2.66E-05 | 8.02E-01 | – | 3.85E-02 | 9.70E-06 | 8.30E+06 | 3.50E+01 | 1.19E+00 |
| Chloral hydrate (1,1-ethanediol, 2,2,2-trichloro-) | 302-17-0 | – | – | l | O | 1.65E+02 | 4.91E-09 | 7.27E-01 | – | 7.43E-02 | 9.16E-06 | 1.80E+06 | 9.79E-04 | 3.30E-01 |
| Chloramben (amiben; 3-amino-2,5-dichlorobenzoic acid) | 133-90-4 | – | – | s | O | 2.06E+02 | 3.49E-08 | 2.32E+00 | – | 5.71E-02 | 7.46E-06 | 6.26E+03 | 1.94E-05 | 2.48E+00 |
| Chlordane (technical) | 12789-03-6 | – | – | s | O | 4.10E+02 | 2.02E-03 | 5.08E+00 | – | 1.18E-02 | 4.37E-06 | 5.60E-02 | 1.00E-05 | 6.60E+00 |
| Chlordane, cis- (alpha chlordane) | 5103-71-9 | – | – | l | O | 4.10E+02 | 4.11E-03 | 6.85E+00 | – | 3.32E-02 | 4.66E-06 | 4.64E-02 | 8.51E-06 | 6.97E+00 |
| Chlordane, trans- (gamma chlordane) | 5103-74-2 | – | – | s | O | 4.10E+02 | 4.11E-03 | 5.59E+00 | – | 3.32E-02 | 4.65E-06 | 2.28E-02 | 4.17E-06 | 6.97E+00 |
| Chlorfenvinphos | 470-90-6 | – | – | l | O | 3.60E+02 | 2.31E-08 | 3.11E+00 | – | – | – | 1.45E+02 | 1.70E-07 | 4.15E+00 |
| Chloride* | 16887-00-6 | – | – | – | – | – | – | – | – | – | – | – | – | – |
| Chlorine | 7782-50-5 | – | – | g | I | 7.09E+01 | 2.86E+00 | – | – | 1.20E-01 | 1.48E-05 | 7.00E+03 | 5.17E+03 | 8.49E-01 |
| Chloro-1,3-butadiene, 2- | 126-99-8 | – | – | l | O | 8.85E+01 | 1.33E+00 | 2.00E+00 | – | 1.00E-01 | 1.00E-05 | 6.30E+02 | 2.12E+02 | 2.53E+00 |
| Chloro-2-propanol, 1- | 127-00-4 | – | – | s | O | 9.55E+01 | 9.64E-05 | 8.29E-01 | – | 8.28E-02 | 9.65E-06 | 1.10E+05 | 2.05E+00 | 9.48E-01 |
| Chloro-3-methylphenol, 4- | 59-50-7 | – | – | s | O | 1.43E+02 | 1.40E-05 | 2.94E+00 | – | 6.46E-02 | 8.01E-06 | 5.43E+03 | 9.75E-03 | 2.99E+00 |
| Chloroaniline, p- | 106-47-8 | – | – | s | O | 1.28E+02 | 4.86E-05 | 1.82E+00 | – | 4.83E-02 | 1.01E-05 | 3.90E+03 | 2.35E-02 | 1.72E+00 |
| Chlorobenzene | 108-90-7 | – | – | l | O | 1.13E+02 | 1.82E-01 | 2.33E+00 | – | 7.30E-02 | 8.70E-06 | 5.02E+02 | 1.21E+01 | 2.64E+00 |
| Chlorobenzilate | 510-15-6 | – | – | s | O | 3.25E+02 | 3.78E-06 | 2.90E+00 | – | 8.00E-02 | 8.00E-06 | 1.30E+01 | 2.20E-06 | 3.99E+00 |
| Chlorobromomethane (bromochloromethane) | 74-97-5 | – | – | l | O | 1.29E+02 | 3.69E-02 | 1.44E+00 | – | 9.65E-02 | 1.12E-05 | 2.04E+04 | 1.06E+02 | 1.32E+00 |
| Chlorodifluoromethane | 75-45-6 | – | – | g | O | 8.65E+01 | 1.22E+00 | 7.87E-01 | – | 1.13E-01 | 1.32E-05 | 2.90E+03 | 7.83E+03 | 8.94E-01 |
| Chloroethane (ethyl chloride) | 75-00-3 | – | – | l | O | 6.45E+01 | 2.12E-01 | 1.25E+00 | – | 1.50E-01 | 1.18E-05 | 2.00E+04 | 1.20E+03 | 1.58E+00 |
| Chloroethanol, 2- | 107-07-3 | – | – | l | O | 8.05E+01 | 3.23E-05 | 2.42E-01 | – | 9.60E-02 | 1.11E-05 | 5.51E+05 | 2.29E+00 | 2.06E-01 |
| Chloroethoxy ethene, 2- (2-chloroethylvinylether) | 110-75-8 | – | – | l | O | 1.07E+02 | 3.02E-02 | 1.57E+00 | – | 7.60E-02 | 8.55E-06 | 5.02E+03 | 2.60E+01 | 1.88E+00 |
| Chloroform | 67-66-3 | – | – | l | O | 1.19E+02 | 1.53E-01 | 1.67E+00 | – | 1.04E-01 | 1.00E-05 | 7.92E+03 | 1.98E+02 | 1.52E+00 |

# Chemical/Physical Properties

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | $Br_{abg}$ ((µg/g DW)/(µg/g soil)) | $Br_{bg}$ ((µg/g DW)/((µg/g soil)) | Physical State | Type | MW (g/mole) | H_unitless (unitless) | $LogK_{oc}$ (unitless) | $LogK_d$ (unitless) | $D_{air}$ ($cm^2/s$) | $D_{wat}$ ($cm^2/s$) | Solubility (mg/l) | Vapor_P (mm Hg) | $logK_{ow}$ (unitless) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Chlorohexane, 1- | 544-10-5 | – | – | l | O | 1.21E+02 | 9.98E-01 | 2.95E+00 | – | 6.40E-02 | 7.27E-06 | 5.38E+01 | 8.22E+00 | 3.63E+00 |
| Chloromethane (methyl chloride) | 74-87-3 | – | – | g | O | 5.05E+01 | 1.44E+00 | 7.78E-01 | – | 1.26E-01 | 6.50E-06 | 7.25E+03 | 3.77E+03 | 1.09E+00 |
| Chloronaphthalene, 1- (Chloronaphthalene, alpha-) | 90-13-1 | – | – | l | O | 1.63E+02 | 6.33E-03 | 3.98E+00 | – | 5.76E-02 | 7.31E-06 | 1.69E+01 | 1.21E-02 | 4.04E+00 |
| Chloronaphthalene, 2- (chloronaphthalene, beta) | 91-58-7 | – | – | s | O | 1.63E+02 | 2.54E-02 | 3.93E+00 | – | 6.18E-02 | 6.98E-06 | 6.74E+00 | 1.70E-02 | 3.81E+00 |
| Chloronitrobenzene, p- (1-chloro-4-nitrobenzene) | 100-00-5 | – | – | s | O | 1.58E+02 | 1.00E-03 | 2.03E+00 | – | 6.37E-02 | 8.04E-06 | 2.67E+02 | 3.92E-02 | 2.47E+00 |
| Chlorophenol, 2- | 95-57-8 | – | – | l | OA | 1.29E+02 | 7.40E-04 | 2.46E+00 | – | 5.01E-02 | 9.46E-06 | 2.80E+04 | 1.42E+00 | 2.16E+00 |
| Chlorophenol, 3- | 108-43-0 | – | – | s | OA | 1.29E+02 | 9.20E-06 | 2.05E+00 | – | 7.13E-02 | 8.74E-06 | 4.11E+04 | 5.38E-02 | 2.07E+00 |
| Chlorophenol, 4- | 106-48-9 | – | – | s | OA | 1.29E+02 | 9.97E-06 | 2.09E+00 | – | 7.13E-02 | 8.75E-06 | 2.86E+04 | 4.06E-02 | 2.10E+00 |
| Chlorophenyl phenylether, 4- | 7005-72-3 | – | – | l | O | 2.05E+02 | 1.30E-02 | 4.12E+00 | – | 4.89E-02 | 6.19E-06 | 1.43E+00 | 1.66E-03 | 5.04E+00 |
| Chloropropane, 2- | 75-29-6 | – | – | l | O | 7.85E+01 | 1.11E+00 | 1.83E+00 | – | 9.12E-02 | 9.30E-06 | 1.56E+03 | 4.04E+02 | 2.21E+00 |
| Chlorothalonil | 1897-45-6 | – | – | s | O | 2.66E+02 | 1.53E-06 | 3.38E+00 | – | 4.90E-02 | 6.57E-06 | 2.30E+01 | 2.41E-06 | 3.46E+00 |
| Chlorotoluene, o- (2-chlorotoluene) | 95-49-8 | – | – | l | O | 1.27E+02 | 1.35E-01 | 2.61E+00 | – | 7.01E-02 | 8.01E-06 | 1.54E+02 | 3.90E-03 | 3.20E+00 |
| Chlorotoluene, p- (4-chlorotoluene) | 106-43-4 | – | – | l | O | 1.27E+02 | 1.33E-01 | 2.70E+00 | – | 6.76E-02 | 7.96E-06 | 1.18E+02 | 2.27E+00 | 3.31E+00 |
| Chlorpyrifos | 2921-88-2 | – | – | s | O | 3.51E+02 | 1.73E-04 | 3.70E+00 | – | 4.85E-02 | 5.11E-06 | 9.00E-01 | 1.87E-05 | 4.66E+00 |
| Chromium (III) | 16065-83-1 | 5.20E-03 | 4.50E-03 | s | M | 5.20E+01 | 0.00E+00 | – | 3.08E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Chromium (total) | 7440-47-3 | 5.20E-03 | 4.50E-03 | s | M | 5.20E+01 | 0.00E+00 | – | 3.08E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Chromium (VI) | 18540-29-9 | 5.20E-03 | 4.50E-03 | s | M | 5.20E+01 | 0.00E+00 | – | 1.15E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Chrysene | 218-01-9 | – | – | s | O | 2.28E+02 | 5.03E-05 | 5.49E+00 | – | 2.48E-02 | 6.21E-06 | 2.00E-03 | 7.80E-09 | 5.52E+00 |
| Cobalt | 7440-48-4 | 1.00E-02 | 7.00E-03 | s | M | 5.89E+01 | 0.00E+00 | – | 1.65E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Copolymer acrylamide | 69418-26-4 | – | – | s | O | 7.11E+01 | 1.33E-08 | -6.60E-01 | – | 9.70E-02 | 1.27E-05 | 2.20E+06 | 7.00E-03 | -8.07E-01 |
| Copper | 7440-50-8 | 2.90E-01 | 2.50E-01 | s | M | 6.35E+01 | 0.00E+00 | – | 1.60E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | -5.71E-01 |
| Coronene | 191-07-1 | – | – | s | O | 3.00E+02 | 6.60E-06 | 7.46E+00 | – | 3.70E-02 | 4.93E-06 | 9.03E-06 | 2.21E-13 | 7.59E+00 |
| Coumaphos | 56-72-4 | – | – | s | O | 3.63E+02 | 2.17E-07 | 4.20E+00 | – | 3.53E-02 | 4.81E-06 | 3.86E-01 | 4.22E-09 | 4.26E+00 |
| Cresol | 1319-77-3 | – | – | l | O | 1.08E+02 | 3.62E-05 | 1.94E+00 | – | 7.40E-02 | 1.00E-05 | 2.30E+04 | 1.40E-01 | 2.06E+00 |
| Cresol, m- (3-methylphenol) | 108-39-4 | – | – | l | O | 1.08E+02 | 3.62E-05 | 1.94E+00 | – | 7.40E-02 | 1.00E-05 | 2.30E+04 | 1.40E-01 | 2.06E+00 |
| Cresol, o- (2-methylphenol) | 95-48-7 | – | – | s | O | 1.08E+02 | 6.65E-05 | 1.99E+00 | – | 7.40E-02 | 8.30E-06 | 2.04E+04 | 3.20E-01 | 2.06E+00 |
| Cresol, p- (4-methylphenol) | 106-44-5 | – | – | s | O | 1.08E+02 | 3.99E-05 | 1.91E+00 | – | 7.40E-02 | 1.00E-05 | 2.30E+04 | 1.30E-01 | 2.06E+00 |
| Crotonaldehyde | 123-73-9 | – | – | l | O | 7.01E+01 | 8.15E-04 | 2.14E-01 | – | 9.37E-02 | 1.02E-05 | 1.60E+05 | 1.90E+01 | 6.01E-01 |
| Cumene (isopropylbenzene) | 98-82-8 | – | – | l | O | 1.20E+02 | 6.07E-01 | 3.54E+00 | – | 6.50E-02 | 7.10E-06 | 5.00E+01 | 4.60E+00 | 3.45E+00 |
| Cyanazine | 21725-46-2 | – | – | s | O | 2.41E+02 | 6.70E-10 | 1.69E+00 | – | 4.33E-02 | 5.83E-06 | 1.15E+02 | 7.28E-09 | 1.72E+00 |
| Cyanide | 57-12-5 | – | – | - | I | 2.60E+01 | 0.00E+00 | - | 9.96E-01 | 5.21E-01 | 2.28E-05 | 1.00E+05 | 1.38E+01 | -6.93E-01 |
| Cyanogen | 460-19-5 | – | – | g | O | 5.20E+01 | 2.06E-01 | 1.34E-01 | – | 2.04E-01 | 1.37E-05 | 1.00E+04 | 3.88E+03 | 7.00E-02 |
| Cycloate | 1134-23-2 | – | – | l | O | 2.15E+02 | 8.55E-05 | 3.44E+00 | – | 4.28E-02 | 5.60E-06 | 8.32E+01 | 6.04E-04 | 3.80E+00 |
| Cyclohexane | 110-82-7 | – | – | l | O | 8.42E+01 | 6.68E+00 | 2.87E+00 | – | 7.84E-02 | 8.39E-06 | 4.25E+01 | 6.16E+01 | 3.52E+00 |
| Cyclohexanol | 108-93-0 | – | – | s | O | 1.00E+02 | 3.52E-05 | 1.09E+00 | – | 7.20E-02 | 8.63E-06 | 2.09E+00 | 2.84E-01 | 1.11E+00 |
| Cyclohexanone | 108-94-1 | – | – | l | O | 9.81E+01 | 4.99E-04 | 7.39E-01 | – | 7.72E-02 | 8.73E-06 | 2.30E+04 | 4.00E+00 | 1.13E+00 |

# Chemical/Physical Properties

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | $Br_{abg}$ ((µg/g DW)/(µg/g soil)) | $Br_{bg}$ ((µg/g DW)/(µg/g soil)) | Physical State | Type | MW (g/mole) | H_unitless (unitless) | $LogK_{oc}$ (unitless) | $LogK_d$ (unitless) | $D_{air}$ ($cm^2/s$) | $D_{wat}$ ($cm^2/s$) | Solubility (mg/l) | Vapor_P (mm Hg) | $logK_{ow}$ (unitless) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Cyclohexene-1-methanol, 3- | 1679-51-2 | – | – | s | O | 1.12E+02 | 3.13E-05 | 2.16E+00 | – | 6.60E-02 | 7.45E-06 | 1.44E+04 | 7.40E-01 | 2.63E+00 |
| Cyclohexene, 4-vinyl-1- | 100-40-3 | – | – | l | O | 1.08E+02 | 2.31E+00 | 3.09E+00 | – | 6.56E-02 | 6.93E-06 | 2.95E+01 | 1.15E+01 | 3.80E+00 |
| Cyclopentane | 287-92-3 | – | – | l | O | 7.01E+01 | 3.77E+00 | 2.29E+00 | – | 8.87E-02 | 8.45E-06 | 2.25E+02 | 2.21E+02 | 2.79E+00 |
| Cyclopentane, methyl- | 96-37-7 | – | – | l | O | 8.42E+01 | 9.82E+00 | 2.87E+00 | – | 7.84E-02 | 7.59E-06 | 5.02E+01 | 1.07E+02 | 3.52E+00 |
| Cyclopentene | 142-29-0 | – | – | l | O | 6.81E+01 | 1.26E+00 | 1.96E+00 | – | 9.21E-02 | 8.81E-06 | 6.63E+02 | 2.24E+02 | 2.38E+00 |
| Cyclotetramethylenetetranitramine (HMX) | 2691-41-0 | – | – | s | O | 2.96E+02 | 2.50E-14 | -1.40E+00 | – | 3.74E-02 | 6.34E-06 | 2.37E+03 | 4.75E-15 | -1.30E+00 |
| Cyclotrimethylenetrinitramine (RDX) | 121-82-4 | – | – | s | O | 2.22E+02 | 4.99E-04 | 1.80E+00 | – | 6.65E-02 | 6.39E-06 | 3.87E+01 | 1.00E-09 | 8.70E-01 |
| Cymene (isopropyltoluene) | 99-87-6 | – | – | l | O | 1.34E+02 | 4.66E-01 | 3.36E+00 | – | 5.72E-02 | 6.73E-06 | 1.71E+01 | 1.08E+00 | 4.14E+00 |
| Cymoxanil | 57966-95-7 | – | – | s | OA | 1.98E+02 | 1.37E-08 | -3.89E+00 | – | 4.91E-02 | 6.76E-06 | 4.47E+03 | 1.13E-06 | 6.00E-01 |
| Dacthal (DCPA) | 1861-32-1 | – | – | s | O | 3.32E+02 | 9.35E-06 | 4.67E+00 | – | 4.20E-02 | 2.05E+00 | 2.20E-01 | 1.13E-07 | 4.71E+00 |
| Dalapon, sodium salt (2,2-dichloropropanoic acid) | 75-99-0 | – | – | s | O | 1.43E+02 | 1.46E-05 | 1.40E+00 | – | 6.98E-02 | 8.70E-06 | 6.98E+04 | 1.30E-01 | 1.60E+00 |
| DDD | 72-54-8 | – | – | s | O | 3.20E+02 | 1.66E-04 | 4.93E+00 | – | 1.69E-02 | 4.76E-06 | 9.00E-02 | 8.66E-07 | 5.87E+00 |
| DDE | 72-55-9 | – | – | s | O | 2.42E+02 | 8.73E-04 | 5.04E+00 | – | 1.44E-02 | 5.87E-06 | 6.50E-02 | 5.66E-06 | 6.00E+00 |
| DDT | 50-29-3 | – | – | s | O | 3.54E+02 | 2.23E-03 | 5.14E+00 | – | 1.37E-02 | 4.95E-06 | 3.10E-03 | 3.93E-07 | 6.79E+00 |
| Demeton | 8065-48-3 | – | – | l | O | 2.58E+02 | 6.65E-03 | 2.43E+00 | – | 4.56E-02 | 5.45E-06 | 7.20E+02 | 1.00E-04 | 2.97E+00 |
| Desethylatrazine | 6190-65-4 | – | – | s | O | 1.88E+02 | 2.19E-08 | 1.85E+00 | – | 5.14E-02 | 6.39E-06 | 1.80E+03 | 3.85E-06 | 1.97E+00 |
| Diacetone alcohol (4-hydroxy-4-methyl-2-pentanone) | 123-42-2 | – | – | l | O | 1.16E+02 | 1.68E-06 | 2.67E-01 | – | 6.39E-02 | 7.74E-06 | 6.81E+05 | 1.80E-01 | 2.71E-01 |
| Diallate | 2303-16-4 | – | – | s | O | 2.70E+02 | 1.58E-04 | 3.28E+00 | – | 8.00E-02 | 8.00E-06 | 1.40E+01 | 1.50E-04 | 4.08E+00 |
| Diazinon | 333-41-5 | – | – | l | O | 3.04E+02 | 4.70E-06 | 2.12E+00 | – | 1.80E-02 | 4.90E-06 | 4.00E+01 | 8.40E-05 | 3.86E+00 |
| Dibenz(a,h)acridine | 226-36-8 | – | – | s | O | 2.79E+02 | 8.44E-09 | 6.28E+00 | – | 3.78E-02 | 5.39E-06 | 6.84E-04 | 3.79E-13 | 6.39E+00 |
| Dibenz(a,j)acridine | 224-42-0 | – | – | s | O | 2.79E+02 | 7.08E-09 | 6.35E+00 | – | 3.79E-02 | 5.41E-06 | 8.14E-04 | 3.77E-13 | 6.36E+00 |
| Dibenz-a,h-anthracene | 53-70-3 | – | – | s | O | 2.78E+02 | 4.66E-07 | 6.28E+00 | – | 2.00E-02 | 5.18E-06 | 5.00E-04 | 2.10E-11 | 6.70E+00 |
| Dibenzo(a,e)pyrene | 192-65-4 | – | – | s | O | 3.02E+02 | 2.16E-06 | 7.42E+00 | – | 3.67E-02 | 5.06E-06 | 7.84E-05 | 5.32E-13 | 7.85E+00 |
| Dibenzo(a,h)pyrene | 189-64-0 | – | – | s | O | 3.02E+02 | 1.83E-06 | 7.38E+00 | – | 3.68E-02 | 5.07E-06 | 2.08E-05 | 1.30E-13 | 7.81E+00 |
| Dibenzo(a,i)pyrene | 189-55-9 | – | – | s | O | 3.02E+02 | 1.83E-06 | 7.38E+00 | – | 3.68E-02 | 5.07E-06 | 3.39E-05 | 2.11E-13 | 7.81E+00 |
| Dibenzofuran | 132-64-9 | – | – | s | O | 1.68E+02 | 5.28E-03 | 3.93E+00 | – | 5.51E-02 | 7.04E-06 | 2.86E+00 | 1.64E-03 | 4.00E+00 |
| Dibenzothiophene | 132-65-0 | – | – | s | O | 1.84E+02 | 9.79E-04 | 4.54E+00 | – | 5.22E-02 | 6.74E-06 | 2.11E-01 | 2.05E-05 | 4.61E+00 |
| Dibromo-3-chloropropane, 1,2- | 96-12-8 | – | – | l | O | 2.36E+02 | 8.31E-03 | 2.23E+00 | – | 8.00E-02 | 8.00E-06 | 1.00E+03 | 7.60E-01 | 2.68E+00 |
| Dibromochloromethane (chlorodibromomethane) | 124-48-1 | – | – | l | O | 2.08E+02 | 3.25E-02 | 1.80E+00 | – | 1.96E-02 | 1.05E-05 | 5.25E+03 | 1.50E+01 | 1.70E+00 |
| Dibromofluoromethane | 1868-53-7 | – | – | l | O | 1.92E+02 | 1.14E-01 | 1.40E+00 | – | 8.70E-02 | 1.01E-05 | 1.26E+04 | 1.37E+02 | 1.67E+00 |
| Dicamba | 1918-00-9 | – | – | s | O | 2.09E+02 | 3.28E-07 | 3.42E-01 | – | 6.02E-02 | 6.69E-06 | 5.60E+03 | 9.70E-05 | 2.14E+00 |
| Dichlormid | 37764-25-3 | – | – | l | O | 2.08E+02 | 2.75E-06 | 1.77E+00 | – | 4.66E-02 | 5.79E-06 | 4.26E+03 | 1.03E-03 | 1.89E+00 |
| Dichloro-2-butene, 1,4- | 764-41-0 | – | – | l | O | 1.25E+02 | 1.24E-02 | 2.26E+00 | – | 7.43E-02 | 8.62E-06 | 6.91E+03 | 1.26E+01 | 2.60E+00 |
| Dichloro-2-butene, 1,4- trans | 110-57-6 | – | – | l | O | 1.25E+02 | 1.35E-02 | 2.31E+00 | – | 7.14E-02 | 8.48E-06 | 1.27E+03 | 2.52E+00 | 2.35E+00 |
| Dichlorobenzene, 1,2- | 95-50-1 | – | – | l | O | 1.47E+02 | 8.73E-02 | 2.84E+00 | – | 6.90E-02 | 7.90E-06 | 1.50E+02 | 1.36E+00 | 3.28E+00 |
| Dichlorobenzene, 1,3- | 541-73-1 | – | – | l | O | 1.47E+02 | 1.95E-01 | 2.23E+00 | – | 6.80E-02 | 8.13E-06 | 1.10E+02 | 2.30E+00 | 3.28E+00 |

# Chemical/Physical Properties

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | $Br_{abg}$ ((µg/g DW)/(µg/g soil)) | $Br_{bg}$ ((µg/g DW)/((µg/g soil)) | Physical State | Type | MW (g/mole) | H_unitless (unitless) | $LogK_{oc}$ (unitless) | $LogK_d$ (unitless) | $D_{air}$ ($cm^2/s$) | $D_{wat}$ ($cm^2/s$) | Solubility (mg/l) | Vapor_P (mm Hg) | $logK_{ow}$ (unitless) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Dichlorobenzene, 1,4- | 106-46-7 | – | – | s | O | 1.47E+02 | 1.17E-01 | 2.81E+00 | – | 6.90E-02 | 7.90E-06 | 7.38E+01 | 1.06E+00 | 3.28E+00 |
| Dichlorobenzidine, 3,3- | 91-94-1 | – | – | s | O | 2.53E+02 | 8.65E-07 | 2.86E+00 | – | 1.94E-02 | 6.74E-06 | 3.11E+00 | 2.20E-07 | 3.21E+00 |
| Dichlorobutane, 2,3- | 7581-97-7 | – | – | l | O | 1.27E+02 | 2.31E-01 | 2.30E+00 | – | 7.10E-02 | 8.07E-06 | 4.52E+02 | 1.50E+01 | 2.81E+00 |
| Dichlorodifluoromethane | 75-71-8 | – | – | l | O | 1.21E+02 | 1.67E+01 | 2.11E+00 | – | 5.20E-02 | 1.05E-05 | 2.80E+02 | 4.80E+03 | 1.82E+00 |
| Dichloroethane, 1,1- | 75-34-3 | – | – | l | O | 9.90E+01 | 2.39E-01 | 1.50E+00 | – | 7.42E-02 | 1.05E-05 | 5.50E+03 | 2.28E+02 | 1.76E+00 |
| Dichloroethane, 1,2- | 107-06-2 | – | – | l | O | 9.90E+01 | 5.32E-02 | 1.24E+00 | – | 1.04E-01 | 9.90E-06 | 8.70E+03 | 8.13E+01 | 1.83E+00 |
| Dichloroethylene, 1,1- | 75-35-4 | – | – | l | O | 9.69E+01 | 1.06E+00 | 1.81E+00 | – | 9.00E-02 | 1.04E-05 | 2.40E+03 | 5.91E+02 | 2.12E+00 |
| Dichloroethylene, cis-1,2- | 156-59-2 | – | – | l | O | 9.69E+01 | 1.87E-01 | 1.46E+00 | – | 7.35E-02 | 1.13E-05 | 4.93E+03 | 1.75E+02 | 1.86E+00 |
| Dichloroethylene, trans-1,2 | 156-60-5 | – | – | l | O | 9.69E+01 | 3.90E-01 | 1.70E+00 | – | 7.07E-02 | 1.19E-05 | 6.30E+03 | 3.52E+02 | 2.07E+00 |
| Dichlorofluoromethane | 75-43-4 | – | – | g | O | 1.03E+02 | 1.98E-01 | 1.08E+00 | – | 1.00E-01 | 9.81E-06 | 1.99E+04 | 7.43E+02 | 1.26E+00 |
| Dichlorophenol, 2,3- | 576-24-9 | – | – | s | OA | 1.63E+02 | 9.40E-06 | 2.14E+00 | – | 6.63E-02 | 8.21E-06 | 6.94E+03 | 7.32E-03 | 2.77E+00 |
| Dichlorophenol, 2,4- | 120-83-2 | – | – | s | OA | 1.63E+02 | 1.31E-04 | 1.86E+00 | – | 3.46E-02 | 8.77E-06 | 4.50E+03 | 7.15E-02 | 2.80E+00 |
| Dichlorophenol, 2,5- | 583-78-8 | – | – | s | OA | 1.63E+02 | 9.09E-06 | 2.09E+00 | – | 6.63E-02 | 8.19E-06 | 8.34E+03 | 8.50E-03 | 2.73E+00 |
| Dichlorophenol, 2,6- | 87-65-0 | – | – | s | O | 1.63E+02 | 1.20E-05 | 1.35E+00 | – | 6.57E-02 | 8.12E-06 | 1.03E+02 | 1.50E-01 | 2.83E+00 |
| Dichlorophenol, 3,4- | 95-77-2 | – | – | s | OA | 1.63E+02 | 2.75E-06 | 2.81E+00 | – | 6.50E-02 | 8.21E-06 | 6.80E+03 | 2.10E-03 | 2.89E+00 |
| Dichlorophenol, 3,5- | 591-35-5 | – | – | s | OA | 1.63E+02 | 3.68E-06 | 2.61E+00 | – | 6.51E-02 | 8.18E-06 | 1.06E+04 | 4.38E-03 | 2.75E+00 |
| Dichlorophenoxy, 2,4- butyric acid, 4- (2,4-DB) | 94-82-6 | – | – | s | O | 2.49E+02 | 3.19E-08 | 2.74E-01 | – | 4.41E-02 | 6.13E-06 | 7.76E+01 | 1.82E-07 | 3.79E+00 |
| Dichlorophenoxyacetic acid, 2,4- (2,4-D) | 94-75-7 | – | – | s | O | 2.21E+02 | 5.82E-09 | 2.95E+00 | – | 5.90E-02 | 6.50E-06 | 8.90E+02 | 2.40E-05 | 2.62E+00 |
| Dichloroprop (2-(2,4-dichlorophenoxy) propanoic acid) | 120-36-5 | – | – | s | O | 2.35E+02 | 9.00E-07 | -1.54E+00 | – | 4.70E-02 | 6.43E-06 | 2.30E+02 | 1.60E-05 | 3.26E+00 |
| Dichloropropane, 1,2- | 78-87-5 | – | – | l | O | 1.13E+02 | 1.17E-01 | 1.77E+00 | – | 7.82E-02 | 8.73E-06 | 2.80E+03 | 5.00E+01 | 2.25E+00 |
| Dichloropropane, 1,3- | 142-28-9 | – | – | l | O | 1.13E+02 | 5.52E-02 | 2.10E+00 | – | 7.91E-02 | 9.07E-06 | 2.16E+03 | 1.93E+01 | 2.23E+00 |
| Dichloropropane, 2,2- | 594-20-7 | – | – | l | O | 1.13E+02 | 3.39E-01 | 2.19E+00 | – | 7.96E-02 | 8.71E-06 | 1.68E+03 | 9.24E+01 | 2.36E+00 |
| Dichloropropanol, 2,3- | 616-23-9 | – | – | l | O | 1.29E+02 | 3.97E-05 | 1.53E+00 | – | 4.84E-02 | 9.84E-06 | 2.95E+05 | 5.82E-01 | 7.84E-01 |
| Dichloropropene, 1,1- | 563-58-6 | – | – | l | O | 1.11E+02 | 1.82E+00 | 2.31E+00 | – | 8.21E-02 | 8.95E-06 | 5.44E+02 | 1.63E+02 | 2.82E+00 |
| Dichloropropene, 1,3- (mixed isomers) | 542-75-6 | – | – | l | O | 1.11E+02 | 1.23E-01 | 1.72E+00 | – | 6.26E-02 | 1.00E-05 | 1.55E+03 | 3.12E+01 | 1.75E+00 |
| Dichloropropene, cis 1,3- | 10061-01-5 | – | – | l | O | 1.11E+02 | 9.15E-02 | 1.65E+00 | – | 7.94E-02 | 8.00E-06 | 2.70E+03 | 3.70E+01 | 1.53E+00 |
| Dichloropropene, trans 1,3- | 10061-02-6 | – | – | l | O | 1.11E+02 | 9.15E-02 | 1.65E+00 | – | 7.94E-02 | 9.20E-06 | 2.80E+03 | 3.00E+01 | 1.53E+00 |
| Dichlorvos | 62-73-7 | – | – | l | O | 2.21E+02 | 3.98E-05 | 9.59E+00 | – | 2.32E-02 | 7.80E-06 | 1.60E+04 | 5.27E-02 | 1.40E+00 |
| Dicrotophos (bidrin) | 141-66-2 | – | – | l | O | 2.37E+02 | 1.49E-10 | -9.68E-01 | – | 4.33E-02 | 5.70E-06 | 1.31E+07 | 1.68E-03 | -7.65E-01 |
| Dicyclopentadiene | 77-73-6 | – | – | – | O | 1.32E+02 | – | 2.96E+00 | – | 7.32E-02 | 8.48E-06 | – | 1.40E+00 | 3.60E+00 |
| Dieldrin | 60-57-1 | – | – | s | O | 3.81E+02 | 1.11E-04 | 4.33E+00 | – | 1.25E-02 | 4.74E-06 | 1.95E-01 | 9.96E-07 | 5.45E+00 |
| Diethanolamine | 111-42-2 | – | – | s | O | 1.05E+02 | 1.90E-11 | -2.10E+00 | – | 7.15E-02 | 9.10E-06 | – | 1.00E-04 | -2.13E+00 |
| Diethyldithiocarbamate, sodium salt | 148-18-5 | – | – | s | O | 1.71E+02 | – | – | – | – | – | – | – | 2.69E-01 |
| Diethyl phthalate | 84-66-2 | – | – | l | O | 2.22E+02 | 1.87E-05 | 2.18E+00 | – | 2.56E-02 | 6.35E-06 | 1.08E+03 | 1.65E-03 | 2.65E+00 |
| Diethylene glycol | 111-46-6 | – | – | l | O | 1.06E+02 | 3.88E-09 | -1.33E+00 | – | 7.31E-02 | 9.15E-06 | 1.00E+06 | 1.30E-03 | -1.36E+00 |
| Diethylene glycol monobutyl ether | 112-34-5 | – | – | l | O | 1.62E+02 | 2.75E-07 | 7.50E-01 | – | 5.14E-02 | 6.35E-06 | 5.11E+04 | 1.58E-03 | 1.00E+00 |

# Chemical/Physical Properties

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | $Br_{abg}$ ((µg/g DW)/ (µg/g soil)) | $Br_{bg}$ ((µg/g DW)/ ((µg/g soil)) | Physical State | Type | MW (g/mole) | H_unitless (unitless) | $LogK_{oc}$ (unitless) | $LogK_d$ (unitless) | $D_{air}$ ($cm^2/s$) | $D_{wat}$ ($cm^2/s$) | Solubility (mg/l) | Vapor_P (mm Hg) | $logK_{ow}$ (unitless) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Diethylhexyl adipate | 103-23-1 | – | – | l | O | 3.71E+02 | 9.78E-01 | 5.58E+00 | – | 3.56E-02 | 3.72E-06 | 1.71E-03 | 8.25E-05 | 8.12E+00 |
| Diethylstilbestrol | 56-53-1 | – | – | s | O | 2.68E+02 | 2.62E-13 | 4.88E+00 | – | 4.43E-02 | 8.00E-06 | 1.30E+04 | 1.06E-09 | 5.64E+00 |
| Diisobutylene (trimethyl-1-pentene, 2,4,4-) | 107-39-1 | – | – | l | O | 1.12E+02 | 7.34E+01 | 3.75E+00 | – | 6.25E-02 | 6.70E-06 | 3.17E+00 | 3.80E+01 | 4.64E+00 |
| Diisopropylbenzene, p- | 100-18-5 | – | – | L | O | 1.62E+02 | 9.39E-01 | 3.98E+00 | – | 4.91E-02 | 5.55E-06 | 1.94E+00 | 2.10E-01 | 4.93E+00 |
| Diisopropyl ether (2,2'-oxybis-propane) | 108-20-3 | – | – | l | O | 1.02E+02 | 1.63E-01 | 1.81E+00 | – | 6.81E-02 | 7.15E-06 | 2.67E+03 | 7.76E+01 | 2.19E+00 |
| Dimethenamid | 87674-68-8 | – | – | l | O | 2.76E+02 | 2.18E-09 | 1.35E+00 | – | 3.80E-02 | 5.35E-06 | 3.75E+04 | 5.42E-06 | 1.49E+00 |
| Dimethoate | 60-51-5 | – | – | s | O | 2.29E+02 | 2.58E-09 | 6.30E-01 | – | 8.00E-02 | 8.00E-06 | 2.50E+04 | 5.09E-06 | 2.78E-01 |
| Dimethoxybenzidine, 3,3'- | 119-90-4 | – | – | s | O | 2.44E+02 | 1.66E-08 | 1.78E+00 | – | 2.42E-02 | 5.50E-06 | 2.40E+02 | 2.50E-07 | 2.08E+00 |
| Dimethyl-2-nitrobenzene, 1,3- | 81-20-9 | – | – | l | O | 1.51E+02 | 1.18E-03 | 3.04E+00 | – | 5.83E-02 | 6.87E-06 | 1.14E+02 | 1.62E-02 | 3.09E+00 |
| Dimethyl-3-nitrobenzene, 1,2- | 83-41-0 | – | – | l | O | 1.51E+02 | 9.35E-04 | 2.83E+00 | – | 5.85E-02 | 6.88E-06 | 2.13E+02 | 2.42E-02 | 2.88E+00 |
| Dimethyl-4-nitrobenzene, 1-2- | 99-51-4 | – | – | s | O | 1.51E+02 | 8.36E-04 | 2.82E+00 | – | 5.82E-02 | 6.85E-06 | 2.02E+02 | 2.05E-02 | 2.87E+00 |
| Dimethyl-5-nitrobenzene, 1,3- | 99-12-7 | – | – | s | O | 1.51E+02 | 1.36E-03 | 2.90E+00 | – | 5.81E-02 | 6.80E-06 | 1.22E+02 | 2.01E-02 | 2.95E+00 |
| Dimethylphenethylamine, alpha, alpha- | 122-09-8 | – | – | l | O | 1.49E+02 | 5.45E-05 | 2.16E+00 | – | 5.57E-02 | 6.64E-06 | 3.54E+03 | 1.30E-01 | 2.20E+00 |
| Dimethyl phenol, 2,4- | 105-67-9 | – | – | s | O | 1.22E+02 | 8.31E-05 | 2.07E+00 | – | 5.84E-02 | 8.69E-06 | 6.20E+03 | 1.26E-01 | 2.61E+00 |
| Dimethylaminoazobenzene, p- | 60-11-7 | – | – | s | OB | 2.25E+02 | 3.25E-05 | 5.06E+00 | – | 4.25E-02 | 5.57E-06 | 4.04E-01 | 1.07E-06 | 5.00E+00 |
| Dimethylbenz-a-anthracene, 7,12- | 57-97-6 | – | – | s | O | 2.56E+02 | 6.49E-06 | 6.93E+00 | – | 3.90E-02 | 5.39E-06 | 1.27E-03 | 4.03E-10 | 7.14E+00 |
| Dimethylbenzidine, 3,3'- | 119-93-7 | – | – | s | O | 2.12E+02 | 5.40E-09 | 2.30E+00 | – | 5.10E-02 | 8.00E-06 | 2.40E+02 | 3.70E-07 | 3.02E+00 |
| Dimethylformamide, N,N- | 68-12-2 | – | – | l | O | 7.31E+01 | 3.21E-05 | -3.10E-01 | – | 9.01E-02 | 9.28E-06 | 1.00E+06 | 1.07E+01 | -4.90E-01 |
| Dimethylnaphthalene, 1,3- | 575-41-7 | – | – | l | O | 1.56E+02 | 7.23E-03 | 4.30E+00 | – | 5.39E-02 | 6.77E-06 | 8.85E+00 | 7.49E-03 | 4.38E+00 |
| Dimethylphthalate | 131-11-3 | – | – | l | O | 1.94E+02 | 2.40E-05 | 1.50E+00 | – | 5.68E-02 | 6.30E-06 | 4.19E+03 | 9.12E-03 | 1.66E+00 |
| Di-n-butyl phthalate | 84-74-2 | – | – | l | O | 2.78E+02 | 5.94E-05 | 4.53E+00 | – | 4.38E-02 | 7.86E-06 | 1.12E+01 | 4.25E-05 | 4.61E+00 |
| Dinitro-2-methylphenol, 4,6- (dinitro-o-cresol, 4, 6-) | 534-52-1 | – | – | s | O | 1.98E+02 | 1.07E-07 | -1.50E+00 | – | 5.31E-02 | 7.27E-06 | 3.00E+03 | 2.87E-05 | 2.07E+00 |
| Dinitrobenzene, 1,3- (dinitrobenzene, 2,4- ) | 99-65-0 | – | – | s | O | 1.68E+02 | 4.57E-06 | 1.48E+00 | – | 2.80E-01 | 7.60E-06 | 5.40E+02 | 2.49E-04 | 1.63E+00 |
| Dinitrobenzene, 1,4- | 100-25-4 | – | – | s | O | 1.68E+02 | 4.44E-06 | 1.42E+00 | – | 6.15E-02 | 7.18E-06 | 1.00E+02 | 4.83E-05 | 1.63E+00 |
| Dinitrophenol, 2,4- | 51-28-5 | – | – | s | OA | 1.84E+02 | 2.01E-07 | -2.00E+00 | – | 2.73E-02 | 9.06E-06 | 5.80E+03 | 1.14E-04 | 1.73E+00 |
| Dinitrophenol, 2,5- | 329-71-5 | – | – | s | OA | 1.84E+02 | 1.47E-07 | 2.55E-03 | – | 5.98E-02 | 7.84E-06 | 1.79E+03 | 2.61E-05 | 2.62E+00 |
| Dinitrotoluene, 2,4- | 121-14-2 | – | – | s | O | 1.82E+02 | 3.60E-05 | 1.71E+00 | – | 2.03E-01 | 7.06E-06 | 2.85E+02 | 1.74E-04 | 2.18E+00 |
| Dinitrotoluene, 2,6- | 606-20-2 | – | – | s | O | 1.82E+02 | 3.11E-05 | 1.62E+00 | – | 3.27E-02 | 7.26E-06 | 1.82E+02 | 5.70E-04 | 2.18E+00 |
| Di-n-octyl phthalate | 117-84-0 | – | – | l | O | 3.91E+02 | 2.78E-03 | 7.92E+00 | – | 1.51E-02 | 3.90E-06 | 2.00E-02 | 4.47E-06 | 8.54E+00 |
| Dinoseb | 88-85-7 | – | – | s | O | 2.40E+02 | 2.08E-02 | 3.08E+00 | – | 2.25E-02 | 6.25E-06 | 5.20E+01 | 7.52E-02 | 3.67E+00 |
| Dioxane 1,4- | 123-91-1 | – | – | l | O | 8.81E+01 | 2.04E-04 | -2.68E-01 | – | 2.30E-01 | 1.00E-05 | 9.00E+05 | 3.80E+01 | -3.20E-01 |
| Dioxins/furans, polychlorinated; (reported as 2,3,7,8-TCDD TEQ) | 1746-01-6 | – | – | s | O | 3.22E+02 | 1.47E-03 | 7.15E+00 | – | 4.70E-02 | 8.00E-06 | 1.93E-05 | 7.40E-10 | 7.02E+00 |
| Diphenyl ether | 101-84-8 | – | – | s | O | 1.70E+02 | 1.75E-02 | 4.18E+00 | – | 5.30E-02 | 6.69E-06 | 7.78E+00 | 1.47E-02 | 4.25E+00 |
| Diphenylamine | 122-39-4 | – | – | s | O | 1.69E+02 | 1.83E-04 | 2.54E+00 | – | 6.80E-02 | 6.30E-06 | 3.00E+02 | 4.26E-03 | 3.29E+00 |
| Diphenylhydrazine, 1,2- | 122-66-7 | – | – | s | O | 1.84E+02 | 1.42E-07 | 2.82E+00 | – | 5.62E-02 | 5.70E-06 | 1.84E+03 | 2.60E-05 | 3.06E+00 |
| Dipropylene glycol | 110-98-5 | – | – | l | O | 1.34E+02 | 1.79E-08 | -4.77E-01 | – | 5.97E-02 | 6.90E-06 | 9.83E+05 | 2.39E-03 | -4.86E-01 |

# Chemical/Physical Properties

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | $Br_{abg}$ ((µg/g DW)/ (µg/g soil)) | $Br_{bg}$ ((µg/g DW)/ ((µg/g soil)) | Physical State | Type | MW (g/mole) | H_unitless (unitless) | $LogK_{oc}$ (unitless) | $LogK_d$ (unitless) | $D_{air}$ ($cm^2/s$) | $D_{wat}$ ($cm^2/s$) | Solubility (mg/l) | Vapor_P (mm Hg) | $logK_{ow}$ (unitless) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Diquat | 85-00-7 | – | – | s | O | 3.44E+02 | 2.69E-12 | 2.31E+00 | – | 5.52E-02 | 5.52E-06 | 7.00E+05 | 1.00E-07 | -2.82E+00 |
| Disodium iminodiacetate (iminodiacetic acid, disodium salt) | 142-73-4 | – | – | s | O | 1.33E+02 | 3.82E-14 | -1.31E+00 | – | 6.03E-02 | 8.38E-06 | 1.57E+05 | 8.21E-10 | -1.33E+00 |
| Disulfoton | 298-04-4 | – | – | s | O | 2.74E+02 | 2.58E-04 | 3.95E+00 | – | 8.00E-02 | 8.00E-06 | 1.60E+01 | 2.30E-04 | 3.86E+00 |
| Diuron | 330-54-1 | – | – | s | O | 2.33E+02 | 3.04E-08 | 2.63E+00 | – | 5.40E-02 | 5.30E-06 | 4.20E+01 | 1.00E-07 | 2.67E+00 |
| Dodecylphenol, 4- | 104-43-8 | – | – | l | OA | 2.62E+02 | 4.00E-04 | 8.40E+00 | – | 3.46E-02 | 4.72E-06 | 3.80E-02 | 1.06E-06 | 8.40E+00 |
| Endosulfan | 115-29-7 | – | – | s | O | 4.07E+02 | 4.66E-04 | 2.87E+00 | – | 1.15E-02 | 4.55E-06 | 5.10E-01 | 9.96E-06 | 3.84E+00 |
| Endosulfan I | 959-98-8 | – | – | s | O | 4.07E+02 | 3.55E-05 | 4.20E+00 | – | 3.22E-02 | 4.67E-06 | 1.73E+00 | 2.75E-06 | 5.20E+00 |
| Endosulfan II | 33213-65-9 | – | – | s | O | 4.07E+02 | 3.55E-05 | 4.20E+00 | – | 3.22E-02 | 4.67E-06 | 1.16E+00 | 1.84E-06 | 5.20E+00 |
| Endosulfan sulfate | 1031-07-8 | – | – | s | O | 4.23E+02 | 3.65E-05 | 5.90E+00 | – | 3.00E-02 | 4.63E-06 | 1.02E-01 | 1.62E-07 | 6.01E+00 |
| Endothall | 145-73-3 | – | – | s | O | 2.30E+02 | 1.08E-08 | 1.93E+00 | – | 5.72E-02 | 7.50E-06 | 1.00E+05 | 1.80E-04 | 1.89E+00 |
| Endrin | 72-20-8 | – | – | s | O | 3.81E+02 | 4.95E-05 | 3.97E+00 | – | 1.25E-02 | 4.74E-06 | 2.50E-01 | 5.84E-07 | 5.45E+00 |
| Endrin aldehyde | 7421-93-4 | – | – | l | O | 3.81E+02 | 1.80E-02 | 6.33E+00 | – | 2.97E-02 | 3.83E-06 | 1.68E-02 | 1.46E-05 | 6.44E+00 |
| Endrin ketone | 53494-70-5 | – | – | s | O | 3.81E+02 | 3.66E-05 | 5.24E+00 | – | 3.10E-02 | 4.46E-06 | 8.60E-01 | 1.51E-06 | 5.33E+00 |
| Epichlorohydrin | 106-89-8 | – | – | l | O | 9.25E+01 | 1.37E-03 | 3.00E-01 | – | 8.60E-02 | 9.80E-06 | 6.60E+04 | 1.67E+01 | 6.26E-01 |
| EPN (o-ethyl o-(4-nitrophenyl)phenylphosphonothioate) | 2104-64-5 | – | – | s | O | 3.23E+02 | 2.00E-08 | 3.75E+00 | – | 3.93E-02 | 5.16E-06 | 1.40E+00 | 1.91E-09 | 3.81E+00 |
| Esfenvalerate | 66230-04-4 | – | – | s | O | 4.20E+02 | 1.70E-08 | 4.80E+00 | – | 2.91E-02 | 4.18E-06 | 2.00E-04 | 1.80E-11 | 6.30E+00 |
| Ethalfluralin (sonolan) | 55283-68-6 | – | – | l | O | 3.33E+02 | 1.54E-05 | 4.78E+00 | – | 3.75E-02 | 4.96E-06 | 1.01E+01 | 8.54E-06 | 4.82E+00 |
| Ethanol | 64-17-5 | – | – | l | O | 4.61E+01 | 2.77E-04 | 7.68E-02 | – | 1.15E-01 | 1.22E-05 | 2.96E+05 | 3.26E+01 | -2.00E-03 |
| Ethanol, 2-amino- | 141-43-5 | – | – | l | O | 6.11E+01 | 1.75E-07 | -8.96E-01 | – | 1.02E-01 | 1.11E-05 | 1.00E+06 | 5.70E-01 | -1.23E+00 |
| Ethanol, 2-(2-aminoethoxy)- | 929-06-6 | – | – | l | O | 1.05E+02 | 8.48E-09 | -8.09E-01 | – | 7.15E-02 | 8.06E-06 | 1.00E+06 | 2.45E-02 | -1.12E+00 |
| Ethanol, 2-(2-ethoxyethoxy)- | 111-90-0 | – | – | l | O | 1.34E+02 | 2.54E-07 | 1.56E+00 | – | 5.95E-02 | 6.73E-06 | 7.40E+05 | 2.56E-02 | 3.30E-01 |
| Ethanol, 2-(methylamino)- | 109-83-1 | – | – | s | O | 7.51E+01 | 2.20E-07 | -7.69E-01 | – | 8.44E-02 | 9.23E-06 | 1.39E+06 | 1.10E-01 | -1.07E+00 |
| Ethion | 563-12-2 | – | – | l | O | 3.84E+02 | 2.87E-05 | 4.19E+00 | – | 3.20E-02 | 4.60E-06 | 1.20E+00 | 1.50E-06 | 4.75E+00 |
| Ethoprop | 13194-48-4 | – | – | l | O | 2.42E+02 | 6.73E-06 | 3.09E+00 | – | 4.16E-02 | 5.56E-06 | 7.50E+02 | 3.80E-04 | 3.14E+00 |
| Ethoxy ethanol, 2- | 110-80-5 | – | – | l | O | 9.01E+01 | 1.04E-05 | -9.69E-02 | – | 9.47E-02 | 9.75E-06 | 1.20E+01 | 4.56E+00 | -4.16E-01 |
| Ethyl acetate | 141-78-6 | – | – | l | O | 8.81E+01 | 5.57E-03 | 7.20E-01 | – | 7.30E-02 | 9.70E-06 | 7.90E+04 | 9.41E+01 | 8.64E-01 |
| Ethyl acrylate | 140-88-5 | – | – | l | O | 1.00E+02 | 1.06E-02 | 2.03E+00 | – | 7.40E-02 | 8.68E-06 | 2.00E+04 | 2.95E+01 | 1.22E+00 |
| Ethyl benzene | 100-41-4 | – | – | l | O | 1.06E+02 | 3.28E-01 | 2.31E+00 | – | 7.50E-02 | 7.80E-06 | 1.69E+02 | 9.60E+00 | 3.03E+00 |
| Ethyl dipropylthiocarbamate, S- | 759-94-4 | – | – | l | O | 1.89E+02 | 4.57E-03 | 2.38E+00 | – | 5.35E-02 | 5.65E-06 | 3.70E+02 | 1.60E-01 | 3.02E+00 |
| Ethyl ether | 60-29-7 | – | – | l | O | 7.41E+01 | 2.70E-02 | 8.80E-01 | – | 7.40E-02 | 9.30E-06 | 6.10E+04 | 5.40E+02 | 1.05E+00 |
| Ethyl methacrylate | 97-63-2 | – | – | l | O | 1.14E+02 | 6.65E-03 | 1.57E+00 | – | 8.00E-02 | 8.00E-06 | 1.90E+04 | 1.75E+01 | 1.77E+00 |
| Ethyl methanesulfonate | 62-50-0 | – | – | l | O | 1.24E+02 | 2.49E-06 | -6.04E-01 | – | 6.94E-02 | 8.72E-06 | 6.95E+04 | 2.54E-02 | -6.14E-01 |
| Ethyl tert-butyl ether (2-ethyl-2-ethoxypropane) | 637-92-3 | – | – | l | O | 1.02E+02 | 9.99E-02 | 1.57E+00 | – | 6.95E-02 | 7.34E-06 | 5.03E+03 | 9.00E+01 | 1.88E+00 |
| Ethyl-1-hexanol, 2- | 104-76-7 | – | – | l | O | 1.30E+02 | 8.73E-04 | 2.67E+00 | – | 5.70E-02 | 6.73E-06 | 8.66E+02 | 1.10E-01 | 2.72E+00 |
| Ethyl-2-hexenal, 2- | 645-62-5 | – | – | l | O | 1.26E+02 | 1.79E-02 | 2.15E+00 | – | 6.00E-02 | 6.91E-06 | 5.85E+02 | 1.52E+00 | 2.62E+00 |
| Ethyl-2-methyl benzene, 1- | 611-14-3 | – | – | l | O | 1.20E+02 | 2.19E-01 | 3.03E+00 | – | 6.76E-02 | 7.29E-06 | 7.46E+01 | 2.48E+00 | 3.53E+00 |

# Chemical/Physical Properties

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | $Br_{abg}$ ((µg/g DW)/ (µg/g soil)) | $Br_{bg}$ ((µg/g DW)/ ((µg/g soil)) | Physical State | Type | MW (g/mole) | H_unitless (unitless) | $LogK_{oc}$ (unitless) | $LogK_d$ (unitless) | $D_{air}$ ($cm^2/s$) | $D_{wat}$ ($cm^2/s$) | Solubility (mg/l) | Vapor_P (mm Hg) | $logK_{ow}$ (unitless) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ethyl-4-methyl benzene, 1- | 622-96-8 | – | – | l | O | 1.20E+02 | 3.27E-01 | 3.07E+00 | – | 6.70E-02 | 7.18E-06 | 9.48E+01 | 2.95E+00 | 3.58E+00 |
| Ethylene* | 74-85-1 | – | – | – | – | – | – | – | – | – | – | – | – | – |
| Ethylene dibromide (dibromoethane, 1,2- ) | 106-93-4 | – | – | l | O | 1.88E+02 | 2.93E-02 | 1.73E+00 | – | 2.17E-02 | 1.90E-05 | 4.32E+03 | 1.10E+01 | 2.01E+00 |
| Ethylene glycol | 107-21-1 | – | – | l | O | 6.21E+01 | 2.49E-06 | -9.00E-01 | – | 1.08E-01 | 1.22E-05 | 1.00E+06 | 7.00E-02 | -1.20E+00 |
| Ethylene oxide | 75-21-8 | – | – | g | O | 4.41E+01 | 4.92E-03 | 3.42E-01 | – | 1.04E-01 | 1.45E-05 | 3.83E+05 | 1.32E+03 | -4.54E-02 |
| Ethylene thiourea | 96-45-7 | – | – | s | O | 1.02E+02 | 4.99E-05 | -6.60E-01 | – | 7.15E-02 | 1.02E-05 | 1.20E+04 | 8.36E-02 | -4.91E-01 |
| Ethylenediamine | 107-15-3 | – | – | l | O | 6.01E+01 | 7.19E-08 | 6.73E-01 | – | 1.53E-01 | 1.12E-05 | 7.95E+06 | 1.10E+01 | -1.62E+00 |
| Ethylenimine | 151-56-4 | – | – | l | OB | 4.31E+01 | 1.68E-05 | 2.68E-01 | – | 1.20E-01 | 1.30E-05 | 8.62E+05 | 2.31E+02 | -6.04E-01 |
| Ethylhexyl acrylate, 2- | 103-11-7 | – | – | l | O | 1.84E+02 | 4.29E-02 | 4.00E+00 | – | 4.68E-02 | 5.74E-06 | 1.37E+01 | 5.85E-02 | 4.07E+00 |
| Famphur | 52-85-7 | – | – | s | O | 3.25E+02 | 6.70E-11 | 1.14E+00 | – | 4.02E-02 | 5.31E-06 | 7.06E+03 | 2.66E-08 | 1.29E+00 |
| Fensulfothion | 115-90-2 | – | – | l | O | 3.08E+02 | 1.42E-07 | 2.49E+00 | – | 4.04E-02 | 5.32E-06 | 4.10E+04 | 3.45E-04 | 2.05E+00 |
| Fenthion | 55-38-9 | – | – | l | O | 2.78E+02 | 2.13E-05 | 3.04E+00 | – | 4.35E-02 | 5.42E-06 | 2.17E+01 | 1.38E-04 | 3.06E+00 |
| Fenuron | 101-42-8 | – | – | s | O | 1.64E+02 | 7.03E-08 | 1.28E+00 | – | 5.36E-02 | 6.61E-06 | 2.30E+03 | 1.81E-05 | 1.37E+00 |
| Fluoranthene | 206-44-0 | – | – | s | O | 2.02E+02 | 3.88E-04 | 4.69E+00 | – | 3.02E-02 | 6.35E-06 | 2.60E-01 | 8.13E-06 | 4.93E+00 |
| Fluorene | 86-73-7 | – | – | s | O | 1.66E+02 | 2.64E-03 | 3.88E+00 | – | 3.63E-02 | 7.88E-06 | 1.98E+00 | 3.24E-03 | 4.02E+00 |
| Fluorine (soluble fluoride) | 7782-41-4 | – | – | g | I | 3.80E+01 | – | – | 2.18E+00 | – | – | – | 7.60E+02 | 2.23E-01 |
| Fluorochloridone | 61213-25-0 | – | – | s | O | 3.12E+02 | 8.44E-08 | 2.69E+00 | – | 4.09E-02 | 5.47E-06 | 8.23E+01 | 4.07E-07 | 3.30E+00 |
| Fonofos | 944-22-9 | – | – | s | O | 2.46E+02 | 3.17E-01 | 3.55E+00 | – | 4.65E-02 | 5.52E-06 | 1.46E+01 | 3.43E-01 | 4.00E+00 |
| Formaldehyde | 50-00-0 | – | – | g | O | 3.00E+01 | 1.37E-05 | 3.40E-01 | – | 1.80E-01 | 2.00E-05 | 5.50E+05 | 3.88E+03 | 3.50E-01 |
| Formic acid | 64-18-6 | – | – | l | O | 4.60E+01 | 1.79E-04 | -5.40E-01 | – | 7.90E-02 | 1.40E-06 | 1.00E+06 | 4.10E+01 | -4.61E-01 |
| Furan | 110-00-9 | – | – | l | O | 6.81E+01 | 2.24E-01 | 1.32E+00 | – | 1.04E-01 | 1.20E-05 | 1.00E+04 | 6.00E+02 | 1.36E+00 |
| Furfural | 98-01-1 | – | – | l | O | 9.61E+01 | 1.25E-04 | 4.45E-01 | – | 8.72E-02 | 1.12E-05 | 8.60E+04 | 2.00E+00 | 8.32E-01 |
| Glycidylaldehyde | 765-34-4 | – | – | l | O | 7.21E+01 | 1.08E-05 | 9.64E-01 | – | 9.64E-02 | 1.16E-05 | 8.55E+07 | 2.70E+01 | -1.17E-01 |
| Glyphosate | 1071-83-6 | – | – | s | OA | 1.69E+02 | 6.11E-12 | 3.00E+00 | – | 5.07E-02 | 7.64E-06 | 1.46E+04 | 2.43E-08 | -3.33E+00 |
| Heptachlor | 76-44-8 | – | – | s | O | 3.73E+02 | 2.44E-02 | 4.07E+00 | – | 1.12E-02 | 5.69E-06 | 1.80E-01 | 3.26E-04 | 6.21E+00 |
| Heptachlor epoxide | 1024-57-3 | – | – | s | O | 3.89E+02 | 3.45E-04 | 3.86E+00 | – | 1.32E-02 | 4.23E-06 | 2.75E-01 | 4.34E-06 | 4.91E+00 |
| Heptane, n- | 142-82-5 | – | – | l | O | 1.00E+02 | 8.37E+01 | 3.84E+00 | – | 6.54E-02 | 7.00E-06 | 2.66E+00 | 4.07E+01 | 4.75E+00 |
| Heptanoic acid, n- | 111-14-8 | – | – | l | OA | 1.30E+02 | 3.72E-05 | -3.00E-01 | – | 5.73E-02 | 7.13E-06 | 1.70E+03 | 8.84E-03 | 2.99E+00 |
| Hexachlorobenzene | 118-74-1 | – | – | s | O | 2.85E+02 | 2.22E-02 | 4.45E+00 | – | 5.42E-02 | 5.91E-06 | 6.00E-03 | 1.23E-05 | 5.86E+00 |
| Hexachlorobutadiene | 87-68-3 | – | – | l | O | 2.61E+02 | 9.94E-01 | 3.84E+00 | – | 5.61E-02 | 6.16E-06 | 2.55E+00 | 1.77E-01 | 4.72E+00 |
| Hexachlorocyclohexane, alpha (alpha-BHC) | 319-84-6 | – | – | s | O | 2.91E+02 | 2.82E-04 | 3.12E+00 | – | 1.42E-02 | 7.34E-06 | 2.00E+00 | 4.26E-05 | 4.26E+00 |
| Hexachlorocyclohexane, beta (beta-BHC) | 319-85-7 | – | – | s | O | 2.91E+02 | 1.44E-05 | 3.14E+00 | – | 1.42E-02 | 7.34E-06 | 5.42E-01 | 4.90E-07 | 4.26E+00 |
| Hexachlorocyclohexane, delta (delta-BHC) | 319-86-8 | – | – | s | O | 2.91E+02 | 1.77E-04 | 3.93E+00 | – | 4.50E-02 | 6.20E-06 | 2.59E+00 | 2.87E-05 | 4.00E+00 |
| Hexachlorocyclohexane, gamma (lindane; gamma-BHC) | 58-89-9 | – | – | s | O | 2.91E+02 | 1.41E-04 | 3.04E+00 | – | 1.42E-02 | 7.34E-06 | 5.75E+00 | 3.72E-05 | 4.26E+00 |
| Hexachlorocyclohexane, techn (technical-BHC) | 608-73-1 | – | – | – | O | 2.91E+02 | 5.99E-05 | 3.38E+00 | – | 1.42E-02 | 7.34E-06 | 4.35E+01 | 1.64E-04 | 4.26E+00 |
| Hexachlorocyclopentadiene | 77-47-4 | – | – | l | O | 2.74E+02 | 7.15E-01 | 3.98E+00 | – | 1.61E-02 | 7.21E-06 | 1.80E+00 | 7.32E-02 | 4.63E+00 |

# Chemical/Physical Properties

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | $Br_{abg}$ ((µg/g DW)/(µg/g soil)) | $Br_{bg}$ ((µg/g DW)/((µg/g soil)) | Physical State | Type | MW (g/mole) | H_unitless (unitless) | $LogK_{oc}$ (unitless) | $LogK_d$ (unitless) | $D_{air}$ ($cm^2/s$) | $D_{wat}$ ($cm^2/s$) | Solubility (mg/l) | Vapor_P (mm Hg) | $logK_{ow}$ (unitless) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexachloroethane | 67-72-1 | – | – | s | O | 2.37E+02 | 1.62E-01 | 3.26E+00 | – | 2.50E-03 | 6.80E-06 | 5.00E+01 | 4.72E-01 | 4.03E+00 |
| Hexachlorophene | 70-30-4 | – | – | s | O | 4.07E+02 | 2.54E-09 | 7.30E+00 | – | 8.00E-02 | 8.00E-06 | 3.00E-03 | 2.74E-12 | 6.92E+00 |
| Hexachloropropylene | 1888-71-7 | – | – | l | O | 2.49E+02 | 3.94E-02 | 4.03E+00 | – | 5.64E-02 | 7.15E-06 | 4.11E+01 | 1.19E-01 | 4.10E+00 |
| Hexanal, 2-ethyl- | 123-05-7 | – | – | l | O | 1.28E+02 | 1.23E-02 | 2.12E+00 | – | 5.81E-02 | 6.26E-06 | 5.48E+02 | 9.59E-01 | 2.58E+00 |
| Hexane, n- | 110-54-3 | – | – | l | O | 8.62E+01 | 4.66E+01 | 2.68E+00 | – | 2.00E-01 | 7.77E-06 | 1.30E+01 | 1.52E+02 | 3.29E+00 |
| Hexanediamine, 1,6- | 124-09-4 | – | – | s | O | 1.16E+02 | 2.88E-08 | 3.56E-01 | – | 6.02E-02 | 6.79E-06 | 1.00E+06 | 4.22E-02 | 3.50E-01 |
| Hexanedinitrile | 111-69-3 | – | – | l | O | 1.08E+02 | 9.31E-08 | 2.62E-01 | – | 6.72E-02 | 7.66E-06 | 1.00E+06 | 6.23E-03 | 2.80E-01 |
| Hexanediol, 1,6- | 629-11-8 | – | – | s | O | 1.18E+02 | 3.14E-08 | 7.62E-01 | – | 6.58E-02 | 7.82E-06 | 2.34E+04 | 1.10E-04 | 7.75E-01 |
| Hexanoic acid | 142-62-1 | – | – | l | O | 1.16E+02 | 1.31E-05 | -1.29E+00 | – | 6.20E-02 | 7.68E-06 | 1.19E+04 | 2.46E-02 | 2.06E+00 |
| Hexanone, 2- | 591-78-6 | – | – | l | O | 1.00E+02 | 3.38E-03 | 1.25E+00 | – | 6.96E-02 | 7.75E-06 | 1.79E+04 | 1.11E+01 | 1.48E+00 |
| Hexazinone | 51235-04-2 | – | – | s | O | 2.52E+02 | 8.62E-11 | 1.57E+00 | – | 5.08E-02 | 5.11E-06 | 3.30E+04 | 2.03E-07 | 2.15E+00 |
| Hexene, 1- | 592-41-6 | – | – | l | O | 8.42E+01 | 2.33E+01 | 2.90E+00 | – | 7.39E-02 | 7.12E-06 | 2.98E+01 | 1.52E+02 | 3.56E+00 |
| Hexene, cis-2- | 7688-21-3 | – | – | l | O | 8.42E+01 | 1.62E+01 | 2.93E+00 | – | 7.39E-02 | 7.15E-06 | 3.75E+01 | 1.33E+02 | 3.60E+00 |
| Hexylene glycol (2-methyl-2,4-pentanediol) | 107-41-5 | – | – | l | O | 1.18E+02 | 6.57E-07 | 3.93E-01 | – | 6.57E-02 | 7.70E-06 | 7.27E+05 | 7.40E-02 | 4.00E-01 |
| Hydrazine | 302-01-2 | – | – | l | O | 3.20E+01 | 7.20E-08 | -1.00E+00 | – | 4.16E-01 | 1.90E-05 | 3.41E+08 | 1.40E+01 | -1.47E+00 |
| Hydrocaproic acid, 6- (6-hydroxyhexanoic acid) | 1191-25-9 | – | – | l | OA | 1.32E+02 | 1.84E-09 | -2.55E-01 | – | 5.77E-02 | 7.22E-06 | 9.86E+03 | 2.51E-06 | -3.00E+00 |
| Hydrogen chloride (hydrochloric acid)* | 7647-01-0 | – | – | – | – | – | – | – | – | – | – | – | – | – |
| Hydroquinone | 123-31-9 | – | – | s | O | 1.10E+02 | 1.35E-09 | 4.98E-01 | – | 6.82E-02 | 8.56E-06 | 2.06E+04 | 4.62E-06 | 5.30E-01 |
| Indene | 95-13-6 | – | – | l | O | 1.16E+02 | 2.08E-02 | 2.50E+00 | – | 6.82E-02 | 7.97E-06 | 3.90E+02 | 1.30E+00 | 2.80E+00 |
| Indeno-1,2,3-cd-pyrene | 193-39-5 | – | – | s | O | 2.76E+02 | 2.85E-06 | 6.54E+00 | – | 1.90E-02 | 5.66E-06 | 3.75E-03 | 1.40E-10 | 6.70E+00 |
| Iron* | 7439-89-6 | – | – | – | – | – | – | – | – | – | – | – | – | – |
| Isoamyl alcohol | 123-51-3 | – | – | l | O | 8.81E+01 | 5.64E-04 | 1.24E+00 | – | 7.40E-02 | 7.75E-06 | 1.75E+04 | 2.05E+00 | 1.47E+00 |
| Isobutyl alcohol | 78-83-1 | – | – | l | O | 7.41E+01 | 4.99E-04 | 7.50E-01 | – | 8.60E-02 | 8.00E-06 | 9.49E+04 | 1.00E+01 | 7.67E-01 |
| Isobutylene (2-methyl-1-propene) | 115-11-7 | – | – | g | O | 5.61E+01 | 9.56E+00 | 2.03E+00 | – | 9.90E-02 | 9.08E-06 | 2.39E+02 | 1.75E+03 | 2.47E+00 |
| Isobutyric acid (2-methylpropanoic acid) | 79-31-2 | – | – | l | OA | 8.81E+01 | 2.40E-05 | -2.05E+00 | – | 7.76E-02 | 9.17E-06 | 4.96E+04 | 4.52E-01 | 1.15E+00 |
| Isodecanol | 25339-17-7 | – | – | l | O | 1.58E+02 | 1.67E-03 | 3.27E+00 | – | 4.84E-02 | 5.49E-06 | 3.43E+01 | 6.63E-03 | 4.02E+00 |
| Isodrin | 465-73-6 | – | – | s | O | 3.65E+02 | 9.13E-02 | 6.84E+00 | – | 3.40E-02 | 4.49E-06 | 1.70E-02 | 7.77E-05 | 6.82E+00 |
| Isopentane | 78-78-4 | – | – | l | O | 7.22E+01 | 6.28E+01 | 2.74E+00 | – | 8.21E-02 | 7.43E-06 | 4.24E+01 | 6.75E+02 | 3.36E+00 |
| Isophorone | 78-59-1 | – | – | l | O | 1.38E+02 | 2.57E-04 | 1.48E+00 | – | 6.23E-02 | 6.76E-06 | 1.20E+04 | 4.10E-01 | 2.62E+00 |
| Isopropyl acetate | 108-21-4 | – | – | l | O | 1.02E+02 | 1.16E-02 | 1.02E+00 | – | 7.35E-02 | 8.00E-06 | 2.14E+04 | 4.43E+01 | 1.19E+00 |
| Isopropyl alcohol | 67-63-0 | – | – | l | O | 6.01E+01 | 3.70E-04 | 5.30E-01 | – | 9.59E-02 | 1.03E-05 | 1.97E+05 | 2.22E+01 | 5.00E-01 |
| Isosafrole | 120-58-1 | – | – | l | O | 1.62E+02 | 1.28E-03 | 2.87E+00 | – | 5.59E-02 | 7.07E-06 | 1.43E+02 | 2.06E-02 | 2.92E+00 |
| Kelthane (dicofol) | 115-32-2 | – | – | s | OA | 3.70E+02 | 8.20E-07 | 4.10E+00 | – | 3.91E-02 | 5.20E-06 | 7.00E-01 | 3.90E-08 | 5.10E+00 |
| Kepone (chlordecone) | 143-50-0 | – | – | s | O | 4.91E+02 | 1.04E-06 | 4.43E+00 | – | 4.22E-02 | 4.30E-06 | 7.60E+00 | 2.25E-07 | 4.91E+00 |
| Lead (inorganic) | 7439-92-1 | – | – | s | M | 2.07E+02 | 0.00E+00 | - | 1.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 7.29E-01 |
| Leptophos | 21609-90-5 | – | – | s | O | 4.12E+02 | 1.31E-05 | 5.12E+00 | – | 3.39E-02 | 4.69E-06 | 1.96E-03 | 1.14E-09 | 6.88E+00 |

# Chemical/Physical Properties

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | $Br_{abg}$ ((µg/g DW)/(µg/g soil)) | $Br_{bg}$ ((µg/g DW)/((µg/g soil)) | Physical State | Type | MW (g/mole) | H_unitless (unitless) | $LogK_{oc}$ (unitless) | $LogK_d$ (unitless) | $D_{air}$ ($cm^2/s$) | $D_{wat}$ ($cm^2/s$) | Solubility (mg/l) | Vapor_P (mm Hg) | $logK_{ow}$ (unitless) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Limonene, d-* | 5989-27-5 | – | – | – | – | – | – | – | – | – | – | – | – | – |
| Lithium | 7439-93-2 | 2.00E-02 | 4.00E-03 | s | M | 6.94E+00 | 0.00E+00 | – | – | – | – | – | – | – |
| Magnesium* | 7439-95-4 | – | – | – | – | – | – | – | – | – | – | – | – | – |
| Malathion | 121-75-5 | – | – | I | O | 3.30E+02 | 9.98E-07 | 2.46E+00 | – | 1.50E-02 | 4.40E-06 | 1.45E+02 | 7.90E-06 | 2.29E+00 |
| Maleic anhydride | 108-31-6 | – | – | s | O | 9.81E+01 | 8.31E-06 | 1.41E+00 | – | 9.50E-02 | 1.11E-05 | 8.65E+02 | 1.34E-03 | 1.62E+00 |
| Maleic hydrazide | 123-33-1 | – | – | s | O | 1.12E+02 | 1.03E-10 | 1.40E+00 | – | 8.75E-02 | 8.75E-06 | 6.00E+03 | 7.50E-08 | -8.87E-01 |
| Malononitrile | 109-77-3 | – | – | s | O | 6.61E+01 | 1.97E-07 | 6.90E-01 | – | 9.97E-02 | 1.09E-05 | 6.96E+06 | 3.79E-01 | -1.78E-01 |
| Mancozeb | 8018-01-7 | – | – | s | O | 2.65E+02 | 1.81E-05 | 1.13E+00 | – | 5.69E-02 | 6.02E-06 | 6.20E+00 | 7.50E-06 | 1.33E+00 |
| Manganese | 7439-96-5 | 1.00E-01 | 5.00E-02 | s | M | 5.49E+01 | 0.00E+00 | – | 1.70E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| MCPA (4-(chloro-2-methylphenoxy) acetic acid) | 94-74-6 | – | – | s | O | 2.01E+02 | 1.18E-07 | -1.50E+00 | – | 5.12E-02 | 6.82E-06 | 6.50E+02 | 6.99E-06 | 3.39E+00 |
| MCPP (2-(4-chloro-2-methylphenoxy) propanoic acid) | 93-65-2 | – | – | s | O | 2.15E+02 | 1.00E-06 | -1.76E+00 | – | 4.70E-02 | 6.36E-06 | 2.80E+02 | 2.50E-05 | 3.13E+00 |
| Mercury (pH = 4.9) | 7439-97-6 | 5.50E-03 | 1.40E-02 | I | M | 2.01E+02 | 4.74E-01 | – | -1.40E+00 | 3.07E-02 | 6.30E-06 | 3.00E-02 | 1.30E-03 | -4.71E-01 |
| Mercury (pH=6.8) | 7439-97-6 | 5.50E-03 | 1.40E-02 | I | M | 2.01E+02 | 4.74E-01 | – | 1.72E+00 | 3.07E-02 | 6.30E-06 | 3.00E-02 | 1.30E-03 | -4.71E-01 |
| Merphos | 150-50-5 | – | – | I | O | 2.99E+02 | 1.26E+00 | 5.34E+00 | – | 3.65E-02 | 4.75E-06 | 4.97E-03 | 3.83E-04 | 7.29E+00 |
| Methacrylic acid (2-methyl-2-propenoic acid) | 79-41-4 | – | – | I | O | 8.61E+01 | 5.21E-04 | -2.40E+00 | – | 8.50E-02 | 9.59E-06 | 9.59E+04 | 1.06E+01 | 1.67E+00 |
| Methacrylonitrile | 126-98-7 | – | – | I | O | 6.71E+01 | 3.03E-03 | 5.30E-01 | – | 8.00E-02 | 8.00E-06 | 2.50E+04 | 6.80E+01 | 7.57E-01 |
| Methanol | 67-56-1 | – | – | I | O | 3.20E+01 | 1.94E-04 | -7.40E-01 | – | 1.50E-01 | 1.64E-05 | 1.00E+06 | 1.22E+02 | -6.32E-01 |
| Methapyrilene | 91-80-5 | – | – | I | O | 2.61E+02 | 1.18E-07 | 1.30E+00 | – | 4.00E-02 | 5.29E-06 | 2.03E+03 | 1.68E-05 | 3.15E+00 |
| Methomyl | 16752-77-5 | – | – | s | O | 1.62E+02 | 7.48E-09 | 2.20E+00 | – | 4.07E-02 | 7.20E-06 | 5.80E+04 | 5.00E-05 | 6.09E-01 |
| Methoxychlor | 72-43-5 | – | – | s | O | 3.46E+02 | 6.57E-04 | 4.89E+00 | – | 1.56E-02 | 4.46E-06 | 4.50E-02 | 1.23E-06 | 5.67E+00 |
| Methoxyethanol, 2- | 109-86-4 | – | – | I | O | 7.61E+01 | 1.28E+00 | 9.31E-01 | – | 9.15E-02 | 1.02E-05 | 2.01E+01 | 6.20E+00 | -9.07E-01 |
| Methyl acetate (acetic acid, methyl ester) | 79-20-9 | – | – | I | O | 7.41E+01 | 4.46E-03 | 2.43E-01 | – | 9.50E-02 | 1.01E-05 | 1.44E+05 | 1.58E+02 | 2.46E-01 |
| Methyl acrylate | 96-33-3 | – | – | I | O | 8.61E+01 | 9.15E-03 | 6.56E-01 | – | 8.70E-02 | 9.35E-06 | 4.03E+04 | 7.93E+01 | 7.30E-01 |
| Methyl amyl ketone (2-heptanone) | 110-43-0 | – | – | I | O | 1.14E+02 | 3.64E-03 | 1.69E+00 | – | 6.32E-02 | 7.20E-06 | 6.06E+03 | 3.53E+00 | 2.03E+00 |
| Methyl chrysene, 1- | 3351-28-8 | – | – | s | O | 2.42E+02 | 1.16E-05 | 6.65E+00 | – | 4.09E-02 | 5.61E-06 | 2.53E-04 | 2.22E-10 | 6.76E+00 |
| Methyl chrysene, 2- | 3351-32-4 | – | – | s | O | 2.42E+02 | 1.18E-05 | 6.65E+00 | – | 4.09E-02 | 5.61E-06 | 3.54E-04 | 3.17E-10 | 6.76E+00 |
| Methyl chrysene, 6- | 1705-85-7 | – | – | s | O | 2.42E+02 | 1.17E-05 | 6.55E+00 | – | 4.09E-02 | 5.61E-06 | 1.07E-03 | 9.44E-10 | 6.76E+00 |
| Methyl cyclohexane | 108-87-2 | – | – | I | O | 9.82E+01 | 1.59E+01 | 3.33E+00 | – | 6.97E-02 | 7.59E-06 | 1.04E+01 | 3.08E+01 | 4.10E+00 |
| Methyl ethyl ketone (2-butanone) | 78-93-3 | – | – | I | O | 7.21E+01 | 1.94E-03 | 2.79E-01 | – | 8.08E-02 | 9.80E-06 | 2.40E+05 | 9.10E+01 | 2.56E-01 |
| Methyl iodide (iodomethane) | 74-88-4 | – | – | I | O | 1.42E+02 | 2.36E-01 | 1.31E+00 | – | 1.02E-01 | 1.17E-05 | 1.24E+04 | 3.79E+02 | 1.55E+00 |
| Methyl isobutyl ketone (4-methyl-2-pentanone) | 108-10-1 | – | – | I | O | 1.00E+02 | 5.82E-03 | 1.18E+00 | – | 7.50E-02 | 7.80E-06 | 1.90E+04 | 1.45E+01 | 1.16E+00 |
| Methyl mercury | 22967-92-6 | – | – | – | I | 2.16E+02 | – | – | – | – | – | – | – | 7.63E-02 |
| Methyl methacrylate | 80-62-6 | – | – | I | O | 1.00E+02 | 1.33E-02 | 1.36E+00 | – | 7.70E-02 | 8.60E-06 | 1.60E+04 | 3.80E+01 | 1.28E+00 |
| Methyl methanesulfonate | 66-27-3 | – | – | I | O | 1.10E+02 | 3.25E-06 | -7.54E-01 | – | 7.52E-02 | 9.50E-06 | 4.95E+04 | 2.67E-02 | -7.67E-01 |
| Methyl parathion | 298-00-0 | – | – | s | O | 2.63E+02 | 5.82E-06 | 2.81E+00 | – | 8.00E-02 | 8.00E-06 | 5.00E+01 | 1.52E-05 | 2.75E+00 |
| Methyl-1-butene, 2- | 563-46-2 | – | – | I | O | 7.01E+01 | 1.41E+01 | 2.23E+00 | – | 8.57E-02 | 8.93E-06 | 1.38E+02 | 5.06E+02 | 2.72E+00 |

# Chemical/Physical Properties

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | $Br_{abg}$ ((µg/g DW)/(µg/g soil)) | $Br_{bg}$ ((µg/g DW)/((µg/g soil)) | Physical State | Type | MW (g/mole) | H_unitless (unitless) | $LogK_{oc}$ (unitless) | $LogK_d$ (unitless) | $D_{air}$ ($cm^2/s$) | $D_{wat}$ ($cm^2/s$) | Solubility (mg/l) | Vapor_P (mm Hg) | $logK_{ow}$ (unitless) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Methyl-1-propanal, 2- (isobutyraldehyde) | 78-84-2 | – | – | l | O | 7.21E+01 | 7.48E-03 | 7.04E-01 | – | 8.90E-02 | 9.36E-06 | 4.59E+04 | 8.89E+01 | 7.90E-01 |
| Methyl-2-butene, 2- | 513-35-9 | – | – | l | O | 7.01E+01 | 7.32E+00 | 2.19E+00 | – | 8.57E-02 | 8.93E-06 | 2.06E+02 | 3.93E+02 | 2.67E+00 |
| Methyl-2-pentenal, 2- | 623-36-9 | – | – | l | O | 9.81E+01 | 1.34E-02 | 1.44E+00 | – | 7.20E-02 | 8.05E-06 | 5.04E+03 | 1.26E+01 | 1.72E+00 |
| Methylcholanthrene, 3- | 56-49-5 | – | – | s | O | 2.68E+02 | 7.72E-07 | 6.96E+00 | – | 3.83E-02 | 5.40E-06 | 1.76E-04 | 6.64E-12 | 7.08E+00 |
| Methylene bromide (dibromomethane) | 74-95-3 | – | – | l | O | 1.74E+02 | 3.49E-02 | 2.26E+00 | – | 8.00E-02 | 8.00E-06 | 1.10E+04 | 4.56E+01 | 1.52E+00 |
| Methylene chloride (dichloromethane) | 75-09-2 | – | – | l | O | 8.49E+01 | 9.10E-02 | 1.07E+00 | – | 1.01E-01 | 1.17E-05 | 1.54E+04 | 4.55E+02 | 1.34E+00 |
| Methylene-bis (2-chloroaniline) 4,4'- | 101-14-4 | – | – | s | O | 2.67E+02 | 1.40E-05 | 3.90E+00 | – | 1.99E-02 | 5.80E-06 | 7.24E+01 | 6.94E-05 | 3.47E+00 |
| Methylmecury hydroxide | 1184-57-2 | – | – | s | OM | 2.33E+02 | 5.47E-09 | 1.92E-02 | – | 1.05E-01 | 1.43E-05 | 1.00E+06 | 7.50E-03 | -1.33E+00 |
| Methylnaphthalene, 1- | 90-12-0 | – | – | s | O | 1.42E+02 | 1.64E-02 | 3.36E+00 | – | 6.31E-02 | 7.13E-06 | 2.80E+01 | 6.62E-02 | 3.72E+00 |
| Methylnaphthalene, 2- | 91-57-6 | – | – | s | O | 1.42E+02 | 1.85E-02 | 3.63E+00 | – | 6.29E-02 | 7.20E-06 | 2.54E+01 | 6.75E-02 | 3.72E+00 |
| Methylpyrrolidone, N- | 872-50-4 | – | – | l | O | 9.91E+01 | 1.83E-06 | 1.01E-02 | – | 7.16E-02 | 8.75E-06 | – | 4.90E-01 | 1.00E-02 |
| Methylsytrene, alpha- | 98-83-9 | – | – | l | O | 1.18E+02 | 1.95E-01 | 2.87E+00 | – | 6.31E-02 | 6.91E-06 | 6.11E+01 | 1.84E+00 | 3.53E+00 |
| Methyltetrahydrofuran, 2- | 96-47-9 | – | – | l | O | 8.61E+01 | 8.78E-03 | 9.43E-01 | – | 8.09E-02 | 8.72E-06 | 3.99E+04 | 7.44E+01 | 1.09E+00 |
| Methyltetrahydropyran, 2- | 10141-72-7 | – | – | l | O | 1.00E+02 | 8.30E-03 | 1.28E+00 | – | 7.19E-02 | 8.04E-06 | 1.23E+04 | 1.87E+01 | 1.52E+00 |
| Metolachlor | 51218-45-2 | – | – | l | O | 2.84E+02 | 3.13E-08 | 2.85E+00 | – | 3.61E-02 | 5.10E-06 | 8.64E+02 | 2.29E-06 | 2.90E+00 |
| Metribuzin | 21087-64-9 | – | – | s | O | 2.14E+02 | 4.99E-09 | 3.48E-01 | – | 4.51E-02 | 5.98E-06 | 1.21E+05 | 5.16E-05 | 3.72E-01 |
| Mirex | 2385-85-5 | – | – | s | O | 5.46E+02 | 3.20E-01 | 7.36E+00 | – | 3.50E-02 | 4.08E-06 | 3.41E-08 | 7.50E-07 | 1.10E+01 |
| Molinate | 2212-67-1 | – | – | l | O | 1.87E+02 | 5.25E-05 | 1.70E+00 | – | 5.65E-02 | 6.00E-06 | 9.00E+02 | 5.60E-03 | 2.91E+00 |
| Molybdenum | 7439-98-7 | 1.00E-01 | 6.00E-02 | s | M | 9.59E+01 | 0.00E+00 | – | 1.30E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Monocrotophos | 2157-98-4 | – | – | s | O | 2.23E+02 | 1.24E-12 | 3.18E-01 | – | 4.48E-02 | 5.67E-06 | 8.02E+05 | 8.12E-08 | 4.84E-01 |
| Morpholine | 110-91-8 | – | – | l | O | 8.71E+01 | 2.28E-06 | -2.63E-02 | – | 8.34E-02 | 9.44E-06 | 3.33E+07 | 1.59E+01 | -8.80E-01 |
| Morpholine, N-butyl- | 1005-67-0 | – | – | l | O | 1.43E+02 | 7.19E-05 | 1.74E+00 | – | 5.36E-02 | 6.01E-06 | 7.36E+04 | 6.80E-01 | 1.77E+00 |
| MTBE (methyl tert-butyl ether) | 1634-04-4 | – | – | l | O | 8.81E+01 | 2.44E-02 | 1.15E+00 | – | 7.92E-02 | 9.41E-05 | 4.80E+04 | 2.49E+02 | 1.43E+00 |
| Naled | 300-76-5 | – | – | l | O | 3.81E+02 | 2.71E-03 | 2.12E+00 | – | 4.40E-02 | 6.80E-06 | 1.50E+00 | 2.00E-04 | 1.60E+00 |
| Naphthalene | 91-20-3 | – | – | s | O | 1.28E+02 | 2.00E-02 | 3.19E+00 | – | 5.90E-02 | 7.50E-06 | 3.14E+01 | 8.89E-02 | 3.17E+00 |
| Naphthoquinone, 1,4- | 130-15-4 | – | – | s | O | 1.58E+02 | 4.00E-05 | 1.29E+00 | – | 5.55E-02 | 7.09E-06 | 2.20E+02 | 1.34E-03 | 1.50E+00 |
| Naphthylamine, 1- | 134-32-7 | – | – | s | O | 1.43E+02 | 8.64E-06 | 2.64E+00 | – | 5.89E-02 | 7.56E-06 | 5.84E+02 | 6.44E-04 | 2.64E+00 |
| Naphthylamine, 2- | 91-59-8 | – | – | s | O | 1.43E+02 | 1.00E-06 | 2.76E+00 | – | 5.86E-02 | 7.46E-06 | 1.25E+02 | 6.76E-05 | 2.76E+00 |
| Napropamide | 15299-99-7 | – | – | s | OB | 2.71E+02 | 2.17E-07 | 3.74E+00 | – | 3.78E-02 | 5.05E-06 | 2.57E+01 | 3.77E-07 | 3.81E+00 |
| Neopentyl glycol | 126-30-7 | – | – | s | O | 1.04E+02 | 5.11E-07 | 2.54E-01 | – | 7.23E-02 | 8.54E-06 | 2.81E+05 | 2.52E-02 | 2.22E-01 |
| Nickel and compounds | 7440-02-0 | 2.50E-02 | 8.00E-03 | s | M | 5.87E+01 | 0.00E+00 | – | 1.20E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | -5.71E-01 |
| Nitrate-N | 14797-55-8 | – | – | – | I | 6.20E+01 | – | – | – | – | – | – | – | 2.09E-01 |
| Nitrite-N | 14797-65-0 | – | – | – | I | 4.60E+01 | – | – | – | – | – | – | – | 5.64E-02 |
| Nitroaniline, 2- | 88-74-4 | – | – | s | O | 1.38E+02 | 2.08E-05 | 1.43E+00 | – | 5.99E-02 | 7.18E-06 | 1.26E+03 | 4.75E-03 | 2.02E+00 |
| Nitroaniline, 3- | 99-09-2 | – | – | s | O | 1.38E+02 | 2.31E-07 | 1.60E+00 | – | 6.73E-02 | 8.59E-06 | 4.56E+02 | 1.39E-05 | 1.62E+00 |
| Nitroaniline, 4- | 100-01-6 | – | – | s | O | 1.38E+02 | 3.33E-08 | 1.05E+00 | – | 6.69E-02 | 8.59E-06 | 6.49E+02 | 2.86E-06 | 1.07E+00 |

# Chemical/Physical Properties

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | $Br_{abg}$ ((µg/g DW)/(µg/g soil)) | $Br_{bg}$ ((µg/g DW)/(µg/g soil)) | Physical State | Type | MW (g/mole) | H_unitless (unitless) | $LogK_{oc}$ (unitless) | $LogK_d$ (unitless) | $D_{air}$ ($cm^2/s$) | $D_{wat}$ ($cm^2/s$) | Solubility (mg/l) | Vapor_P (mm Hg) | $logK_{ow}$ (unitless) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Nitrobenzene | 98-95-3 | – | – | l | O | 1.23E+02 | 8.56E-04 | 2.12E+00 | – | 7.60E-02 | 8.60E-06 | 1.90E+03 | 2.44E-01 | 1.81E+00 |
| Nitroglycerin | 55-63-0 | – | – | l | O | 2.27E+02 | 3.40E-06 | 1.97E+00 | – | 5.53E-02 | 7.34E-06 | 6.70E+04 | 1.00E-04 | 2.00E+00 |
| Nitrophenol, 2- | 88-75-5 | – | – | s | O | 1.39E+02 | 2.21E-05 | 1.32E+00 | – | 6.87E-02 | 8.47E-06 | 1.73E+04 | 5.03E-02 | 2.35E+00 |
| Nitrophenol, 3- | 554-84-7 | – | – | s | O | 1.39E+02 | 1.90E-11 | 1.84E+00 | – | 6.65E-02 | 8.61E-06 | 5.86E+03 | 7.81E-05 | 1.97E+00 |
| Nitrophenol, 4- | 100-02-7 | – | – | s | O | 1.39E+02 | 3.24E-08 | 5.00E-01 | – | 6.73E-02 | 8.66E-06 | 4.49E+03 | 1.91E-05 | 1.73E+00 |
| Nitropropane, 2- | 79-46-9 | – | – | l | O | 8.91E+01 | 5.15E-03 | 5.44E-01 | – | 9.23E-02 | 1.01E-05 | 1.70E+04 | 1.82E+01 | 8.72E-01 |
| Nitroquinoline-N-oxide, 4- | 56-57-5 | – | – | s | O | 1.90E+02 | 8.23E-13 | 1.07E+00 | – | 6.78E-02 | 7.44E-06 | 1.17E+07 | 9.23E-07 | 1.09E+00 |
| Nitrosodiethanolamine | 1116-54-7 | – | – | l | O | 1.34E+02 | 2.05E-09 | 4.76E-01 | – | 7.27E-02 | 7.70E-06 | 7.33E+07 | 5.00E-04 | -1.28E+00 |
| Nitrosodiethylamine, n- | 55-18-5 | – | – | l | O | 1.02E+02 | 3.60E-05 | 4.77E-01 | – | 8.00E-02 | 8.00E-06 | 1.47E+05 | 1.42E+00 | 3.44E-01 |
| Nitrosodimethylamine, n- | 62-75-9 | – | – | l | O | 7.41E+01 | 2.16E-05 | 5.56E-01 | – | 1.34E-01 | 9.72E-06 | 1.00E+06 | 5.37E+00 | -6.39E-01 |
| Nitrosodi-n-butylamine, n- | 924-16-3 | – | – | – | O | 1.58E+02 | 3.58E-03 | 2.36E+00 | – | 8.00E-02 | 8.00E-06 | 1.20E+03 | 2.89E-01 | 2.31E+00 |
| Nitrosodi-n-propylamine, n- | 621-64-7 | – | – | s | O | 1.30E+02 | 9.35E-05 | 1.29E+00 | – | 5.45E-02 | 8.17E-06 | 9.89E+03 | 4.00E-01 | 1.35E+00 |
| Nitrosodiphenylamine | 86-30-6 | – | – | s | O | 1.98E+02 | 2.08E-04 | 2.52E+00 | – | 3.12E-02 | 6.35E-06 | 3.51E+01 | 9.88E-02 | 3.16E+00 |
| Nitroso-methyl-ethyl-amine, n- | 10595-95-6 | – | – | – | O | 8.81E+01 | 3.70E-05 | 1.32E+00 | – | 8.00E-02 | 8.00E-06 | 3.00E+05 | 2.28E+00 | -1.47E-01 |
| Nitrosomorpholine, N- | 59-89-2 | – | – | s | O | 1.16E+02 | 3.99E-08 | -1.37E+00 | – | 7.41E-02 | 9.22E-06 | 4.71E+06 | 2.96E-02 | -1.39E+00 |
| Nitroso-n-ethylurea, n- | 759-73-9 | – | – | s | O | 1.17E+02 | 1.05E-04 | 1.51E+00 | – | 8.08E-02 | 8.25E-06 | 4.85E+04 | 7.97E-01 | -2.47E-02 |
| Nitrosopiperidine, N- | 100-75-4 | – | – | l | O | 1.14E+02 | 1.30E-05 | 7.28E-01 | – | 6.90E-02 | 8.57E-06 | 4.91E+04 | 1.00E-01 | 7.40E-01 |
| Nitrosopyrrolidine, n- | 930-55-2 | – | – | l | O | 1.00E+02 | 7.48E-07 | -1.87E-01 | – | 8.00E-02 | 8.00E-06 | 7.80E+05 | 1.75E-01 | 2.31E-01 |
| Nitrotoluene, m- | 99-08-1 | – | – | l | O | 1.37E+02 | 2.24E-03 | 2.15E+00 | – | 6.42E-02 | 7.69E-06 | 4.98E+02 | 1.50E-01 | 2.36E+00 |
| Nitrotoluene, o- | 88-72-2 | – | – | l | O | 1.37E+02 | 1.87E-03 | 2.15E+00 | – | 6.47E-02 | 7.73E-06 | 6.00E+02 | 1.50E-01 | 2.36E+00 |
| Nitrotoluene, p- | 99-99-0 | – | – | s | O | 1.37E+02 | 2.29E-03 | 2.15E+00 | – | 6.40E-02 | 7.70E-06 | 4.00E+02 | 1.20E-01 | 2.36E+00 |

# Chemical/Physical Properties

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | $Br_{abg}$ ((µg/g DW)/ (µg/g soil)) | $Br_{bg}$ ((µg/g DW)/ ((µg/g soil)) | Physical State | Type | MW (g/mole) | H_unitless (unitless) | $LogK_{oc}$ (unitless) | $LogK_{d}$ (unitless) | $D_{air}$ ($cm^2/s$) | $D_{wat}$ ($cm^2/s$) | Solubility (mg/l) | Vapor_P (mm Hg) | $logK_{ow}$ (unitless) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Nonachlor, cis- | 5103-73-1 | – | – | s | O | 4.10E+02 | 2.02E-03 | 5.08E+00 | – | 1.18E-02 | 4.37E-06 | 5.60E-02 | 1.00E-05 | 6.60E+00 |
| Nonachlor, trans- | 39765-80-5 | – | – | s | O | 4.10E+02 | 2.02E-03 | 5.08E+00 | – | 1.18E-02 | 4.37E-06 | 5.60E-02 | 1.00E-05 | 6.60E+00 |
| Nonanal | 124-19-6 | – | – | l | O | 1.42E+02 | 2.34E-02 | 2.85E+00 | – | 5.29E-02 | 6.29E-06 | 1.24E+02 | 3.71E-01 | 3.50E+00 |
| Nonene, 1-n | 124-11-8 | – | – | l | o | 1.26E+02 | 8.81E+01 | 4.45E+00 | – | 5.56E-02 | 5.86E-06 | 3.00E-01 | 3.80E+00 | 5.52E+00 |
| Nonylphenol, 4-n- | 104-40-5 | – | – | l | OA | 2.20E+02 | 6.96E-05 | 6.48E+00 | – | 3.93E-02 | 5.27E-06 | 7.23E-01 | 4.14E-06 | 6.48E+00 |
| Nonylphenol ethoxylate | 9016-45-9 | – | – | l | O | 2.92E+02 | 8.19E-04 | 6.88E+00 | – | 3.29E-02 | 4.08E-06 | 2.79E-02 | 1.38E-06 | 7.00E+00 |
| Octamethylpyrophosphoramide | 152-16-9 | – | – | l | O | 2.86E+02 | 1.16E-08 | -5.09E-01 | – | 8.00E-02 | 8.00E-06 | 1.00E+06 | 9.88E-04 | -1.01E+00 |
| Octanone | 106-68-3 | – | – | l | O | 1.28E+02 | 6.35E-03 | 2.15E+00 | – | 5.78E-02 | 6.67E-06 | 1.65E+03 | 1.50E+00 | 2.61E+00 |
| Oxamyl | 23135-22-0 | – | – | s | O | 2.19E+02 | 1.60E-11 | 6.99E-01 | – | 5.57E-02 | 5.75E-06 | 2.80E+05 | 3.83E-07 | -1.20E+00 |
| Oxychlordane | 27304-13-8 | – | – | s | O | 4.10E+02 | 2.02E-03 | 5.08E+00 | – | 1.18E-02 | 4.37E-06 | 5.60E-02 | 1.00E-05 | 6.60E+00 |
| Paraquat | 1910-42-5 | – | – | s | OB | 2.57E+02 | 2.91E-11 | -4.81E+00 | – | 3.74E-02 | 3.57E-06 | 7.00E+05 | 1.45E-06 | -4.50E+00 |
| Parathion (ethyl parathion) | 56-38-2 | – | – | s | O | 2.91E+02 | 2.37E-05 | 3.75E+00 | – | 1.70E-02 | 5.80E-06 | 1.18E+01 | 1.73E-05 | 3.73E+00 |
| Pebulate | 1114-71-2 | – | – | l | O | 2.03E+02 | 9.85E-04 | 2.63E+00 | – | 5.10E-02 | 5.38E-06 | 9.20E+01 | 8.85E-03 | 3.51E+00 |
| Pendimethalin | 40487-42-1 | – | – | s | O | 2.81E+02 | 1.97E-05 | 5.28E+00 | – | 3.81E-02 | 5.26E-06 | 5.69E-01 | 7.31E-07 | 5.37E+00 |
| Pentachlorobenzene | 608-93-5 | – | – | s | O | 2.50E+02 | 3.16E-02 | 4.50E+00 | – | 6.70E-02 | 6.30E-06 | 6.50E-01 | 1.67E-03 | 5.22E+00 |
| Pentachloroethane | 76-01-7 | – | – | l | O | 2.02E+02 | 2.15E-02 | 2.28E+00 | – | 6.37E-02 | 7.88E-06 | 6.19E+02 | 1.20E+00 | 2.78E+00 |
| Pentachloronitrobenzene | 82-68-8 | – | – | s | O | 2.95E+02 | 2.57E-02 | 4.11E+00 | – | 1.59E-02 | 6.10E-06 | 7.11E-02 | 1.13E-04 | 5.03E+00 |
| Pentachlorophenol | 87-86-5 | – | – | s | OA | 2.66E+02 | 1.16E-05 | 2.61E+00 | – | 5.60E-02 | 6.10E-06 | 1.40E+01 | 1.70E-05 | 4.74E+00 |
| Pentadiene, 1,3-cis- | 1574-41-0 | – | – | l | O | 6.81E+01 | 2.42E+00 | 2.08E+00 | – | 8.73E-02 | 8.10E-06 | 5.62E+02 | 3.65E+02 | 2.53E+00 |
| Pentadiene, 1,3-trans- | 2004-70-8 | – | – | l | O | 6.81E+01 | 1.31E+00 | 1.95E+00 | – | 8.75E-02 | 8.74E-06 | 8.94E+02 | 3.15E+02 | 2.37E+00 |
| Pentaerythritol tetranitrate (PETN) | 78-11-5 | – | – | s | O | 3.16E+02 | 5.60E-05 | 3.80E+00 | – | 4.48E-02 | 6.20E-06 | 2.66E+01 | 8.63E-05 | 3.86E+00 |
| Pentane | 109-66-0 | – | – | l | O | 7.22E+01 | 4.50E+01 | 3.48E+00 | – | 8.26E-01 | 8.07E-06 | 4.05E+01 | 4.62E+02 | 3.54E+00 |
| Pentane, 2-methyl- | 107-83-5 | – | – | l | O | 8.62E+01 | 7.44E+01 | 3.26E+00 | – | 7.34E-02 | 6.89E-06 | 1.25E+01 | 1.97E+02 | 4.01E+00 |
| Pentane, 3-methyl- | 96-14-0 | – | – | l | O | 8.62E+01 | 5.78E+01 | 3.21E+00 | – | 7.38E-02 | 6.96E-06 | 1.48E+01 | 1.81E+02 | 3.96E+00 |
| Pentanediol, 1,5- | 111-29-5 | – | – | l | O | 1.04E+02 | 2.51E-08 | 1.47E-01 | – | 7.14E-02 | 8.57E-06 | 7.44E+04 | 3.27E-04 | 1.49E-01 |
| Pentanol, 1- | 71-41-0 | – | – | l | O | 8.81E+01 | 6.10E-04 | 1.35E+00 | – | 7.44E-02 | 7.77E-06 | 1.50E+04 | 1.90E+00 | 1.61E+00 |
| Pentanol, 4-methyl-2- | 108-11-2 | – | – | l | O | 1.02E+02 | 9.33E-04 | 1.33E+00 | – | 6.72E-02 | 7.08E-06 | 1.47E+04 | 2.46E+00 | 1.58E+00 |
| Pentanone, 2- | 107-87-9 | – | – | l | O | 8.61E+01 | 2.54E-03 | 9.31E-01 | – | 7.78E-02 | 8.46E-06 | 5.40E+04 | 2.91E+01 | 1.08E+00 |
| Pentene, 2- | 109-68-2 | – | – | l | O | 7.01E+01 | 7.90E+00 | 2.40E+00 | – | 8.48E-02 | 7.87E-06 | 1.86E+02 | 3.80E+02 | 2.93E+00 |
| Pentyne, 1- | 627-19-0 | – | – | l | O | 6.81E+01 | 1.35E+00 | 1.92E+00 | – | 8.92E-02 | 8.84E-06 | 8.34E+02 | 3.03E+02 | 2.32E+00 |
| Perchlorate | 14797-73-0 | – | – | s | I | 9.95E+01 | 0.00E+00 | – | -5.00E-01 | – | – | – | 0.00E+00 | 0.00E+00 |

# Chemical/Physical Properties

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | $Br_{abg}$ ((µg/g DW)/(µg/g soil)) | $Br_{bg}$ ((µg/g DW)/((µg/g soil)) | Physical State | Type | MW (g/mole) | H_unitless (unitless) | $LogK_{oc}$ (unitless) | $LogK_d$ (unitless) | $D_{air}$ ($cm^2/s$) | $D_{wat}$ ($cm^2/s$) | Solubility (mg/l) | Vapor_P (mm Hg) | $logK_{ow}$ (unitless) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Perfluorooctanoic sulfonic acid (1-Octanesulfonic acid, heptadecafluoro-1-) | 1763-23-1 | – | – | s | O | 4.99E+02 | 3.25E-08 | 3.34E+00 | – | 3.92E-02 | 9.00E-06 | 5.70E+02 | 5.91E-09 | 2.45E+00 |
| Perfluoroundecanoic acid (Undecanoic acid, uncosafluoro-) | 2058-94-8 | – | – | s | O | 5.63E+02 | 1.27E-05 | 3.18E+00 | – | 3.57E-02 | 7.97E-06 | 5.33E-01 | 2.14E-07 | 3.59E+00 |
| Perfluoropentanoic acid (Pentanoic acid, nonafluoro-) | 2706-90-3 | – | – | s | O | 2.63E+02 | 1.03E-10 | 1.58E+00 | – | 5.36E-02 | 1.17E-05 | 1.07E+05 | 7.15E-07 | -7.00E-02 |
| Perfluorohexanoic acid (Hexanoic acid, undecafluoro-) | 307-24-4 | – | – | s | O | 3.13E+02 | 7.07E-10 | 1.91E+00 | – | 4.88E-02 | 1.07E-05 | 1.15E+05 | 5.67E-07 | 5.40E-01 |
| Perfluorododecanoic acid (Dodecanoic acid, tricosafluoro-) | 307-55-1 | – | – | s | O | 6.13E+02 | 9.36E-05 | 3.45E+00 | – | 3.41E-02 | 7.63E-06 | 6.71E-02 | 1.83E-07 | 3.68E+00 |
| Perfluorooctanoic acid (Octanoic acid, pentadecafluoro-) | 335-67-1 | – | – | s | O | 4.13E+02 | 3.31E-08 | 2.31E+00 | – | 4.21E-02 | 9.30E-06 | 9.50E+03 | 3.57E-07 | 1.76E+00 |
| Perfluorodecanoic acid (Decanoic acid, nonadecafluoro-) | 335-76-2 | – | – | s | O | 5.13E+02 | 1.72E-06 | 3.17E+00 | – | 3.75E-02 | 8.34E-06 | 4.20E+00 | 2.50E-07 | 2.98E+00 |
| Perfluorodecane sulfonic acid (1-Decanesulfonic acid, heneicosafluoro-) | 335-77-3 | – | – | s | O | 5.99E+02 | 1.76E-06 | 3.53E+00 | – | 3.54E-02 | 8.21E-06 | 8.20E-02 | 4.29E-09 | 3.59E+00 |
| Perfluorohexane sulfonic acid (1-Hexanesulfonic acid, triddecafluoro-) | 355-46-4 | – | – | s | O | 3.99E+02 | 6.02E-10 | 2.70E+00 | – | 4.45E-02 | 1.01E-05 | 3.07E+02 | 8.12E-09 | 1.15E+00 |
| Perfluorobutyric acid (Butanoic acid, heptafluoro-) | 375-22-4 | – | – | s | O | 2.13E+02 | 1.51E-11 | 1.32E+00 | – | 6.00E-02 | 1.29E-05 | 7.58E+05 | 9.01E-07 | -6.80E-01 |
| Perfluorobutane sulfonic acid (1-Butanesulfonic acid, nonafluoro-) | 375-73-5 | – | – | s | O | 2.99E+02 | 1.12E-11 | 1.47E+00 | – | 5.25E-02 | 1.16E-05 | 1.74E+04 | 1.12E-08 | -7.00E-02 |
| Perfluoroheptanoic acid (Heptanoic acid, tridecafluoro-) | 375-85-9 | – | – | s | O | 3.63E+02 | 4.84E-09 | 2.19E+00 | – | 4.51E-02 | 9.92E-06 | 1.94E+03 | 4.50E-07 | 1.15E+00 |
| Perfluorononanoic acid (Nonanoic acid, heptadecafluoro-) | 375-95-1 | – | – | s | O | 4.63E+02 | 2.33E-07 | 2.33E+00 | – | 3.96E-02 | 8.78E-06 | 3.28E+01 | 2.92E-07 | 2.37E+00 |
| Perfluorotetradecanoic acid (Tetradecanoic acid, heptacosafluoro-) | 376-06-7 | – | – | s | O | 7.13E+02 | 5.09E-03 | 3.98E+00 | – | 3.15E-02 | 7.08E-06 | 1.05E-03 | 1.34E-07 | 5.02E+00 |
| Perfluorotridecanoic acid (Tridecanoic acid, pentacosafluoro-) | 72629-94-8 | – | – | s | O | 6.63E+02 | 6.88E-04 | 3.71E+00 | – | 3.27E-02 | 7.34E-06 | 8.39E-03 | 1.56E-07 | 4.35E+00 |
| Perfluorooctane sulfonamide (1-Octanesulfonamide, hetpadecafluoro-) | 754-91-6 | – | – | s | O | 4.99E+02 | 1.05E+03 | 4.10E+00 | – | 3.91E-02 | 9.00E-06 | 4.88E-02 | 3.13E-01 | 5.80E+00 |
| Perylene | 198-55-0 | – | – | s | O | 2.52E+02 | 3.50E-13 | 6.59E+00 | – | 4.06E-02 | 5.49E-06 | 1.31E-04 | 1.11E-10 | 6.70E+00 |
| Phenacetin | 62-44-2 | – | – | s | O | 1.79E+02 | 8.80E-09 | 1.43E+00 | – | 5.04E-02 | 6.65E-06 | 3.60E+02 | 3.30E-07 | 1.45E+00 |
| Phenanthrene | 85-01-8 | – | – | s | O | 1.78E+02 | 5.40E-03 | 4.15E+00 | – | 3.33E-02 | 7.47E-06 | 9.94E-01 | 6.80E-04 | 4.34E+00 |
| Phenanthridine | 229-87-8 | – | – | s | O | 1.79E+02 | 1.83E-06 | 3.24E+00 | – | 5.46E-02 | 7.19E-06 | 2.50E+01 | 4.30E-06 | 3.30E+00 |
| Phenol | 108-95-2 | – | – | s | O | 9.41E+01 | 2.47E-05 | 1.24E+00 | – | 8.20E-02 | 9.10E-06 | 8.70E+04 | 4.63E-01 | 1.51E+00 |
| Phenol, 4-tert-butyl- | 98-54-4 | – | – | s | O | 1.50E+02 | 7.03E-05 | 2.94E+00 | – | 5.57E-02 | 6.25E-06 | 1.83E+02 | 1.57E-03 | 3.62E+00 |
| Phenothiazine | 92-84-2 | – | – | s | O | 1.99E+02 | 1.46E-06 | 3.87E+00 | – | 5.09E-02 | 6.32E-06 | 1.39E-02 | 1.87E-09 | 4.19E+00 |
| Phenyl mercuric acetate | 62-38-4 | – | – | s | O | 3.37E+02 | 3.41E-09 | 2.20E+00 | – | 8.00E-02 | 8.00E-06 | 4.37E+03 | 3.04E-06 | 8.90E-01 |
| Phenylene diamine, m- | 108-45-2 | – | – | s | O | 1.08E+02 | 9.56E-07 | 4.14E-02 | – | 6.63E-02 | 9.90E-06 | 3.51E+05 | 2.28E-02 | -3.91E-01 |
| Phenylene diamine, p- | 106-50-3 | – | – | s | O | 1.08E+02 | 5.24E-08 | 4.14E-02 | – | 7.15E-02 | 8.92E-06 | 3.80E+04 | 4.60E-03 | -3.91E-01 |
| Phorate | 298-02-2 | – | – | l | O | 2.60E+02 | 4.99E-04 | 3.74E+00 | – | 8.00E-02 | 8.00E-06 | 4.40E+01 | 1.30E-03 | 3.37E+00 |
| Phosalone | 2310-17-0 | – | – | s | O | 3.68E+02 | 1.95E-05 | 3.06E+00 | – | 3.80E-02 | 4.97E-06 | 7.77E+01 | 7.53E-05 | 3.15E+00 |
| Phosdrin (mevinphos) | 7786-34-7 | – | – | l | O | 2.24E+02 | 3.28E-09 | -9.00E-01 | – | 4.72E-02 | 6.06E-06 | 1.24E+07 | 1.81E-02 | -7.00E-01 |
| Phosmet | 732-11-6 | – | – | s | O | 3.17E+02 | 8.02E-08 | 2.21E+00 | – | 4.07E-02 | 5.37E-06 | 3.70E+03 | 1.71E-05 | 1.53E+00 |
| Phosphine | 7803-51-2 | – | – | g | I | 3.40E+01 | 1.46E+02 | - | – | 3.81E-01 | 1.82E-05 | 4.00E+02 | 3.14E+04 | -2.71E-01 |
| Phosphorotrithioic acid, S,S,S-tributyl ester | 78-48-8 | – | – | s | O | 3.15E+02 | 1.98E-03 | 6.00E+00 | – | 3.34E-02 | 4.32E-06 | 1.23E-03 | 1.41E-07 | 6.10E+00 |
| Phosphorus, total* | 7723-14-0 | – | – | – | – | – | – | – | – | – | – | – | – | – |
| Phosphorus, white | 7723-14-0 | – | – | s | I | 1.24E+02 | 5.65E-02 | 3.05E+00 | – | – | – | 3.00E+00 | 2.50E-02 | 3.08E+00 |

# Chemical/Physical Properties

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | $Br_{abg}$ ((µg/g DW)/(µg/g soil)) | $Br_{bg}$ ((µg/g DW)/((µg/g soil)) | Physical State | Type | MW (g/mole) | H_unitless (unitless) | $LogK_{oc}$ (unitless) | $LogK_d$ (unitless) | $D_{air}$ ($cm^2/s$) | $D_{wat}$ ($cm^2/s$) | Solubility (mg/l) | Vapor_P (mm Hg) | $logK_{ow}$ (unitless) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Phthalic anhydride | 85-44-9 | – | – | s | O | 1.48E+02 | 2.54E-07 | 1.90E+00 | – | 6.36E-02 | 7.90E-06 | 6.20E+03 | 2.00E-04 | 2.07E+00 |
| Picloram | 1918-02-1 | – | – | s | O | 2.41E+02 | 1.01E-07 | -6.00E-02 | – | 5.50E-02 | 7.27E-06 | 2.82E+02 | 2.15E-06 | 2.94E+00 |
| Picoline, 2- (2-methylpyridine) | 109-06-8 | – | – | l | O | 9.31E+01 | 6.21E-04 | 1.20E+00 | – | 7.77E-02 | 8.86E-06 | 6.14E+04 | 7.48E+00 | 1.28E+00 |
| Polybrominated biphenyls (PBBs) | 67774-32-7 | – | – | s | O | 6.28E+02 | 1.62E-04 | 3.33E+00 | – | – | 4.63E-06 | 1.10E-02 | 5.20E-08 | 6.39E+00 |
| Polychlorinated biphenyls (PCBs) | 1336-36-3 | – | – | l | O | 2.90E+02 | 1.75E-02 | 5.72E+00 | – | 1.04E-01 | 1.00E-05 | 5.55E-02 | 7.60E-05 | 6.30E+00 |
| Potassium* | 7440-09-7 | – | – | – | – | – | – | – | – | – | – | – | – | – |
| Primene | 68955-53-3 | – | – | l | O | 1.71E+02 | 3.24E-03 | 3.96E+00 | – | 4.60E-02 | 1.08E-03 | 9.56E+01 | 3.30E-02 | 4.03E+00 |
| Prometon (pramitol) | 1610-18-0 | – | – | s | O | 2.25E+02 | 7.32E-07 | 2.78E+00 | – | 4.25E-02 | 5.54E-06 | 5.76E+01 | 3.43E-06 | 2.88E+00 |
| Prometryn | 7287-19-6 | – | – | S | O | 2.41E+02 | 4.99E-08 | 3.39E+00 | – | 3.89E-02 | 5.06E-06 | 2.09E+01 | 7.90E-08 | 3.62E+00 |
| Pronamide | 23950-58-5 | – | – | s | O | 2.56E+02 | 3.74E-04 | 2.30E+00 | – | 8.00E-02 | 8.00E-06 | 1.50E+01 | 4.00E-04 | 3.57E+00 |
| Propanal (propionaldehyde) | 123-38-6 | – | – | l | O | 5.81E+01 | 4.40E-03 | 3.40E-01 | – | 1.04E-01 | 1.07E-05 | 1.09E+05 | 1.51E+02 | 3.30E-01 |
| Propane, 1-bromo- | 106-94-5 | – | – | l | O | 1.23E+02 | 1.63E-01 | 1.59E+00 | – | 8.28E-02 | 8.63E-06 | 3.98E+03 | 9.67E+01 | 1.91E+00 |
| Propanil | 709-98-8 | – | – | s | OA | 2.18E+02 | 8.47E-08 | 2.96E+00 | – | 4.93E-02 | 6.59E-06 | 1.27E+02 | 8.99E-07 | 2.97E+00 |
| Propanoic acid (propionic acid) | 79-09-4 | – | – | l | OA | 7.41E+01 | 1.54E-05 | -2.79E+00 | – | 9.01E-02 | 1.04E-05 | 1.92E+05 | 2.90E+00 | 4.95E-01 |
| Propanol, 1- | 71-23-8 | – | – | l | O | 6.01E+01 | 4.66E-04 | 5.70E-01 | – | 9.75E-02 | 1.05E-05 | 1.21E+05 | 1.71E+01 | 6.21E-01 |
| Propargite | 2312-35-8 | – | – | l | O | 3.50E+02 | 1.44E-06 | 3.75E+00 | – | 3.94E-02 | 4.20E-06 | 5.00E-01 | 4.48E-08 | 3.73E+00 |
| Propargyl alcohol | 107-19-7 | – | – | l | O | 5.61E+01 | 1.34E-05 | 7.31E-01 | – | 1.04E-01 | 1.24E-05 | 5.57E+06 | 1.20E+01 | -4.22E-01 |
| Propazine | 139-40-2 | – | – | s | O | 2.30E+02 | 2.15E-06 | 3.04E+00 | – | 4.40E-02 | 5.69E-06 | 7.23E+00 | 1.23E-06 | 3.25E+00 |
| Propham | 122-42-9 | – | – | s | O | 1.79E+02 | 5.30E-06 | 1.71E+00 | – | 5.71E-02 | 6.28E-06 | 2.50E+02 | 1.35E-04 | 2.66E+00 |
| Propionitrile (propane nitrile) | 107-12-0 | – | – | l | O | 5.51E+01 | 1.02E-03 | 2.15E-01 | – | 1.02E-01 | 1.72E-05 | 9.73E+04 | 3.28E+01 | 1.73E-01 |
| Propyl acetate, n- | 109-60-4 | – | – | l | O | 1.02E+02 | 8.89E-03 | 1.07E+00 | – | 7.36E-02 | 8.09E-06 | 1.84E+04 | 2.93E+01 | 1.26E+00 |
| Propylbenzene, n- | 103-65-1 | – | – | l | O | 1.20E+02 | 4.24E-01 | 3.03E+00 | – | 6.22E-02 | 7.21E-06 | 4.20E+01 | 2.71E+00 | 3.73E+00 |
| Propylene glycol | 57-55-6 | – | – | – | O | 7.61E+01 | 2.06E-07 | -5.67E-01 | – | 1.06E-01 | 1.23E-05 | 1.00E+05 | 2.05E-02 | -9.21E-01 |
| Propylene glycol monomethyl ether | 107-98-2 | – | – | – | O | 9.01E+01 | 1.40E-05 | -1.89E-01 | – | 9.45E-02 | 1.09E-05 | 1.00E+05 | 1.18E+01 | -4.37E-01 |
| Propylene oxide | 75-56-9 | – | – | l | O | 5.81E+01 | 3.47E-03 | 1.02E-01 | – | 1.04E-01 | 1.16E-05 | 4.76E+05 | 5.32E+02 | 3.00E-02 |
| Propylene tetramer | 6842-15-5 | – | – | l | O | 1.60E+02 | 1.20E+02 | 5.40E+00 | – | 1.00E-01 | 1.00E-05 | 3.40E-02 | 4.79E-01 | – |
| Prothiofos (Tokuthion) | 34643-46-4 | – | – | l | O | 3.45E+02 | 5.72E-03 | 7.39E+00 | – | 3.56E-02 | 4.58E-06 | 6.23E-03 | 1.89E-06 | 7.36E+00 |
| Pyrene | 129-00-0 | – | – | s | O | 2.02E+02 | 4.57E-04 | 4.58E+00 | – | 2.72E-02 | 7.24E-06 | 1.35E-01 | 4.25E-06 | 4.93E+00 |
| Pyridine | 110-86-1 | – | – | l | O | 7.91E+01 | 2.91E-01 | 6.43E-01 | – | 9.10E-02 | 7.60E-06 | 3.00E+02 | 2.00E+01 | 8.04E-01 |
| Quinoline | 91-22-5 | – | – | l | O | 1.29E+02 | 1.15E-04 | 2.76E+00 | – | 5.46E-02 | 8.31E-06 | 6.78E+03 | 9.60E-02 | 2.14E+00 |
| Ronnel | 299-84-3 | – | – | s | O | 3.22E+02 | 1.32E-03 | 3.93E+00 | – | 4.62E-02 | 5.54E-06 | 2.28E+00 | 1.01E-04 | 4.86E+00 |
| Safrole | 94-59-7 | – | – | l | O | 1.62E+02 | 3.09E-03 | 2.97E+00 | – | 5.60E-02 | 7.01E-06 | 1.37E+02 | 4.77E-02 | 3.02E+00 |
| Selenium | 7782-49-2 | 1.50E-02 | 2.20E-02 | s | M | 7.90E+01 | 0.00E+00 | – | 3.42E-01 | – | – | 0.00E+00 | 0.00E+00 | 2.39E-01 |
| Selenourea | 630-10-4 | – | – | – | O | 1.19E+02 | – | – | – | – | – | – | – | -2.63E+00 |
| Silver | 7440-22-4 | 1.70E-01 | 1.00E-01 | s | M | 1.08E+02 | 0.00E+00 | – | -1.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Simazine | 122-34-9 | – | – | s | O | 2.02E+02 | 2.48E-07 | 2.47E+00 | – | 4.90E-02 | 6.37E-06 | 4.06E+01 | 9.10E-07 | 2.64E+00 |

# Chemical/Physical Properties

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | $Br_{abg}$ ((µg/g DW)/ (µg/g soil)) | $Br_{bg}$ ((µg/g DW)/ ((µg/g soil)) | Physical State | Type | MW (g/mole) | H_unitless (unitless) | $LogK_{oc}$ (unitless) | $LogK_d$ (unitless) | $D_{air}$ ($cm^2/s$) | $D_{wat}$ ($cm^2/s$) | Solubility (mg/l) | Vapor_P (mm Hg) | $logK_{ow}$ (unitless) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sodium* | 7440-23-5 | – | – | – | – | – | – | – | – | – | – | – | – | – |
| Sodium hypochlorite | 7681-52-9 | – | – | I | I | 7.44E+01 | – | – | -2.08E-01 | – | – | – | – | – |
| Sodium polyacrylate | 9003-04-7 | – | – | I | O | 7.21E+01 | 1.32E-05 | 5.43E-02 | – | 9.08E-02 | 1.06E-05 | 1.00E+06 | 3.72E+00 | 4.42E-01 |
| Strontium | 7440-24-6 | – | – | s | M | 8.76E+01 | 0.00E+00 | - | 3.01E-01 | 0.00E+00 | 0.00E+00 | - | 0.00E+00 | 0.00E+00 |
| Strychnine | 57-24-9 | – | – | s | O | 3.34E+02 | 6.65E-12 | 1.90E+00 | – | 8.00E-02 | 8.00E-06 | 1.43E+02 | 1.67E-10 | 1.85E+00 |

# Chemical/Physical Properties

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | $Br_{abg}$ ((µg/g DW)/(µg/g soil)) | $Br_{bg}$ ((µg/g DW)/(µg/g soil)) | Physical State | Type | MW (g/mole) | H_unitless (unitless) | $LogK_{oc}$ (unitless) | $LogK_d$ (unitless) | $D_{air}$ ($cm^2/s$) | $D_{wat}$ ($cm^2/s$) | Solubility (mg/l) | Vapor_P (mm Hg) | $logK_{ow}$ (unitless) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Styrene | 100-42-5 | – | – | l | O | 1.04E+02 | 1.14E-01 | 2.88E+00 | – | 7.10E-02 | 8.00E-06 | 3.10E+02 | 6.24E+00 | 2.89E+00 |
| Sulfate* | 14808-79-8 | – | – | – | – | – | – | – | – | – | – | – | – | – |
| Sulfide* | 18496-25-8 | – | – | – | – | – | – | – | – | – | – | – | – | – |
| Sulfolane | 126-33-0 | – | – | s | O | 1.20E+02 | 4.82E-07 | -7.89E-01 | – | 6.98E-01 | 9.30E-06 | 8.37E+03 | 6.15E-04 | -8.03E-01 |
| Sulfur* | 7704-34-9 | – | – | – | – | – | – | – | – | – | – | – | – | – |
| Sulprofos (Bolstar) | 35400-43-2 | – | – | l | O | 3.22E+02 | 3.64E-05 | 6.41E+00 | – | 3.55E-02 | 4.52E-06 | 1.90E-02 | 3.99E-08 | 6.40E+00 |
| Tebuconazole | 107534-96-3 | – | – | s | O | 3.08E+02 | 5.94E-09 | 3.01E+00 | – | 4.25E-02 | 4.17E-06 | 3.60E+01 | 1.28E-08 | 3.70E+00 |
| Tebuthiuron | 34014-18-1 | – | – | s | O | 2.28E+02 | 4.99E-11 | 1.50E+00 | – | 5.62E-02 | 5.85E-06 | 2.50E+03 | 2.03E-05 | 1.79E+00 |
| Terbufos | 13071-79-9 | – | – | l | O | 2.88E+02 | 6.83E-02 | 4.14E+00 | – | 4.18E-02 | 5.08E-06 | 6.84E+00 | 2.96E-02 | 4.20E+00 |
| Tert-amyl ethyl ether (TAEE) | 919-94-8 | – | – | l | O | 1.66E+02 | 3.31E-01 | 2.24E+00 | – | 6.43E-02 | 6.38E-06 | 7.76E+02 | 4.04E+01 | 2.73E+00 |
| Tert-amyl-methyl ether (TAME) | 994-05-8 | – | – | l | O | 1.02E+02 | 1.30E-01 | 1.62E+00 | – | 6.99E-02 | 7.37E-06 | 4.29E+03 | 9.97E+01 | 1.95E+00 |
| Tert-butyl alcohol (2-methyl-2-propanol) | 75-65-0 | – | – | s | O | 7.41E+01 | 5.42E-04 | 6.25E-01 | – | 8.52E-02 | 9.11E-06 | 2.35E+05 | 3.14E+01 | 6.90E-01 |
| Tetrachlorobenzene, 1,2,3,4- | 634-66-2 | – | – | s | O | 2.16E+02 | 3.02E-02 | 4.61E+00 | – | 5.72E-02 | 7.31E-06 | 6.43E+00 | 1.64E-02 | 4.69E+00 |
| Tetrachlorobenzene, 1,2,3,5- | 634-90-2 | – | – | s | O | 2.16E+02 | 2.41E-02 | 3.80E+00 | – | 5.75E-02 | 7.31E-06 | 5.18E+00 | 1.06E-02 | 4.70E+00 |
| Tetrachlorobenzene, 1,2,4,5- | 95-94-3 | – | – | s | O | 2.16E+02 | 4.99E-02 | 3.20E+00 | – | 2.11E-02 | 8.80E-06 | 3.00E-01 | 5.40E-03 | 4.57E+00 |
| Tetrachloroethane, 1,1,1,2- | 630-20-6 | – | – | s | O | 1.68E+02 | 9.98E-02 | 2.98E+00 | – | 7.10E-02 | 7.90E-06 | 1.10E+03 | 1.22E+01 | 2.93E+00 |
| Tetrachloroethane, 1,1,2,2- | 79-34-5 | – | – | l | O | 1.68E+02 | 1.55E-02 | 1.89E+00 | – | 7.10E-02 | 7.90E-06 | 2.97E+03 | 5.17E+00 | 2.19E+00 |
| Tetrachloroethylene | 127-18-4 | – | – | l | O | 1.66E+02 | 7.65E-01 | 2.19E+00 | – | 7.20E-02 | 8.20E-06 | 2.00E+02 | 1.84E+01 | 2.97E+00 |
| Tetrachlorophenol, 2,3,4,5- | 4901-51-3 | – | – | s | OA | 2.32E+02 | 1.98E-06 | 2.66E+00 | – | 5.65E-02 | 7.32E-06 | 2.96E+02 | 4.62E-05 | 4.41E+00 |
| Tetrachlorophenol, 2,3,4,6- | 58-90-2 | – | – | s | OA | 2.32E+02 | 2.54E-04 | 2.02E+00 | – | 2.17E-02 | 7.10E-06 | 1.00E+02 | 5.02E-03 | 4.09E+00 |
| Tetrachlorophenol, 2,3,5,6- | 935-95-5 | – | – | s | O | 2.32E+02 | 5.82E-03 | 1.40E+00 | – | 5.60E-02 | 7.29E-06 | 2.03E+00 | 9.20E-04 | 4.51E+00 |
| Tetrachlorvinphos (Stirophos) | 22248-79-9 | – | – | s | O | 3.66E+02 | 7.84E-08 | 4.76E+00 | – | 3.88E-02 | 4.82E-06 | 9.74E+01 | 3.82E-07 | 4.80E+00 |
| Tetradifon | 116-29-0 | – | – | s | O | 3.56E+02 | 7.32E-09 | 3.65E+00 | – | 4.14E-02 | 5.80E-06 | 7.02E-01 | 2.64E-10 | 4.17E+00 |
| Tetraethyl dithiopyrophosphate (sulfotep) | 3689-24-5 | – | – | l | O | 3.22E+02 | 1.75E-04 | 2.87E+00 | – | 1.50E-02 | 5.50E-06 | 2.50E+01 | 1.70E-04 | 3.98E+00 |
| Tetraethyl lead | 78-00-2 | – | – | l | O | 3.23E+02 | 3.31E+00 | 3.69E+00 | – | 1.32E-02 | 6.40E-06 | 8.00E-01 | 1.50E-01 | 4.88E+00 |
| Tetraethyl pyrophosphate (TEPP) | 107-49-3 | – | – | l | O | 2.90E+02 | 1.52E-08 | 2.91E+00 | – | 3.77E-02 | 4.76E-06 | 1.48E+04 | 1.41E-05 | 3.00E+00 |
| Tetraethylene glycol | 112-60-7 | – | – | l | O | 1.94E+02 | 5.69E-12 | -5.54E-01 | – | 4.61E-02 | 5.81E-06 | 6.54E+05 | 2.54E-07 | -5.90E-01 |
| Tetrahydrofuran | 109-99-9 | – | – | l | O | 7.21E+01 | 5.75E-03 | 5.73E-01 | – | 9.36E-02 | 9.88E-06 | 1.09E+05 | 1.59E+02 | 6.25E-01 |
| Tetrahydropyran | 142-68-7 | – | – | l | O | 8.61E+01 | 5.53E-03 | 9.19E-01 | – | 8.14E-02 | 8.95E-06 | 3.40E+04 | 3.99E+01 | 1.06E+00 |
| Tetraoxadodecane, 2,5,8,11- | 112-49-2 | – | – | l | O | 1.78E+02 | 6.73E-08 | 1.35E+00 | – | 4.88E-02 | 5.62E-06 | 1.00E+06 | 6.74E-02 | -4.40E-02 |
| Thallium | 7791-12-0 | 1.00E-03 | 4.00E-04 | s | M | 2.40E+02 | 0.00E+00 | – | 1.64E+00 | – | – | 2.90E+03 | 0.00E+00 | – |

# Chemical/Physical Properties

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | $Br_{abg}$ ((µg/g DW)/(µg/g soil)) | $Br_{bg}$ ((µg/g DW)/(µg/g soil)) | Physical State | Type | MW (g/mole) | H_unitless (unitless) | $LogK_{oc}$ (unitless) | $LogK_d$ (unitless) | $D_{air}$ ($cm^2/s$) | $D_{wat}$ ($cm^2/s$) | Solubility (mg/l) | Vapor_P (mm Hg) | $logK_{ow}$ (unitless) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Thiofanox | 39196-18-4 | – | – | s | O | 2.18E+02 | 3.90E-07 | 1.77E+00 | – | 2.55E-02 | 6.62E-06 | 5.20E+03 | 3.10E-04 | 2.16E+00 |
| Thionazin | 297-97-2 | – | – | l | O | 2.48E+02 | 1.62E-05 | 2.06E+00 | – | 4.67E-02 | 5.81E-06 | 2.10E+02 | 2.51E-04 | 2.09E+00 |
| Thiophanate-methyl | 23564-05-8 | – | – | s | O | 3.42E+02 | 3.82E-07 | 9.54E-01 | – | 4.55E-02 | 4.68E-06 | 3.50E+00 | 7.50E-08 | 1.50E+00 |
| Thiram | 137-26-8 | – | – | s | O | 2.40E+02 | 3.28E-06 | 2.83E+00 | – | 2.25E-02 | 6.24E-06 | 3.00E+01 | 7.50E-06 | 1.70E+00 |
| Tin | 7440-31-5 | 1.00E-02 | 6.00E-03 | s | M | 1.19E+02 | 0.00E+00 | – | 2.10E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.29E+00 |
| Titanium | 7440-32-6 | 3.70E-03 | 3.00E-03 | s | M | 4.79E+01 | 0.00E+00 | – | – | – | – | 0.00E+00 | – | – |
| Toluene | 108-88-3 | – | – | l | O | 9.21E+01 | 2.76E-01 | 2.15E+00 | – | 8.70E-02 | 8.60E-06 | 5.30E+02 | 2.82E+01 | 2.54E+00 |
| Toluene diisocyanate, 2,4/2,6- | 26471-62-5 | – | – | l | O | 1.74E+02 | 6.86E-06 | 3.35E+00 | – | 6.09E-02 | 6.80E-06 | 1.11E+05 | 8.00E-02 | 3.74E+00 |
| Toluenediamine, 2,4- | 95-80-7 | – | – | s | O | 1.22E+02 | 7.48E-08 | 3.11E+00 | – | 8.00E-02 | 8.00E-06 | 7.47E+03 | 8.36E-05 | 1.56E-01 |
| Toluenediamine, 2,6- | 823-40-5 | – | – | s | O | 1.22E+02 | 5.15E-10 | 1.60E-01 | – | 6.87E-02 | 7.97E-06 | 4.80E+04 | 1.98E-05 | 1.56E-01 |
| Toluidine, o- | 95-53-4 | – | – | l | OB | 1.07E+02 | 1.57E-04 | 2.31E+00 | – | 7.01E-02 | 8.43E-06 | 1.06E+04 | 2.84E-01 | 1.61E+00 |
| Toluidine, p- | 106-49-0 | – | – | s | O | 1.07E+02 | 3.82E-04 | 1.40E+00 | – | 8.00E-02 | 8.00E-06 | 7.20E+03 | 3.30E-01 | 1.62E+00 |
| Toxaphene | 8001-35-2 | – | – | s | O | 4.14E+02 | 1.40E-04 | 4.98E+00 | – | 1.16E-02 | 4.34E-06 | 7.40E-01 | 4.19E-06 | 6.79E+00 |
| TPH, TX1005, C6-C12 | NA | – | – | l | O | 1.20E+02 | 4.80E-01 | 3.20E+00 | – | 1.00E-01 | 1.00E-05 | 6.50E+01 | 4.79E+00 | 0.00E+00 |
| TPH, TX1005, >C12-C28 | NA | – | – | l | O | 1.50E+02 | 5.30E-02 | 3.70E+00 | – | 1.00E-01 | 1.00E-05 | 5.80E+00 | 3.65E-02 | 0.00E+00 |
| TPH, TX1005, >C12-C35 | NA | – | – | l | O | 1.50E+02 | 5.30E-02 | 3.70E+00 | – | 1.00E-01 | 1.00E-05 | 5.80E+00 | 3.65E-02 | 0.00E+00 |
| TPH, TX1005, >C28-C35 | NA | – | – | l | O | 1.50E+02 | 5.30E-02 | 3.70E+00 | – | 1.00E-01 | 1.00E-05 | 5.80E+00 | 3.65E-02 | 0.00E+00 |
| TP Silvex, 2,4,5- | 93-72-1 | – | – | s | O | 2.70E+02 | 5.45E-07 | 3.41E+00 | – | 1.94E-02 | 5.80E-06 | 1.40E+02 | 5.20E-06 | 3.68E+00 |
| Triademenol | 55219-65-3 | – | – | s | O | 2.96E+02 | 5.32E-11 | 2.37E+00 | – | 4.55E-02 | 4.53E-06 | 9.50E+01 | 3.08E-10 | 2.90E+00 |
| Triallate | 2303-17-5 | – | – | s | O | 3.05E+02 | 4.53E-04 | 3.16E+00 | – | 4.58E-02 | 4.84E-06 | 4.00E+00 | 1.20E-04 | 4.57E+00 |
| Triaminotrinitrobenzene (TATB) | 3058-38-6 | – | – | s | O | 2.58E+02 | 5.80E-12 | 6.88E-01 | – | 5.02E-02 | 6.84E-06 | 3.20E+01 | 1.34E-11 | 7.00E-01 |
| Tributyltin oxide | 56-35-9 | – | – | l | O | 5.96E+02 | 2.08E-03 | – | – | – | – | 1.80E+01 | 6.91E-05 | 5.80E+00 |
| Trichloro-1,2,2-trifluoroethane, 1,1,2- | 76-13-1 | – | – | l | O | 1.87E+02 | 2.20E+01 | 3.11E+00 | – | 7.80E-02 | 8.20E-06 | 2.00E+02 | 3.60E+02 | 3.09E+00 |
| Trichlorobenzene, 1,2,3- | 87-61-6 | – | – | l | O | 1.81E+02 | 3.80E-02 | 3.95E+00 | – | 6.20E-02 | 7.71E-06 | 1.64E+01 | 6.30E-02 | 4.02E+00 |
| Trichlorobenzene, 1,2,4- | 120-82-1 | – | – | l | O | 1.81E+02 | 5.90E-02 | 3.22E+00 | – | 3.00E-02 | 8.23E-06 | 4.88E+01 | 3.36E-01 | 3.93E+00 |
| Trichlorobenzene, 1,3,5- | 108-70-3 | – | – | s | O | 1.81E+02 | 6.03E-02 | 3.40E+00 | – | 6.25E-02 | 7.66E-06 | 1.82E+01 | 1.11E-01 | 4.19E+00 |
| Trichloroethane, 1,1,1- | 71-55-6 | – | – | l | O | 1.33E+02 | 7.15E-01 | 2.04E+00 | – | 7.80E-02 | 8.80E-06 | 1.33E+03 | 1.24E+02 | 2.68E+00 |
| Trichloroethane, 1,1,2- | 79-00-5 | – | – | l | O | 1.33E+02 | 3.80E-02 | 1.70E+00 | – | 7.92E-02 | 8.80E-06 | 4.42E+03 | 2.52E+01 | 2.01E+00 |
| Trichloroethylene | 79-01-6 | – | – | l | O | 1.31E+02 | 4.28E-01 | 1.97E+00 | – | 7.90E-02 | 9.10E-06 | 1.10E+03 | 7.20E+01 | 2.47E+00 |
| Trichlorofluoromethane | 75-69-4 | – | – | l | O | 1.37E+02 | 4.03E+00 | 2.13E+00 | – | 8.70E-02 | 9.70E-06 | 1.10E+03 | 6.87E+02 | 2.13E+00 |
| Trichloronate | 327-98-0 | – | – | l | O | 3.34E+02 | 4.82E-04 | 4.62E+00 | – | 4.27E-02 | 5.18E-06 | 8.13E-01 | 4.48E-05 | 5.74E+00 |
| Trichlorophenol, 2,3,4- | 15950-66-0 | – | – | s | OA | 1.97E+02 | 4.60E-06 | 2.75E+00 | – | 6.10E-02 | 7.73E-06 | 1.55E+03 | 6.60E-04 | 3.88E+00 |
| Trichlorophenol, 2,3,5- | 933-78-8 | – | – | s | OA | 1.97E+02 | 3.95E-06 | 2.37E+00 | – | 6.10E-02 | 7.71E-06 | 3.74E+03 | 1.37E-03 | 3.75E+00 |

# Chemical/Physical Properties

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | $Br_{abg}$ ((µg/g DW)/(µg/g soil)) | $Br_{bg}$ ((µg/g DW)/(µg/g soil)) | Physical State | Type | MW (g/mole) | H_unitless (unitless) | $LogK_{oc}$ (unitless) | $LogK_d$ (unitless) | $D_{air}$ ($cm^2/s$) | $D_{wat}$ ($cm^2/s$) | Solubility (mg/l) | Vapor_P (mm Hg) | $logK_{ow}$ (unitless) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Trichlorophenol, 2,3,6- | 933-75-5 | – | – | s | OA | 1.97E+02 | 8.78E-03 | 2.39E+00 | – | 6.08E-02 | 7.70E-06 | 2.78E+01 | 2.26E-02 | 4.66E+00 |
| Trichlorophenol, 2,4,5- | 95-95-4 | – | – | s | OA | 1.97E+02 | 1.78E-04 | 2.47E+00 | – | 2.91E-02 | 7.03E-06 | 1.20E+03 | 1.63E-02 | 3.45E+00 |
| Trichlorophenol, 2,4,6- | 88-06-2 | – | – | s | OA | 1.97E+02 | 3.19E-04 | 2.12E+00 | – | 3.18E-02 | 6.25E-06 | 9.82E+02 | 1.18E-02 | 3.45E+00 |
| Trichlorophenol, 3,4,5- | 609-19-8 | – | – | s | OA | 1.97E+02 | 1.15E-06 | 3.52E+00 | – | 6.00E-02 | 7.73E-06 | 1.52E+03 | 1.61E-04 | 3.91E+00 |
| Trichlorophenoxyacetic acid, 2,4,5- | 93-76-5 | – | – | s | O | 2.55E+02 | 3.62E-07 | 1.72E+00 | – | 8.00E-02 | 8.00E-06 | 2.78E+02 | 3.61E-06 | 3.26E+00 |
| Trichloropropane, 1,1,2- | 598-77-6 | – | – | l | O | 1.47E+02 | 1.21E+00 | 2.24E+00 | – | 3.96E-02 | 9.30E-06 | 4.44E+01 | 6.64E+00 | 2.43E+00 |
| Trichloropropane, 1,2,3- | 96-18-4 | – | – | l | O | 1.47E+02 | 1.58E-02 | 2.59E+00 | – | 7.10E-02 | 7.90E-06 | 1.90E+03 | 3.70E+00 | 2.50E+00 |
| Triethanolamine | 102-71-6 | – | – | s | O | 1.49E+02 | 3.50E-13 | -2.93E+00 | – | 5.33E-02 | 7.54E-06 | - | 2.90E-06 | -2.98E+00 |
| Triethylamine | 121-44-8 | – | – | l | O | 1.01E+02 | 1.99E-02 | 1.12E+00 | – | 7.54E-02 | 7.51E-06 | 1.50E+04 | 5.00E+01 | 1.51E+00 |
| Triethylene glycol | 112-27-6 | – | – | l | O | 1.50E+02 | 8.96E-11 | -1.16E+00 | – | 5.65E-02 | 7.38E-06 | 2.11E+06 | 2.31E-05 | -1.18E+00 |
| Triethylphosphorothioate, O, O, O- | 126-68-1 | – | – | l | O | 1.98E+02 | 2.08E-02 | 2.69E+00 | – | 5.26E-02 | 6.24E-06 | 8.45E+02 | 7.30E-01 | 2.64E+00 |
| Trifluralin | 1582-09-8 | – | – | s | O | 3.35E+02 | 2.01E-03 | 4.14E+00 | – | 1.49E-02 | 4.70E-06 | 6.00E-01 | 1.10E-04 | 5.31E+00 |
| Trimethylamine | 75-50-3 | – | – | g | OB | 5.91E+01 | 4.14E-03 | 1.24E+00 | – | 9.58E-02 | 9.13E-06 | 5.50E+05 | 9.36E+01 | 2.47E-01 |
| Trimethylbenzene, 1,2,3- | 526-73-8 | – | – | l | O | 1.20E+02 | 1.33E-01 | 2.77E+00 | – | 6.77E-02 | 7.41E-06 | 7.52E+01 | 1.49E+00 | 3.55E+00 |
| Trimethylbenzene, 1,2,4- | 95-63-6 | – | – | l | O | 1.20E+02 | 1.84E-01 | 2.97E+00 | – | 6.22E-02 | 7.28E-06 | 5.68E+01 | 1.59E+00 | 3.65E+00 |
| Trimethylbenzene, 1,3,5- | 108-67-8 | – | – | l | O | 1.20E+02 | 2.72E-01 | 3.01E+00 | – | 6.21E-02 | 7.23E-06 | 5.15E+01 | 2.13E+00 | 3.70E+00 |
| Trinitrobenzene, 1,3,5- | 99-35-4 | – | – | s | O | 2.13E+02 | 2.87E-06 | 1.15E+00 | – | 8.00E-02 | 8.00E-06 | 3.53E+02 | 9.90E-05 | 1.45E+00 |
| Trinitrophenylmethylnitramine (tetryl; nitramine) | 479-45-8 | – | – | s | O | 2.87E+02 | 8.31E-11 | 2.37E+00 | – | 5.69E-02 | 6.40E-06 | 7.50E+01 | 4.00E-10 | 2.04E+00 |
| Trinitrotoluene, 2,4,6- | 118-96-7 | – | – | s | O | 2.27E+02 | 1.90E-05 | 2.48E+00 | – | 5.41E-02 | 6.57E-06 | 1.30E+02 | 1.24E-04 | 1.99E+00 |
| Tungsten (as sodium tungstate dihydride) | 7440-33-7 | – | – | s | M | 3.30E+02 | 0.00E+00 | – | 3.47E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Uranium (soluble salts) | 7440-61-1 | 5.00E-03 | 4.00E-03 | s | M | 2.38E+02 | 0.00E+00 | – | 3.47E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Valeric acid (pentanoic acid) | 109-52-4 | – | – | l | O | 1.02E+02 | 1.16E-05 | -1.80E+00 | – | 6.92E-02 | 8.37E-06 | 2.20E+00 | 7.39E-02 | 1.53E+00 |
| Vanadium | 7440-62-2 | 3.60E-03 | 3.00E-03 | s | M | 5.09E+01 | 0.00E+00 | – | 3.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Vernam | 1929-77-7 | – | – | l | O | 2.03E+02 | 7.36E-04 | 3.44E+00 | – | 5.10E-02 | 5.39E-06 | 9.85E+01 | 1.04E-02 | 3.51E+00 |
| Vinyl acetate | 108-05-4 | – | – | l | O | 8.61E+01 | 2.29E-02 | 7.20E-01 | – | 8.50E-02 | 9.20E-06 | 2.00E+04 | 1.09E+02 | 7.28E-01 |
| Vinyl chloride | 75-01-4 | – | – | g | O | 6.25E+01 | 3.49E+00 | 1.04E+00 | – | 1.06E-01 | 1.23E-05 | 2.76E+03 | 2.80E+03 | 1.62E+00 |
| Vinylcyclohexane | 695-12-5 | – | – | l | O | 1.10E+02 | 3.57E+00 | 3.42E+00 | – | 6.49E-02 | 7.33E-06 | 1.08E+01 | 6.40E+00 | 4.22E+00 |
| Warfarin | 81-81-2 | – | – | s | O | 3.08E+02 | 1.15E-07 | 2.96E+00 | – | 1.63E-02 | 4.40E-06 | 1.70E+01 | 1.16E-07 | 3.20E+00 |
| Xylene, m- | 108-38-3 | – | – | l | O | 1.06E+02 | 3.05E-01 | 2.29E+00 | – | 7.00E-02 | 7.80E-06 | 1.60E+02 | 8.00E+00 | 3.20E+00 |
| Xylene, o- | 95-47-6 | – | – | l | O | 1.06E+02 | 7.36E-04 | 2.11E+00 | – | 8.70E-02 | 1.00E-05 | 1.78E+02 | 6.75E+00 | 3.13E+00 |
| Xylene, p- | 106-42-3 | – | – | l | O | 1.06E+02 | 3.18E-01 | 2.49E+00 | – | 7.69E-02 | 8.44E-06 | 1.85E+02 | 8.76E+00 | 3.17E+00 |
| Xylenes | 1330-20-7 | – | – | l | O | 1.06E+02 | 2.93E-01 | 2.38E+00 | – | 7.40E-02 | 8.50E-06 | 1.98E+02 | 8.06E+00 | 3.09E+00 |
| Zinc | 7440-66-6 | 9.00E-02 | 4.40E-02 | s | M | 6.54E+01 | 0.00E+00 | – | 1.20E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | -4.71E-01 |

# Chemical/Physical Properties

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | $Br_{abg}$ ((µg/g DW)/ (µg/g soil)) | $Br_{bg}$ ((µg/g DW)/ ((µg/g soil)) | Physical State | Type | MW (g/mole) | H_unitless (unitless) | $LogK_{oc}$ (unitless) | $LogK_d$ (unitless) | $D_{air}$ ($cm^2/s$) | $D_{wat}$ ($cm^2/s$) | Solubility (mg/l) | Vapor_P (mm Hg) | $logK_{ow}$ (unitless) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 6 C aliphatics (TPH) (>53% n-hexane content) | NA | – | – | l | O | 8.10E+01 | 3.30E+01 | 2.90E+00 | – | 1.00E-01 | 1.00E-05 | 3.60E+01 | 2.66E+02 | – |
| 6 C aliphatics (TPH) (<53% n-hexane content) | NA | – | – | l | O | 8.10E+01 | 3.30E+01 | 2.90E+00 | – | 1.00E-01 | 1.00E-05 | 3.60E+01 | 2.66E+02 | – |
| >6-8 C aliphatics (TPH) (>53% n-hexane content) | NA | – | – | l | O | 1.00E+02 | 5.00E+01 | 3.60E+00 | – | 1.00E-01 | 1.00E-05 | 5.40E+00 | 4.79E+01 | – |
| >6-8 C aliphatics (TPH) (<53% n-hexane content) | NA | – | – | l | O | 1.00E+02 | 5.00E+01 | 3.60E+00 | – | 1.00E-01 | 1.00E-05 | 5.40E+00 | 4.79E+01 | – |
| >8-10 C aliphatics (TPH) | NA | – | – | l | O | 1.30E+02 | 8.00E+01 | 4.50E+00 | – | 1.00E-01 | 1.00E-05 | 4.30E-01 | 4.79E+00 | – |
| >10-12 C aliphatics (TPH) | NA | – | – | l | O | 1.60E+02 | 1.20E+02 | 5.40E+00 | – | 1.00E-01 | 1.00E-05 | 3.40E-02 | 4.79E-01 | – |
| >12-16 C aliphatics (TPH) | NA | – | – | l | O | 2.00E+02 | 5.20E+02 | 6.70E+00 | – | 1.00E-01 | 1.00E-05 | 7.60E-04 | 3.65E-02 | – |
| >16-35 C aliphatics (TPH) | NA | – | – | l | O | 2.70E+02 | 4.90E+03 | 8.80E+00 | – | 1.00E-01 | 1.00E-05 | 2.50E-06 | 8.40E-04 | – |
| >16-35 C aliphatics (TPH) (for transformer mineral oil releases only) | NA | – | – | l | O | 2.70E+02 | 4.90E+03 | 8.80E+00 | – | 1.00E-01 | 1.00E-05 | 2.50E-06 | 8.40E-04 | – |
| >7-8 C aromatics (TPH) | NA | – | – | l | O | 9.20E+01 | 2.76E-01 | 2.15E+00 | – | 8.70E-02 | 8.60E-06 | 5.30E+02 | 2.82E+01 | – |
| >8-10 C aromatics (TPH) | NA | – | – | l | O | 1.20E+02 | 4.80E-01 | 3.20E+00 | – | 1.00E-01 | 1.00E-05 | 6.50E+01 | 4.79E+00 | – |
| >10-12 C aromatics (TPH) | NA | – | – | l | O | 1.30E+02 | 1.40E-01 | 3.40E+00 | – | 1.00E-01 | 1.00E-05 | 2.50E+01 | 4.79E-01 | – |
| >12-16 C aromatics (TPH) | NA | – | – | l | O | 1.50E+02 | 5.30E-02 | 3.70E+00 | – | 1.00E-01 | 1.00E-05 | 5.80E+00 | 3.65E-02 | – |
| >16-21 C aromatics (TPH) | NA | – | – | l | O | 1.90E+02 | 1.30E-02 | 4.20E+00 | – | 1.00E-01 | 1.00E-05 | 6.50E-01 | 8.40E-04 | – |
| >21-35 C aromatics (TPH) | NA | – | – | s | O | 2.40E+02 | 6.70E-04 | 5.10E+00 | – | 1.00E-01 | 1.00E-05 | 6.60E-03 | 3.30E-07 | – |

**Footnotes**

***** These compounds are not necessarily of concern from a human health standpoint, therefore calculation of human health-based values is not required. However, aesthetics and ecological criteria would still apply. See table entitled "Compounds for which Calculation of a Human Health PCL is Not Required" available on the TCEQ website at http://www.tceq.texas.gov/remediation/trrp/trrppcls.html.

**s** - compound solid at @ 20 oC

**l** - compound liquid at @ 20 oC

**g** - compound gaseous at @ 20 oC

**H'** - Dimensionless Henry's Law Constant H' = H x 41.57 @ 20 oC (cm3-H2O/cm3-air)

**H** - Henry's Law Constant (atm-m3/mole)

**MW** - Molecular Weight (g/mole)

**$K_{oc}$** - Soil organic carbon-water partition coefficient (cm3-H2O/g-Carbon)

**$K_d$** - soil-water partition coefficient (cm3-H2O/g-Soil)

**$D_{air}$** - Diffusion coefficient in air (cm2/s)

**$D_{wat}$** - Diffusion coefficient in water (cm2/s)

**$K_{ow}$** - Octanol-water partition coefficient (cm3-H2O/cm3-Octanol)

**$Br_{abg}$** - Soil-to-above ground plant biotransfer factor (g soil/g plant tissue dry weight)

**$Br_{bg}$** - Soil-to-below ground plant biotransfer factor (g soil/g plant tissue dry weight)

**Type** - O: Organic, I: Inorganic, M: Metal, OA: Organic Acids

**CE** - Not found, Can not estimate

**NA/reacts** - Not applicable because reacts with water

This table shows the chemical and physical properties used to calculate protective concentration levels.

end of worksheet

# Koc Values for Ionizing Organic COCs as a Function of pH

## Last Revised: November 8, 2019

| pH | Adipic acid 124-04-9 | Ametryn 834-12-8 | Aminobiphenyl, 4- 92-67-1 | Benz[c]acridine 225-51-4 | Benzoic Acid* 65-85-0 | Butanoic acid 107-92-6 | Chlorophenol, 2-* 95-57-8 | Chlorophenol, 3- 108-43-0 | Chlorophenol, 4- 106-48-9 |
|---|---|---|---|---|---|---|---|---|---|
| 4.9 | 1.69E-01 | 8.57E+02 | 5.31E+03 | 1.48E+05 | 5.54E+00 | 4.19E+00 | 3.98E+02 | 1.17E+02 | 1.26E+02 |
| 5.0 | 1.22E-01 | 8.37E+02 | 4.68E+03 | 1.31E+05 | 4.64E+00 | 3.61E+00 | 3.98E+02 | 1.17E+02 | 1.26E+02 |
| 5.1 | 9.21E-02 | 8.24E+02 | 4.21E+03 | 1.17E+05 | 3.88E+00 | 3.11E+00 | 3.98E+02 | 1.17E+02 | 1.26E+02 |
| 5.2 | 6.27E-02 | 8.11E+02 | 3.73E+03 | 1.03E+05 | 3.25E+00 | 2.60E+00 | 3.98E+02 | 1.17E+02 | 1.26E+02 |
| 5.3 | 4.64E-02 | 8.03E+02 | 3.40E+03 | 9.35E+04 | 2.72E+00 | 2.20E+00 | 3.98E+02 | 1.17E+02 | 1.26E+02 |
| 5.4 | 3.01E-02 | 7.95E+02 | 3.06E+03 | 8.36E+04 | 2.29E+00 | 1.81E+00 | 3.98E+02 | 1.17E+02 | 1.26E+02 |
| 5.5 | 2.18E-02 | 7.90E+02 | 2.83E+03 | 7.67E+04 | 1.94E+00 | 1.51E+00 | 3.97E+02 | 1.17E+02 | 1.26E+02 |
| 5.6 | 1.36E-02 | 7.85E+02 | 2.61E+03 | 6.98E+04 | 1.65E+00 | 1.22E+00 | 3.97E+02 | 1.17E+02 | 1.26E+02 |
| 5.7 | 9.77E-03 | 7.82E+02 | 2.45E+03 | 6.51E+04 | 1.42E+00 | 1.01E+00 | 3.97E+02 | 1.17E+02 | 1.26E+02 |
| 5.8 | 5.91E-03 | 7.78E+02 | 2.30E+03 | 6.05E+04 | 1.24E+00 | 8.01E-01 | 3.97E+02 | 1.17E+02 | 1.26E+02 |
| 5.9 | 4.20E-03 | 7.76E+02 | 2.20E+03 | 5.74E+04 | 1.09E+00 | 6.61E-01 | 3.97E+02 | 1.17E+02 | 1.26E+02 |
| 6.0 | 2.49E-03 | 7.74E+02 | 2.10E+03 | 5.44E+04 | 9.69E-01 | 5.20E-01 | 3.96E+02 | 1.17E+02 | 1.26E+02 |
| 6.1 | 1.76E-03 | 7.73E+02 | 2.04E+03 | 5.24E+04 | 8.75E-01 | 4.27E-01 | 3.96E+02 | 1.17E+02 | 1.26E+02 |
| 6.2 | 1.03E-03 | 7.72E+02 | 1.97E+03 | 5.04E+04 | 7.99E-01 | 3.34E-01 | 3.96E+02 | 1.17E+02 | 1.26E+02 |
| 6.3 | 7.25E-04 | 7.71E+02 | 1.93E+03 | 4.92E+04 | 7.36E-01 | 2.74E-01 | 3.95E+02 | 1.17E+02 | 1.26E+02 |
| 6.4 | 4.20E-04 | 7.70E+02 | 1.89E+03 | 4.79E+04 | 6 89E-01 | 2.13E-01 | 3.94E+02 | 1.17E+02 | 1.26E+02 |
| 6.5 | 2.95E-04 | 7.70E+02 | 1.87E+03 | 4.71E+04 | 6.51E-01 | 1.74E-01 | 3.93E+02 | 1.17E+02 | 1.26E+02 |
| 6.6 | 1.70E-04 | 7.69E+02 | 1.84E+03 | 4.63E+04 | 6.20E-01 | 1.36E-01 | 3.92E+02 | 1.17E+02 | 1.26E+02 |
| 6.7 | 1.19E-04 | 7.69E+02 | 1.82E+03 | 4.58E+04 | 5.95E-01 | 1.11E-01 | 3.90E+02 | 1.17E+02 | 1.26E+02 |
| 6.8 | 6.83E-05 | 7.69E+02 | 1.81E+03 | 4.52E+04 | 5.76E-01 | 8.59E-02 | 3.88E+02 | 1.17E+02 | 1.26E+02 |
| 6.9 | 4.78E-05 | 7.68E+02 | 1.80E+03 | 4.49E+04 | 5.60E-01 | 7.02E-02 | 3.86E+02 | 1.17E+02 | 1.26E+02 |
| 7.0 | 2.74E-05 | 7.68E+02 | 1.79E+03 | 4.46E+04 | 5.47E-01 | 5.44E-02 | 3.83E+02 | 1.17E+02 | 1.26E+02 |
| 7.1 | 1.91E-05 | 7.68E+02 | 1.78E+03 | 4.44E+04 | 5.38E-01 | 4.44E-02 | 3.79E+02 | 1.17E+02 | 1.25E+02 |
| 7.2 | 1.09E-05 | 7.68E+02 | 1.77E+03 | 4.42E+04 | 5.32E-01 | 3.44E-02 | 3.75E+02 | 1.16E+02 | 1.25E+02 |
| 7.3 | 7.65E-06 | 7.68E+02 | 1.77E+03 | 4.41E+04 | 5.25E-01 | 2.81E-02 | 3.69E+02 | 1.16E+02 | 1.25E+02 |
| 7.4 | 4.36E-06 | 7.68E+02 | 1.77E+03 | 4.39E+04 | 5.19E-01 | 2.17E-02 | 3.62E+02 | 1.16E+02 | 1.25E+02 |
| 7.5 | 3.05E-06 | 7.68E+02 | 1.76E+03 | 4.38E+04 | 5.16E-01 | 1.77E-02 | 3.54E+02 | 1.15E+02 | 1.25E+02 |
| 7.6 | 1.74E-06 | 7.68E+02 | 1.76E+03 | 4.38E+04 | 5.13E-01 | 1.37E-02 | 3.44E+02 | 1.15E+02 | 1.24E+02 |
| 7.7 | 1.22E-06 | 7.68E+02 | 1.76E+03 | 4.37E+04 | 5.09E-01 | 1.12E-02 | 3.33E+02 | 1.14E+02 | 1.24E+02 |
| 7.8 | 6.93E-07 | 7.68E+02 | 1.76E+03 | 4.37E+04 | 5.06E-01 | 8.66E-03 | 3.19E+02 | 1.13E+02 | 1.23E+02 |
| 7.9 | 4.85E-07 | 7.68E+02 | 1.76E+03 | 4.36E+04 | 5.06E-01 | 7.06E-03 | 3.04E+02 | 1.12E+02 | 1.23E+02 |
| 8.0 | 2.76E-07 | 7.68E+02 | 1.75E+03 | 4.36E+04 | 5.06E-01 | 5.46E-03 | 2.86E+02 | 1.11E+02 | 1.22E+02 |

# Koc Values for Ionizing Organic COCs as a Function of pH

## Last Revised: November 8, 2019

| pH | Cymoxanil 57966-95-7 | Dibenz(a,j)acridine 224-42-0 | Dichlorophenol, 2,3- 576-24-9 | Dichlorophenol,2,4-* 120-83-2 | Dichlorophenol, 2,5- 583-78-8 | Dichlorophenol, 2,6- 87-65-0 | Dichlorophenol, 3,4- 95-77-2 |
|---|---|---|---|---|---|---|---|
| 4.9 | 1.56E-01 | 7.18E+06 | 5.87E+02 | 1.59E+02 | 5.36E+02 | 6.58E+02 | 7.77E+02 |
| 5.0 | 1.22E-01 | 6.32E+06 | 5.87E+02 | 1.59E+02 | 5.35E+02 | 6.55E+02 | 7.77E+02 |
| 5.1 | 1.00E-01 | 5.68E+06 | 5.86E+02 | 1.59E+02 | 5.35E+02 | 6.49E+02 | 7.77E+02 |
| 5.2 | 7.83E-02 | 5.03E+06 | 5.86E+02 | 1.59E+02 | 5.34E+02 | 6.44E+02 | 7.77E+02 |
| 5.3 | 6.41E-02 | 4.56E+06 | 5.85E+02 | 1.59E+02 | 5.33E+02 | 6.36E+02 | 7.76E+02 |
| 5.4 | 4.99E-02 | 4.10E+06 | 5.84E+02 | 1.58E+02 | 5.33E+02 | 6.28E+02 | 7.76E+02 |
| 5.5 | 4.08E-02 | 3.78E+06 | 5.83E+02 | 1.58E+02 | 5.31E+02 | 6.16E+02 | 7.76E+02 |
| 5.6 | 3.17E-02 | 3.46E+06 | 5.81E+02 | 1.58E+02 | 5.30E+02 | 6.03E+02 | 7.76E+02 |
| 5.7 | 2.59E-02 | 3.24E+06 | 5.79E+02 | 1.58E+02 | 5.28E+02 | 5.86E+02 | 7.76E+02 |
| 5.8 | 2.01E-02 | 3.03E+06 | 5.77E+02 | 1.58E+02 | 5.26E+02 | 5.69E+02 | 7.76E+02 |
| 5.9 | 1.64E-02 | 2.89E+06 | 5.73E+02 | 1.57E+02 | 5.23E+02 | 5.45E+02 | 7.75E+02 |
| 6.0 | 1.27E-02 | 2.75E+06 | 5.70E+02 | 1.57E+02 | 5.20E+02 | 5.21E+02 | 7.75E+02 |
| 6.1 | 1.03E-02 | 2.66E+06 | 5.65E+02 | 1.57E+02 | 5.15E+02 | 4.90E+02 | 7.75E+02 |
| 6.2 | 8.02E-03 | 2.57E+06 | 5.59E+02 | 1.56E+02 | 5.10E+02 | 4.60E+02 | 7.74E+02 |
| 6.3 | 6.54E-03 | 2.51E+06 | 5.52E+02 | 1.55E+02 | 5.03E+02 | 4.24E+02 | 7.73E+02 |
| 6.4 | 5.06E-03 | 2.46E+06 | 5.44E+02 | 1.54E+02 | 4.95E+02 | 3.88E+02 | 7.73E+02 |
| 6.5 | 4.13E-03 | 2.42E+06 | 5.32E+02 | 1.53E+02 | 4.85E+02 | 3.49E+02 | 7.71E+02 |
| 6.6 | 3.20E-03 | 2.38E+06 | 5.20E+02 | 1.52E+02 | 4.74E+02 | 3.11E+02 | 7.70E+02 |
| 6.7 | 2.61E-03 | 2.36E+06 | 5.04E+02 | 1.50E+02 | 4.58E+02 | 2.73E+02 | 7.68E+02 |
| 6.8 | 2.02E-03 | 2.34E+06 | 4.87E+02 | 1.47E+02 | 4.43E+02 | 2.36E+02 | 7.67E+02 |
| 6.9 | 1.65E-03 | 2.32E+06 | 4.65E+02 | 1.45E+02 | 4.23E+02 | 2.04E+02 | 7.64E+02 |
| 7.0 | 1.27E-03 | 2.31E+06 | 4.42E+02 | 1.41E+02 | 4.02E+02 | 1.71E+02 | 7.61E+02 |
| 7.1 | 1.04E-03 | 2.30E+06 | 4.14E+02 | 1.38E+02 | 3.76E+02 | 1.45E+02 | 7.56E+02 |
| 7.2 | 8.03E-04 | 2.29E+06 | 3.86E+02 | 1.33E+02 | 3.51E+02 | 1.19E+02 | 7.51E+02 |
| 7.3 | 6.55E-04 | 2.28E+06 | 3.54E+02 | 1.28E+02 | 3.21E+02 | 9.97E+01 | 7.44E+02 |
| 7.4 | 5.07E-04 | 2.28E+06 | 3.22E+02 | 1.21E+02 | 2.91E+02 | 8.04E+01 | 7.37E+02 |
| 7.5 | 4.13E-04 | 2.27E+06 | 2.88E+02 | 1.14E+02 | 2.61E+02 | 6.67E+01 | 7.27E+02 |
| 7.6 | 3.20E-04 | 2.27E+06 | 2.54E+02 | 1.07E+02 | 2.30E+02 | 5.31E+01 | 7.16E+02 |
| 7.7 | 2.61E-04 | 2.27E+06 | 2.22E+02 | 9.84E+01 | 2.01E+02 | 4.38E+01 | 7.01E+02 |
| 7.8 | 2.02E-04 | 2.26E+06 | 1.91E+02 | 8.97E+01 | 1.72E+02 | 3.45E+01 | 6.85E+02 |
| 7.9 | 1.65E-04 | 2.26E+06 | 1.64E+02 | 8.07E+01 | 1.48E+02 | 2.83E+01 | 6.63E+02 |
| 8.0 | 1.27E-04 | 2.26E+06 | 1.37E+02 | 7.17E+01 | 1.23E+02 | 2.22E+01 | 6.41E+02 |

# Koc Values for Ionizing Organic COCs as a Function of pH

## Last Revised: November 8, 2019

| pH | Dichlorophenol, 3,5-<br>591-35-5 | DB, 2,4-<br>(4-(2,4-Dichlorophenoxy) butyric acid)<br>94-82-6 | Dichloroprop<br>(2-(2,4-dichlorophenoxy) propanoic acid)<br>120-36-5 | Dimethylamino-azobenzene, 4-<br>60-11-7 | Dimethylhydrazine, 1,1-<br>57-14-7 | Dinitro-2-methylphenol, 4,6-<br>(dinitro-o-cresol, 4, 6-)<br>534-52-1 |
|---|---|---|---|---|---|---|
| 4.9 | 5.59E+02 | 1.72E+03 | 3.61E+01 | 1.13E+05 | 6.44E-01 | 2.91E+01 |
| 5.0 | 5.59E+02 | 1.44E+03 | 2.81E+01 | 1.10E+05 | 6.44E-01 | 2.43E+01 |
| 5.1 | 5.59E+02 | 1.22E+03 | 2.30E+01 | 1.09E+05 | 6.43E-01 | 2.05E+01 |
| 5.2 | 5.59E+02 | 9.93E+02 | 1.78E+01 | 1.07E+05 | 6.43E-01 | 1.67E+01 |
| 5.3 | 5.59E+02 | 8.30E+02 | 1.46E+01 | 1.06E+05 | 6.42E-01 | 1.40E+01 |
| 5.4 | 5.59E+02 | 6.66E+02 | 1.13E+01 | 1.04E+05 | 6.41E-01 | 1.12E+01 |
| 5.5 | 5.59E+02 | 5.52E+02 | 9.22E+00 | 1.04E+05 | 6.40E-01 | 9.27E+00 |
| 5.6 | 5.59E+02 | 4.38E+02 | 7.15E+00 | 1.03E+05 | 6.38E-01 | 7.35E+00 |
| 5.7 | 5.58E+02 | 3.61E+02 | 5.83E+00 | 1.03E+05 | 6.36E-01 | 6.05E+00 |
| 5.8 | 5.58E+02 | 2.84E+02 | 4.52E+00 | 1.02E+05 | 6.34E-01 | 4.75E+00 |
| 5.9 | 5.58E+02 | 2.33E+02 | 3.68E+00 | 1.02E+05 | 6.31E-01 | 3.90E+00 |
| 6.0 | 5.57E+02 | 1.82E+02 | 2.85E+00 | 1.02E+05 | 6.28E-01 | 3.05E+00 |
| 6.1 | 5.57E+02 | 1.49E+02 | 2.33E+00 | 1.01E+05 | 6.22E-01 | 2.50E+00 |
| 6.2 | 5.56E+02 | 1.16E+02 | 1.80E+00 | 1.01E+05 | 6.17E-01 | 1.94E+00 |
| 6.3 | 5.55E+02 | 9.51E+01 | 1.47E+00 | 1.01E+05 | 6.10E-01 | 1.59E+00 |
| 6.4 | 5.54E+02 | 7.39E+01 | 1.14E+00 | 1.01E+05 | 6.02E-01 | 1.24E+00 |
| 6.5 | 5.53E+02 | 6.03E+01 | 9.27E-01 | 1.01E+05 | 5.91E-01 | 1.01E+00 |
| 6.6 | 5.51E+02 | 4.68E+01 | 7.17E-01 | 1.01E+05 | 5.80E-01 | 7.83E-01 |
| 6.7 | 5.49E+02 | 3.82E+01 | 5.85E-01 | 1.01E+05 | 5.63E-01 | 6.39E-01 |
| 6.8 | 5.46E+02 | 2.96E+01 | 4.53E-01 | 1.01E+05 | 5.47E-01 | 4.95E-01 |
| 6.9 | 5.42E+02 | 2.42E+01 | 3.69E-01 | 1.01E+05 | 5.26E-01 | 4.04E-01 |
| 7.0 | 5.39E+02 | 1.87E+01 | 2.86E-01 | 1.01E+05 | 5.04E-01 | 3.13E-01 |
| 7.1 | 5.33E+02 | 1.53E+01 | 2.33E-01 | 1.01E+05 | 4.77E-01 | 2.55E-01 |
| 7.2 | 5.27E+02 | 1.18E+01 | 1.80E-01 | 1.01E+05 | 4.49E-01 | 1.98E-01 |
| 7.3 | 5.19E+02 | 9.65E+00 | 1.47E-01 | 1.01E+05 | 4.17E-01 | 1.61E-01 |
| 7.4 | 5.10E+02 | 7.47E+00 | 1.14E-01 | 1.01E+05 | 3.86E-01 | 1.25E-01 |
| 7.5 | 4.98E+02 | 6.09E+00 | 9.27E-02 | 1.01E+05 | 3.52E-01 | 1.02E-01 |
| 7.6 | 4.85E+02 | 4.71E+00 | 7.17E-02 | 1.01E+05 | 3.19E-01 | 7.88E-02 |
| 7.7 | 4.68E+02 | 3.84E+00 | 5.85E-02 | 1.01E+05 | 2.88E-01 | 6.43E-02 |
| 7.8 | 4.50E+02 | 2.98E+00 | 4.53E-02 | 1.01E+05 | 2.56E-01 | 4.97E-02 |
| 7.9 | 4.27E+02 | 2.43E+00 | 3.69E-02 | 1.01E+05 | 2.29E-01 | 4.06E-02 |
| 8.0 | 4.04E+02 | 1.88E+00 | 2.86E-02 | 1.01E+05 | 2.02E-01 | 3.14E-02 |

# Koc Values for Ionizing Organic COCs as a Function of pH

## Last Revised: November 8, 2019

| pH | Dinitrophenol, 2,4-* 51-28-5 | Dinitrophenol, 2,5- 329-71-5 | Dodecylphenol, 4- 104-43-8 | Endothall 145-73-3 | Ethanol, 2-(methylamino)- 109-83-1 | Ethyleneimine 151-56-4 | Glyphosate[1] 1071-83-6 | Heptanoic Acid, n- 111-14-8 |
|---|---|---|---|---|---|---|---|---|
| 4.9 | 2.94E-02 | 3.15E+02 | 2.51E+08 | 3.70E+00 | 3.11E-06 | 2.49E+00 | Under review. | 3.85E+02 |
| 5.0 | 2.55E-02 | 2.97E+02 | 2.51E+08 | 2.49E+00 | 3.82E-06 | 2.49E+00 | - | 3.31E+02 |
| 5.1 | 2.23E-02 | 2.75E+02 | 2.51E+08 | 1.84E+00 | 4.93E-06 | 2.49E+00 | - | 2.85E+02 |
| 5.2 | 1.98E-02 | 2.54E+02 | 2.51E+08 | 1.19E+00 | 6.05E-06 | 2.49E+00 | - | 2.39E+02 |
| 5.3 | 1.78E-02 | 2.30E+02 | 2.51E+08 | 8.60E-01 | 7.82E-06 | 2.49E+00 | - | 2.02E+02 |
| 5.4 | 1.62E-02 | 2.06E+02 | 2.51E+08 | 5.35E-01 | 9.58E-06 | 2.49E+00 | - | 1.66E+02 |
| 5.5 | 1.50E-02 | 1.82E+02 | 2.51E+08 | 3.83E-01 | 1.24E-05 | 2.49E+00 | - | 1.39E+02 |
| 5.6 | 1.40E-02 | 1.58E+02 | 2.51E+08 | 2.32E-01 | 1.52E-05 | 2.49E+00 | - | 1.12E+02 |
| 5.7 | 1.32E-02 | 1.37E+02 | 2.51E+08 | 1.65E-01 | 1.96E-05 | 2.49E+00 | - | 9.26E+01 |
| 5.8 | 1.25E-02 | 1.16E+02 | 2.51E+08 | 9.76E-02 | 2.41E-05 | 2.49E+00 | - | 7.35E+01 |
| 5.9 | 1.20E-02 | 9.86E+01 | 2.51E+08 | 6.89E-02 | 3.11E-05 | 2.48E+00 | - | 6.06E+01 |
| 6.0 | 1.16E-02 | 8.14E+01 | 2.51E+08 | 4.03E-02 | 3.82E-05 | 2.48E+00 | - | 4.77E+01 |
| 6.1 | 1.13E-02 | 6.83E+01 | 2.51E+08 | 2.84E-02 | 4.93E-05 | 2.48E+00 | - | 3.92E+01 |
| 6.2 | 1.10E-02 | 5.53E+01 | 2.51E+08 | 1.64E-02 | 6.05E-05 | 2.48E+00 | - | 3.07E+01 |
| 6.3 | 1.08E-02 | 4.60E+01 | 2.51E+08 | 1.15E-02 | 7.82E-05 | 2.47E+00 | - | 2.51E+01 |
| 6.4 | 1.06E-02 | 3.67E+01 | 2.51E+08 | 6.64E-03 | 9.58E-05 | 2.47E+00 | - | 1.96E+01 |
| 6.5 | 1.05E-02 | 3.03E+01 | 2.51E+08 | 4.65E-03 | 1.24E-04 | 2.46E+00 | - | 1.60E+01 |
| 6.6 | 1.04E-02 | 2.39E+01 | 2.51E+08 | 2.67E-03 | 1.52E-04 | 2.46E+00 | - | 1.24E+01 |
| 6.7 | 1.03E-02 | 1.96E+01 | 2.51E+08 | 1.87E-03 | 1.96E-04 | 2.45E+00 | - | 1.02E+01 |
| 6.8 | 1.02E-02 | 1.54E+01 | 2.51E+08 | 1.07E-03 | 2.41E-04 | 2.44E+00 | - | 7.89E+00 |
| 6.9 | 1.02E-02 | 1.26E+01 | 2.51E+08 | 7.48E-04 | 3.11E-04 | 2.42E+00 | - | 6.44E+00 |
| 7.0 | 1.02E-02 | 9.85E+00 | 2.51E+08 | 4.27E-04 | 3.81E-04 | 2.41E+00 | - | 4.99E+00 |
| 7.1 | 1.02E-02 | 8.06E+00 | 2.51E+08 | 2.99E-04 | 4.93E-04 | 2.38E+00 | - | 4.07E+00 |
| 7.2 | 1.01E-02 | 6.27E+00 | 2.51E+08 | 1.71E-04 | 6.04E-04 | 2.36E+00 | - | 3.16E+00 |
| 7.3 | 1.01E-02 | 5.12E+00 | 2.51E+08 | 1.19E-04 | 7.81E-04 | 2.32E+00 | - | 2.57E+00 |
| 7.4 | 1.01E-02 | 3.98E+00 | 2.51E+08 | 6.80E-05 | 9.57E-04 | 2.29E+00 | - | 1.99E+00 |
| 7.5 | 1.01E-02 | 3.25E+00 | 2.51E+08 | 4.75E-05 | 1.24E-03 | 2.24E+00 | - | 1.63E+00 |
| 7.6 | 1.01E-02 | 2.52E+00 | 2.51E+08 | 2.71E-05 | 1.52E-03 | 2.19E+00 | - | 1.26E+00 |
| 7.7 | 1.00E-02 | 2.05E+00 | 2.51E+08 | 1.89E-05 | 1.96E-03 | 2.11E+00 | - | 1.03E+00 |
| 7.8 | 1.00E-02 | 1.59E+00 | 2.50E+08 | 1.08E-05 | 2.40E-03 | 2.04E+00 | - | 7.95E-01 |
| 7.9 | 1.00E-02 | 1.30E+00 | 2.50E+08 | 7.55E-06 | 3.10E-03 | 1.95E+00 | - | 6.48E-01 |
| 8.0 | 1.00E-02 | 1.01E+00 | 2.50E+08 | 4.30E-06 | 3.80E-03 | 1.86E+00 | - | 5.02E-01 |

# Koc Values for Ionizing Organic COCs as a Function of pH

## Last Revised: November 8, 2019

| pH | Hexanoic acid 142-62-1 | Kelthane 115-32-2 | MCPA (4-(Chloro-2-methylphenoxy) acetic acid) 94-74-6 | MCPP, acid (2-(4-chloro-2-methylphenoxy) propanoic acid) 93-65-2 | Methacrylic acid (2-methyl-2-propenoic acid) 79-41-4 | Methanethiol 74-93-1 | Methapyrilene 91-80-5 |
|---|---|---|---|---|---|---|---|
| 4.9 | 4.00E+01 | 1.26E+05 | 4.01E+01 | 2.20E+01 | 4.60E+00 | 4.23E+00 | 1.43E+04 |
| 5.0 | 3.44E+01 | 1.26E+05 | 3.12E+01 | 1.71E+01 | 3.67E+00 | 4.23E+00 | 1.43E+04 |
| 5.1 | 2.95E+01 | 1.26E+05 | 2.55E+01 | 1.40E+01 | 3.03E+00 | 4.23E+00 | 1.43E+04 |
| 5.2 | 2.47E+01 | 1.26E+05 | 1.98E+01 | 1.09E+01 | 2.39E+00 | 4.23E+00 | 1.43E+04 |
| 5.3 | 2.09E+01 | 1.26E+05 | 1.61E+01 | 8.87E+00 | 1.96E+00 | 4.23E+00 | 1.43E+04 |
| 5.4 | 1.71E+01 | 1.26E+05 | 1.25E+01 | 6.87E+00 | 1.54E+00 | 4.23E+00 | 1.43E+04 |
| 5.5 | 1.42E+01 | 1.26E+05 | 1.02E+01 | 5.61E+00 | 1.26E+00 | 4.23E+00 | 1.43E+04 |
| 5.6 | 1.14E+01 | 1.26E+05 | 7.90E+00 | 4.34E+00 | 9.83E-01 | 4.23E+00 | 1.43E+04 |
| 5.7 | 9.49E+00 | 1.26E+05 | 6.45E+00 | 3.54E+00 | 8.04E-01 | 4.23E+00 | 1.43E+04 |
| 5.8 | 7.53E+00 | 1.26E+05 | 4.99E+00 | 2.74E+00 | 6.25E-01 | 4.23E+00 | 1.42E+04 |
| 5.9 | 6.20E+00 | 1.26E+05 | 4.07E+00 | 2.24E+00 | 5.11E-01 | 4.23E+00 | 1.42E+04 |
| 6.0 | 4.88E+00 | 1.26E+05 | 3.15E+00 | 1.73E+00 | 3.97E-01 | 4.23E+00 | 1.42E+04 |
| 6.1 | 4.00E+00 | 1.26E+05 | 2.57E+00 | 1.41E+00 | 3.24E-01 | 4.23E+00 | 1.42E+04 |
| 6.2 | 3.13E+00 | 1.26E+05 | 1.99E+00 | 1.09E+00 | 2.51E-01 | 4.23E+00 | 1.42E+04 |
| 6.3 | 2.56E+00 | 1.26E+05 | 1.62E+00 | 8.92E-01 | 2.05E-01 | 4.23E+00 | 1.42E+04 |
| 6.4 | 2.00E+00 | 1.26E+05 | 1.26E+00 | 6.90E-01 | 1.59E-01 | 4.23E+00 | 1.41E+04 |
| 6.5 | 1.63E+00 | 1.26E+05 | 1.02E+00 | 5.63E-01 | 1.30E-01 | 4.23E+00 | 1.41E+04 |
| 6.6 | 1.27E+00 | 1.26E+05 | 7.93E-01 | 4.36E-01 | 1.00E-01 | 4.23E+00 | 1.40E+04 |
| 6.7 | 1.04E+00 | 1.26E+05 | 6.46E-01 | 3.55E-01 | 8.18E-02 | 4.23E+00 | 1.39E+04 |
| 6.8 | 8.05E-01 | 1.26E+05 | 5.00E-01 | 2.75E-01 | 6.34E-02 | 4.23E+00 | 1.39E+04 |
| 6.9 | 6.57E-01 | 1.26E+05 | 4.08E-01 | 2.24E-01 | 5.17E-02 | 4.23E+00 | 1.38E+04 |
| 7.0 | 5.09E-01 | 1.26E+05 | 3.16E-01 | 1.73E-01 | 4.00E-02 | 4.23E+00 | 1.36E+04 |
| 7.1 | 4.15E-01 | 1.26E+05 | 2.57E-01 | 1.41E-01 | 3.26E-02 | 4.23E+00 | 1.35E+04 |
| 7.2 | 3.22E-01 | 1.26E+05 | 1.99E-01 | 1.09E-01 | 2.52E-02 | 4.23E+00 | 1.33E+04 |
| 7.3 | 2.63E-01 | 1.26E+05 | 1.62E-01 | 8.93E-02 | 2.06E-02 | 4.23E+00 | 1.30E+04 |
| 7.4 | 2.03E-01 | 1.26E+05 | 1.26E-01 | 6.91E-02 | 1.59E-02 | 4.22E+00 | 1.28E+04 |
| 7.5 | 1.66E-01 | 1.26E+05 | 1.02E-01 | 5.63E-02 | 1.30E-02 | 4.22E+00 | 1.24E+04 |
| 7.6 | 1.28E-01 | 1.26E+05 | 7.93E-02 | 4.36E-02 | 1.01E-02 | 4.22E+00 | 1.20E+04 |
| 7.7 | 1.05E-01 | 1.26E+05 | 6.47E-02 | 3.55E-02 | 8.20E-03 | 4.22E+00 | 1.16E+04 |
| 7.8 | 8.10E-02 | 1.26E+05 | 5.00E-02 | 2.75E-02 | 6.34E-03 | 4.21E+00 | 1.11E+04 |
| 7.9 | 6.61E-02 | 1.26E+05 | 4.08E-02 | 2.24E-02 | 5.17E-03 | 4.21E+00 | 1.05E+04 |
| 8.0 | 5.11E-02 | 1.26E+05 | 3.16E-02 | 1.73E-02 | 4.00E-03 | 4.20E+00 | 9.83E+03 |

# Koc Values for Ionizing Organic COCs as a Function of pH

## Last Revised: November 8, 2019

| pH | Methylpyridine,2-<br>109-06-8 | Morpholine<br>110-91-8 | Naphthylamine, 1-<br>134-32-7 | Naphthylamine, 2-<br>91-59-8 | Nitrophenol, 2-<br>88-75-5 | Nitrophenol, 3-<br>554-84-7 | Nitrophenol, 4-<br>100-02-7 | Nonylphenol, 4-<br>(branched)<br>84852-15-3 |
|---|---|---|---|---|---|---|---|---|
| 4.9 | 1.71E+02 | 1.32E+00 | 9.52E+02 | 1.44E+03 | 2.03E+02 | 9.33E+01 | 4.95E+01 | 3.01E+06 |
| 5.0 | 1.67E+02 | 1.32E+00 | 8.50E+02 | 1.27E+03 | 2.02E+02 | 9.33E+01 | 4.94E+01 | 3.01E+06 |
| 5.1 | 1.61E+02 | 1.32E+00 | 7.78E+02 | 1.16E+03 | 2.02E+02 | 9.33E+01 | 4.92E+01 | 3.01E+06 |
| 5.2 | 1.56E+02 | 1.32E+00 | 7.07E+02 | 1.04E+03 | 2.01E+02 | 9.33E+01 | 4.90E+01 | 3.01E+06 |
| 5.3 | 1.49E+02 | 1.32E+00 | 6.59E+02 | 9.61E+02 | 2.01E+02 | 9.33E+01 | 4.86E+01 | 3.01E+06 |
| 5.4 | 1.41E+02 | 1.32E+00 | 6.11E+02 | 8.81E+02 | 2.00E+02 | 9.32E+01 | 4.83E+01 | 3.01E+06 |
| 5.5 | 1.32E+02 | 1.32E+00 | 5.79E+02 | 8.27E+02 | 1.98E+02 | 9.32E+01 | 4.78E+01 | 3.01E+06 |
| 5.6 | 1.24E+02 | 1.32E+00 | 5.47E+02 | 7.74E+02 | 1.97E+02 | 9.32E+01 | 4.73E+01 | 3.01E+06 |
| 5.7 | 1.14E+02 | 1.32E+00 | 5.27E+02 | 7.39E+02 | 1.95E+02 | 9.32E+01 | 4.66E+01 | 3.01E+06 |
| 5.8 | 1.04E+02 | 1.32E+00 | 5.06E+02 | 7.04E+02 | 1.93E+02 | 9.31E+01 | 4.58E+01 | 3.01E+06 |
| 5.9 | 9.45E+01 | 1.32E+00 | 4.93E+02 | 6.82E+02 | 1.90E+02 | 9.31E+01 | 4.47E+01 | 3.01E+06 |
| 6.0 | 8.48E+01 | 1.31E+00 | 4.80E+02 | 6.59E+02 | 1.88E+02 | 9.30E+01 | 4.36E+01 | 3.01E+06 |
| 6.1 | 7.60E+01 | 1.31E+00 | 4.72E+02 | 6.45E+02 | 1.83E+02 | 9.29E+01 | 4.21E+01 | 3.01E+06 |
| 6.2 | 6.73E+01 | 1.31E+00 | 4.63E+02 | 6.30E+02 | 1.79E+02 | 9.28E+01 | 4.06E+01 | 3.01E+06 |
| 6.3 | 6.02E+01 | 1.31E+00 | 4.58E+02 | 6.21E+02 | 1.73E+02 | 9.27E+01 | 3.86E+01 | 3.01E+06 |
| 6.4 | 5.30E+01 | 1.31E+00 | 4.52E+02 | 6.12E+02 | 1.67E+02 | 9.25E+01 | 3.65E+01 | 3.01E+06 |
| 6.5 | 4.76E+01 | 1.30E+00 | 4.49E+02 | 6.06E+02 | 1.59E+02 | 9.23E+01 | 3.40E+01 | 3.01E+06 |
| 6.6 | 4.22E+01 | 1.30E+00 | 4.46E+02 | 6.00E+02 | 1.51E+02 | 9.20E+01 | 3.15E+01 | 3.01E+06 |
| 6.7 | 3.83E+01 | 1.29E+00 | 4.44E+02 | 5.97E+02 | 1.41E+02 | 9.17E+01 | 2.87E+01 | 3.01E+06 |
| 6.8 | 3.44E+01 | 1.29E+00 | 4.41E+02 | 5.93E+02 | 1.31E+02 | 9.13E+01 | 2.59E+01 | 3.01E+06 |
| 6.9 | 3.18E+01 | 1.28E+00 | 4.40E+02 | 5.91E+02 | 1.20E+02 | 9.07E+01 | 2.30E+01 | 3.01E+06 |
| 7.0 | 2.91E+01 | 1.27E+00 | 4.39E+02 | 5.88E+02 | 1.08E+02 | 9.02E+01 | 2.02E+01 | 3.01E+06 |
| 7.1 | 2.73E+01 | 1.25E+00 | 4.38E+02 | 5.87E+02 | 9.66E+01 | 8.93E+01 | 1.76E+01 | 3.00E+06 |
| 7.2 | 2.55E+01 | 1.24E+00 | 4.37E+02 | 5.85E+02 | 8.49E+01 | 8.84E+01 | 1.50E+01 | 3.00E+06 |
| 7.3 | 2.44E+01 | 1.22E+00 | 4.36E+02 | 5.85E+02 | 7.41E+01 | 8.71E+01 | 1.28E+01 | 3.00E+06 |
| 7.4 | 2.32E+01 | 1.19E+00 | 4.36E+02 | 5.84E+02 | 6.33E+01 | 8.58E+01 | 1.06E+01 | 3.00E+06 |
| 7.5 | 2.25E+01 | 1.16E+00 | 4.36E+02 | 5.83E+02 | 5.42E+01 | 8.38E+01 | 8.94E+00 | 3.00E+06 |
| 7.6 | 2.17E+01 | 1.13E+00 | 4.35E+02 | 5.82E+02 | 4.51E+01 | 8.19E+01 | 7.26E+00 | 3.00E+06 |
| 7.7 | 2.12E+01 | 1.09E+00 | 4.35E+02 | 5.82E+02 | 3.80E+01 | 7.91E+01 | 6.05E+00 | 3.00E+06 |
| 7.8 | 2.08E+01 | 1.05E+00 | 4.35E+02 | 5.82E+02 | 3.10E+01 | 7.64E+01 | 4.84E+00 | 3.00E+06 |
| 7.9 | 2.05E+01 | 9.95E-01 | 4.35E+02 | 5.81E+02 | 2.58E+01 | 7.27E+01 | 4.00E+00 | 3.00E+06 |
| 8.0 | 2.02E+01 | 9.41E-01 | 4.34E+02 | 5.81E+02 | 2.07E+01 | 6.91E+01 | 3.17E+00 | 2.99E+06 |

# Koc Values for Ionizing Organic COCs as a Function of pH

## Last Revised: November 8, 2019

| pH | Pentachlorophenol* 87-86-5 | Propanil 709-98-8 | Tetrachlorophenol, 2,3,4,5-* 4901-51-3 | Tetrachlorophenol, 2,3,4,6-* 58-90-2 | Tetrachlorophenol, 2,3,5,6- 935-95-5 | Toluenediamine, 2,6- 823-40-5 | Toluidine, o- 95-53-4 |
|---|---|---|---|---|---|---|---|
| 4.9 | 9.05E+03 | 9.33E+02 | 1.73E+04 | 4.45E+03 | 1.60E+04 | 9.01E+00 | 1.85E+02 |
| 5.0 | 7.96E+03 | 9.33E+02 | 1.72E+04 | 4.15E+03 | 1.42E+04 | 8.29E+00 | 1.65E+02 |
| 5.1 | 6.93E+03 | 9.33E+02 | 1.70E+04 | 3.83E+03 | 1.24E+04 | 7.55E+00 | 1.47E+02 |
| 5.2 | 5.97E+03 | 9.33E+02 | 1.67E+04 | 3.49E+03 | 1.07E+04 | 6.81E+00 | 1.30E+02 |
| 5.3 | 5.10E+03 | 9.33E+02 | 1.65E+04 | 3.14E+03 | 9.18E+03 | 6.13E+00 | 1.16E+02 |
| 5.4 | 4.32E+03 | 9.33E+02 | 1.61E+04 | 2.79E+03 | 7.68E+03 | 5.44E+00 | 1.03E+02 |
| 5.5 | 3.65E+03 | 9.33E+02 | 1.57E+04 | 2.45E+03 | 6.50E+03 | 4.87E+00 | 9.26E+01 |
| 5.6 | 3.07E+03 | 9.33E+02 | 1.52E+04 | 2.13E+03 | 5.32E+03 | 4.29E+00 | 8.25E+01 |
| 5.7 | 2.58E+03 | 9.33E+02 | 1.47E+04 | 1.83E+03 | 4.45E+03 | 3.84E+00 | 7.55E+01 |
| 5.8 | 2.18E+03 | 9.33E+02 | 1.40E+04 | 1.56E+03 | 3.58E+03 | 3.40E+00 | 6.84E+01 |
| 5.9 | 1.84E+03 | 9.33E+02 | 1.32E+04 | 1.32E+03 | 2.96E+03 | 3.07E+00 | 6.36E+01 |
| 6.0 | 1.56E+03 | 9.33E+02 | 1.24E+04 | 1.11E+03 | 2.35E+03 | 2.75E+00 | 5.88E+01 |
| 6.1 | 1.33E+03 | 9.33E+02 | 1.15E+04 | 9.27E+02 | 1.94E+03 | 2.52E+00 | 5.57E+01 |
| 6.2 | 1.15E+03 | 9.33E+02 | 1.05E+04 | 7.75E+02 | 1.53E+03 | 2.29E+00 | 5.25E+01 |
| 6.3 | 9.98E+02 | 9.33E+02 | 9.51E+03 | 6.47E+02 | 1.25E+03 | 2.14E+00 | 5.04E+01 |
| 6.4 | 8.77E+02 | 9.32E+02 | 8.48E+03 | 5.42E+02 | 9.80E+02 | 1.99E+00 | 4.84E+01 |
| 6.5 | 7.81E+02 | 9.32E+02 | 7.47E+03 | 4.55E+02 | 8.03E+02 | 1.89E+00 | 4.71E+01 |
| 6.6 | 7.03E+02 | 9.32E+02 | 6.49E+03 | 3.84E+02 | 6.25E+02 | 1.79E+00 | 4.57E+01 |
| 6.7 | 6.40E+02 | 9.32E+02 | 5.58E+03 | 3.27E+02 | 5.11E+02 | 1.72E+00 | 4.49E+01 |
| 6.8 | 5.92E+02 | 9.31E+02 | 4.74E+03 | 2.80E+02 | 3.97E+02 | 1.66E+00 | 4.41E+01 |
| 6.9 | 5.52E+02 | 9.31E+02 | 3.99E+03 | 2.42E+02 | 3.25E+02 | 1.62E+00 | 4.35E+01 |
| 7.0 | 5.21E+02 | 9.30E+02 | 3.33E+03 | 2.13E+02 | 2.52E+02 | 1.58E+00 | 4.30E+01 |
| 7.1 | 4.96E+02 | 9.29E+02 | 2.76E+03 | 1.88E+02 | 2.06E+02 | 1.55E+00 | 4.27E+01 |
| 7.2 | 4.76E+02 | 9.28E+02 | 2.28E+03 | 1.69E+02 | 1.59E+02 | 1.52E+00 | 4.23E+01 |
| 7.3 | 4.61E+02 | 9.27E+02 | 1.87E+03 | 1.53E+02 | 1.30E+02 | 1.51E+00 | 4.21E+01 |
| 7.4 | 4.47E+02 | 9.26E+02 | 1.53E+03 | 1.41E+02 | 1.01E+02 | 1.49E+00 | 4.19E+01 |
| 7.5 | 4.37E+02 | 9.23E+02 | 1.25E+03 | 1.31E+02 | 8.22E+01 | 1.48E+00 | 4.17E+01 |
| 7.6 | 4.29E+02 | 9.21E+02 | 1.02E+03 | 1.23E+02 | 6.37E+01 | 1.47E+00 | 4.16E+01 |
| 7.7 | 4.23E+02 | 9.18E+02 | 8.31E+02 | 1.17E+02 | 5.19E+01 | 1.46E+00 | 4.15E+01 |
| 7.8 | 4.18E+02 | 9.14E+02 | 6.79E+02 | 1.13E+02 | 4.02E+01 | 1.46E+00 | 4.14E+01 |
| 7.9 | 4.14E+02 | 9.09E+02 | 5.56E+02 | 1.08E+02 | 3.28E+01 | 1.45E+00 | 4.14E+01 |
| 8.0 | 4.10E+02 | 9.03E+02 | 4.58E+02 | 1.05E+02 | 2.54E+01 | 1.45E+00 | 4.13E+01 |

# Koc Values for Ionizing Organic COCs as a Function of pH

## Last revised: November 8, 2019

| pH | Trichlorophenol, 2,3,4- 15950-66-0 | Trichlorophenol, 2,3,5- 933-78-8 | Trichlorophenol, 2,3,6- 933-75-5 | Trichlorophenol, 2,4,5-* 95-95-4 | Trichlorophenol, 2,4,6-* 88-06-2 | Trichlorophenol, 3,4,5- 609-19-8 | Valeric acid (pentanoic acid) 109-52-4 |
|---|---|---|---|---|---|---|---|
| 4.9 | 7.51E+03 | 5.47E+03 | 4.00E+04 | 2.37E+03 | 1.04E+03 | 8.13E+03 | 1.24E+01 |
| 5.0 | 7.49E+03 | 5.45E+03 | 3.88E+04 | 2.36E+03 | 1.03E+03 | 8.13E+03 | 1.06E+01 |
| 5.1 | 7.46E+03 | 5.41E+03 | 3.71E+04 | 2.36E+03 | 1.02E+03 | 8.12E+03 | 9.12E+00 |
| 5.2 | 7.44E+03 | 5.38E+03 | 3.55E+04 | 2.35E+03 | 1.01E+03 | 8.12E+03 | 7.63E+00 |
| 5.3 | 7.40E+03 | 5.32E+03 | 3.34E+04 | 2.34E+03 | 9.99E+02 | 8.12E+03 | 6.45E+00 |
| 5.4 | 7.35E+03 | 5.27E+03 | 3.13E+04 | 2.33E+03 | 9.82E+02 | 8.11E+03 | 5.27E+00 |
| 5.5 | 7.29E+03 | 5.19E+03 | 2.88E+04 | 2.32E+03 | 9.62E+02 | 8.10E+03 | 4.40E+00 |
| 5.6 | 7.22E+03 | 5.11E+03 | 2.64E+04 | 2.31E+03 | 9.38E+02 | 8.09E+03 | 3.54E+00 |
| 5.7 | 7.13E+03 | 4.99E+03 | 2.37E+04 | 2.29E+03 | 9.10E+02 | 8.08E+03 | 2.93E+00 |
| 5.8 | 7.03E+03 | 4.87E+03 | 2.11E+04 | 2.27E+03 | 8.77E+02 | 8.07E+03 | 2.33E+00 |
| 5.9 | 6.89E+03 | 4.71E+03 | 1.86E+04 | 2.24E+03 | 8.39E+02 | 8.04E+03 | 1.92E+00 |
| 6.0 | 6.74E+03 | 4.54E+03 | 1.60E+04 | 2.21E+03 | 7.96E+02 | 8.02E+03 | 1.51E+00 |
| 6.1 | 6.53E+03 | 4.32E+03 | 1.38E+04 | 2.17E+03 | 7.48E+02 | 7.99E+03 | 1.24E+00 |
| 6.2 | 6.33E+03 | 4.10E+03 | 1.16E+04 | 2.12E+03 | 6.97E+02 | 7.96E+03 | 9.68E-01 |
| 6.3 | 6.05E+03 | 3.82E+03 | 9.85E+03 | 2.06E+03 | 6.44E+02 | 7.90E+03 | 7.93E-01 |
| 6.4 | 5.77E+03 | 3.55E+03 | 8.08E+03 | 1.99E+03 | 5.89E+02 | 7.85E+03 | 6.17E-01 |
| 6.5 | 5.42E+03 | 3.24E+03 | 6.77E+03 | 1.91E+03 | 5.33E+02 | 7.77E+03 | 5.05E-01 |
| 6.6 | 5.06E+03 | 2.93E+03 | 5.45E+03 | 1.82E+03 | 4.80E+02 | 7.69E+03 | 3.92E-01 |
| 6.7 | 4.65E+03 | 2.61E+03 | 4.53E+03 | 1.71E+03 | 4.29E+02 | 7.57E+03 | 3.21E-01 |
| 6.8 | 4.24E+03 | 2.29E+03 | 3.60E+03 | 1.60E+03 | 3.81E+02 | 7.45E+03 | 2.49E-01 |
| 6.9 | 3.80E+03 | 2.00E+03 | 2.97E+03 | 1.47E+03 | 3.38E+02 | 7.28E+03 | 2.03E-01 |
| 7.0 | 3.37E+03 | 1.70E+03 | 2.34E+03 | 1.34E+03 | 3.00E+02 | 7.10E+03 | 1.57E-01 |
| 7.1 | 2.95E+03 | 1.46E+03 | 1.92E+03 | 1.21E+03 | 2.67E+02 | 6.86E+03 | 1.28E-01 |
| 7.2 | 2.54E+03 | 1.21E+03 | 1.50E+03 | 1.07E+03 | 2.39E+02 | 6.61E+03 | 9.83E-02 |
| 7.3 | 2.18E+03 | 1.02E+03 | 1.23E+03 | 9.43E+02 | 2.15E+02 | 6.29E+03 | 8.06E-02 |
| 7.4 | 1.83E+03 | 8.31E+02 | 9.60E+02 | 8.19E+02 | 1.95E+02 | 5.96E+03 | 6.28E-02 |
| 7.5 | 1.55E+03 | 6.93E+02 | 7.85E+02 | 7.03E+02 | 1.78E+02 | 5.55E+03 | 5.12E-02 |
| 7.6 | 1.27E+03 | 5.55E+02 | 6.10E+02 | 5.99E+02 | 1.64E+02 | 5.15E+03 | 3.97E-02 |
| 7.7 | 1.06E+03 | 4.59E+02 | 4.99E+02 | 5.07E+02 | 1.53E+02 | 4.70E+03 | 3.24E-02 |
| 7.8 | 8.52E+02 | 3.64E+02 | 3.87E+02 | 4.26E+02 | 1.44E+02 | 4.24E+03 | 2.50E-02 |
| 7.9 | 7.06E+02 | 2.99E+02 | 3.16E+02 | 3.57E+02 | 1.37E+02 | 3.78E+03 | 2.04E-02 |
| 8.0 | 5.61E+02 | 2.35E+02 | 2.45E+02 | 2.98E+02 | 1.31E+02 | 3.31E+03 | 1.58E-02 |

**Footnotes**

**1** Glyphosate - Koc under review. Contact your TCEQ Project

* As listed in Figure: 30 TAC §350.73(e)(1)(B)

This table shows the carbon-water partitioning coefficient for

end of worksheet

# $ABS_{GI}$ and ABS.d Values

## Last Revised: November 8, 2019

| Chemical of Concern | CAS | $ABS_{GI}$ (unitless) | ABS.d (unitless) |
|---|---|---|---|
| Acenaphthene | 83-32-9 | 8.90E-01 | 1.30E-01 |
| Acenaphthylene | 208-96-8 | 8.90E-01 | 1.30E-01 |
| Acetaldehyde | 75-07-0 | 8.00E-01 | 0.00E+00 |
| Acetate, 2-ethoxyethanol | 111-15-9 | 8.00E-01 | 0.00E+00 |
| Acetate, isoamyl | 123-92-2 | 8.00E-01 | 0.00E+00 |
| Acetate, isobutyl | 110-19-0 | 8.00E-01 | 0.00E+00 |
| Acetate, sec-butyl | 105-46-4 | 8.00E-01 | 0.00E+00 |
| Acetic acid* | 64-19-7 | 0.00E+00 | 0.00E+00 |
| Acetone (2-propanone) | 67-64-1 | 8.30E-01 | 0.00E+00 |
| Acetone cyanohydrin | 75-86-5 | 5.00E-01 | 1.00E-01 |
| Acetonitrile | 75-05-8 | 8.00E-01 | 0.00E+00 |
| Acetophenone | 98-86-2 | 5.00E-01 | 1.00E-01 |
| Acetylaminofluorene, 2- | 53-96-3 | 5.00E-01 | 1.00E-01 |
| Acifluorfen, sodium | 62476-59-9 | 5.00E-01 | 1.00E-01 |
| Acridine | 260-94-6 | 5.00E-01 | 1.00E-01 |
| Acrolein | 107-02-8 | 8.00E-01 | 0.00E+00 |
| Acrylamide | 79-06-1 | 5.00E-01 | 1.00E-01 |
| Acrylic acid | 79-10-7 | 8.00E-01 | 0.00E+00 |
| Acrylonitrile | 107-13-1 | 8.00E-01 | 0.00E+00 |
| Adipic acid (hexanedioic acid) | 124-04-9 | 5.00E-01 | 1.00E-01 |
| Alachlor | 15972-60-8 | 5.00E-01 | 1.00E-01 |
| Aldicarb | 116-06-3 | 5.00E-01 | 1.00E-01 |
| Aldicarb sulfone | 1646-88-4 | 5.00E-01 | 1.00E-01 |
| Aldrin | 309-00-2 | 5.00E-01 | 1.00E-01 |
| Allyl alcohol | 107-18-6 | 8.00E-01 | 0.00E+00 |
| Allyl chloride | 107-05-1 | 8.00E-01 | 0.00E+00 |
| Aluminum | 7429-90-5 | 1.00E-01 | 1.00E-02 |
| Ametryn | 834-12-8 | 5.00E-01 | 1.00E-01 |
| Amino-2,6-dinitrotoluene, 4- | 19406-51-0 | 5.00E-01 | 1.00E-01 |

# $ABS_{GI}$ and ABS.d Values

## Last Revised: November 8, 2019

| Chemical of Concern | CAS | $ABS_{GI}$ (unitless) | ABS.d (unitless) |
|---|---|---|---|
| Amino-4,6-dinitrotoluene, 2- | 35572-78-2 | 5.00E-01 | 1.00E-01 |
| Aminobiphenyl, 4- (1,1-biphenyl-4-amine) | 92-67-1 | 5.00E-01 | 1.00E-01 |
| Aminopyridine, 4- | 504-24-5 | 5.00E-01 | 1.00E-01 |
| Ammonia | 7664-41-7 | 2.00E-01 | 1.00E-02 |
| Ammonium polyphosphate* | 6833-79-9 | 0.00E+00 | 0.00E+00 |
| Ammonium salts* | AMMONIUM | 0.00E+00 | 0.00E+00 |
| Aniline | 62-53-3 | 5.00E-01 | 1.00E-01 |
| Anthracene | 120-12-7 | 8.90E-01 | 1.30E-01 |
| Anthraquinone, 9,10- | 84-65-1 | 5.00E-01 | 1.00E-01 |
| Antimony | 7440-36-0 | 1.50E-01 | 1.00E-02 |
| Aramite | 140-57-8 | 5.00E-01 | 1.00E-01 |
| Arsenic | 7440-38-2 | 9.50E-01 | 3.00E-02 |
| Arsine | 7784-42-1 | 2.00E-01 | 1.00E-02 |
| Atrazine | 1912-24-9 | 5.00E-01 | 1.00E-01 |
| Azinphos-methyl (guthion) | 86-50-0 | 5.00E-01 | 1.00E-01 |
| Azobenzene | 103-33-3 | 5.00E-01 | 1.00E-01 |
| Barium | 7440-39-3 | 7.00E-02 | 1.00E-02 |
| Bayleton | 43121-43-3 | 5.00E-01 | 1.00E-01 |
| Benefin (benfluralin) | 1861-40-1 | 5.00E-01 | 1.00E-01 |
| Benomyl | 17804-35-2 | 5.00E-01 | 1.00E-01 |
| Benz-a-anthracene | 56-55-3 | 8.90E-01 | 1.30E-01 |
| Benzaldehyde | 100-52-7 | 8.00E-01 | 0.00E+00 |
| Benzene | 71-43-2 | 9.70E-01 | 0.00E+00 |
| Benzenedicarbonitrile, 1,3- | 626-17-5 | 5.00E-01 | 1.00E-01 |
| Benzenedicarboxylic acid, 1,2-disodecyl ester | 26761-40-0 | 5.00E-01 | 1.00E-01 |
| Benzenethiol | 108-98-5 | 8.00E-01 | 0.00E+00 |
| Benzidine | 92-87-5 | 8.00E-01 | 1.00E-01 |
| Benzo-a-pyrene | 50-32-8 | 8.90E-01 | 1.30E-01 |
| Benzo-b-fluoranthene | 205-99-2 | 8.90E-01 | 1.30E-01 |

# $ABS_{GI}$ and ABS.d Values

## Last Revised: November 8, 2019

| Chemical of Concern | CAS | $ABS_{GI}$ (unitless) | ABS.d (unitless) |
|---|---|---|---|
| Benzo-e-pyrene | 192-97-2 | 8.90E-01 | 1.30E-01 |
| Benzo-g,h,i-perylene | 191-24-2 | 8.90E-01 | 1.30E-01 |
| Benzoic acid | 65-85-0 | 1.00E+00 | 1.00E-01 |
| Benzo-j-fluoranthene | 205-82-3 | 8.90E-01 | 1.30E-01 |
| Benzo-k-fluoranthene | 207-08-9 | 8.90E-01 | 1.30E-01 |
| Benzophenone | 119-61-9 | 5.00E-01 | 1.00E-01 |
| Benzotrichloride | 98-07-7 | 5.00E-01 | 1.00E-01 |
| Benzoyl peroxide | 94-36-0 | 5.00E-01 | 1.00E-01 |
| Benzyl alcohol | 100-51-6 | 6.60E-01 | 1.00E-01 |
| Benzyl chloride | 100-44-7 | 8.00E-01 | 0.00E+00 |
| Benzyl dichloride | 98-87-3 | 5.00E-01 | 1.00E-01 |
| Beryllium | 7440-41-7 | 7.00E-03 | 1.00E-02 |
| Biphenyl, 1,1- | 92-52-4 | 5.00E-01 | 1.00E-01 |
| Biphenyl, 1,1'-, 2-phenoxy- | 6738-04-1 | 5.00E-01 | 1.00E-01 |
| Biquinoline, 2,2'- | 119-91-5 | 5.00E-01 | 1.00E-01 |
| Bis (2-chloroethoxy) methane | 111-91-1 | 5.00E-01 | 1.00E-01 |
| Bis (2-chloroethyl) ether | 111-44-4 | 8.00E-01 | 0.00E+00 |
| Bis (2-chloro-1-methyl) ether | 108-60-1 | 5.00E-01 | 1.00E-01 |
| Bis (2-chloromethyl) ether | 542-88-1 | 8.00E-01 | 0.00E+00 |
| Bis (2-ethyl-hexyl) phthalate | 117-81-7 | 1.90E-01 | 1.00E-01 |
| Bismuth | 7440-69-9 | 2.00E-01 | 1.00E-02 |
| Bisphenol A | 80-05-7 | 5.00E-01 | 1.00E-01 |
| Boron | 7440-42-8 | 9.00E-01 | 1.00E-02 |
| Bromacil | 314-40-9 | 5.00E-01 | 1.00E-01 |
| Bromo-2-chloroethane, 1- | 107-04-0 | 8.00E-01 | 0.00E+00 |
| Bromobenzene | 108-86-1 | 8.00E-01 | 0.00E+00 |
| Bromodichloromethane | 75-27-4 | 9.80E-01 | 0.00E+00 |
| Bromoform | 75-25-2 | 6.00E-01 | 0.00E+00 |
| Bromomethane | 74-83-9 | 8.00E-01 | 0.00E+00 |

# $ABS_{GI}$ and ABS.d Values

## Last Revised: November 8, 2019

| Chemical of Concern | CAS | $ABS_{GI}$ (unitless) | ABS.d (unitless) |
|---|---|---|---|
| Bromophenyl phenylether, 4- | 101-55-3 | 5.00E-01 | 1.00E-01 |
| Butadiene, 1,3- | 106-99-0 | 8.00E-01 | 0.00E+00 |
| Butadiene, 2-methyl-1,3- (isoprene) | 78-79-5 | 8.00E-01 | 0.00E+00 |
| Butanal (butyraldehyde) | 123-72-8 | 8.00E-01 | 0.00E+00 |
| Butane, 2,3-dimethyl- | 79-29-8 | 8.00E-01 | 0.00E+00 |
| Butanoic acid (butyric acid) | 107-92-6 | 5.00E-01 | 1.00E-01 |
| Butanol, 2- | 78-92-2 | 8.00E-01 | 0.00E+00 |
| Butanol, 2-methyl-1- | 137-32-6 | 5.00E-01 | 1.00E-01 |
| Butanol, 2-methyl-2- | 75-85-4 | 8.00E-01 | 0.00E+00 |
| Butanol, n- | 71-36-3 | 8.00E-01 | 0.00E+00 |
| Butene, 1- | 106-98-9 | 8.00E-01 | 0.00E+00 |
| Butene, cis-2- | 590-18-1 | 8.00E-01 | 0.00E+00 |
| Butene, trans-2- | 624-64-6 | 8.00E-01 | 0.00E+00 |
| Butoxy ethanol, 2- (Ethylene glycol monobutyl ether; EGBE) | 111-76-2 | 5.00E-01 | 1.00E-01 |
| Butyl acetate | 123-86-4 | 8.00E-01 | 0.00E+00 |
| Butyl acrylate | 141-32-2 | 8.00E-01 | 0.00E+00 |
| Butyl benzyl phthalate | 85-68-7 | 6.10E-01 | 1.00E-01 |
| Butyl ether, n- (dibutyl ether) | 142-96-1 | 8.00E-01 | 0.00E+00 |
| Butyl methacrylate | 97-88-1 | 9.40E-01 | 5.00E-01 |
| Butylate | 2008-41-5 | 5.00E-01 | 1.00E-01 |
| Butylbenzene, n- | 104-51-8 | 5.00E-01 | 1.00E-01 |
| Butylbenzene, sec- | 135-98-8 | 8.00E-01 | 0.00E+00 |
| Butylbenzene, tert- | 98-06-6 | 8.00E-01 | 0.00E+00 |
| Cacodylic acid | 75-60-5 | 5.00E-01 | 1.00E-01 |
| Cadmium | 7440-43-9 | 2.50E-02 | 1.00E-03 |
| Calcium* | 7440-70-2 | 0.00E+00 | 0.00E+00 |
| Caprolactam | 105-60-2 | 5.00E-01 | 1.00E-01 |
| Captan | 133-06-2 | 5.00E-01 | 1.00E-01 |
| Carbaryl | 63-25-2 | 5.00E-01 | 1.00E-01 |

# $ABS_{GI}$ and ABS.d Values

## Last Revised: November 8, 2019

| Chemical of Concern | CAS | $ABS_{GI}$ (unitless) | ABS.d (unitless) |
|---|---|---|---|
| Carbazole | 86-74-8 | 7.00E-01 | 1.00E-01 |
| Carbofuran | 1563-66-2 | 5.00E-01 | 1.00E-01 |
| Carbon disulfide | 75-15-0 | 6.30E-01 | 0.00E+00 |
| Carbon tetrachloride | 56-23-5 | 6.50E-01 | 0.00E+00 |
| Carbophenothion | 786-19-6 | 5.00E-01 | 1.00E-01 |
| Carbosulfan | 55285-14-8 | 5.00E-01 | 1.00E-01 |
| Carboxin | 5234-68-4 | 5.00E-01 | 1.00E-01 |
| Chloral | 75-87-6 | 8.00E-01 | 0.00E+00 |
| Chloral hydrate (1,1-ethanediol, 2,2,2-trichloro-) | 302-17-0 | 5.00E-01 | 1.00E-01 |
| Chloramben (amiben; 3-amino-2,5-dichlorobenzoic acid) | 133-90-4 | 5.00E-01 | 1.00E-01 |
| Chlordane (technical) | 12789-03-6 | 8.00E-01 | 4.00E-02 |
| Chlordane, cis- (alpha chlordane) | 5103-71-9 | 5.00E-01 | 1.00E-01 |
| Chlordane, trans- (gamma chlordane) | 5103-74-2 | 5.00E-01 | 1.00E-01 |
| Chlorfenvinphos | 470-90-6 | 5.00E-01 | 1.00E-01 |
| Chloride* | 16887-00-6 | 0.00E+00 | 0.00E+00 |
| Chlorine | 7782-50-5 | 2.00E-01 | 1.00E-02 |
| Chloro-1,3-butadiene, 2- | 126-99-8 | 8.00E-01 | 0.00E+00 |
| Chloro-2-propanol, 1- | 127-00-4 | 8.00E-01 | 0.00E+00 |
| Chloro-3-methylphenol, 4- | 59-50-7 | 5.00E-01 | 1.00E-01 |
| Chloroaniline, p- | 106-47-8 | 5.00E-01 | 1.00E-01 |
| Chlorobenzene | 108-90-7 | 3.10E-01 | 0.00E+00 |
| Chlorobenzilate | 510-15-6 | 5.00E-01 | 1.00E-01 |
| Chlorobromomethane (bromochloromethane) | 74-97-5 | 8.00E-01 | 0.00E+00 |
| Chlorodifluoromethane | 75-45-6 | 8.00E-01 | 0.00E+00 |
| Chloroethane (ethyl chloride) | 75-00-3 | 8.00E-01 | 0.00E+00 |
| Chloroethanol, 2- | 107-07-3 | 8.00E-01 | 0.00E+00 |
| Chloroethoxy ethene, 2- (2-chloroethylvinylether) | 110-75-8 | 8.00E-01 | 0.00E+00 |
| Chloroform | 67-66-3 | 2.00E-01 | 0.00E+00 |
| Chlorohexane, 1- | 544-10-5 | 8.00E-01 | 0.00E+00 |

# $ABS_{GI}$ and ABS.d Values

## Last Revised: November 8, 2019

| Chemical of Concern | CAS | $ABS_{GI}$ (unitless) | ABS.d (unitless) |
|---|---|---|---|
| Chloromethane (methyl chloride) | 74-87-3 | 8.00E-01 | 0.00E+00 |
| Chloronaphthalene, 1- (Chloronaphthalene, alpha-) | 90-13-1 | 8.90E-01 | 1.30E-01 |
| Chloronaphthalene, 2- (chloronaphthalene, beta) | 91-58-7 | 8.90E-01 | 1.30E-01 |
| Chloronitrobenzene, p- (1-chloro-4-nitrobenzene) | 100-00-5 | 5.00E-01 | 1.00E-01 |
| Chlorophenol, 2- | 95-57-8 | 8.00E-01 | 0.00E+00 |
| Chlorophenol, 3- | 108-43-0 | 5.00E-01 | 1.00E-01 |
| Chlorophenol, 4- | 106-48-9 | 5.00E-01 | 1.00E-01 |
| Chlorophenyl phenylether, 4- | 7005-72-3 | 5.00E-01 | 1.00E-01 |
| Chloropropane, 2- | 75-29-6 | 8.00E-01 | 0.00E+00 |
| Chlorothalonil | 1897-45-6 | 5.00E-01 | 1.00E-01 |
| Chlorotoluene, o- (2-chlorotoluene) | 95-49-8 | 5.00E-01 | 1.00E-01 |
| Chlorotoluene, p- (4-chlorotoluene) | 106-43-4 | 8.00E-01 | 0.00E+00 |
| Chlorpyrifos | 2921-88-2 | 5.00E-01 | 1.00E-01 |
| Chromium (III) | 16065-83-1 | 1.30E-02 | 1.00E-02 |
| Chromium (total) | 7440-47-3 | 1.30E-02 | 1.00E-02 |
| Chromium (VI) | 18540-29-9 | 2.50E-02 | 1.00E-02 |
| Chrysene | 218-01-9 | 8.90E-01 | 1.30E-01 |
| Cobalt | 7440-48-4 | 8.00E-01 | 1.00E-02 |
| Copolymer acrylamide | 69418-26-4 | 5.00E-01 | 1.00E-01 |
| Copper | 7440-50-8 | 5.70E-01 | 1.00E-02 |
| Coronene | 191-07-1 | 5.00E-01 | 1.00E-01 |
| Coumaphos | 56-72-4 | 5.00E-01 | 1.00E-01 |
| Cresol | 1319-77-3 | 5.00E-01 | 1.00E-01 |
| Cresol, m- (3-methylphenol) | 108-39-4 | 5.00E-01 | 1.00E-01 |
| Cresol, o- (2-methylphenol) | 95-48-7 | 5.00E-01 | 1.00E-01 |
| Cresol, p- (4-methylphenol) | 106-44-5 | 6.50E-01 | 1.00E-01 |
| Crotonaldehyde | 123-73-9 | 8.00E-01 | 0.00E+00 |
| Cumene (isopropylbenzene) | 98-82-8 | 8.00E-01 | 0.00E+00 |
| Cyanazine | 21725-46-2 | 5.00E-01 | 1.00E-01 |

# $ABS_{GI}$ and ABS.d Values

## Last Revised: November 8, 2019

| Chemical of Concern | CAS | $ABS_{GI}$ (unitless) | ABS.d (unitless) |
|---|---|---|---|
| Cyanide | 57-12-5 | 5.00E-01 | 1.00E-02 |
| Cyanogen | 460-19-5 | 8.00E-01 | 0.00E+00 |
| Cycloate | 1134-23-2 | 5.00E-01 | 1.00E-01 |
| Cyclohexane | 110-82-7 | 8.00E-01 | 0.00E+00 |
| Cyclohexanol | 108-93-0 | 5.00E-01 | 1.00E-01 |
| Cyclohexanone | 108-94-1 | 8.00E-01 | 0.00E+00 |
| Cyclohexene, 1-methanol-3- | 1679-51-2 | 5.00E-01 | 1.00E-01 |
| Cyclohexene, 4-vinyl-1- | 100-40-3 | 8.00E-01 | 0.00E+00 |
| Cyclopentane | 287-92-3 | 8.00E-01 | 0.00E+00 |
| Cyclopentane, methyl- | 96-37-7 | 8.00E-01 | 0.00E+00 |
| Cyclopentene | 142-29-0 | 8.00E-01 | 0.00E+00 |
| Cyclotetramethylenetetranitramine (HMX) | 2691-41-0 | 1.50E-01 | 1.00E-01 |
| Cyclotrimethylenetrinitramine (RDX) | 121-82-4 | 1.00E+00 | 1.00E-01 |
| Cymene (isopropyltoluene) | 99-87-6 | 8.00E-01 | 0.00E+00 |
| Cymoxanil | 57966-95-7 | 5.00E-01 | 1.00E-01 |
| Dacthal (DCPA) | 1861-32-1 | 5.00E-01 | 1.00E-01 |
| Dalapon, sodium salt (2,2-dichloropropanoic acid) | 75-99-0 | 5.00E-01 | 1.00E-01 |
| DDD | 72-54-8 | 7.00E-01 | 3.00E-02 |
| DDE | 72-55-9 | 7.00E-01 | 3.00E-02 |
| DDT | 50-29-3 | 7.00E-01 | 3.00E-02 |
| Demeton | 8065-48-3 | 5.00E-01 | 1.00E-01 |
| Desethylatrazine | 6190-65-4 | 5.00E-01 | 1.00E-01 |
| Diacetone alcohol (4-hydroxy-4-methyl-2-pentanone) | 123-42-2 | 5.00E-01 | 1.00E-01 |
| Diallate | 2303-16-4 | 5.00E-01 | 1.00E-01 |
| Diazinon | 333-41-5 | 5.00E-01 | 1.00E-01 |
| Dibenz(a,h)acridine | 226-36-8 | 5.00E-01 | 1.00E-01 |
| Dibenz(a,j)acridine | 224-42-0 | 8.90E-01 | 1.30E-01 |
| Dibenz-a,h-anthracene | 53-70-3 | 8.90E-01 | 1.30E-01 |
| Dibenzo(a,e)pyrene | 192-65-4 | 5.00E-01 | 1.00E-01 |

# $ABS_{GI}$ and ABS.d Values

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | $ABS_{GI}$ (unitless) | ABS.d (unitless) |
|---|---|---|---|
| Dibenzo(a,h)pyrene | 189-64-0 | 5.00E-01 | 1.00E-01 |
| Dibenzo(a,i)pyrene | 189-55-9 | 5.00E-01 | 1.00E-01 |
| Dibenzofuran | 132-64-9 | 5.00E-01 | 1.00E-01 |
| Dibenzothiophene | 132-65-0 | 5.00E-01 | 1.00E-01 |
| Dibromo-3-chloropropane, 1,2- | 96-12-8 | 5.00E-01 | 1.00E-01 |
| Dibromochloromethane (chlorodibromomethane) | 124-48-1 | 6.00E-01 | 0.00E+00 |
| Dibromofluoromethane | 1868-53-7 | 8.00E-01 | 0.00E+00 |
| Dicamba | 1918-00-9 | 5.00E-01 | 1.00E-01 |
| Dichlormid | 37764-25-3 | 5.00E-01 | 1.00E-01 |
| Dichloro-2-butene, 1,4- | 764-41-0 | 8.00E-01 | 0.00E+00 |
| Dichloro-2-butene, 1,4- trans | 110-57-6 | 8.00E-01 | 0.00E+00 |
| Dichlorobenzene, 1,2- | 95-50-1 | 8.00E-01 | 0.00E+00 |
| Dichlorobenzene, 1,3- | 541-73-1 | 8.00E-01 | 0.00E+00 |
| Dichlorobenzene, 1,4- | 106-46-7 | 9.00E-01 | 0.00E+00 |
| Dichlorobenzidine, 3,3- | 91-94-1 | 5.00E-01 | 1.00E-01 |
| Dichlorobutane, 2,3- | 7581-97-7 | 8.00E-01 | 0.00E+00 |
| Dichlorodifluoromethane | 75-71-8 | 2.30E-01 | 0.00E+00 |
| Dichloroethane, 1,1- | 75-34-3 | 1.00E+00 | 0.00E+00 |
| Dichloroethane, 1,2- | 107-06-2 | 1.00E+00 | 0.00E+00 |
| Dichloroethylene, 1,1- | 75-35-4 | 1.00E+00 | 0.00E+00 |
| Dichloroethylene, cis-1,2- | 156-59-2 | 1.00E+00 | 0.00E+00 |
| Dichloroethylene, trans-1,2 | 156-60-5 | 1.00E+00 | 0.00E+00 |
| Dichlorofluoromethane | 75-43-4 | 8.00E-01 | 0.00E+00 |
| Dichlorophenol, 2,3- | 576-24-9 | 5.00E-01 | 1.00E-01 |
| Dichlorophenol, 2,4- | 120-83-2 | 8.20E-01 | 1.00E-01 |
| Dichlorophenol, 2,5- | 583-78-8 | 5.00E-01 | 1.00E-01 |
| Dichlorophenol, 2,6- | 87-65-0 | 5.00E-01 | 1.00E-01 |
| Dichlorophenol, 3,4- | 95-77-2 | 5.00E-01 | 1.00E-01 |
| Dichlorophenol, 3,5- | 591-35-5 | 5.00E-01 | 1.00E-01 |

# $ABS_{GI}$ and ABS.d Values

## Last Revised: November 8, 2019

| Chemical of Concern | CAS | $ABS_{GI}$ (unitless) | ABS.d (unitless) |
|---|---|---|---|
| Dichlorophenoxy, 2,4- butyric acid, 4- (2,4-DB) | 94-82-6 | 5.00E-01 | 1.00E-01 |
| Dichlorophenoxyacetic acid, 2,4- (2,4-D) | 94-75-7 | 9.00E-01 | 5.00E-02 |
| Dichloroprop (2-(2,4-dichlorophenoxy) propanoic acid) | 120-36-5 | 5.00E-01 | 1.00E-01 |
| Dichloropropane, 1,2- | 78-87-5 | 7.40E-01 | 0.00E+00 |
| Dichloropropane, 1,3- | 142-28-9 | 8.00E-01 | 0.00E+00 |
| Dichloropropane, 2,2- | 594-20-7 | 8.00E-01 | 0.00E+00 |
| Dichloropropanol, 2,3- | 616-23-9 | 5.00E-01 | 1.00E-01 |
| Dichloropropene, 1,1- | 563-58-6 | 8.00E-01 | 0.00E+00 |
| Dichloropropene, 1,3- (mixed isomers) | 542-75-6 | 5.50E-01 | 0.00E+00 |
| Dichloropropene, cis 1,3- | 10061-01-5 | 8.00E-01 | 0.00E+00 |
| Dichloropropene, trans 1,3- | 10061-02-6 | 8.00E-01 | 0.00E+00 |
| Dichlorvos | 62-73-7 | 5.00E-01 | 1.00E-01 |
| Dicrotophos (bidrin) | 141-66-2 | 5.00E-01 | 1.00E-01 |
| Dicyclopentadiene | 77-73-6 | 8.00E-01 | 0.00E+00 |
| Dieldrin | 60-57-1 | 5.00E-01 | 1.00E-01 |
| Diethanolamine | 111-42-2 | 5.00E-01 | 1.00E-01 |
| Diethyldithiocarbamate, sodium salt | 148-18-5 | 0.00E+00 | 0.00E+00 |
| Diethyl phthalate | 84-66-2 | 9.00E-01 | 1.00E-01 |
| Diethylene glycol | 111-46-6 | 5.00E-01 | 1.00E-01 |
| Diethylene glycol monobutyl ether | 112-34-5 | 5.00E-01 | 1.00E-01 |
| Diethylhexyl adipate | 103-23-1 | 5.00E-01 | 1.00E-01 |
| Diethylstilbestrol | 56-53-1 | 5.00E-01 | 1.00E-01 |
| Diisobutylene (trimethyl-1-pentene, 2,4,4-) | 107-39-1 | 8.00E-01 | 0.00E+00 |
| Diisopropylbenzene, p- | 100-18-5 | 5.00E-01 | 1.00E-01 |
| Diisopropyl ether (2,2'-oxybis-propane) | 108-20-3 | 8.00E-01 | 0.00E+00 |
| Dimethenamid | 87674-68-8 | 5.00E-01 | 1.00E-01 |
| Dimethoate | 60-51-5 | 5.00E-01 | 1.00E-01 |
| Dimethoxybenzidine, 3,3'- | 119-90-4 | 5.00E-01 | 1.00E-01 |
| Dimethyl-2-nitrobenzene, 1,3- | 81-20-9 | 5.00E-01 | 1.00E-01 |

# $ABS_{GI}$ and ABS.d Values

## Last Revised: November 8, 2019

| Chemical of Concern | CAS | $ABS_{GI}$ (unitless) | ABS.d (unitless) |
|---|---|---|---|
| Dimethyl-3-nitrobenzene, 1,2- | 83-41-0 | 5.00E-01 | 1.00E-01 |
| Dimethyl-4-nitrobenzene, 1-2- | 99-51-4 | 5.00E-01 | 1.00E-01 |
| Dimethyl-5-nitrobenzene, 1,3- | 99-12-7 | 5.00E-01 | 1.00E-01 |
| Dimethylphenethylamine, alpha, alpha- | 122-09-8 | 5.00E-01 | 1.00E-01 |
| Dimethyl phenol, 2,4- | 105-67-9 | 5.00E-01 | 1.00E-01 |
| Dimethylaminoazobenzene, p- | 60-11-7 | 5.00E-01 | 1.00E-01 |
| Dimethylbenz-a-anthracene, 7,12- | 57-97-6 | 8.90E-01 | 1.30E-01 |
| Dimethylbenzidine, 3,3'- | 119-93-7 | 5.00E-01 | 1.00E-01 |
| Dimethylformamide, N,N- | 68-12-2 | 8.00E-01 | 0.00E+00 |
| Dimethylnaphthalene, 1,3- | 575-41-7 | 8.90E-01 | 1.30E-01 |
| Dimethylphthalate | 131-11-3 | 9.00E-01 | 1.00E-01 |
| Di-n-butyl phthalate | 84-74-2 | 1.00E+00 | 1.00E-01 |
| Dinitro-2-methylphenol, 4,6- (dinitro-o-cresol, 4, 6-) | 534-52-1 | 1.00E+00 | 1.00E-01 |
| Dinitrobenzene, 1,3- (dinitrobenzene, 2,4- ) | 99-65-0 | 6.50E-01 | 1.00E-01 |
| Dinitrobenzene, 1,4- | 100-25-4 | 5.00E-01 | 1.00E-01 |
| Dinitrophenol, 2,4- | 51-28-5 | 1.00E+00 | 1.00E-01 |
| Dinitrophenol, 2,5- | 329-71-5 | 5.00E-01 | 1.00E-01 |
| Dinitrotoluene, 2,4- | 121-14-2 | 8.50E-01 | 1.00E-01 |
| Dinitrotoluene, 2,6- | 606-20-2 | 8.50E-01 | 1.00E-01 |
| Di-n-octyl phthalate | 117-84-0 | 9.00E-01 | 1.00E-01 |
| Dinoseb | 88-85-7 | 5.00E-01 | 1.00E-01 |
| Dioxane 1,4- | 123-91-1 | 8.00E-01 | 0.00E+00 |
| Dioxins/furans, polychlorinated; (reported as 2,3,7,8-TCDD TEQ) | 1746-01-6 | 5.00E-01 | 3.00E-02 |
| Diphenyl ether | 101-84-8 | 5.00E-01 | 1.00E-01 |
| Diphenylamine | 122-39-4 | 5.00E-01 | 1.00E-01 |
| Diphenylhydrazine, 1,2- | 122-66-7 | 5.00E-01 | 1.00E-01 |
| Dipropylene glycol | 110-98-5 | 5.00E-01 | 1.00E-01 |
| Diquat | 85-00-7 | 5.00E-01 | 1.00E-01 |
| Disodium iminodiacetate (iminodiacetic acid, disodium salt) | 142-73-4 | 5.00E-01 | 1.00E-01 |

# $ABS_{GI}$ and ABS.d Values

## Last Revised: November 8, 2019

| Chemical of Concern | CAS | $ABS_{GI}$ (unitless) | ABS.d (unitless) |
|---|---|---|---|
| Disulfoton | 298-04-4 | 5.00E-01 | 1.00E-01 |
| Diuron | 330-54-1 | 5.00E-01 | 1.00E-01 |
| Dodecylphenol, 4- | 104-43-8 | 5.00E-01 | 1.00E-01 |
| Endosulfan | 115-29-7 | 5.00E-01 | 1.00E-01 |
| Endosulfan I | 959-98-8 | 5.00E-01 | 1.00E-01 |
| Endosulfan II | 33213-65-9 | 5.00E-01 | 1.00E-01 |
| Endosulfan sulfate | 1031-07-8 | 5.00E-01 | 1.00E-01 |
| Endothall | 145-73-3 | 5.00E-01 | 1.00E-01 |
| Endrin | 72-20-8 | 5.00E-01 | 1.00E-01 |
| Endrin aldehyde | 7421-93-4 | 5.00E-01 | 1.00E-01 |
| Endrin ketone | 53494-70-5 | 5.00E-01 | 1.00E-01 |
| Epichlorohydrin | 106-89-8 | 8.00E-01 | 0.00E+00 |
| EPN (o-ethyl o-(4-nitrophenyl)phenylphosphonothioate) | 2104-64-5 | 5.00E-01 | 1.00E-01 |
| Esfenvalerate | 66230-04-4 | 5.00E-01 | 1.00E-01 |
| Ethalfluralin (sonolan) | 55283-68-6 | 5.00E-01 | 1.00E-01 |
| Ethanol | 64-17-5 | 8.00E-01 | 0.00E+00 |
| Ethanol, 2-amino- | 141-43-5 | 5.00E-01 | 1.00E-01 |
| Ethanol, 2-(2-aminoethoxy)- | 929-06-6 | 5.00E-01 | 1.00E-01 |
| Ethanol, 2-(2-ethoxyethoxy)- | 111-90-0 | 5.00E-01 | 1.00E-01 |
| Ethanol, 2-(methylamino)- | 109-83-1 | 5.00E-01 | 1.00E-01 |
| Ethion | 563-12-2 | 5.00E-01 | 1.00E-01 |
| Ethoprop | 13194-48-4 | 5.00E-01 | 1.00E-01 |
| Ethoxy ethanol, 2- | 110-80-5 | 8.00E-01 | 0.00E+00 |
| Ethyl acetate | 141-78-6 | 8.00E-01 | 0.00E+00 |
| Ethyl acrylate | 140-88-5 | 8.00E-01 | 0.00E+00 |
| Ethyl benzene | 100-41-4 | 9.70E-01 | 0.00E+00 |
| Ethyl dipropylthiocarbamate, S- | 759-94-4 | 5.00E-01 | 1.00E-01 |
| Ethyl ether | 60-29-7 | 8.00E-01 | 0.00E+00 |
| Ethyl methacrylate | 97-63-2 | 8.00E-01 | 0.00E+00 |

# $ABS_{GI}$ and ABS.d Values

## Last Revised: November 8, 2019

| Chemical of Concern | CAS | $ABS_{GI}$ (unitless) | ABS.d (unitless) |
|---|---|---|---|
| Ethyl methanesulfonate | 62-50-0 | 5.00E-01 | 1.00E-01 |
| Ethyl tert-butyl ether (2-ethyl-2-ethoxypropane) | 637-92-3 | 8.00E-01 | 0.00E+00 |
| Ethyl-1-hexanol, 2- | 104-76-7 | 5.00E-01 | 1.00E-01 |
| Ethyl-2-hexenal, 2- | 645-62-5 | 8.00E-01 | 0.00E+00 |
| Ethyl-2-methyl benzene, 1- | 611-14-3 | 9.70E-01 | 0.00E+00 |
| Ethyl-4-methyl benzene, 1- | 622-96-8 | 9.70E-01 | 0.00E+00 |
| Ethylene* | 74-85-1 | 0.00E+00 | 0.00E+00 |
| Ethylene dibromide (dibromoethane, 1,2- ) | 106-93-4 | 8.00E-01 | 0.00E+00 |
| Ethylene glycol | 107-21-1 | 5.00E-01 | 1.00E-01 |
| Ethylene oxide | 75-21-8 | 8.00E-01 | 0.00E+00 |
| Ethylene thiourea | 96-45-7 | 5.00E-01 | 1.00E-01 |
| Ethylenediamine | 107-15-3 | 8.00E-01 | 0.00E+00 |
| Ethylenimine | 151-56-4 | 8.00E-01 | 0.00E+00 |
| Ethylhexyl acrylate, 2- | 103-11-7 | 5.00E-01 | 1.00E-01 |
| Famphur | 52-85-7 | 5.00E-01 | 1.00E-01 |
| Fensulfothion | 115-90-2 | 5.00E-01 | 1.00E-01 |
| Fenthion | 55-38-9 | 5.00E-01 | 1.00E-01 |
| Fenuron | 101-42-8 | 5.00E-01 | 1.00E-01 |
| Fluoranthene | 206-44-0 | 8.90E-01 | 1.30E-01 |
| Fluorene | 86-73-7 | 8.90E-01 | 1.30E-01 |
| Fluorine (soluble fluoride) | 7782-41-4 | 9.70E-01 | 1.00E-02 |
| Fluorochloridone | 61213-25-0 | 5.00E-01 | 1.00E-01 |
| Fonofos | 944-22-9 | 5.00E-01 | 1.00E-01 |
| Formaldehyde | 50-00-0 | 8.00E-01 | 0.00E+00 |
| Formic acid | 64-18-6 | 8.00E-01 | 0.00E+00 |
| Furan | 110-00-9 | 8.00E-01 | 0.00E+00 |
| Furfural | 98-01-1 | 8.00E-01 | 0.00E+00 |
| Glycidylaldehyde | 765-34-4 | 8.00E-01 | 0.00E+00 |
| Glyphosate | 1071-83-6 | 5.00E-01 | 1.00E-01 |

# $ABS_{GI}$ and ABS.d Values

## Last Revised: November 8, 2019

| Chemical of Concern | CAS | $ABS_{GI}$ (unitless) | ABS.d (unitless) |
|---|---|---|---|
| Heptachlor | 76-44-8 | 7.20E-01 | 1.00E-01 |
| Heptachlor epoxide | 1024-57-3 | 7.20E-01 | 1.00E-01 |
| Heptane, n- | 142-82-5 | 8.00E-01 | 0.00E+00 |
| Heptanoic acid, n- | 111-14-8 | 5.00E-01 | 1.00E-01 |
| Hexachlorobenzene | 118-74-1 | 5.00E-01 | 1.00E-01 |
| Hexachlorobutadiene | 87-68-3 | 5.00E-01 | 1.00E-01 |
| Hexachlorocyclohexane, alpha (alpha-BHC) | 319-84-6 | 9.70E-01 | 4.00E-02 |
| Hexachlorocyclohexane, beta (beta-BHC) | 319-85-7 | 9.10E-01 | 4.00E-02 |
| Hexachlorocyclohexane, delta (delta-BHC) | 319-86-8 | 5.00E-01 | 4.00E-02 |
| Hexachlorocyclohexane, gamma (lindane; gamma-BHC) | 58-89-9 | 9.70E-01 | 4.00E-02 |
| Hexachlorocyclohexane, techn (technical-BHC) | 608-73-1 | 9.70E-01 | 4.00E-02 |
| Hexachlorocyclopentadiene | 77-47-4 | 5.00E-01 | 1.00E-01 |
| Hexachloroethane | 67-72-1 | 5.00E-01 | 1.00E-01 |
| Hexachlorophene | 70-30-4 | 5.00E-01 | 1.00E-01 |
| Hexachloropropylene | 1888-71-7 | 5.00E-01 | 1.00E-01 |
| Hexanal, 2-ethyl- | 123-05-7 | 5.00E-01 | 1.00E-01 |
| Hexane, n- | 110-54-3 | 8.00E-01 | 0.00E+00 |
| Hexanediamine, 1,6- | 124-09-4 | 5.00E-01 | 1.00E-01 |
| Hexanedinitrile | 111-69-3 | 5.00E-01 | 1.00E-01 |
| Hexanediol, 1,6- | 629-11-8 | 5.00E-01 | 1.00E-01 |
| Hexanoic acid | 142-62-1 | 5.00E-01 | 1.00E-01 |
| Hexanone, 2- | 591-78-6 | 6.60E-01 | 0.00E+00 |
| Hexazinone | 51235-04-2 | 5.00E-01 | 1.00E-01 |
| Hexene, 1- | 592-41-6 | 8.00E-01 | 0.00E+00 |
| Hexene, cis-2- | 7688-21-3 | 8.00E-01 | 0.00E+00 |
| Hexylene glycol (2-methyl-2,4-pentanediol) | 107-41-5 | 5.00E-01 | 1.00E-01 |
| Hydrazine | 302-01-2 | 8.00E-01 | 0.00E+00 |
| Hydrocaproic acid, 6- (6-hydroxyhexanoic acid) | 1191-25-9 | 5.00E-01 | 1.00E-01 |
| Hydrogen chloride (hydrochloric acid)* | 7647-01-0 | 0.00E+00 | 0.00E+00 |

# $ABS_{GI}$ and ABS.d Values

## Last Revised: November 8, 2019

| Chemical of Concern | CAS | $ABS_{GI}$ (unitless) | ABS.d (unitless) |
|---|---|---|---|
| Hydroquinone | 123-31-9 | 5.00E-01 | 1.00E-01 |
| Indene | 95-13-6 | 8.00E-01 | 0.00E+00 |
| Indeno-1,2,3-cd-pyrene | 193-39-5 | 8.90E-01 | 1.30E-01 |
| Iron* | 7439-89-6 | 0.00E+00 | 0.00E+00 |
| Isoamyl alcohol | 123-51-3 | 8.00E-01 | 0.00E+00 |
| Isobutyl alcohol | 78-83-1 | 8.00E-01 | 0.00E+00 |
| Isobutylene (2-methyl-1-propene) | 115-11-7 | 8.00E-01 | 0.00E+00 |
| Isobutyric acid (2-methylpropanoic acid) | 79-31-2 | 5.00E-01 | 1.00E-01 |
| Isodecanol | 25339-17-7 | 5.00E-01 | 1.00E-01 |
| Isodrin | 465-73-6 | 5.00E-01 | 1.00E-01 |
| Isopentane | 78-78-4 | 8.00E-01 | 0.00E+00 |
| Isophorone | 78-59-1 | 5.00E-01 | 1.00E-01 |
| Isopropyl acetate | 108-21-4 | 8.00E-01 | 0.00E+00 |
| Isopropyl alcohol | 67-63-0 | 8.00E-01 | 0.00E+00 |
| Isosafrole | 120-58-1 | 5.00E-01 | 1.00E-01 |
| Kelthane (dicofol) | 115-32-2 | 5.00E-01 | 1.00E-01 |
| Kepone (chlordecone) | 143-50-0 | 5.00E-01 | 1.00E-01 |
| Lead (inorganic) | 7439-92-1 | 1.50E-01 | 1.00E-02 |
| Leptophos | 21609-90-5 | 5.00E-01 | 1.00E-01 |
| Limonene, d-* | 5989-27-5 | 0.00E+00 | 0.00E+00 |
| Lithium | 7439-93-2 | 8.00E-01 | 1.00E-02 |
| Magnesium* | 7439-95-4 | 0.00E+00 | 0.00E+00 |
| Malathion | 121-75-5 | 5.00E-01 | 1.00E-01 |
| Maleic anhydride | 108-31-6 | 5.00E-01 | 1.00E-01 |
| Maleic hydrazide | 123-33-1 | 5.00E-01 | 1.00E-01 |
| Malononitrile | 109-77-3 | 5.00E-01 | 1.00E-01 |
| Mancozeb | 8018-01-7 | 5.00E-01 | 1.00E-01 |
| Manganese | 7439-96-5 | 6.00E-02 | 1.00E-02 |
| MCPA (4-(chloro-2-methylphenoxy) acetic acid) | 94-74-6 | 5.00E-01 | 1.00E-01 |

# $ABS_{GI}$ and ABS.d Values

## Last Revised: November 8, 2019

| Chemical of Concern | CAS | $ABS_{GI}$ (unitless) | ABS.d (unitless) |
|---|---|---|---|
| MCPP (2-(4-chloro-2-methylphenoxy) propanoic acid) | 93-65-2 | 5.00E-01 | 1.00E-01 |
| Mercury (pH = 4.9) | 7439-97-6 | 7.00E-02 | 1.00E-02 |
| Mercury (pH=6.8) | 7439-97-6 | 7.00E-02 | 1.00E-02 |
| Merphos | 150-50-5 | 5.00E-01 | 1.00E-01 |
| Methacrylic acid (2-methyl-2-propenoic acid) | 79-41-4 | 8.00E-01 | 0.00E+00 |
| Methacrylonitrile | 126-98-7 | 8.00E-01 | 0.00E+00 |
| Methanol | 67-56-1 | 8.00E-01 | 0.00E+00 |
| Methapyrilene | 91-80-5 | 5.00E-01 | 1.00E-01 |
| Methomyl | 16752-77-5 | 5.00E-01 | 1.00E-01 |
| Methoxychlor | 72-43-5 | 5.00E-01 | 1.00E-01 |
| Methoxyethanol, 2- | 109-86-4 | 8.00E-01 | 0.00E+00 |
| Methyl acetate (acetic acid, methyl ester) | 79-20-9 | 8.00E-01 | 0.00E+00 |
| Methyl acrylate | 96-33-3 | 8.00E-01 | 0.00E+00 |
| Methyl amyl ketone (2-heptanone) | 110-43-0 | 8.00E-01 | 0.00E+00 |
| Methyl chrysene, 1- | 3351-28-8 | 8.90E-01 | 1.30E-01 |
| Methyl chrysene, 2- | 3351-32-4 | 8.90E-01 | 1.30E-01 |
| Methyl chrysene, 6- | 1705-85-7 | 8.90E-01 | 1.30E-01 |
| Methyl cyclohexane | 108-87-2 | 8.00E-01 | 0.00E+00 |
| Methyl ethyl ketone (2-butanone) | 78-93-3 | 8.00E-01 | 0.00E+00 |
| Methyl iodide (iodomethane) | 74-88-4 | 8.00E-01 | 0.00E+00 |
| Methyl isobutyl ketone (4-methyl-2-pentanone) | 108-10-1 | 8.00E-01 | 0.00E+00 |
| Methyl mercury | 22967-92-6 | 9.00E-01 | 1.00E-02 |
| Methyl methacrylate | 80-62-6 | 8.00E-01 | 0.00E+00 |
| Methyl methanesulfonate | 66-27-3 | 5.00E-01 | 1.00E-01 |
| Methyl parathion | 298-00-0 | 5.00E-01 | 1.00E-01 |
| Methyl-1-butene, 2- | 563-46-2 | 8.00E-01 | 0.00E+00 |
| Methyl-1-propanal, 2- (isobutyraldehyde) | 78-84-2 | 8.00E-01 | 0.00E+00 |
| Methyl-2-butene, 2- | 513-35-9 | 8.00E-01 | 0.00E+00 |
| Methyl-2-pentenal, 2- | 623-36-9 | 8.00E-01 | 0.00E+00 |

# $ABS_{GI}$ and ABS.d Values

## Last Revised: November 8, 2019

| Chemical of Concern | CAS | $ABS_{GI}$ (unitless) | ABS.d (unitless) |
|---|---|---|---|
| Methylcholanthrene, 3- | 56-49-5 | 8.90E-01 | 1.30E-01 |
| Methylene bromide (dibromomethane) | 74-95-3 | 8.00E-01 | 0.00E+00 |
| Methylene chloride (dichloromethane) | 75-09-2 | 9.50E-01 | 0.00E+00 |
| Methylene-bis (2-chloroaniline) 4,4'- | 101-14-4 | 5.00E-01 | 1.00E-01 |
| Methylmecury hydroxide | 1184-57-2 | 5.00E-01 | 1.00E-01 |
| Methylnaphthalene, 1- | 90-12-0 | 8.90E-01 | 1.30E-01 |
| Methylnaphthalene, 2- | 91-57-6 | 8.90E-01 | 1.30E-01 |
| Methylpyrrolidone, N- | 872-50-4 | 5.00E-01 | 1.00E-01 |
| Methylstyrene, alpha- | 98-83-9 | 8.00E-01 | 0.00E+00 |
| Methyltetrahydrofuran, 2- | 96-47-9 | 8.00E-01 | 0.00E+00 |
| Methyltetrahydropyran, 2- | 10141-72-7 | 8.00E-01 | 0.00E+00 |
| Metolachlor | 51218-45-2 | 5.00E-01 | 1.00E-01 |
| Metribuzin | 21087-64-9 | 5.00E-01 | 1.00E-01 |
| Mirex | 2385-85-5 | 5.00E-01 | 1.00E-01 |
| Molinate | 2212-67-1 | 5.00E-01 | 1.00E-01 |
| Molybdenum | 7439-98-7 | 3.80E-01 | 1.00E-02 |
| Monocrotophos | 2157-98-4 | 5.00E-01 | 1.00E-01 |
| Morpholine | 110-91-8 | 8.00E-01 | 0.00E+00 |
| Morpholine, N-butyl- | 1005-67-0 | 5.00E-01 | 1.00E-01 |
| MTBE (methyl tert-butyl ether) | 1634-04-4 | 8.00E-01 | 0.00E+00 |
| Naled | 300-76-5 | 5.00E-01 | 1.00E-01 |
| Naphthalene | 91-20-3 | 8.90E-01 | 1.30E-01 |
| Naphthoquinone, 1,4- | 130-15-4 | 5.00E-01 | 1.00E-01 |
| Naphthylamine, 1- | 134-32-7 | 5.00E-01 | 1.00E-01 |
| Naphthylamine, 2- | 91-59-8 | 5.00E-01 | 1.00E-01 |
| Napropamide | 15299-99-7 | 5.00E-01 | 1.00E-01 |
| Neopentyl glycol | 126-30-7 | 5.00E-01 | 1.00E-01 |
| Nickel and compounds | 7440-02-0 | 4.00E-02 | 1.00E-02 |
| Nitrate-N | 14797-55-8 | 5.00E-01 | 1.00E-02 |

# $ABS_{GI}$ and ABS.d Values

**Last Revised: November 8, 2019**

| Chemical of Concern | CAS | $ABS_{GI}$ (unitless) | ABS.d (unitless) |
|---|---|---|---|
| Nitrite-N | 14797-65-0 | 5.00E-01 | 1.00E-02 |
| Nitroaniline, 2- | 88-74-4 | 5.00E-01 | 1.00E-01 |
| Nitroaniline, 3- | 99-09-2 | 5.00E-01 | 1.00E-01 |
| Nitroaniline, 4- | 100-01-6 | 5.00E-01 | 1.00E-01 |
| Nitrobenzene | 98-95-3 | 9.70E-01 | 1.00E-01 |
| Nitroglycerin | 55-63-0 | 5.00E-01 | 1.00E-01 |
| Nitrophenol, 2- | 88-75-5 | 5.00E-01 | 1.00E-01 |
| Nitrophenol, 3- | 554-84-7 | 5.00E-01 | 1.00E-01 |
| Nitrophenol, 4- | 100-02-7 | 1.00E+00 | 1.00E-01 |
| Nitropropane, 2- | 79-46-9 | 8.00E-01 | 0.00E+00 |
| Nitroquinoline-N-oxide, 4- | 56-57-5 | 5.00E-01 | 1.00E-01 |
| Nitrosodiethanolamine | 1116-54-7 | 5.00E-01 | 1.00E-01 |
| Nitrosodiethylamine, n- | 55-18-5 | 8.00E-01 | 0.00E+00 |
| Nitrosodimethylamine, n- | 62-75-9 | 8.00E-01 | 0.00E+00 |
| Nitrosodi-n-butylamine, n- | 924-16-3 | 5.00E-01 | 1.00E-01 |
| Nitrosodi-n-propylamine, n- | 621-64-7 | 2.50E-01 | 1.00E-01 |
| Nitrosodiphenylamine | 86-30-6 | 2.50E-01 | 1.00E-01 |
| Nitroso-methyl-ethyl-amine, n- | 10595-95-6 | 8.00E-01 | 0.00E+00 |
| Nitrosomorpholine, N- | 59-89-2 | 5.00E-01 | 1.00E-01 |
| Nitroso-n-ethylurea, n- | 759-73-9 | 5.00E-01 | 1.00E-01 |
| Nitrosopiperidine, N- | 100-75-4 | 5.00E-01 | 1.00E-01 |
| Nitrosopyrrolidine, n- | 930-55-2 | 5.00E-01 | 1.00E-01 |
| Nitrotoluene, m- | 99-08-1 | 5.00E-01 | 1.00E-01 |
| Nitrotoluene, o- | 88-72-2 | 5.00E-01 | 1.00E-01 |
| Nitrotoluene, p- | 99-99-0 | 5.00E-01 | 1.00E-01 |
| Nonachlor, cis- | 5103-73-1 | 5.00E-01 | 1.00E-01 |
| Nonachlor, trans- | 39765-80-5 | 5.00E-01 | 1.00E-01 |
| Nonanal | 124-19-6 | 5.00E-01 | 1.00E-01 |
| Nonene, 1-n | 124-11-8 | 8.00E-01 | 0.00E+00 |

# $ABS_{GI}$ and ABS.d Values

## Last Revised: November 8, 2019

| Chemical of Concern | CAS | $ABS_{GI}$ (unitless) | ABS.d (unitless) |
|---|---|---|---|
| Nonylphenol, 4-n- | 104-40-5 | 5.00E-01 | 1.00E-01 |
| Nonylphenol ethoxylate | 9016-45-9 | 5.00E-01 | 1.00E-01 |
| Octamethylpyrophosphoramide | 152-16-9 | 5.00E-01 | 1.00E-01 |
| Octanone | 106-68-3 | 8.00E-01 | 0.00E+00 |
| Oxamyl | 23135-22-0 | 5.00E-01 | 1.00E-01 |
| Oxychlordane | 27304-13-8 | 5.00E-01 | 1.00E-01 |
| Paraquat | 1910-42-5 | 5.00E-01 | 1.00E-01 |
| Parathion (ethyl parathion) | 56-38-2 | 5.00E-01 | 1.00E-01 |
| Pebulate | 1114-71-2 | 5.00E-01 | 1.00E-01 |
| Pendimethalin | 40487-42-1 | 5.00E-01 | 1.00E-01 |
| Pentachlorobenzene | 608-93-5 | 5.00E-01 | 1.00E-01 |
| Pentachloroethane | 76-01-7 | 8.00E-01 | 0.00E+00 |
| Pentachloronitrobenzene | 82-68-8 | 5.00E-01 | 1.00E-01 |
| Pentachlorophenol | 87-86-5 | 7.60E-01 | 2.50E-01 |
| Pentadiene, 1,3-cis- | 1574-41-0 | 8.00E-01 | 0.00E+00 |
| Pentadiene, 1,3-trans- | 2004-70-8 | 8.00E-01 | 0.00E+00 |
| Pentaerythritol tetranitrate (PETN) | 78-11-5 | 5.00E-01 | 1.00E-01 |
| Pentane | 109-66-0 | 8.00E-01 | 0.00E+00 |
| Pentane, 2-methyl- | 107-83-5 | 8.00E-01 | 0.00E+00 |
| Pentane, 3-methyl- | 96-14-0 | 8.00E-01 | 0.00E+00 |
| Pentanediol, 1,5- | 111-29-5 | 5.00E-01 | 1.00E-01 |
| Pentanol, 1- | 71-41-0 | 5.00E-01 | 0.00E+00 |
| Pentanol, 4-methyl-2- | 108-11-2 | 8.00E-01 | 0.00E+00 |
| Pentanone, 2- | 107-87-9 | 8.00E-01 | 0.00E+00 |
| Pentene, 2- | 109-68-2 | 8.00E-01 | 0.00E+00 |
| Pentyne, 1- | 627-19-0 | 8.00E-01 | 0.00E+00 |
| Perchlorate | 14797-73-0 | 2.00E-01 | 1.00E-02 |
| Perfluorooctanoic sulfonic acid (1-Octanesulfonic acid, heptadecafluoro-1-) | 1763-23-1 | 5.00E-01 | 1.00E-01 |

# $ABS_{GI}$ and ABS.d Values

## Last Revised: November 8, 2019

| Chemical of Concern | CAS | $ABS_{GI}$ (unitless) | ABS.d (unitless) |
|---|---|---|---|
| Perfluoroundecanoic acid (Undecanoic acid, uncosafluoro-) | 2058-94-8 | 5.00E-01 | 1.00E-01 |
| Perfluoropentanoic acid (Pentanoic acid, nonafluoro-) | 2706-90-3 | 5.00E-01 | 1.00E-01 |
| Perfluorohexanoic acid (Hexanoic acid, undecafluoro-) | 307-24-4 | 5.00E-01 | 1.00E-01 |
| Perfluorododecanoic acid (Dodecanoic acid, tricosafluoro-) | 307-55-1 | 5.00E-01 | 1.00E-01 |
| Perfluorooctanoic acid (Octanoic acid, pentadecafluoro-) | 335-67-1 | 5.00E-01 | 1.00E-01 |
| Perfluorodecanoic acid (Decanoic acid, nonadecafluoro-) | 335-76-2 | 5.00E-01 | 1.00E-01 |
| Perfluorodecane sulfonic acid (1-Decanesulfonic acid, heneicosafluoro-) | 335-77-3 | 5.00E-01 | 1.00E-01 |
| Perfluorohexane sulfonic acid (1-Hexanesulfonic acid, triddecafluoro-) | 355-46-4 | 5.00E-01 | 1.00E-01 |
| Perfluorobutyric acid (Butanoic acid, heptafluoro-) | 375-22-4 | 5.00E-01 | 1.00E-01 |
| Perfluorobutane sulfonic acid (1-Butanesulfonic acid, nonafluoro-) | 375-73-5 | 5.00E-01 | 1.00E-01 |
| Perfluoroheptanoic acid (Heptanoic acid, tridecafluoro-) | 375-85-9 | 5.00E-01 | 1.00E-01 |
| Perfluorononanoic acid (Nonanoic acid, heptadecafluoro-) | 375-95-1 | 5.00E-01 | 1.00E-01 |
| Perfluorotetradecanoic acid (Tetradecanoic acid, heptacosafluoro-) | 376-06-7 | 5.00E-01 | 1.00E-01 |
| Perfluorotridecanoic acid (Tridecanoic acid, pentacosafluoro-) | 72629-94-8 | 5.00E-01 | 1.00E-01 |
| Perfluorooctane sulfonamide (1-Octanesulfonamide, hetpadecafluoro-) | 754-91-6 | 5.00E-01 | 1.00E-01 |
| Perylene | 198-55-0 | 5.00E-01 | 1.00E-01 |
| Phenacetin | 62-44-2 | 5.00E-01 | 1.00E-01 |
| Phenanthrene | 85-01-8 | 8.90E-01 | 1.30E-01 |
| Phenanthridine | 229-87-8 | 5.00E-01 | 1.00E-01 |
| Phenol | 108-95-2 | 9.00E-01 | 1.00E-01 |
| Phenol, 4-tert-butyl- | 98-54-4 | 5.00E-01 | 1.00E-01 |
| Phenothiazine | 92-84-2 | 5.00E-01 | 1.00E-01 |
| Phenyl mercuric acetate | 62-38-4 | 5.00E-01 | 1.00E-01 |
| Phenylene diamine, m- | 108-45-2 | 5.00E-01 | 1.00E-01 |
| Phenylene diamine, p- | 106-50-3 | 5.00E-01 | 1.00E-01 |
| Phorate | 298-02-2 | 5.00E-01 | 1.00E-01 |
| Phosalone | 2310-17-0 | 5.00E-01 | 1.00E-01 |

# $ABS_{GI}$ and ABS.d Values

## Last Revised: November 8, 2019

| Chemical of Concern | CAS | $ABS_{GI}$ (unitless) | ABS.d (unitless) |
|---|---|---|---|
| Phosdrin (mevinphos) | 7786-34-7 | 5.00E-01 | 1.00E-01 |
| Phosmet | 732-11-6 | 5.00E-01 | 1.00E-01 |
| Phosphine | 7803-51-2 | 2.00E-01 | 1.00E-02 |
| Phosphorotrithioic acid, S,S,S-tributyl ester | 78-48-8 | 5.00E-01 | 1.00E-01 |
| Phosphorus, total* | 7723-14-0 | 0.00E+00 | 0.00E+00 |
| Phosphorus, white | 7723-14-0 | 2.00E-01 | 1.00E-02 |
| Phthalic anhydride | 85-44-9 | 5.00E-01 | 1.00E-01 |
| Picloram | 1918-02-1 | 5.00E-01 | 1.00E-01 |
| Picoline, 2- (2-methylpyridine) | 109-06-8 | 8.00E-01 | 0.00E+00 |
| Polybrominated biphenyls (PBBs) | 67774-32-7 | 9.30E-01 | 1.00E-01 |
| Polychlorinated biphenyls (PCBs) | 1336-36-3 | 8.10E-01 | 1.40E-01 |
| Potassium* | 7440-09-7 | 0.00E+00 | 0.00E+00 |
| Primene | 68955-53-3 | 5.00E-01 | 1.00E-01 |
| Prometon (pramitol) | 1610-18-0 | 5.00E-01 | 1.00E-01 |
| Prometryn | 7287-19-6 | 5.00E-01 | 1.00E-01 |
| Pronamide | 23950-58-5 | 5.00E-01 | 1.00E-01 |
| Propanal (propionaldehyde) | 123-38-6 | 8.00E-01 | 0.00E+00 |
| Propane, 1-bromo- | 106-94-5 | 8.00E-01 | 0.00E+00 |
| Propanil | 709-98-8 | 5.00E-01 | 1.00E-01 |
| Propanoic acid (propionic acid) | 79-09-4 | 8.00E-01 | 0.00E+00 |
| Propanol, 1- | 71-23-8 | 8.00E-01 | 0.00E+00 |
| Propargite | 2312-35-8 | 5.00E-01 | 1.00E-01 |
| Propargyl alcohol | 107-19-7 | 8.00E-01 | 0.00E+00 |
| Propazine | 139-40-2 | 5.00E-01 | 1.00E-01 |
| Propham | 122-42-9 | 5.00E-01 | 1.00E-01 |
| Propionitrile (propane nitrile) | 107-12-0 | 8.00E-01 | 0.00E+00 |
| Propyl acetate, n- | 109-60-4 | 8.00E-01 | 0.00E+00 |
| Propylbenzene, n- | 103-65-1 | 8.00E-01 | 0.00E+00 |
| Propylene glycol | 57-55-6 | 5.00E-01 | 1.00E-01 |

# $ABS_{GI}$ and ABS.d Values

## Last Revised: November 8, 2019

| Chemical of Concern | CAS | $ABS_{GI}$ (unitless) | ABS.d (unitless) |
|---|---|---|---|
| Propylene glycol monomethyl ether | 107-98-2 | 8.00E-01 | 0.00E+00 |
| Propylene oxide | 75-56-9 | 8.00E-01 | 0.00E+00 |
| Propylene tetramer | 6842-15-5 | 5.00E-01 | 1.00E-01 |
| Prothiofos (Tokuthion) | 34643-46-4 | 5.00E-01 | 1.00E-01 |
| Pyrene | 129-00-0 | 8.90E-01 | 1.30E-01 |
| Pyridine | 110-86-1 | 8.00E-01 | 0.00E+00 |
| Quinoline | 91-22-5 | 5.00E-01 | 1.00E-01 |
| Ronnel | 299-84-3 | 5.00E-01 | 1.00E-01 |
| Safrole | 94-59-7 | 5.00E-01 | 1.00E-01 |
| Selenium | 7782-49-2 | 5.00E-01 | 1.00E-02 |
| Selenourea | 630-10-4 | 0.00E+00 | 0.00E+00 |
| Silver | 7440-22-4 | 4.00E-02 | 1.00E-02 |
| Simazine | 122-34-9 | 5.00E-01 | 1.00E-01 |
| Sodium* | 7440-23-5 | 0.00E+00 | 0.00E+00 |
| Sodium hypochlorite | 7681-52-9 | 2.00E-01 | 1.00E-02 |
| Sodium polyacrylate | 9003-04-7 | 8.00E-01 | 0.00E+00 |
| Strontium | 7440-24-6 | 2.00E-01 | 1.00E-02 |
| Strychnine | 57-24-9 | 5.00E-01 | 1.00E-01 |
| Styrene | 100-42-5 | 8.00E-01 | 0.00E+00 |
| Sulfate* | 14808-79-8 | 0.00E+00 | 0.00E+00 |
| Sulfide* | 18496-25-8 | 0.00E+00 | 0.00E+00 |
| Sulfolane | 126-33-0 | 5.00E-01 | 1.00E-01 |
| Sulfur* | 7704-34-9 | 0.00E+00 | 0.00E+00 |
| Sulprofos (Bolstar) | 35400-43-2 | 5.00E-01 | 1.00E-01 |
| Tebuconazole | 107534-96-3 | 5.00E-01 | 1.00E-01 |
| Tebuthiuron | 34014-18-1 | 5.00E-01 | 1.00E-01 |
| Terbufos | 13071-79-9 | 5.00E-01 | 1.00E-01 |
| Tert-amyl ethyl ether (TAEE) | 919-94-8 | 8.00E-01 | 0.00E+00 |
| Tert-amyl-methyl ether (TAME) | 994-05-8 | 8.00E-01 | 0.00E+00 |

# $ABS_{GI}$ and ABS.d Values

## Last Revised: November 8, 2019

| Chemical of Concern | CAS | $ABS_{GI}$ (unitless) | ABS.d (unitless) |
|---|---|---|---|
| Tert-butyl alcohol (2-methyl-2-propanol) | 75-65-0 | 8.00E-01 | 0.00E+00 |
| Tetrachlorobenzene, 1,2,3,4- | 634-66-2 | 5.00E-01 | 1.00E-01 |
| Tetrachlorobenzene, 1,2,3,5- | 634-90-2 | 5.00E-01 | 1.00E-01 |
| Tetrachlorobenzene, 1,2,4,5- | 95-94-3 | 5.00E-01 | 1.00E-01 |
| Tetrachloroethane, 1,1,1,2- | 630-20-6 | 8.00E-01 | 0.00E+00 |
| Tetrachloroethane, 1,1,2,2- | 79-34-5 | 7.00E-01 | 0.00E+00 |
| Tetrachloroethylene | 127-18-4 | 1.00E+00 | 0.00E+00 |
| Tetrachlorophenol, 2,3,4,5- | 4901-51-3 | 5.00E-01 | 1.00E-01 |
| Tetrachlorophenol, 2,3,4,6- | 58-90-2 | 5.00E-01 | 1.00E-01 |
| Tetrachlorophenol, 2,3,5,6- | 935-95-5 | 5.00E-01 | 1.00E-01 |
| Tetrachlorvinphos (Stirophos) | 22248-79-9 | 5.00E-01 | 1.00E-01 |
| Tetradifon | 116-29-0 | 5.00E-01 | 1.00E-01 |
| Tetraethyl dithiopyrophosphate (sulfotep) | 3689-24-5 | 5.00E-01 | 1.00E-01 |
| Tetraethyl lead | 78-00-2 | 5.00E-01 | 1.00E-01 |
| Tetraethyl pyrophosphate (TEPP) | 107-49-3 | 5.00E-01 | 1.00E-01 |
| Tetraethylene glycol | 112-60-7 | 5.00E-01 | 1.00E-01 |
| Tetrahydrofuran | 109-99-9 | 8.00E-01 | 0.00E+00 |
| Tetrahydropyran | 142-68-7 | 8.00E-01 | 0.00E+00 |
| Tetraoxadodecane, 2,5,8,11- | 112-49-2 | 5.00E-01 | 1.00E-01 |
| Thallium | 7791-12-0 | 1.00E+00 | 1.00E-02 |
| Thiofanox | 39196-18-4 | 5.00E-01 | 1.00E-01 |
| Thionazin | 297-97-2 | 5.00E-01 | 1.00E-01 |
| Thiophanate-methyl | 23564-05-8 | 5.00E-01 | 1.00E-01 |
| Thiram | 137-26-8 | 5.00E-01 | 1.00E-01 |
| Tin | 7440-31-5 | 1.00E-01 | 1.00E-02 |
| Titanium | 7440-32-6 | 3.00E-02 | 1.00E-02 |
| Toluene | 108-88-3 | 8.00E-01 | 0.00E+00 |
| Toluene diisocyanate, 2,4/2,6- | 26471-62-5 | 5.00E-01 | 1.00E-01 |
| Toluenediamine, 2,4- | 95-80-7 | 5.00E-01 | 1.00E-01 |

# $ABS_{GI}$ and ABS.d Values

## Last Revised: November 8, 2019

| Chemical of Concern | CAS | $ABS_{GI}$ (unitless) | ABS.d (unitless) |
|---|---|---|---|
| Toluenediamine, 2,6- | 823-40-5 | 5.00E-01 | 1.00E-01 |
| Toluidine, o- | 95-53-4 | 5.00E-01 | 1.00E-01 |
| Toluidine, p- | 106-49-0 | 5.00E-01 | 1.00E-01 |
| Toxaphene | 8001-35-2 | 5.00E-01 | 1.00E-01 |
| TPH, TX1005, C6-C12 | NA | 8.00E-01 | 0.00E+00 |
| TPH, TX1005, >C12-C28 | NA | 5.00E-01 | 1.00E-01 |
| TPH, TX1005, >C12-C35 | NA | 5.00E-01 | 1.00E-01 |
| TPH, TX1005, >C28-C35 | NA | 5.00E-01 | 1.00E-01 |
| TP Silvex, 2,4,5- | 93-72-1 | 5.00E-01 | 1.00E-01 |
| Triademenol | 55219-65-3 | 5.00E-01 | 1.00E-01 |
| Triallate | 2303-17-5 | 5.00E-01 | 1.00E-01 |
| Triaminotrinitrobenzene (TATB) | 3058-38-6 | 5.00E-01 | 1.00E-01 |
| Tributyltin oxide | 56-35-9 | 5.00E-01 | 1.00E-01 |
| Trichloro-1,2,2-trifluoroethane, 1,1,2- | 76-13-1 | 8.00E-01 | 0.00E+00 |
| Trichlorobenzene, 1,2,3- | 87-61-6 | 5.00E-01 | 1.00E-01 |
| Trichlorobenzene, 1,2,4- | 120-82-1 | 9.70E-01 | 1.00E-01 |
| Trichlorobenzene, 1,3,5- | 108-70-3 | 5.00E-01 | 1.00E-01 |
| Trichloroethane, 1,1,1- | 71-55-6 | 9.00E-01 | 0.00E+00 |
| Trichloroethane, 1,1,2- | 79-00-5 | 8.10E-01 | 0.00E+00 |
| Trichloroethylene | 79-01-6 | 1.00E+00 | 0.00E+00 |
| Trichlorofluoromethane | 75-69-4 | 2.30E-01 | 0.00E+00 |
| Trichloronate | 327-98-0 | 5.00E-01 | 1.00E-01 |
| Trichlorophenol, 2,3,4- | 15950-66-0 | 5.00E-01 | 1.00E-01 |
| Trichlorophenol, 2,3,5- | 933-78-8 | 5.00E-01 | 1.00E-01 |
| Trichlorophenol, 2,3,6- | 933-75-5 | 5.00E-01 | 1.00E-01 |
| Trichlorophenol, 2,4,5- | 95-95-4 | 5.00E-01 | 1.00E-01 |
| Trichlorophenol, 2,4,6- | 88-06-2 | 5.00E-01 | 1.00E-01 |
| Trichlorophenol, 3,4,5- | 609-19-8 | 5.00E-01 | 1.00E-01 |
| Trichlorophenoxyacetic acid, 2,4,5- | 93-76-5 | 5.00E-01 | 1.00E-01 |

# $ABS_{GI}$ and ABS.d Values

## Last Revised: November 8, 2019

| Chemical of Concern | CAS | $ABS_{GI}$ (unitless) | ABS.d (unitless) |
|---|---|---|---|
| Trichloropropane, 1,1,2- | 598-77-6 | 8.00E-01 | 0.00E+00 |
| Trichloropropane, 1,2,3- | 96-18-4 | 8.00E-01 | 0.00E+00 |
| Triethanolamine | 102-71-6 | 5.00E-01 | 1.00E-01 |
| Triethylamine | 121-44-8 | 8.00E-01 | 0.00E+00 |
| Triethylene glycol | 112-27-6 | 5.00E-01 | 1.00E-01 |
| Triethylphosphorothioate, O, O, O- | 126-68-1 | 5.00E-01 | 1.00E-01 |
| Trifluralin | 1582-09-8 | 5.00E-01 | 1.00E-01 |
| Trimethylamine | 75-50-3 | 8.00E-01 | 0.00E+00 |
| Trimethylbenzene, 1,2,3- | 526-73-8 | 9.70E-01 | 0.00E+00 |
| Trimethylbenzene, 1,2,4- | 95-63-6 | 8.00E-01 | 0.00E+00 |
| Trimethylbenzene, 1,3,5- | 108-67-8 | 8.00E-01 | 0.00E+00 |
| Trinitrobenzene, 1,3,5- | 99-35-4 | 6.50E-01 | 1.00E-01 |
| Trinitrophenylmethylnitramine (tetryl; nitramine) | 479-45-8 | 5.00E-01 | 1.00E-01 |
| Trinitrotoluene, 2,4,6- | 118-96-7 | 6.00E-01 | 1.00E-01 |
| Tungsten (as sodium tungstate dihydride) | 7440-33-7 | 2.00E-01 | 1.00E-01 |
| Uranium (soluble salts) | 7440-61-1 | 8.50E-01 | 1.00E-02 |
| Valeric acid (pentanoic acid) | 109-52-4 | 5.00E-01 | 1.00E-01 |
| Vanadium | 7440-62-2 | 2.60E-02 | 1.00E-02 |
| Vernam | 1929-77-7 | 5.00E-01 | 1.00E-01 |
| Vinyl acetate | 108-05-4 | 6.50E-01 | 0.00E+00 |
| Vinyl chloride | 75-01-4 | 1.00E+00 | 0.00E+00 |
| Vinylcyclohexane | 695-12-5 | 8.00E-01 | 0.00E+00 |

# $ABS_{GI}$ and ABS.d Values

## Last Revised: November 8, 2019

| Chemical of Concern | CAS | $ABS_{GI}$ (unitless) | ABS.d (unitless) |
|---|---|---|---|
| Warfarin | 81-81-2 | 5.00E-01 | 1.00E-01 |
| Xylene, m- | 108-38-3 | 8.00E-01 | 0.00E+00 |
| Xylene, o- | 95-47-6 | 8.00E-01 | 0.00E+00 |
| Xylene, p- | 106-42-3 | 8.00E-01 | 0.00E+00 |
| Xylenes | 1330-20-7 | 9.20E-01 | 0.00E+00 |
| Zinc | 7440-66-6 | 2.00E-01 | 1.00E-02 |
| 6 C aliphatics (TPH) (>53% n-hexane content) | NA | 8.00E-01 | 0.00E+00 |
| 6 C aliphatics (TPH) (<53% n-hexane content) | NA | 8.00E-01 | 0.00E+00 |
| >6-8 C aliphatics (TPH) (>53% n-hexane content) | NA | 8.00E-01 | 0.00E+00 |
| >6-8 C aliphatics (TPH) (<53% n-hexane content) | NA | 8.00E-01 | 0.00E+00 |
| >8-10 C aliphatics (TPH) | NA | 8.00E-01 | 0.00E+00 |
| >10-12 C aliphatics (TPH) | NA | 5.00E-01 | 1.00E-01 |
| >12-16 C aliphatics (TPH) | NA | 5.00E-01 | 1.00E-01 |
| >16-21 C aliphatics (TPH) | NA | 5.00E-01 | 1.00E-01 |
| >16-21 C aliphatics (TPH) (for transformer mineral oil releases only) | NA | 5.00E-01 | 1.00E-01 |
| >21-35 C aliphatics (TPH) | NA | 5.00E-01 | 1.00E-01 |
| >21-35 C aliphatics (TPH) (for transformer mineral oil releases only) | NA | 5.00E-01 | 1.00E-01 |
| >7-8 C aromatics (TPH) | NA | 8.00E-01 | 0.00E+00 |
| >8-10 C aromatics (TPH) | NA | 8.00E-01 | 0.00E+00 |
| >10-12 C aromatics (TPH) | NA | 5.00E-01 | 1.00E-01 |
| >12-16 C aromatics (TPH) | NA | 5.00E-01 | 1.00E-01 |
| >16-21 C aromatics (TPH) | NA | 5.00E-01 | 1.00E-01 |
| >21-35 C aromatics (TPH) | NA | 5.00E-01 | 1.00E-01 |

**Footnotes**

*****Acetic acid; Ammonium polyphosphate; Ammonium salts; Calcium; Chloride; Ethylene; Hydrogen chloride (hydrochloric acid); Iron; Limonene, d-; Magnesium; Phosphorus, total; Potassium; Sodium; Sulfate; Sulfide; Sulfur. These compounds are not necessarily of concern from a human health standpoint, therefore calculation of human health-based values is not required. However, aesthetics and ecological criteria would still apply. See table entitled "Compounds for which Calculation of a Human Health PCL is Not Required" available on the TCEQ website at http://www.tceq.texas.gov/remediation/trrp/trrppcls.html.

# $ABS_{GI}$ and ABS.d Values

## Last Revised: November 8, 2019

| Chemical of Concern | CAS | $ABS_{GI}$ (unitless) | ABS.d (unitless) |
|---|---|---|---|

This table show gastrointestinal and dermal absorption values used in calculating protective concentration levels.

end of worksheet

# Toxicity Factor changes for 2011 PCL table update

| Chemical of Concern | CAS | Class[1] | Ref[2] | SFo (mg/kg-day)$^{-1}$ | Ref[2] | RfD (mg/kg-day) | Ref[2] | URF (ug/m3)$^{-1}$ | Ref[2] | RfC[3] (mg/m$^3$) | Ref[2] |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Acetate, 2-ethoxyethanol | 111-15-9 | – | – | – | – | 0.1 | PPRTV | – | – | 0.06 | PPRTV |
| Acetate, isoamyl | 123-92-2 | – | – | – | – | – | – | – | – | delete value | – |
| Acetate, isobutyl | 110-19-0 | – | – | – | – | – | – | – | – | delete value | – |
| Acetate, sec-butyl | 105-46-4 | – | – | – | – | – | – | – | – | delete value | – |
| Acetone (2-propanone) | 67-64-1 | – | – | – | – | – | – | – | – | 31 | A |
| Acetophenone | 98-86-2 | – | – | – | – | – | – | – | – | delete value | – |
| Acifluorfen, sodium | 62476-59-9 | – | – | – | – | – | – | – | – | delete value | – |
| Acrolein | 107-02-8 | – | – | – | – | – | – | – | – | 0.0005 | T |
| Acrylamide | 79-06-1 | LC | – | – | – | – | – | – | – | – | – |
| Adipic acid (hexanedioic acid) | 124-04-9 | – | – | – | – | – | – | – | – | delete value | – |
| Allyl alcohol | 107-18-6 | – | – | – | – | – | – | – | – | 0.0001 | – |
| Aluminum | 7429-90-5 | – | – | – | – | – | – | – | – | 0.005 | PPRTV |
| Amino-2,6-dinitrotoluene, 4- | 19406-51-0 | – | – | – | – | – | – | – | – | delete value | – |
| Amino-4,6-dinitrotoluene, 2- | 35572-78-2 | – | – | – | – | – | – | – | – | delete value | – |
| Aminopyridine, 4- | 504-24-5 | – | – | – | – | – | – | – | – | delete value | – |
| Anthraquinone, 9,10- | 84-65-1 | LC | PPRTV | 0.039 | PPRTV | – | – | – | – | – | – |
| Antimony | 7440-36-0 | – | – | – | – | – | – | – | – | delete value | – |
| Asbestos | 1332-21-4 | – | – | – | – | – | – | URF removed | – | – | – |
| Atrazine | 1912-24-9 | – | – | – | – | – | – | – | – | delete value | – |
| Barium | 7440-39-3 | – | – | – | – | – | – | – | – | delete value | – |
| Benzaldehyde | 100-52-7 | – | – | – | – | – | – | – | – | delete value | – |
| Benzene | 71-43-2 | – | – | 0.015 | T | – | – | – | – | - | – |
| Benzenethiol | 108-98-5 | – | – | – | – | – | – | – | – | delete value | – |
| Benzoic acid | 65-85-0 | – | – | – | – | – | – | – | – | delete value | – |
| Benzotrichloride | 98-07-7 | – | – | – | – | – | – | – | – | delete value | – |
| Benzoyl peroxide | 94-36-0 | – | – | – | – | – | – | – | – | delete value | – |

# Toxicity Factor changes for 2011 PCL table update

| Chemical of Concern | CAS | Class[1] | Ref[2] | SFo (mg/kg-day)$^{-1}$ | Ref[2] | RfD (mg/kg-day) | Ref[2] | URF (ug/m3)$^{-1}$ | Ref[2] | RfC[3] (mg/m$^3$) | Ref[2] |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzyl alcohol | 100-51-6 | – | – | – | – | – | – | – | – | delete value | – |
| Benzyl dichloride | 98-87-3 | – | – | – | – | 0.002 | T | – | – | 0.001 | T |
| Biphenyl, 1,1- | 92-52-4 | – | – | – | – | – | – | – | – | delete value | – |
| Bisphenol A | 80-05-7 | – | – | – | – | – | – | – | – | delete value | – |
| Bromo-2-chloroethane, 1- | 107-04-0 | – | – | – | – | – | – | – | – | delete value | – |
| Butanal (butyraldehyde) | 123-72-8 | – | – | – | – | – | – | – | – | delete value | – |
| Butanol, 1-, 2-methyl- | 137-32-6 | – | – | – | – | – | – | – | – | delete value | – |
| Butanol, 2-methyl-2- | 75-85-4 | – | – | – | – | – | – | – | – | delete value | – |
| Butanol, n- | 71-36-3 | – | – | – | – | – | – | – | – | delete value | – |
| Butoxy ethanol, 2- (Ethylene glycol monobutyl ether; EGBE) | 111-76-2 | NLC | – | – | – | 0.1 | – | – | – | 1.6 | – |
| Butyl acetate | 123-86-4 | – | – | – | – | – | – | – | – | 0.62 | – |
| Butyl acrylate | 141-32-2 | – | – | – | – | – | – | – | – | delete value | – |
| Butyl benzyl phthalate | 85-68-7 | LC | PPRTV | – | – | – | – | – | – | delete value | – |
| Butyl ether, n- (dibutyl ether) | 142-96-1 | – | – | – | – | – | – | – | – | delete value | – |
| Butyl methacrylate | 97-88-1 | – | – | – | – | – | – | – | – | delete value | – |
| Butylbenzene, n- | 104-51-8 | – | – | – | – | 0.05 | PPRTV | – | – | delete value | – |
| Butylbenzene, sec- | 135-98-8 | – | – | – | – | – | – | – | – | delete value | – |
| Butylbenzene, tert- | 98-06-6 | – | – | – | – | – | – | – | – | delete value | – |
| Caprolactam | 105-60-2 | – | – | – | – | – | – | – | – | delete value | – |
| Captan | 133-06-2 | – | – | – | – | – | – | – | – | delete value | – |
| Carbaryl | 63-25-2 | – | – | – | – | – | – | – | – | delete value | – |
| Carbofuran | 1563-66-2 | – | – | – | – | – | – | – | – | delete value | – |
| Carbon tetrachloride | 56-23-5 | LC | I | 0.07 | – | 0.004 | – | 0.000006 | – | 0.1 | I |
| Chloral | 75-87-6 | – | – | – | – | – | – | – | – | delete value | – |
| Chloral hydrate (1,1-ethanediol, 2,2,2-trichloro-) | 302-17-0 | – | – | – | – | – | – | – | – | delete value | – |
| Chlorine | 7782-50-5 | – | – | – | – | – | – | – | – | 0.00015 | A |

# Toxicity Factor changes for 2011 PCL table update

| Chemical of Concern | CAS | Class[1] | Ref[2] | SFo (mg/kg-day)$^{-1}$ | Ref[2] | RfD (mg/kg-day) | Ref[2] | URF (ug/m3)$^{-1}$ | Ref[2] | RfC[3] (mg/m$^3$) | Ref[2] |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloro-1,3-butadiene, 2- | 126-99-8 | LC | I | – | – | – | – | 0.0003 | I | 0.02 | I |
| Chloro-3-methylphenol, 4- | 59-50-7 | – | – | – | – | – | – | – | – | delete value | – |
| Chloroaniline, p- | 106-47-8 | LC | PPRTV | – | – | – | – | – | – | delete value | – |
| Chlorobromomethane | 74-97-5 | – | – | – | – | – | – | – | – | delete value | – |
| Chloroethanol, 2- | 107-07-3 | – | – | – | – | – | – | – | – | delete value | – |
| Chloronitrobenzene, p- (1-chloro-4-nitrobenzene) | 100-00-5 | LC | PPRTV | – | – | – | – | – | – | – | – |
| Chlorophenol, 2- | 95-57-8 | – | – | – | – | – | – | – | – | delete value | – |
| Chlorophenol, 3- | 108-43-0 | – | – | – | – | – | – | – | – | delete value | – |
| Chlorophenol, 4- | 106-48-9 | – | – | – | – | – | – | – | – | delete value | – |
| Chlorotoluene, o- (2-chlorotoluene) | 95-49-8 | – | – | – | – | – | – | – | – | 0.8 | PPRTV |
| Chlorotoluene, p- (4-chlorotoluene) | 106-43-4 | – | – | – | – | 0.02 | PPRTV | – | – | delete value | – |
| Chlorpyrifos | 2921-88-2 | – | – | – | – | – | – | – | – | delete value | – |
| Cobalt | 7440-48-4 | LC | PPRTV | – | – | – | – | – | – | – | – |
| Copolymer acrylamide | 69418-26-4 | – | – | – | – | – | – | – | – | delete value | – |
| Copper | 7440-50-8 | – | – | – | – | – | – | – | – | delete value | – |
| Cresol | 1319-77-3 | – | – | – | – | – | – | – | – | delete value | – |
| Cresol, m- (3-methylphenol) | 108-39-4 | – | – | – | – | – | – | – | – | delete value | – |
| Cresol, o- (2-methylphenol) | 95-48-7 | – | – | – | – | – | – | – | – | delete value | – |
| Cresol, p- (4-methylphenol) | 106-44-5 | – | – | – | – | – | – | – | – | delete value | – |
| Crotonaldehyde | 123-73-9 | – | – | – | – | 0.001 | PPRTV | – | – | delete value | – |
| Cyanide | 57-12-5 | – | – | – | – | 0.0006 | – | – | – | 0.0008 | I |
| Cyanogen | 460-19-5 | – | – | – | – | 0.001 | – | – | – | 0.0008 | I |
| Cyclohexanol | 108-93-0 | – | – | – | – | – | – | – | – | delete value | – |
| Cyclohexanone | 108-94-1 | – | – | – | – | – | – | – | – | 0.7 | PPRTV |
| Cyclotetramethylenetetranitramine (HMX) | 2691-41-0 | – | – | – | – | – | – | – | – | delete value | – |
| Cyclotrimethylenetrinitramine (RDX) | 121-82-4 | – | – | – | – | – | – | – | – | delete value | – |
| Cymene (isopropyltoluene) | 99-87-6 | – | – | – | – | – | – | – | – | delete value | – |
| Diazinon | 333-41-5 | – | – | – | – | – | – | – | – | 0.0001 | T |

# Toxicity Factor changes for 2011 PCL table update

| Chemical of Concern | CAS | Class[1] | Ref[2] | SFo (mg/kg-day)$^{-1}$ | Ref[2] | RfD (mg/kg-day) | Ref[2] | URF (ug/m3)$^{-1}$ | Ref[2] | RfC[3] (mg/m$^3$) | Ref[2] |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Dibromo-3-chloropropane, 1,2- | 96-12-8 | LC | PPRTV | – | – | – | – | – | – | – | – |
| Dibromofluoromethane | 1868-53-7 | – | – | – | – | – | – | – | – | delete value | – |
| Dicamba | 1918-00-9 | – | – | – | – | – | – | – | – | delete value | – |
| Dichloro-2-butene, 1,4- | 764-41-0 | SEC | PPRTV | – | – | – | – | – | – | – | – |
| Dichloro-2-butene, 1,4- trans | 110-57-6 | SEC | PPRTV | – | – | – | – | – | – | – | – |
| Dichlorodifluoromethane | 75-71-8 | – | – | – | – | – | – | – | – | 0.1 | PPRTV |
| Dichloroethane, 1,1- | 75-34-3 | – | – | – | – | – | – | – | – | 2.4 | T |
| Dichloroethane, 1,2- | 107-06-2 | – | – | – | – | 0.006 | – | – | – | 0.007 | PPRTV |
| Dichloroethylene, cis-1,2- | 156-59-2 | – | – | – | – | – | – | – | – | 0.06 | T |
| Dichloroethylene, trans-1,2 | 156-60-5 | IIACP | I | – | – | – | – | – | – | – | – |
| Dichlorofluoromethane | 75-43-4 | – | – | – | – | – | – | – | – | delete value | – |
| Dichlorophenol, 2,3- | 576-24-9 | – | – | – | – | – | – | – | – | delete value | – |
| Dichlorophenol, 2,4- | 120-83-2 | – | – | – | – | – | – | – | – | delete value | – |
| Dichlorophenol, 2,5- | 583-78-8 | – | – | – | – | – | – | – | – | delete value | – |
| Dichlorophenol, 2,6- | 87-65-0 | – | – | – | – | – | – | – | – | delete value | – |
| Dichlorophenol, 3,4- | 95-77-2 | – | – | – | – | – | – | – | – | delete value | – |
| Dichlorophenol, 3,5- | 591-35-5 | – | – | – | – | – | – | – | – | delete value | – |
| Dichlorophenoxyacetic acid, 2,4- (2,4-D) | 94-75-7 | – | – | – | – | – | – | – | – | delete value | – |
| Dichloropropene, cis 1,3- | 10061-01-5 | – | – | – | – | – | – | – | – | 0.02 | I |
| Dichloropropene, trans 1,3- | 10061-02-6 | – | – | – | – | – | – | – | – | 0.02 | I |
| Diethanolamine | 111-42-2 | – | – | – | – | – | – | – | – | delete value | – |
| Diethyl phthalate | 84-66-2 | – | – | – | – | – | – | – | – | delete value | – |
| Diethylhexyl adipate | 103-23-1 | – | – | – | – | – | – | – | – | delete value | – |
| Diisopropylbenzene, p- | 100-18-5 | – | – | – | – | – | – | – | – | delete value | – |
| Dimethyl phenol, 2,4- | 105-67-9 | – | – | – | – | – | – | – | – | delete value | – |
| Dimethylbenzidine, 3,3'- | 119-93-7 | LC | PPRTV | – | – | – | – | – | – | – | – |
| Dimethylphenethylamine, alpha, alpha- | 122-09-8 | – | – | – | – | – | – | – | – | delete value | – |

# Toxicity Factor changes for 2011 PCL table update

| Chemical of Concern | CAS | Class[1] | Ref[2] | SFo (mg/kg-day)$^{-1}$ | Ref[2] | RfD (mg/kg-day) | Ref[2] | URF (ug/m3)$^{-1}$ | Ref[2] | RfC[3] (mg/m$^3$) | Ref[2] |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Dimethylphthalate | 131-11-3 | – | – | – | – | – | – | – | – | delete value | – |
| Di-n-butyl phthalate | 84-74-2 | – | – | – | – | – | – | – | – | delete value | – |
| Dinitro-2-methylphenol, 4,6- (dinitro-o-cresol, 4, 6-) | 534-52-1 | – | – | – | – | – | – | – | – | delete value | – |
| Dinitrobenzene, 1,3- (dinitrobenzene, 2,4- ) | 99-65-0 | – | – | – | – | – | – | – | – | delete value | – |
| Dinitrobenzene, 1,4- | 100-25-4 | – | – | – | – | – | – | – | – | delete value | – |
| Dinitrotoluene, 2,4- | 121-14-2 | – | – | – | – | – | – | – | – | delete value | – |
| Dinitrotoluene, 2,6- | 606-20-2 | – | – | – | – | – | – | – | – | delete value | – |
| Di-n-octyl phthalate | 117-84-0 | – | – | – | – | – | – | – | – | delete value | – |
| Dioxane, 1,4- | 123-91-1 | LC | – | 0.1 | I | 0.03 | I | – | – | 3.6 | A |
| Diphenyl ether | 101-84-8 | – | – | – | – | – | – | – | – | delete value | – |
| Diphenylamine | 122-39-4 | – | – | – | – | – | – | – | – | delete value | – |
| Dipropylene glycol | 110-98-5 | – | – | – | – | – | – | – | – | delete value | – |
| Diquat | 85-00-7 | – | – | – | – | – | – | – | – | delete value | – |
| Disulfoton | 298-04-4 | – | – | – | – | – | – | – | – | delete value | – |
| Diuron | 330-54-1 | – | – | – | – | – | – | – | – | delete value | – |
| Dodecylphenol, 4- | 104-43-8 | – | – | – | – | – | – | – | – | delete value | – |
| Endosulfan | 115-29-7 | – | – | – | – | – | – | – | – | delete value | – |
| Endosulfan I | 959-98-8 | – | – | – | – | – | – | – | – | delete value | – |
| Endrin | 72-20-8 | – | – | – | – | – | – | – | – | delete value | – |
| Endrin ketone | 53494-70-5 | – | – | – | – | – | – | – | – | delete value | – |
| Ethanol | 64-17-5 | – | – | – | – | – | – | – | – | delete value | – |
| Ethanol, 2-(2-aminoethoxy)- | 141-43-5 | – | – | – | – | – | – | – | – | delete value | – |
| Ethanol, 2-amino- | 929-06-6 | – | – | – | – | – | – | – | – | delete value | – |
| Ethion | 563-12-2 | – | – | – | – | – | – | – | – | delete value | – |
| Ethyl acetate | 141-78-6 | – | – | – | – | – | – | – | – | delete value | – |
| Ethyl acrylate | 140-88-5 | – | – | – | – | – | – | – | – | delete value | – |

# Toxicity Factor changes for 2011 PCL table update

| Chemical of Concern | CAS | Class[1] | Ref[2] | SFo (mg/kg-day)$^{-1}$ | Ref[2] | RfD (mg/kg-day) | Ref[2] | URF (ug/m3)$^{-1}$ | Ref[2] | RfC[3] (mg/m$^3$) | Ref[2] |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Ethyl benzene | 100-41-4 | – | – | – | – | – | – | – | – | 1.9 | T |
| Ethyl ether | 60-29-7 | – | – | – | – | – | – | – | – | delete value | – |
| Ethyl methacrylate | 97-63-2 | – | – | – | – | – | – | – | – | 0.3 | PPRTV |
| Ethyl-1-hexanol, 2- | 104-76-7 | – | – | – | – | – | – | – | – | delete value | – |
| Ethyl-2-hexenal, 2- | 645-62-5 | – | – | – | – | – | – | – | – | delete value | – |
| Ethylene glycol | 74-85-1 | – | – | – | – | – | – | – | – | delete value | – |
| Ethylene thiourea | 107-21-1 | – | – | – | – | – | – | – | – | delete value | – |
| Ethylenediamine | 96-45-7 | – | – | – | – | – | – | – | – | delete value | – |
| Ethylhexyl acrylate, 2- | 107-15-3 | – | – | – | – | – | – | – | – | delete value | – |
| Famphur | 103-11-7 | – | – | – | – | – | – | – | – | delete value | – |
| Fluorochloridone | 52-85-7 | – | – | – | – | – | – | – | – | delete value | – |
| Formic Acid | 61213-25-0 | – | – | – | – | 0.9 | PPRTV | – | – | – | – |
| Furan | 64-18-6 | – | – | – | – | – | – | – | – | delete value | – |
| Furfural | 110-00-9 | – | – | – | – | – | – | – | – | delete value | – |
| Hexachlorocyclohexane, gamma (lindane; gamma-BHC) | 98-01-1 | – | – | – | – | – | – | – | – | delete value | – |
| Hexanal, 2-ethyl- | 58-89-9 | – | – | – | – | – | – | – | – | delete value | – |
| Hexanediamine, 1,6- | 123-05-7 | – | – | – | – | – | – | – | – | delete value | – |
| Hexanone, 2- | 124-09-4 | IIACP | I | – | – | – | – | – | – | – | – |
| Hexazinone | 591-78-6 | – | – | – | – | – | – | – | – | delete value | – |
| Hexene, 1- | 51235-04-2 | – | – | – | – | 0.33 | T | – | – | 0.11 | T |
| Hexylene glycol (2-methyl-2,4-pentanediol) | 592-41-6 | – | – | – | – | – | – | – | – | delete value | – |
| Hydroquinone | 107-41-5 | LC | PPRTV | – | – | – | – | – | – | – | – |
| Isoamyl alcohol | 123-31-9 | – | – | – | – | – | – | – | – | delete value | – |
| Isobutyl alcohol | 123-51-3 | – | – | – | – | – | – | – | – | delete value | – |
| Isobutyric acid | 78-83-1 | – | – | – | – | – | – | – | – | delete value | – |
| Isophorone | 79-31-2 | – | – | – | – | – | – | – | – | delete value | – |

# Toxicity Factor changes for 2011 PCL table update

| Chemical of Concern | CAS | Class[1] | Ref[2] | SFo (mg/kg-day)$^{-1}$ | Ref[2] | RfD (mg/kg-day) | Ref[2] | URF (ug/m3)$^{-1}$ | Ref[2] | RfC[3] (mg/m$^3$) | Ref[2] |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Isopropyl alcohol | 67-63-0 | – | – | – | – | – | – | – | – | delete value | – |
| Malathion | 121-75-5 | – | – | – | – | – | – | – | – | 0.0002 | T |
| Maleic anhydride | 108-31-6 | – | – | – | – | – | – | – | – | delete value | – |
| Maleic hydrazide | 123-33-1 | – | – | – | – | – | – | – | – | delete value | – |
| Malononitrile | 109-77-3 | – | – | – | – | – | – | – | – | delete value | – |
| Methacrylic acid (2-methyl-2-propenoic acid) | 79-41-4 | – | – | – | – | – | – | – | – | delete value | – |
| Methacrylonitrile | 126-98-7 | – | – | – | – | – | – | – | – | delete value | – |
| Methanol | 67-56-1 | – | – | – | – | – | – | – | – | delete value | – |
| Methapyrilene | 91-80-5 | – | – | – | – | – | – | – | – | delete value | – |
| Methomyl | 16752-77-5 | – | – | – | – | – | – | – | – | delete value | – |
| Methoxychlor | 72-43-5 | – | – | – | – | – | – | – | – | delete value | – |
| Methoxyethanol, 2- | 109-86-4 | – | – | – | – | 0.003 | PPRTV | – | – | – | – |
| Methyl acetate (acetic acid, methyl ester) | 79-20-9 | – | – | – | – | – | – | – | – | delete value | – |
| Methyl acrylate | 96-33-3 | – | – | – | – | – | – | – | – | delete value | – |
| Methyl ethyl ketone (2-butanone) | 78-93-3 | – | – | – | – | – | – | – | – | 8.8 | T |
| Methyl iodide (iodomethane) | 74-88-4 | – | – | – | – | – | – | – | – | delete value | – |
| Methyl mercury | 22967-92-6 | – | – | – | – | – | – | – | – | delete value | – |
| Methyl parathion | 298-00-0 | – | – | – | – | – | – | – | – | delete value | – |
| Methyl-1-propanal, 2- (isobutyraldehyde) | 78-84-2 | – | – | – | – | – | – | – | – | delete value | – |
| Methyl-2-pentenal, 2- | 623-36-9 | – | – | – | – | – | – | – | – | delete value | – |
| Methylene bromide (dibromomethane) | 74-95-3 | – | – | – | – | – | – | – | – | 0.004 | PPRTV |
| Methylene-bis (2-chloroaniline) 4,4'- | 101-14-4 | LC | PPRTV | – | – | – | – | – | – | – | – |
| Methylmecury hydroxide | 1184-57-2 | – | – | – | – | – | – | – | – | delete value | – |
| Methylnaphthalene, 1- | 90-12-0 | SEC | PPRTV | – | – | – | – | – | – | – | – |
| Methylpyrrolidone, N- | 872-50-4 | – | – | – | – | – | – | – | – | delete value | – |
| Molybdenum | 7439-98-7 | – | – | – | – | – | – | – | – | delete value | – |
| Monocrotophos | 2157-98-4 | – | – | – | – | – | – | – | – | delete value | – |
| Morpholine | 110-91-8 | – | – | – | – | – | – | – | – | delete value | – |

# Toxicity Factor changes for 2011 PCL table update

| Chemical of Concern | CAS | Class[1] | Ref[2] | SFo (mg/kg-day)$^{-1}$ | Ref[2] | RfD (mg/kg-day) | Ref[2] | URF (ug/m3)$^{-1}$ | Ref[2] | RfC[3] (mg/m$^3$) | Ref[2] |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Naled | 300-76-5 | – | – | – | – | – | – | – | – | delete value | – |
| Naphthoquinone, 1,4- | 130-15-4 | – | – | – | – | – | – | – | – | delete value | – |
| Nitroaniline, 3- | 99-09-2 | – | – | – | – | – | – | – | – | 0.0002 | T |
| Nitroaniline, 4- | 100-01-6 | SEC | PPRTV | – | – | – | – | – | – | – | – |
| Nitroglycerin | 55-63-0 | LC | PPRTV | – | – | – | – | – | – | – | – |
| Nitrophenol, 2- | 88-75-5 | – | – | – | – | – | – | – | – | delete value | – |
| Nitrophenol, 3- | 554-84-7 | – | – | – | – | – | – | – | – | delete value | – |
| Nitrophenol, 4- | 100-02-7 | – | – | – | – | – | – | – | – | delete value | – |
| Nitropropane, 2- | 79-46-9 | – | – | – | – | – | – | – | – | 0.02 | I |
| Nitrotoluene, m- | 99-08-1 | – | – | – | – | – | – | – | – | delete value | – |
| Nitrotoluene, o- | 88-72-2 | LC | PPRTV | – | – | – | – | – | – | delete value | – |
| Nitrotoluene, p- | 99-99-0 | LC | PPRTV | – | – | – | – | – | – | delete value | – |
| Nonene, 1-n | 124-11-8 | – | – | – | – | – | – | – | – | delete value | – |
| Nonylphenol | 104-40-5 | – | – | – | – | – | – | – | – | delete value | – |
| Nonylphenol ethoxylate** | 9016-45-9 | – | – | – | – | – | – | – | – | delete value | – |
| Parathion (ethyl parathion) | 56-38-2 | – | – | – | – | – | – | – | – | delete value | – |
| Pentachlorobenzene | 608-93-5 | – | – | – | – | – | – | – | – | delete value | – |
| Pentachloroethane | 76-01-7 | LC | PPRTV | – | – | – | – | – | – | – | – |
| Pentachloronitrobenzene | 82-68-8 | – | – | – | – | – | – | – | – | delete value | – |
| Pentachlorophenol | 87-86-5 | – | – | – | – | – | – | – | – | delete value | – |
| Pentaerythritol tetranitrate (PETN) | 78-11-5 | – | – | – | – | 0.002 | PPRTV | – | – | – | – |
| Pentanol, 1- | 71-41-0 | – | – | – | – | – | – | – | – | delete value | – |
| Pentanol, 4-methyl-2- | 108-11-2 | – | – | – | – | – | – | – | – | delete value | – |
| Pentanone, 2- | 107-87-9 | – | – | – | – | – | – | – | – | delete value | – |
| Phenol | 108-95-2 | – | – | – | – | – | – | – | – | delete value | – |
| Phenol, 4-tert-butyl- | 98-54-4 | – | – | – | – | – | – | – | – | delete value | – |

# Toxicity Factor changes for 2011 PCL table update

| Chemical of Concern | CAS | Class[1] | Ref[2] | SFo (mg/kg-day)$^{-1}$ | Ref[2] | RfD (mg/kg-day) | Ref[2] | URF (ug/m3)$^{-1}$ | Ref[2] | RfC[3] (mg/m$^3$) | Ref[2] |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Phenothiazine | 92-84-2 | – | – | – | – | – | – | – | – | delete value | – |
| Phenylene diamine, m- | 108-45-2 | – | – | – | – | – | – | – | – | delete value | – |
| Phenylene diamine, p- | 106-50-3 | – | – | – | – | – | – | – | – | delete value | – |
| Phorate | 298-02-2 | – | – | – | – | – | – | – | – | delete value | – |
| Phosmet | 732-11-6 | – | – | – | – | – | – | – | – | delete value | – |
| Phosphorus, white | 7723-14-0 | – | – | – | – | – | – | – | – | delete value | – |
| Picoline, 2- (2-methylpyridine) | 109-06-8 | – | – | – | – | – | – | – | – | delete value | – |
| Primene | 68955-53-3 | – | – | – | – | – | – | – | – | delete value | – |
| Propane, 1-bromo- | 106-94-5 | – | – | – | – | – | – | – | – | delete value | – |
| Propanoic acid | 79-09-4 | – | – | – | – | – | – | – | – | delete value | – |
| Propanol, 1- | 71-23-8 | – | – | – | – | – | – | – | – | delete value | – |

# Toxicity Factor changes for 2011 PCL table update

| Chemical of Concern | CAS | Class[1] | Ref[2] | SFo (mg/kg-day)$^{-1}$ | Ref[2] | RfD (mg/kg-day) | Ref[2] | URF (ug/m3)$^{-1}$ | Ref[2] | RfC[3] (mg/m$^3$) | Ref[2] |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Propargyl alcohol | 107-19-7 | – | – | – | – | – | – | – | – | delete value | – |
| Propionitrile (propane nitrile) | 107-12-0 | – | – | – | – | – | – | – | – | delete value | – |
| Propylene glycol | 57-55-6 | – | – | – | – | – | – | – | – | 0.003 | PPRTV |
| Prothiofos (Tokuthion) | 34643-46-4 | – | – | – | – | – | – | – | – | delete value | – |
| Pyridine | 110-86-1 | – | – | – | – | – | – | – | – | delete value | – |
| Quinoline | 91-22-5 | – | – | – | – | – | – | – | – | delete value | – |
| Selenium | 7782-49-2 | – | – | – | – | – | – | – | – | delete value | – |
| Silver | 7440-22-4 | – | – | – | – | – | – | – | – | delete value | – |
| Sodium diethyldithiocarbamate | 7440-23-5 | – | – | – | – | – | – | – | – | delete value | – |
| Sodium hypochlorite | 148-18-5 | – | – | – | – | – | – | – | – | 0.00031 | T |
| Sulfolane | 7681-52-9 | – | – | – | – | 0.0037 | – | – | – | 0.0064 | T |
| Sulprofos (Bolstar) | 126-33-0 | – | – | – | – | – | – | – | – | delete value | – |
| Tert-amyl ethyl ether (TAEE) | 35400-43-2 | – | – | – | – | – | – | – | – | delete value | – |
| Tert-amyl-methyl ether (TAME) | 919-94-8 | – | – | – | – | – | – | – | – | delete value | – |
| Tert-butyl alcohol (2-methyl-2-propanol) | 994-05-8 | – | – | – | – | – | – | – | – | delete value | – |
| Tetrachlorobenzene, 1,2,3,4- | 75-65-0 | – | – | – | – | – | – | – | – | delete value | – |
| Tetrachlorobenzene, 1,2,3,5- | 634-66-2 | – | – | – | – | – | – | – | – | delete value | – |
| Tetrachlorobenzene, 1,2,4,5- | 634-90-2 | – | – | – | – | – | – | – | – | delete value | – |
| Tetrachloroethane, 1,1,2,2- | 95-94-3 | LC | I | – | – | 0.02 | I | delete value | – | – | – |
| Tetrachlorophenol, 2,3,4,5- | 79-34-5 | – | – | – | – | – | – | – | – | delete value | – |
| Tetrachlorophenol, 2,3,4,6- | 4901-51-3 | – | – | – | – | – | – | – | – | delete value | – |
| Tetrachlorophenol, 2,3,5,6- | 58-90-2 | – | – | – | – | – | – | – | – | delete value | – |
| Tetrachlorvinphos (Stirophos) | 935-95-5 | – | – | – | – | – | – | – | – | delete value | – |
| Tetraethyl dithiopyrophosphate (sulfotep) | 22248-79-9 | – | – | – | – | – | – | – | – | delete value | – |
| Tetraethyl lead | 3689-24-5 | – | – | – | – | – | – | – | – | delete value | – |
| Tetraethyl pyrophosphate (TEPP) | 78-00-2 | – | – | – | – | – | – | – | – | delete value | – |
| Tetraethylene glycol | 112-60-7 | – | – | – | – | – | – | – | – | delete value | – |

# Toxicity Factor changes for 2011 PCL table update

| Chemical of Concern | CAS | Class[1] | Ref[2] | SFo (mg/kg-day)$^{-1}$ | Ref[2] | RfD (mg/kg-day) | Ref[2] | URF (ug/m3)$^{-1}$ | Ref[2] | RfC[3] (mg/m$^3$) | Ref[2] |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Tetraoxadodecane, 2,5,8,11- | 112-49-2 | – | – | – | – | – | – | – | – | delete value | – |
| Thallium and compounds (as thallium chloride) | 7791-12-0 | – | – | – | – | – | – | – | – | delete value | – |
| Thiofanox | 39196-18-4 | – | – | – | – | – | – | – | – | delete value | – |
| Thiram | 137-26-8 | – | – | – | – | – | – | – | – | delete value | – |
| Tin | 7440-31-5 | – | – | – | – | – | – | – | – | delete value | – |
| Toluenediamine, 2,4- | 95-80-7 | – | – | – | – | – | – | – | – | delete value | – |
| TP Silvex, 2,4,5- | 93-72-1 | – | – | – | – | – | – | – | – | delete value | – |
| Triaminotrinitrobenzene (TATB) | 3058-38-6 | – | – | – | – | – | – | – | – | delete value | – |
| Tributyltin oxide | 56-35-9 | – | – | – | – | – | – | – | – | delete value | – |
| Trichlorobenzene, 1,2,3- | 87-61-6 | – | – | – | – | – | – | – | – | 0.002 | T |
| Trichlorobenzene, 1,2,4- | 120-82-1 | LC | PPRTV | – | – | – | – | – | – | – | – |
| Trichlorobenzene, 1,3,5- | 108-70-3 | – | – | – | – | – | – | – | – | 0.002 | T |
| Trichlorofluoromethane | 75-69-4 | – | – | – | – | – | – | – | – | delete value | – |
| Trichlorophenol, 2,3,4- | 15950-66-0 | – | – | – | – | – | – | – | – | delete value | – |
| Trichlorophenol, 2,3,5- | 933-78-8 | – | – | – | – | – | – | – | – | delete value | – |
| Trichlorophenol, 2,3,6- | 933-75-5 | – | – | – | – | – | – | – | – | delete value | – |
| Trichlorophenol, 2,4,5- | 95-95-4 | – | – | – | – | – | – | – | – | delete value | – |
| Trichlorophenol, 3,4,5- | 609-19-8 | – | – | – | – | – | – | – | – | delete value | – |
| Trichlorophenoxyacetic acid, 2,4,5- | 93-76-5 | – | – | – | – | – | – | – | – | delete value | – |
| Trichloropropane, 1,1,2- | 598-77-6 | – | – | – | – | – | – | – | – | 0.0003 | I |
| Trichloropropane, 1,2,3- | 96-18-4 | LC | I | – | – | – | – | – | – | 0.0003 | – |
| Triethanolamine | 102-71-6 | – | – | – | – | – | – | – | – | delete value | – |
| Trifluralin | 1582-09-8 | – | – | – | – | – | – | – | – | delete value | – |
| Trimethylbenzene, 1,2,4- | 95-63-6 | – | – | – | – | 0.05 | N | – | – | – | – |
| Trimethylbenzene, 1,3,5- | 108-67-8 | – | – | – | – | – | PPRTV | – | – | 0.006 | PPRTV |
| Trinitrophenylmethylnitramine (tetryl; nitramine) | 479-45-8 | – | – | – | – | – | – | – | – | delete value | – |
| Trinitrotoluene, 2,4,6- | 118-96-7 | – | – | – | – | – | – | – | – | delete value | – |

# Toxicity Factor changes for 2011 PCL table update

| Chemical of Concern | CAS | Class[1] | Ref[2] | SFo (mg/kg-day)$^{-1}$ | Ref[2] | RfD (mg/kg-day) | Ref[2] | URF (ug/m3)$^{-1}$ | Ref[2] | RfC[3] (mg/m$^3$) | Ref[2] |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Vanadium | 7440-62-2 | – | – | – | – | – | – | – | – | 0.0001 | A |

# Toxicity Factor changes for 2011 PCL table update

| Chemical of Concern | CAS | Class[1] | Ref[2] | SFo (mg/kg-day)$^{-1}$ | Ref[2] | RfD (mg/kg-day) | Ref[2] | URF (ug/m3)$^{-1}$ | Ref[2] | RfC[3] (mg/m$^3$) | Ref[2] |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Vinylcyclohexane | 695-12-5 | – | – | – | – | – | – | – | – | delete value | – |
| Warfarin | 81-81-2 | – | – | – | – | – | – | – | – | delete value | – |
| 6 C aliphatics (TPH) | NA | – | – | – | – | – | – | – | – | 0.67 | – |
| >6-8 C aliphatics (TPH) | NA | – | – | – | – | – | – | – | – | 0.67 | – |
| >8-10 C aliphatics (TPH) | NA | – | – | – | – | – | MA DEP | – | – | 0.5 | T |
| >10-12 C aliphatics (TPH) | NA | – | – | – | – | – | MA DEP | – | – | 0.5 | T |
| >12-16 C aliphatics (TPH) | NA | – | – | – | – | – | MA DEP | – | – | 0.5 | T |
| >16-21 C aliphatics (TPH) | NA | – | – | – | – | – | MA DEP | – | – | – | – |
| >7-8 C aromatics (TPH) | NA | – | – | – | – | – | – | – | – | 1.9 | – |

**For questions on toxicity factors, contact the Toxicology Section at 877-992-8370.**

**Footnotes**

**1** 2005 carcinogen guideline class descriptors: LC = likely to be carcinogenic to humans; SEC = suggestive evidence of carcinogenic potential; NLC = not likely to be carcinogenic to humans; IIACP = inadequate information to assess carcinogenic potential. These descriptors may be specific to the exposure pathway for which a carcinogenic toxicity factor was developed.

**2** Reference (Ref): A = ATSDR chronic MRL; CU = Cornell University Pesticide Management Education Program; EPA-OP = EPA Office of Pesticide Programs; H = HEAST, July, 1997; I = IRIS; MA DEP = Massachusetts Department of Environmental Protection; N = NCEA; NYSDOH = New York State Department of Health; OEHHA = Cal/EPA Office of Environmental; PPRTV = EPA Provisional Peer Reviewed Toxicity Value; T = TCEQ Toxicology Division.

**3** RS-ESL values have been rescinded by the Toxicology Division as more scientifically rigorous methods are available for the derivation of inhalation toxicity factors which impact the setting of regulatory standards (i.e., TRRP PCLs). Consequently, there are no RS-ESLs to serve as a source of inhalation toxicity factors for TRRP, and RS-ESLs have been removed from the Toxicity Factors table. Any newly developed inhalation values by the Toxicology Division will not be differentially termed as "RS-ESLs," but will be referred to as an RfC or URF (with "T" noted as the source for the Toxicology Division) and undergo a more scientifically rigorous derivation process. If inhalation may be the driving exposure pathway for a chemical in a particular instance (e.g., groundwater-to-air or subsurface-soil-to-air for class 3 groundwater) but no inhalation toxicity factors are listed in the TRRP Toxicity Factors table, then contact the TCEQ to request that an inhalation toxicity factor and PCLs be derived. See the general process for requesting a PCL at http://www.tceq.texas.gov/remediation/trrp/pclrequests.html.

This table shows the 2011 changes to the PCL tables

end of workheet