

OWQScreen-SVersion
3.35

Wasteload Allocation (WLA)

GLENPOOL PIPELINE BREAKOUTSTATION

Where a pollutant screen indicates there is RP to exceed one or more OWQS numerical criteria, wasteload allocations are calculated for those pollutants. A PWS flag (◀) for a pollutant means there is a PWS intake w/in 5 miles downstream of the point of discharge, a human health criterion (either FFW or FF) applies, and there is a measurable level of the pollutant in the discharge. In such cases, OAC 252:690-3-68 (for FF) or 252:690-3-75 (for FFW) requires the WLA be set equal to the respective human health criterion, and WQ-based limits are required, even if there is no RP. If the background conc exceeds an applicable criterion and there is RP, then the WLA is set equal to the affected criterion. Agricultural mineral calculations are found in the Ag tab.

Outfall		WLAs for Public & Private Water Supply/Fish & Wildlife Propagation/Fish Consumption Beneficial Uses														
Parameters	Units	Eqn 10 Aesthetics	PPWS		F&WP		Fish Consump	C _b > OWQS Criteria?						PWS FLAG		
			Eqn 11 Raw Water	Eqn 12 Human Hlth FF & Water	Aquatic Toxicity			Eqn 17 Human Hlth Fish Flesh	A E S	R A W	F F W				F	
					Eqn 13 Acute	Eqns 14 - 16 Chronic										
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	mg/l															
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		130.30	10.00	622,690.95	199.28	50.00		NO	NO	NO	NO	NO			
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																
4-Nitrophenol																
p-Chloro-m-cresol																
Pentachlorophenol	ug/l															
Phenol	ug/l															

Outfall	WLAs for Public & Private Water Supply/Fish & Wildlife Propagation/Fish Consumption Beneficial Uses														
Parameters	Units	Eqn 10 Aesthetics	PPWS		F&WP		Fish Consump	C _b > OWQS Criteria?						PWS FLAG	
			Eqn 11 Raw Water	Eqn 12 Human Hlth FF & Water	Aquatic Toxicity		Eqn 17 Human Hlth Fish Flesh	A E S	R A W	F F W	A	C	F F		
					Eqn 13 Acute	Eqns 14 - 16 Chronic									
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 (α + β)	ug/l														
Endosulfan Sulfate															
Endrin	ug/l														
Endrin Aldehyde															
Heptachlor	ug/l														
Heptachlor Epoxide															
PCB-1242															
PCB-1254															
PCB-1221															
PCB-1232															
PCB-1248															
PCB-1260															
PCB-1016															
Toxaphene	ua/l														

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Outfall		WLAs for Public & Private Water Supply/Fish & Wildlife Propagation/Fish Consumption Beneficial Uses														
Parameters	Units	Eqn 10 Aesthetics	PPWS		F&WP		Fish Consump	C _b > OWQS Criteria?						PWS FLAG		
			Eqn 11 Raw Water	Eqn 12 Human Hlth FF & Water	Aquatic Toxicity	Eqn 17 Human Hlth Fish Flesh	A	R	F							
					Eqn 13 Acute		Eqns 14 - 16 Chronic	E	A	F	A	C	F			
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 Instream Pollutant Concentrations after Mixing (C _d) *		
Criterion	Eqn No.	C _d Equation
Aesthetics	Eqn 10	$WLA_{AES} = C_{AES} + ((C_{AES} - C_b) / Q^*)$
Raw Water	Eqn 11	$WLA_{RAW} = C_{RAW} + ((C_{RAW} - C_b) / Q^{**})$
HH / Fish Flesh and Water	Eqn 12	$WLA_{FFW} = C_{FFW} + ((C_{FFW} - C_b) / Q^{**})$
Acute Toxicity	Eqn 13	$WLA_A = C_b + (64.63 (C_A - C_b) / Q_e)$
Chronic Toxicity	Q* <= 0.1823	Eqn 14
	0.1823 < Q* < 0.3333	Eqn 15
	Q* >= 0.3333	Eqn 16
HH / Fish Flesh	Eqn 17	$WLA_{FF} = C_{FF} + ((C_{FF} - C_b) / Q^{**})$

* Where background conc C_b is greater than OWQS numerical criterion, WLA is set equal to numerical criterion.