

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
1	CALCULATIONS OF ARKANSAS WATER QUALITY-BASED EFFLUENT LIMITATIONS															
2	The spreadsheet logic will function correctly when ALL yellow cells with "?" have data entered. For an Arkansas River/Stream															
3	Do not enter data in yellow cells marked "Reserved". White cells marked "Reserved" have comp (Reserved)															
4	STEP 1: INPUT TWO LETTER CODE FOR ECOREGION (Use Code at Right)		GC													
5																
6																
7	FACILITY															
8																
9	Codes & TSS for Ecoregions and Large Rivers															
10	Permittee															
11	NPDES Permit No.															
12	Outfall No.(s)															
13	Plant Effluent Flow (MGD)															
14	Plant Effluent Flow (cfs)															
15	RECEIVING STREAM															
16																
17	Is this a Large River from the list at right? (enter "1" if yes, "0" if no; make entry as a number)															
18	Name of Receiving Stream:															
19																
20	Is this a lake or reservoir? (enter '1' if yes, '0' = no; make entry as a number)															
21	(Reserved)															
22	(Reserved) DO NOT INPUT DATA INTO CELL H22, H23 & H24....LEAVE BLANK→ ?															
23	(Reserved)															
24	(Reserved)															
25	(Reserved)															
26	(Reserved)															
27	(Reserved)															
28																
29	Ecoregion TSS (mg/l) (For Large River, See List to Right)															
30	Ecoregion Hardness (mg/l) For Large Rivers Ecoregion TSS and Hardness may not apply															
31	Enter 7Q10 (cfs) as the Critical Flow (Reserved)															
32	Long Term Ave / Harmonic Mean Flow (cfs)															
33	Using Diffusers (Yes/No)															
34	pH (Avg)															
35	Percent (%) of Critical Flow for Chronic Criteria															
36	Percent (%) of Critical Flow for Acute Criteria															
37	Water Effect Ratio (WER)															
38	Ave Monthly Limit LTA Multiplier (Ref: page 103 TSD for WQ-Based Toxics Control)															
39	Max Daily Limit LTA Multiplier (Ref: " " " ")															
40	Max Daily Limit LTA Multiplier for Human Health (Ref: 2009 CPP; Section 5.27.2)															

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
41	STEP 2:	INPUT AMBIENT AND EFFLUENT DATA														
42		CALCULATE IN-STREAM WASTE CONCENTRATIONS														
43																
44	DATA INPUT			For less than 20 data points enter geometric mean concentration as micro-gram per liter (ug/l or ppb).												
45				For 20 or more data points in set enter highest concentration as micro-gram per liter (ug/l or ppb).												
46																
47				Effluent value reported as "< detection level" (DL) but the DL is greater than MQL, the 1/2 DL is used.												
48				Effluent value reported as "< detection level" (DL) and the DL is smaller than MQL, "0" is used.												
49				If a firm value is reported, even less than MQL, the reported value is used.												
50																
51				The following formulae is used to calculate the Instream Waste Concentration (IWC)												
52				(Please refer to CPP for detail)												
53				$IWC = [(F*Qa*Cb) + (Qe*2.13*Ce)] / (F*Qa + Qe)$												
54				Where:												
55				IWC = Instream Waste Concentration												
56				F = Fraction of stream allowed for mixing												
57				Ce = Reported concentration in effluent												
58				Cb = Ambient stream concentration upstream of discharge												
59				Qe = Plant effluent flow												
60				Qb = Critical low flow of stream at discharge point expressed as the 7Q10 or harmonic mean flow for human health criteria												
61				Upstream Flow (Qb)= (% of 7Q10) X 7Q10 for Chronic and Acute												
62																
63	The following formulae convert metals reported in total form to dissolved form if criteria are in dissolved form															
64																
65	$Kp = Kpo * (TSS**a)$					Kp = Linear partition coefficient; Kpo and a can be found in table below										
66	$C/Ct = 1 / (1 + Kp*TSS* 10^{-6})$					TSS = Total suspended solids concentration found in receiving stream (or in effluent for intermittent stream)										
67	Total Metal Criteria (Ct) = Cr / (C/Ct)					C/Ct = Fraction of metal dissolved; and Cr = Dissolved criteria value										
68																
69		*Stream Linear Partition Coefficient (Insert "Dissolved" Conc in Column B to convert to "Total")										Lake Linear Partition Coefficient				
		Dissolved Value in Stream		Kpo	alpha (a)	Kp	C/Ct	Total Value				Kpo	alpha (a)	Kp	C/Ct	Total Value
70	Total Metals															
71																
73	Cadmium			4000000	-1.13	582706.889	0.237818469	0.00				3520000.00	-0.92	733514.98	0.1986361	0
74	Chromium(3)			3360000	-0.93	688338.365	0.208948818	0.00				2170000.00	-0.27	1369499.28	0.1172024	0
75	Copper			1040000	-0.74	294554.016	0.381672529	0.00				2850000.00	-0.9	614495.12	0.2283249	0
76	Lead			2800000	-0.8	715925.58	0.202527926	0.00				2040000.00	-0.53	826490.64	0.1803199	0
77	Mercury			2900000	-1.14	415321.613	0.30448177	0.00				1970000.00	-1.17	268066.09	0.4041443	0
78	Nickel			490000	-0.57	185433.992	0.495077211	0.00				2210000.00	-0.76	604946.03	0.2310962	0
79	Zinc			1250000	-0.7	379014.766	0.324193117	0.00				3340000.00	-0.68	1047851.74	0.1478593	0
80	Silver			2400000	-1.03	414607.994	0.30484608	0.00				2400000.00	-1.03	414607.99	0.3048461	0
81		<i>*Note: Use this section to convert lab concentrations shown as "dissolved" to "total"</i>														
82												Dissolved	Total			

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P		
83	The following formulas are used to calculate water quality criteria based on Regulation No. 2 (Act 472 of Ark 1949)										WQC (ug/l)	WQC(ug/l)						
84	Cadmium			Acute			WER X CF1 X e(1.128[ln(hardness)]-3.828)				0.93		CF1 = 1.136672 - [0.041838*ln(hardness)]					
85				Chronic			WER X CF2 X e(0.7852[ln(hardness)]-3.490)				0.40		CF2 = 1.101672 - [0.041838*ln(hardness)]					
86																		
87	Chromium Tri			Acute			WER X 0.316 X e(0.819[ln(hardness)]+3.688)				193.46							
88				Chronic			WER X 0.86 X e(0.819[ln(hardness)]+1.561)				62.76							
89																		
90	Chromium Hex			Acute			WER X 0.982 X 16				15.71							
91				Chronic			WER X 11 X 0.962				10.58							
92																		
93	Copper			Acute			WER X 0.96 X e(0.9422[ln(hardness)]-1.464)				5.13							
94				Chronic			WER X 0.96 X e(0.8545[ln(hardness)]-1.465)				3.82							
95																		
96	Lead			Acute			WER X e(1.273[ln(hardness)]-1.460)*CF3				15.77		CF3 = 1.46203 - [0.145712*ln(hardness)]					
97				Chronic			WER X e(1.273[ln(hardness)]-4.705)*CF3				0.61							
98																		
99	Mercury			Acute			WER X 0.85 X 2.4				2.04							
100				Chronic			WER X 0.012				0.01							
101																		
102	Nickel			Acute			WER X 0.998 X e(0.8460[ln(hardness)]+3.3612)				482.14							
103				Chronic			WER X 0.997 X e(0.8460[ln(hardness)]+1.1645)				53.55							
104																		
105	Zinc			Acute			WER X 0.978 X e(0.8473[ln(hardness)]+0.8604)				38.92							
106				Chronic			WER X 0.986 X e(0.8473[ln(hardness)]+0.7614)				35.54							
107																		
108	Silver			Acute			WER X 0.85 X e(1.72[ln(hardness)]-6.52)				0.39							
109																		
110	Cyanide			Acute			WER X 22.36				22.36							
111				Chronic			WER X 5.2				5.20							
118																		
119	Selenium			Acute			WER X 20				20.00							
120				Chronic			WER X 5				5.00							
121																		
122	The following formulas are applicable to the Jet Stream Model for lakes for calculating the Dilution Factor (DF):																	
123				DF = ((2.8 * D * 3.1416^0.5) / X)			where DF is % of effluent at distance X, D is the diameter of the outfall pipe											
124				and X is aquatic life criteria--25 feet for ZID; 100 feet for mixing zone; human health criteria 200 feet for mixing zone.														
125				DF =	#VALUE!	Acute	#VALUE!	Chronic	#VALUE!	Bioacc.								
126																		

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
127	The following formulas are used to calculate the instream waste concentration (IWC) for each pollutant:															
128																
129			IWC = [(Frac X Critical Flow X Cb) + (2.13 X Ce X Qd)] / [Frac X Critical Flow + Qd] where the critical flow is the 7Q10 except for lakes with the Jet Stream Model.													
130			Use EPA Statistical Factor of 2.13 for less than 20 Ce data points with the Geometric Mean of the Ce's; use 1 for more than 20 data points with the maximum Ce.													
131			IWC = (DF X Ce) + Cb for lakes with Jet Stream Model.													
132	POLLUTANTS		Number of Data points	MQL	EPA Statistical	Background Conc. Cb ug/l	Effluent Conc. Ce ug/l	Domestic Supply IWC ug/l	Acute Aquatic IWC ug/l	Chronic Aquatic IWC ug/l	Bioacc. IWC ug/l	[Reserved]	Arkansas Acute Aquatic	Arkansas Chronic Aquatic	Arkansas Bioacc.	EPA Bioacc.
133				ug/l	Factor								ug/l	ug/l	ug/l	ug/l
137	METALS AND CYANIDE															
138	1. Antimony Total		1	60	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999.00	9999999.00	9999999	6*
139	2. Arsenic Total		1	0.5	2.13	0.59	0.9	0.61	0.91	0.68	0.60	9999999	9999999.00	9999999.00	9999999	1.4
140	3. Beryllium Total		1	0.5	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999.00	9999999.00	4	4
141	4. Cadmium Total		1	1	2.13	0	0	0.00	0.00	0.00	0.00	9999999	3.91	1.69	9999999	5*
142	6. Chromium (Tri)		1	10	2.13	0	0	0.00	0.00	0.00	0.00	9999999	925.86	300.34	9999999	100*
143	7. Chromium (hex)		1	10	2.13	0	0	0.00	0.00	0.00	0.00	9999999	15.71	10.58	9999999	100*
144	8. Copper Total		25	0.5	1	1.08	8.3	1.22	2.82	1.59	1.13	9999999	13.44	10.02	9999999	13,000
145	9. Lead Total		1	0.5	2.13	0	0	0.00	0.00	0.00	0.00	9999999	77.87	3.03	9999999	50
146	10. Mercury Total		1	0.005	2.13	0	0.00136	0.00005	0.00070	0.00021	0.00002	9999999	6.70	0.012	9999999	2*
147	12. Nickel Total		1	0.5	2.13	1.19	1.8	1.24	1.83	1.38	1.21	9999999	973.88	108.16	9999999	46,000
148	13. Selenium Total		1	5	2.13	0	0	0.00	0.00	0.00	0.00	9999999	20.00	5.00	9999999	42,000
149	14. Silver Total		1	0.5	2.13	0	0	0.00	0.00	0.00	0.00	9999999	1.27	9999999.00	9999999	-
150	15. Thallium Total		1	0.5	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999.00	9999999.00	9999999	4.7
151	16. Zinc Total		104	20	1	2.77	39	3.45	11.52	5.34	3.00	9999999	120.05	109.63	9999999	260,000
152	129. Phenols, Total		1	5	2.13	0	5	0.20	2.57	0.76	0.07	9999999	9999999.00	9999999.00	9999999	-
153	17. Cyanide Total		1	10	2.13	0	0	0.00	0.00	0.00	0.00	9999999	22.36	5.2	9999999	4,000
156	DIOXIN															
157	18. 2-3-7-8-TCDD		1	0.00001	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	1.00E-06	5.10E-08
159	VOLATILE COMPOUNDS															
160	19. Acrolein		1	50	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	4,000
161	20. Acrylonitrile		1	20	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	70
162	21. Benzene		1	10	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	
163	22. Bromoform		1	10	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	1,200
164	23. Carbon Tetrachloride		1	2	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	5*
165	24. Chlorobenzene		1	10	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	100*
166	25. Chlorodibromomethane		1	10	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	210
167	26. Chloroethane		1	50	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	
168	27. 2-Chloroethylvinyl ether		1	10	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	
169	28. Chloroform		1	10	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	20,000
170	29. Dichlorobromomethane		1	10	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	270
171	30. 1-1-Dichloroethane		1	10	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	
172	31. 1-2-Dichloroethane		1	10	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	5*
173	32. 1-1-Dichlorethylene		1	10	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	7*
174	33. 1,2 Dichloropropane		1	10	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	310
175	34. 1,3 Dichloropropylene		1	10	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	
176	35. Ethylbenzene		1	10	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	700*
177	37. Methyl Chloride		1	50	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	
178	36. Methyl bromide		1	50	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	100,000
179	38. Methylene chloride		1	20	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	10,000
180	39. 1-1-2-2-Tetrachloroethane		1	10	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	30
181	40. Tetrachloroethylene		1	10	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	5*

*Primary Drinking Water MCL

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
182	41. Toluene		1	10	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	1,000*
183	42. 1,2-trans-dichloroethyler		1	10	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	40,000
184	44. 1-1-2-Trichloroethane		1	10	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	5*
185	43. 1-1-1-Trichloroethane		1	10	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	200*
186	45. Trichloroethylene		1	10	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	5*
187	46. Vinyl Chloride		1	10	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	2*
188																
189	ACID COMPOUNDS															
190	47. 2-Chlorophenol		1	10	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	8,000
191	48. 2-4-Dichlorophenol		1	10	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	600
192	49. 2-4 Dimethylphenol		1	10	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	30,000
193	50. 4,6-Dinitro-o-Cresol		1	50	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	
194	51. 2,4-Dinitrophenol		1	50	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	3,000
195	52.-53. Nitrophenols		1	20	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	
196	54. 4 Chloro-3-methylpheno		1	10	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	
197	55. Pentachlorophenol		1	5	2.13	0	0	0.00	0.00	0.00	0.00	9999999	0.01	0.01	9999999	0.4
198	56. Phenol		1	10	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	3,000,000
199	57. 2-4-6-Trichlorophenol		1	10	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	28
200																
201						Ambient Background Conc.	Effluent Conc.	Domestic Supply	Acute Aquatic	Chronic Aquatic	Human Health	[Reserved]	Acute Aquatic Criteria	Chronic Aquatic Criteria	Human Health Criteria	
202	BASE/NEUTRAL COMPOUNDS				2.13	Cb	Ce	IWC	IWC	IWC	IWC		ug/l	ug/l	ug/l	
203	58. Acenaphthene		1	10	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	900
204	59. Acenaphthylene		1	10	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	
205	60. Anthracene		1	10	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	4,000
206	61. Benzidine		1	50	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	0.11
207	62. Benzo(a) anthracene		1	5	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	0.013
208	63. Benzo(a) pyrene		1	5	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	0.0013
209	64. 3,4-benzoflouranthene		1	10	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	0.013
210	65. Benzo(g,h,i)perylene		1	20	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	
211	66. Benzo(k) fluoranthene		1	5	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	0.13
212	67. Bis(2-chloroethoxy)meth		1	10	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	
213	68. Bis(2-chloroethly) Ether		1	10	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	22
214	69. Bis(2-Chloroisopropyl) e		1	10	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	
215	70. Bis(2-ethylhexyl)phthala		1	10	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	3.7
216	71. 4-Bromophenyl phenyl e		1	10	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	
217	72. Butylbenzy phthalate		1	10	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	1
218	73. 2-chloronapthalene		1	10	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	10,000
219	74. 4-chlorophenyl phenyl e		1	10	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	
220	75. Chrysene		1	5	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	1.3
221	76. Dibenzo(a,h)anthracene		1	5	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	0.0013
222	77-79. Dichlorobenzene(1,2		1	10	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	9,000
223	80. 3,3' Dichlorobenzidine		1	5	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	1.5
224	81. Diethyl Phthalate		1	10	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	6,000
225	82. Dimethyl phthalate		1	10	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	20,000
226	83. Di-n-Butyl phthalate		1	10	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	300
227	84. 2-4-Dinitrotoluene		1	10	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	17
228	85. 2-6-Dinitrotoluene		1	10	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	
229	86. Di-n-octyl phthalate		1	10	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	
230	87. 1,2-diphenylhydrazine		1	20	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	2
231	88. Fluoranthene		1	10	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	200
232	89. Fluorene		1	10	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	700
233	90. Hexachlorobenzene		1	5	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	0.00079
234	91. Hexachlorobutadiene		1	10	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	0.1
235	92. Hexachlorocyclopentadi		1	10	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	40
236	93. Hexachloroethane		1	20	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	1

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
237	Hexachlorocyclohexane		1		2.13	0	0	0.00	0.00	0.00	0.00	9999999	2	0.08	0.0373	0.1
238	94. Indeno(1,2,3-cd)pyrene		1	5	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	0.013
239	95. Isophorone		1	10	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	18,000
240	96. Naphthalene		1	10	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	
241	97. Nitrobenzene		1	10	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	6,000
242	98. N-nitrosodimethylamine		1	50	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	30
243	99. N-nitrosodi-n-propylamine		1	20	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	5.1
244	100. N-nitrosodiphenylamine		1	20	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	60
245	101. Phenanthrene		1	10	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	
246	103. 1,2,4-trichlorobenzene		1	10	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	0.76
247																
248	PESTICIDES															
249	104. Aldrin		1	0.01	2.13	0	0	0.00	0.00	0.00	0.00	9999999	3	9999999	9999999	7.7E-07
250	105. Alpha-BHC		1	0.05	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	
251	106. Beta-BHC		1	0.05	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	
252	107. Gamma-BHC		1	0.05	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	
253	108. Delta-BHC		1	0.05	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	
254	109. Chlordane		1	0.2	2.13	0	0	0.00	0.00	0.00	0.00	9999999	2.4	0.0043	0.005	0.0032
255	110. 4,4'-DDT		1	0.02	2.13	0	0	0.00	0.00	0.00	0.00	9999999	1.1	0.001	9999999	0.0003
256	111. 4,4'-DDE		1	0.1	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	0.00018
257	112. 4,4'-DDD		1	0.1	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	0.0012
258	113. Dieldrin		1	0.02	2.13	0	0	0.00	0.00	0.00	0.00	9999999	2.5	0.0019	0.0012	0.000012
259	114. Alpha-endosulfan		1	0.01	2.13	0	0	0.00	0.00	0.00	0.00	9999999	0.22	0.056	9999999	300
260	115. Beta-endosulfan		1	0.02	2.13	0	0	0.00	0.00	0.00	0.00	9999999	0.22	0.056	9999999	400
261	116. Endosulfan sulfate		1	0.1	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	400
262	117. Endrin		1	0.02	2.13	0	0	0.00	0.00	0.00	0.00	9999999	0.18	0.0023	9999999	0.3
263	118. Endrin aldehyde		1	0.1	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	10
264	119. Heptachlor		1	0.01	2.13	0	0	0.00	0.00	0.00	0.00	9999999	0.52	0.0038	9999999	0.000059
265	120. Heptachlor epoxide		1	0.01	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	0.00032
266	121. PCB-1242		1	0.2	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999.00	0.014	0.0004	
267	122. PCB-1254		1	0.2	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999.00	0.014	0.0004	
268	123. PCB-1221		1	0.2	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999.00	0.014	0.0004	
269	124. PCB-1232		1	0.2	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999.00	0.014	0.0004	
270	125. PCB-1248		1	0.2	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999.00	0.014	0.0004	
271	126. PCB-1260		1	0.2	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999.00	0.014	0.0004	
272	127. PCB-1016		1	0.2	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999.00	0.014	0.0004	
273	128. Toxaphene		1	0.3	2.13	0	0	0.00	0.00	0.00	0.00	9999999	0.73	0.0002	0.0063	0.0071
274	130. Chlorpyrifos		1	0.07	2.13	0	0	0.00	0.00	0.00	0.00	9999999	0.083	0.041	9999999	
275																
276																
277																
278																

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
279	STEP 3:	APPLICABLE WATER QUALITY-BASED LIMITS														
280																
281																
282								ADEQ HUMAN HEALTH CRITERIA								
			Permit Daily Maximum	Permit Monthly Average	Permit Daily Maximum	Permit Monthly Average		Permit Daily Maximum	Permit Monthly Average	Permit Daily Maximum	Permit Monthly Average					
283	POLLUTANTS		ug/l	ug/l	lb/day	lb/day		ug/l	ug/l	lb/day	lb/day					
284			NO	NO	NO	NO		NO	NO	NO	NO					
285	Alpha-BHC		NO	NO	NO	NO										
286	Beta-BHC		NO	NO	NO	NO										
287	Gamma-BHC		NO	NO	NO	NO										
288	Delta-BHC		NO	NO	NO	NO										
289	Pentachlorophenol		NO	NO	NO	NO										
290	Aldrin		NO	NO	NO	NO										
291	Chlordane		NO	NO	NO	NO		NO	NO	NO	NO					
292	4,4'-DDT		NO	NO	NO	NO										
293	4,4'-DDE		NO	NO	NO	NO										
294	4,4'-DDD		NO	NO	NO	NO										
295	Dieldrin		NO	NO	NO	NO		NO	NO	NO	NO					
296	Alpha-endosulfan		NO	NO	NO	NO										
297	Beta-endosulfan		NO	NO	NO	NO										
298	Endosulfan sulfate		NO	NO	NO	NO										
299	Endrin		NO	NO	NO	NO										
300	Endrin aldehyde		NO	NO	NO	NO										
301	Heptachlor		NO	NO	NO	NO										
302	Heptachlor epoxide		NO	NO	NO	NO										
303	Toxaphene		NO	NO	NO	NO		NO	NO	NO	NO					
304	Chlorpyrifos		NO	NO	NO	NO										
305	Cadmium Total		NO	NO	NO	NO										
306	Chromium (hex)		NO	NO	NO	NO										
307	Copper Total		NO	NO	NO	NO										
308	Lead Total		NO	NO	NO	NO										
309	Mercury Total		NO	NO	NO	NO										
310	Nickel Total		NO	NO	NO	NO										
311	Selenium Total		NO	NO	NO	NO										
312	Silver Total		NO	NO	NO	NO										
313	Zinc Total		NO	NO	NO	NO										
314	Chromium (Tri)		NO	NO	NO	NO										
315	Cyanide Total		NO	NO	NO	NO										
316	Beryllium Total		NO	NO	NO	NO		NO	NO	NO	NO					
317	PCB-1242		NO	NO	NO	NO		NO	NO	NO	NO					
318	PCB-1254		NO	NO	NO	NO		NO	NO	NO	NO					
319	PCB-1221		NO	NO	NO	NO		NO	NO	NO	NO					
320	PCB-1232		NO	NO	NO	NO		NO	NO	NO	NO					
321	PCB-1248		NO	NO	NO	NO		NO	NO	NO	NO					
322	PCB-1260		NO	NO	NO	NO		NO	NO	NO	NO					
323	PCB-1016		NO	NO	NO	NO		NO	NO	NO	NO					
324	2-3-7-8-TCDD		NO	NO	NO	NO		NO	NO	NO	NO					