

DMLs are calculated from the criterion LTAs reflected in the LTA worksheet. Agricultural mineral calculations are found in the Ag tab.

OWQScreen-SVersion
3.35**DML Computation
GLENPOOL PIPELINE
BREAKOUTSTATION**

Outfall		Daily Max Limits (DMLs)						
Parameters	Units	No. of Samples per Month (N)	Eqn 30 Aesthetics	PPWS		F&WP	Fish Consump	
				Eqn 31 Raw Water	Eqn 32 Human Hlth FF & Water	Eqn 33 Aquatic Toxicity	Eqn 34 Human Hlth Fish Flesh	
PART A								
Ammonia	mg/l							
PART B								
Color								
Fluoride (at 90 deg F)	mg/l							
Nitrate-Nitrite (as N)	mg/l							
Phosphorus (as P) (Scenic Rivers only)	mg/l							
Barium, total	mg/l							
Manganese, total								
METALS and CYANIDE								
Antimony, total								
Arsenic, total	ug/l							
Beryllium, total								
Cadmium, total	ug/l							
Chromium, total	ug/l							
Copper, total	ug/l							
Lead, total	ug/l	3		246.86	18.94	327.33	94.72	
Mercury, total	ug/l							
Nickel, total	ug/l							
Selenium, total	ug/l							
Silver, total	ug/l							
Thallium, total	ug/l							
Zinc, total	ug/l							
Cyanide, total	ug/l							
DIOXINS								
2,3,7,8-Tetrachlorodibenzo-P Dioxin	ug/l							
GC/MS FRACTION - VOLATILE COMPOUNDS								
Acrolein	ug/l							
Acrylonitrile	ug/l							
Benzene	ug/l							
Bromoform								
Carbon Tetrachloride	ug/l							
Chlorobenzene								
Chlorodibromomethane								
Chloroethane								
2-Chloroethylvinyl Ether								
Chloroform	ug/l							
Dichlorobromomethane	ug/l							
1,1-Dichloroethane								
1,2-Dichloroethane								
1,1-Dichloroethylene								
1,2-Dichloropropane								
1,3-Dichloropropylene								
Ethylbenzene	ug/l							
Methyl Bromide								
Methyl Chloride								
Methylene Chloride								
1,1,2,2-Tetrachloroethane								
Tetrachloroethylene	ug/l							
Toluene	ug/l							
1,2-Trans-dichloroethene								
1,1,1-Trichloroethane	ug/l							
1,1,2-Trichloroethane								
Trichloroethylene								
Vinyl Chloride								
GC/MS FRACTION - ACID COMPOUNDS								
2-Chlorophenol								
2,4-Dichlorophenol								
2,4-Dimethylphenol								
4,6-Dinitro-o-cresol								
2,4-Dinitrophenol								
2-Nitrophenol								

Daily Max Limit Computation

Outfall		Daily Max Limits (DMLs)						
Parameters	Units	No. of Samples per Month (N)	Eqn 30 Aesthetics	PPWS		F&WP	Fish Consump	
				Eqn 31 Raw Water	Eqn 32 Human Hlth FF & Water	Eqn 33 Aquatic Toxicity	Eqn 34 Human Hlth Fish Flesh	
4-Nitrophenol								
p-Chloro-m-cresol								
Pentachlorophenol	ug/l							
Phenol	ug/l							
2,4,6-Trichlorophenol								
GC/MS FRACTION - BASE/NEUTRAL COMPOUNDS								
Acenaphthene								
Acenaphthylene								
Anthracene								
Benzidine	ug/l							
Benzo (a) Anthracene								
Benzo (a) Pyrene								
3,4-Benzofluoranthene								
Benzo (ghi) Perylene								
Benzo (k) Fluoranthene								
Bis (2-Chloroethoxy) Methane								
Bis (2-Chloroethyl) Ether								
Bis (2-Chloroisopropyl) Ether								
Bis (2-Ethylhexyl) Phthalate	ug/l							
4-Bromophenyl Phenyl Ether								
Butylbenzyl Phthalate	ug/l							
2-Chloronaphthalene								
4-Chlorophenyl Phenyl Ether								
Chrysene								
Dibenzo (a,h) Anthracene								
1,2-Dichlorobenzene								
1,3-Dichlorobenzene								
1,4-Dichlorobenzene								
3,3'-Dichlorobenzidine								
Diethyl Phthalate	ug/l							
Dimethyl Phthalate	ug/l							
Di-n-butyl Phthalate	ug/l							
2,4-Dinitrotoluene								
2,6-Dinitrotoluene								
Di-n-octyl Phthalate								
1,2-Diphenylhydrazine (as Azobenzene)								
Fluoranthene								
Fluorene								
Hexachlorobenzene	ug/l							
Hexachlorobutadiene								
Hexachlorocyclopentadiene								
Hexachloroethane								
Indeno (1,2,3-cd) Pyrene								
Isophorone								
Naphthalene								
Nitrobenzene								
n-Nitrosodimethylamine								
n-Nitrosodi-n-propylamine								
n-Nitrosodiphenylamine								
Phenanthrene								
Pyrene								
1,2,4-Trichlorobenzene								
GC/MS FRACTION - PESTICIDES								
Aldrin	ug/l							
alpha-BHC								
beta-BHC								
gamma-BHC	ug/l							
delta-BHC								
Chlordane	ug/l							
4,4'-DDT	ug/l							
4,4'-DDE								
4,4'-DDD	ug/l							
Dieldrin	ug/l							
Endosulfan, total ($\alpha + \beta$)	ug/l							
Endosulfan Sulfate								
Endrin	ug/l							
Endrin Aldehyde								
Heptachlor	ug/l							
Heptachlor Epoxide								

Daily Max Limit Computation

Outfall		Daily Max Limits (DMLs)						
Parameters	Units	No. of Samples per Month (N)	Eqn 30 Aesthetics	PPWS		F&WP	Fish Consump	
				Eqn 31 Raw Water	Eqn 32 Human Hlth FF & Water	Eqn 33 Aquatic Toxicity	Eqn 34 Human Hlth Fish Flesh	
PCB-1242								
PCB-1254								
PCB-1221								
PCB-1232								
PCB-1248								
PCB-1260								
PCB-1016								
Toxaphene	ug/l							
ADDITIONAL PARAMETERS								
Chlorides						See AG Worksheet		
Sulfates						See AG Worksheet		
Total Dissolved Solids (TDS)						See AG Worksheet		
2,4,5-TP	ug/l							
2,4,6-Trinitotoluene	ug/l							
2,4-D	ug/l							
Bis-chloromethyl ether								
Chlorpyrifos (Dursban)	ug/l							
Demeton	ug/l							
Detergents, total	mg/l							
Diazinon	ug/l							
Dinitrophenols								
Guthion	ug/l							
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	ug/l							
Malathion	ug/l							
Methoxychlor	ug/l							
Methylene Blue Active Substances	ug/l							
Mirex	ug/l							
n-Nitrosodibutylamine								
n-Nitrosodiethylamine								
n-Nitrosopyrrolidine								
Nonylphenol (mixed isomers)	ug/l							
Parathion	ug/l							
PCB's, total	ug/l							
Pentachlorobenzene								
Perchlorate	ug/l							
Phthalate Esters (except Butylbenzyl)	ug/l							
1,2,4,5-Tetrachlorobenzene								
2,4,5-Trichlorophenol								
Equations Used to Calculate Daily Maximum Limits (DMLs)								
Criterion	Eqn No.	DML Equation						
Aesthetics	Eqn 30	$DML_{AES} = LTA_{AES} \times (EXP(2.326(LN(1 + CV^2))^{1/2} - 0.5 LN(1 + CV^2)) / EXP(1.645(LN(1 + CV^2/N))^{1/2} - 0.5 LN(1 + CV^2/N)))$						
Raw Water	Eqn 31	$DML_{RAW} = LTA_{RAW} \times (EXP(2.326(LN(1 + CV^2))^{1/2} - 0.5 LN(1 + CV^2)) / EXP(1.645(LN(1 + CV^2/N))^{1/2} - 0.5 LN(1 + CV^2/N)))$						
HH / Fish Flesh and Water	Eqn 32	$DML_{FFW} = LTA_{FFW} \times (EXP(2.326(LN(1 + CV^2))^{1/2} - 0.5 LN(1 + CV^2)) / EXP(1.645(LN(1 + CV^2/N))^{1/2} - 0.5 LN(1 + CV^2/N)))$						
Aq Toxicity	Eqn 33	$DML_{TOX} = MIN(LTA_A, LTA_C) \times EXP(2.326(LN(1 + CV^2))^{1/2} - 0.5 LN(1 + CV^2))$						
HH / Fish Flesh	Eqn 34	$DML_{FF} = LTA_{FF} \times (EXP(2.326(LN(1 + CV^2))^{1/2} - 0.5 LN(1 + CV^2)) / EXP(1.645(LN(1 + CV^2/N))^{1/2} - 0.5 LN(1 + CV^2/N)))$						