

	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												Codes & TSS for Ecoregions and Large Rivers					
8												Ouachita Mts. Eco (OM) =	2.0 mg/l	Arkansas (Ft. Smith to Dardanelle Dam		12.0 mg/l		
9	Permittee											Ozark Highlands Eco (OH) =	2.5 mg/l	Arkansas (Dardanelle Dam to Terry L&		10.5 mg/l		
10	NPDES Permit No.											Boston Mts. Eco (BM) =	1.3 mg/l	Arkansas (Terry L&D to L&D No. 5)		8.3 mg/l		
11	Outfall No.(s)											Ark River Valley Eco (AV) =	3.0 mg/l	Arkansas (L&D No. 5 to Mouth)		9.0 mg/l		
12	Plant Effluent Flow (MGD)											Gulf Coastal Eco (GC) =	5.5 mg/l	White (Above Beaver Lake)		2.5 mg/l		
13	Plant Effluent Flow (cfs)											Delta Ecoregion (DL) =	8.0 mg/l	White (Below Bull Shoals to Black Riv)		3.3 mg/l		
14														White (From Black River to Mouth)		18.5 mg/l		
15	RECEIVING STREAM													St. Francis River		18.0 mg/l		
16														Ouachita (Above Caddo River)		2.0 mg/l		
17	Is this a large river? (see list at right)(enter "1" if yes, "0" if no; make entry as a number)								0						Ouachita (Below Caddo River)		5.5 mg/l	
18	Name of Receiving Stream:								unnamed trib.						Red River		33.0 mg/l	
19																		
20	Is this a lake or reservoir? (enter '1' if yes, '0' = no; make entry as a number)								0				Total Hardness for:					
21	(Reserved)											Arkansas River =	125 mg/l			Red River =	211 mg/l	
22	(Reserved)	DO NOT INPUT DATA INTO CELL H22, H23 & H24....LEAVE BLANK=?						?					Ouachita River =	28 mg/l			St. Francis River =	103 mg/l
23	(Reserved)											White River =	116 mg/l					
24		(Reserved)		(Reserved)				(Reserved)										
25				(Reserved)				(Reserved)				Gulf Coastal =	31 mg/l			Ouachita Mount =	31 mg/l	
26				(Reserved)				(Reserved)				Ozark Highlands =	148 mg/l			Ark River Valley =	25 mg/l	
27				(Reserved)				(Reserved)				Boston Mount =	25 mg/l			Delta =	81 mg/l	
28																		
29	Ecoregion TSS (mg/l) (For Large River, See List to Right)								5.50				Large Rivers					
30	Ecoregion Hardness (mg/l) (Reserved)								31.00				Mississippi River, Arkansas River, Red River					
31	Enter 7Q10 (cfs) as the Critical Flow (Reserved) (Reserved)								0.00		(Reserved)		White (Below confluence with Black River)					
32	Long Term Ave / Harmonic Mean Flow (cfs)								0.00		(Reserved)	(Reserved)	Ouachita (Below confluence with Little Miss. River)					
33	Using Diffusers (Yes/No)								no									
34	pH (Avg)								6.56				For industrial and federal facility, use the highest monthly average flow					
35	Percent (%) of Critical Flow for Chronic Criteria								0.67				for the past 24 months. For POTWs, use the design flow.					
36	Percent (%) of Critical Flow for Acute Criteria								0.33									
37	Water Effect Ratio (WER)								1.00				#VALUE! => No violation or Not Applicable					
38	Ave Monthly Limit LTA Multiplier (Ref: page 103 TSD for WQ-Based Toxics Control)								1.55				9999999.00 => No EPA/ADEQ Guideline					
39	Max Daily Limit LTA Multiplier (Ref: " " " ")								3.11									

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	
40	Max Daily Limit LTA Multiplier for Human Health (Ref: 2009 CPP; Section 5.27.2)								1.64								
41	STEP 2: INPUT AMBIENT AND EFFLUENT DATA																
42	CALCULATE IN-STREAM WASTE CONCENTRATIONS																
43																	
44	DATA INPUT																
45	For less than 20 data points enter geometric mean concentration as micro-gram per liter (ug/l or ppb).																
46	For 20 or more data points in set enter highest concentration as micro-gram per liter (ug/l or ppb).																
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	$IWC = [(F \cdot Q_a \cdot C_b) + (Q_e \cdot 2.13 \cdot C_e)] / (F \cdot Q_a + Q_e)$																
54	Where:																
55	IWC = Instream Waste Concentration																
56	F = Fraction of stream allowed for mixing																
57	C _e = Reported concentration in effluent																
58	C _b = Ambient stream concentration upstream of discharge																
59	Q _e = Plant effluent flow																
60	Q _b = Critical low flow of stream at discharge point expressed as the 7Q10 or harmonic mean flow for human health criteria																
61	Upstream Flow (Q _b)= (% 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	$K_p = K_{po} \cdot (TSS^a)$ K _p = Linear partition coefficient; K _{po} and a can be found in table below																
66	$C/C_t = 1 / (1 + K_p \cdot TSS \cdot 10^{-6})$ TSS = Total suspended solids concentration found in receiving stream (or in effluent for intermittent stream)																
67	Total Metal Criteria (C _t) = C _r / (C/C _t) C/C _t = Fraction of metal dissolved; and C _r = Dissolved criteria value																
68																	
69	*Stream Linear Partition Coefficient (Insert "Dissolved" Conc in Column B to convert to "Total")								Lake Linear Partition Coefficient								
70	Total Metals	Dissolved Value in Stream		K _{po}	alpha (a)	K _p	C/C _t	Total Value					K _{po}	alpha (a)	K _p	C/C _t	Total Value
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>																

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
82											Dissolved	Total				
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)				1.04		CF1 = 1.136672 - [0.041838*ln(hardness)]			
85				Chronic			WER X CF2 X e(0.7852[ln(hardness)]-3.490)				0.43		CF2 = 1.101672 - [0.041838*ln(hardness)]			
86																
87	Chromium Tri			Acute			WER X 0.316 X e(0.819[ln(hardness)]+3.688)				210.28					
88				Chronic			WER X 0.86 X e(0.819[ln(hardness)]+1.561)				68.21					
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)				5.64					
94				Chronic			WER X 0.96 X e(0.8545[ln(hardness)]-1.465)				4.17					
95																
96	Lead			Acute			WER X e(1.273[ln(hardness)]-1.460)*CF3				17.68		CF3 = 1.46203 - [0.145712*ln(hardness)]			
97				Chronic			WER X e(1.273[ln(hardness)]-4.705)*CF3				0.69					
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)				525.50					
103				Chronic			WER X 0.997 X e(0.8460[ln(hardness)]+1.1645)				58.36					
104																
105	Zinc			Acute			WER X 0.978 X e(0.8473[ln(hardness)]+0.8604)				42.43					
106				Chronic			WER X 0.986 X e(0.8473[ln(hardness)]+0.7614)				38.74					
107																
108	Silver			Acute			WER X 0.85 X e(1.72[ln(hardness)]-6.52)				0.46					
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																
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.												

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
132	POLLUTANTS		Number of Data points	MQL	EPA Statistical	Background Conc.	Effluent Conc.	Domestic Supply IWC	Acute Aquatic IWC	Chronic Aquatic IWC	Bioacc. IWC	[Reserved]	Arkansas Acute Aquatic	Arkansas Chronic Aquatic	Arkansas Bioacc.	
133				ug/l	Factor	Cb ug/l	Ce ug/l	ug/l	ug/l	ug/l	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	
139	2. Arsenic Total		1	0.5	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999.00	#####	9999999	
140	3. Beryllium Total		1	0.5	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999.00	#####	4	
141	4. Cadmium Total		1	1	2.13	0	0	0.00	0.00	0.00	0.00	9999999	4.37	1.82	9999999	
142	6. Chromium (Tri)		1	10	2.13	0	0	0.00	0.00	0.00	0.00	9999999	1006.35	326.45	9999999	
143	7. Chromium (hex)		1	10	2.13	0	0	0.00	0.00	0.00	0.00	9999999	15.71	10.58	9999999	
144	8. Copper Total		1	0.5	2.13	0	13.12	27.95	27.95	27.95	27.95	9999999	14.79	10.93	9999999	
145	9. Lead Total		1	0.5	2.13	0	3.43	7.31	7.31	7.31	7.31	9999999	87.29	3.40	9999999	
146	10. Mercury Total		1	0.005	2.13	0	0	0.00	0.00	0.00	0.00	9999999	6.70	0.012	9999999	
147	12. Nickel Total		1	0.5	2.13	0	0	0.00	0.00	0.00	0.00	9999999	1061.45	117.88	9999999	
148	13. Selenium Total		1	5	2.13	0	0	0.00	0.00	0.00	0.00	9999999	20.00	5.00	9999999	
149	14. Silver Total		1	0.5	2.13	0	0	0.00	0.00	0.00	0.00	9999999	1.51	#####	9999999	
150	15. Thallium Total		1	0.5	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999.00	#####	9999999	
151	16. Zinc Total		1	20	2.13	0	76.59	163.14	163.14	163.14	163.14	9999999	130.87	119.50	9999999	
152	129. Phenols, Total		1	5	2.13	0	0	0.00	0.00	0.00	0.00	9999999	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	
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	
159	VOLATILE COMPOUNDS															
160	19. Acrolein		1	50	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	
161	20. Acrylonitrile		1	20	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	
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	
164	23. Carbon Tetrach		1	2	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	
165	24. Chlorobenzene		1	10	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	
166	25. Chlorodibromomethane		1	10	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	
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	
170	29. Dichlorobromomethane		1	10	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	
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	
173	32. 1-1-Dichlorethylene		1	10	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	
174	33. 1,2 Dichloropropane		1	10	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	
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	
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	
179	38. Methylene chloride		1	20	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	
180	39. 1-1-2-2-Tetrachloroethar		1	10	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	
181	40. Tetrachloroethylene		1	10	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	
182	41. Toluene		1	10	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	
183	42. 1,2-trans-dichloroethyler		1	10	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	
184	44. 1-1-2-Trichloroethane		1	10	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	
185	43. 1-1-1-Trichloroethane		1	10	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	
186	45. Trichloroethylene		1	10	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	
187	46. Vinyl Chloride		1	10	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	

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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	
191	48. 2-4-Dichlorophenol		1	10	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	
192	49. 2-4 Dimethylphenol		1	10	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	
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	
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	5.61	4.30	9999999	
198	56. Phenol		1	10	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	
199	57. 2-4-6-Trichlorophenol		1	10	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	
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	
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	
206	61. Benzidine		1	50	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	
207	62. Benzo(a) anthracene		1	5	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	
208	63. Benzo(a) pyrene		1	5	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	
209	64. 3,4-benzoflouranthene		1	10	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	
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	
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-chloroethyl) Ether		1	10	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	
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)phthalat		1	10	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	
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	
218	73. 2-chloronapthalene		1	10	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	
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	
221	76. Dibenzo(a,h)anthracene		1	5	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	
222	77-79. Dichlorobenzene(1,2,		1	10	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	
223	80. 3,3' Dichlorobenzidine		1	5	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	
224	81. Diethyl Phthalate		1	10	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	
225	82. Dimethyl phthalate		1	10	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	
226	83. Di-n-Butyl phthalate		1	10	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	
227	84. 2-4-Dinitrotoluene		1	10	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	
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	
231	88. Fluoranthene		1	10	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	
232	89. Fluorene		1	10	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	
233	90. Hexachlorobenzene		1	5	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	
234	91. Hexachlorobutadiene		1	10	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	
235	92. Hexachlorocyclopentadi		1	10	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	
236	93. Hexachloroethane		1	20	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	
237	Hexachlorocyclohexane		1		2.13	0	0	0.00	0.00	0.00	0.00	9999999	2	0.08	0.0373	
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	
239	95. Isophorone		1	10	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	
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	
242	98. N-nitrosodimethylamine		1	50	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	
243	99. N-nitrosodi-n-propylamir		1	20	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	
278																	
279	STEP 3:	APPLICABLE WATER QUALITY-BASED LIMITS															
280																	
281																	
282								ADEQ HUMAN HEALTH CRITERIA									
283	POLLUTANTS		Permit Daily Maximum	Permit Monthly Average	Permit Daily Maximum	Permit Monthly Average		Permit Daily Maximum	Permit Monthly Average	Permit Daily Maximum	Permit Monthly Average						
284			ug/l	ug/l	lb/day	lb/day		ug/l	ug/l	lb/day	lb/day						
285	Alpha-BHC		NO	NO	NO	NO		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		24.4794	12.2003	0.204158	0.10175078											
308	Lead Total		7.6169	3.7962	0.0635246	0.03166018											
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		231.9893	115.6217	1.9347912	0.96428498											
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						