Rates and Constants Table - base15a_XPC01

	Parameter	Description	Value	Unit	Min	Max	Reference
1	GAM1	I_GAM1					
2	UseNutrientLimit	Use nutrient limit function in growth	☑	No Units			CE-QUAL-ICM (1995)
3	UseTempLimit	Use temperature limit function in growth	☑	No Units			CE-QUAL-ICM (1995)
4	UseSalineToxicLimit	Use saline toxicity limit function in growth	☐	No Units			CE-QUAL-ICM (1995)
5	UseLightLimit	Use light limit function in growth computations	☑	No Units			CE-QUAL-ICM (1995)
6	k1r	Respiration rate @t 20 °C	0.08	0 : 1/day	0.05	0.2	WDOE (1984)
7	Tht_k1r	Temperature Coefficient	1.05	No Units	1	1.08	WASP5; pp. 52
8	k1c	Growth rate @ 20 °C	2.2	0 : 1/day	0.05	4	WASP5;pp. 94
9	Tht_k1c	Temperature Coefficient	1	No Units	1	1.08	WASP5;pp. 94
10	k1d	Death rate @ 20 °C	0.03	0 : 1/day	0.015	0.2	WDOE (1984)
11	fe	Excretion fraction	0.05	No Units	0.1	0.8	EPA (1985)
12	as	Assimilaion efficiency of zooplankton grazing	0.5	No Units	0.5	0.8	EPA (1985)
13	ws	Settling velocity	0.5	5 : m/day	0.5	0.8	EPA (1985)
14	ZPGMode	Zooplankton grazing mode	1 : LinearGr	No Units	0	2	Boatman (1997)
15	kgmicro	Grazing rate due to micro zooplankton	0.11	0 : 1/day	0	0.08	Boatman (1997)
16	Tht_kgmicro	Temperature Coefficient	1.04	No Units	1	1.08	Boatman (1997)
17	kgmacro	Grazing rate due to macro zooplankton	0.01	0 : 1/day	0	0.101	Boatman (1997)
18	Tht_kgmacro	Temperature Coefficient	1.04	No Units	1	1.08	Boatman (1997)
19	cchl	Carbon to chlorophyll ratio	60	0 : gC/gChl-a	30	150	CE-QUAL-ICM (1995)
20	LightModel	Light model	3 : Steele E	No Units			QUAL2Kw (2004)
21	kke	Light extinction coefficient	1	No Units	0	1	CE-QUAL-ICM (1995)
22	kechl	Light attenuation coefficient	17	0 : m^2/mg	0	20	CE-QUAL-ICM (1995)
23	Isat	Light constant	30	1 : W/m^2	28.8	115.2	QUAL2Kw (2004)
24	khn	Constant for algae nitrogen uptake	0.024	0 : gm N/m^3			CE-QUAL-ICM (1995)
25	khp	Constant for algae phosphorous uptake	0.00001	0 : gm P/m^3			CE-QUAL-ICM (1995)
26	stMethod	Salinity toxicity method	1 : Equation	View Equation			CE-QUAL-ICM (1995)
27	stf	Maximum mortality due to salinity toxicity	0.01	0 : 1/day	0.01	0.05	CE-QUAL-ICM (1995)
28	khst	Salinity at which toxicity is half the maximum	0.5	0 : ppt	0	1	CE-QUAL-ICM (1995)
29	tm	Optimum temperature for algae growth	10	0 : C	0	30	CE-QUAL-ICM (1995)
30	ktg1	Suboptimal temperature effect for algae	0.024	No Units	0	0.005	CE-QUAL-ICM (1995)
31	ktg2	Superoptimal temperature effect for algae	0.024	No Units	0	0.1	CE-QUAL-ICM (1995)
32	fd5	Fraction of dead phytoplankton recycled to	0.75	No Units			CE-QUAL-ICM (1995)
33	fon	Organic nitrogen from dead algae	0.5	No Units	0	0.5	WASP5; pp.105
34	fop	Organic phosphorous from dead algae	0.5	No Units	0	0.5	WASP5; pp. 98
35	foc	Organic carbon from dead algae	0.5	No Units	0	0.5	WASP5; pp. 98
36	GAM2	I_GAM2					
37	UseNutrientLimit	Use nutrient limit function in growth	☑	No Units			CE-QUAL-ICM (1995)
38	UseTempLimit	Use temperature limit function in growth	☑	No Units			CE-QUAL-ICM (1995)
39	UseSalineToxicLimit	Use saline toxicity limit function in growth	☐	No Units			CE-QUAL-ICM (1995)
40	UseLightLimit	Use light limit function in growth computations	☑	No Units			CE-QUAL-ICM (1995)

Rates and Constants Table - base15a_XPC01

	Parameter	Description	Value	Unit	Min	Max	Reference
41	k1r	Respiration rate @t 20 °C	0.08	0 : 1/day	0.05	0.2	WDOE (1984)
42	Tht_k1r	Temperature Coefficient	1.05	No Units	1	1.08	WASP5; pp. 52
43	k1c	Growth rate @ 20 °C	2.5	0 : 1/day	0.05	4	WASP5;pp. 94
44	Tht_k1c	Temperature Coefficient	1	No Units	1	1.08	WASP5;pp. 94
45	k1d	Death rate @ 20 °C	0.03	0 : 1/day	0.015	0.2	WDOE (1984)
46	fe	Excretion fraction	0.05	No Units	0.1	0.8	EPA (1985)
47	as	Assimilaion efficiency of zooplankton grazing	0.5	No Units	0.5	0.8	EPA (1985)
48	ws	Settling velocity	0.2	5 : m/day	0.5	0.8	EPA (1985)
49	ZPGMode	Zooplankton grazing mode	1 : LinearGr	No Units	0	2	Boatman (1997)
50	kgmicro	Grazing rate due to micro zooplankton	0.11	0 : 1/day	0	0.08	Boatman (1997)
51	Tht_kgmicro	Temperature Coefficient	1.04	No Units	1	1.08	Boatman (1997)
52	kgmacro	Grazing rate due to macro zooplankton	0.01	0 : 1/day	0	0.101	Boatman (1997)
53	Tht_kgmacro	Temperature Coefficient	1.04	No Units	1	1.08	Boatman (1997)
54	cchl	Carbon to chlorophyll ratio	60	0 : gC/gChl-a	30	150	CE-QUAL-ICM (1995)
55	LightModel	Light model	3 : Steele E	No Units			QUAL2Kw (2004)
56	kke	Light extinction coefficient	1	No Units	0	1	CE-QUAL-ICM (1995)
57	kechl	Light attenuation coefficient	17	0 : m^2/mg	0	20	CE-QUAL-ICM (1995)
58	Isat	Light constant	70	1 : W/m^2	28.8	115.2	QUAL2Kw (2004)
59	khn	Constant for algae nitrogen uptake	0.028	0 : gm N/m^3			CE-QUAL-ICM (1995)
60	khp	Constant for algae phosphorous uptake	0.00001	0 : gm P/m^3			CE-QUAL-ICM (1995)
61	stMethod	Salinity toxicity method	1 : Equation	View Equation			CE-QUAL-ICM (1995)
62	stf	Maximum mortality due to salinity toxicity	0.01	0 : 1/day	0.01	0.05	CE-QUAL-ICM (1995)
63	khst	Salinity at which toxicity is half the maximum	0.5	0 : ppt	0	1	CE-QUAL-ICM (1995)
64	tm	Optimum temperature for algae growth	17	0 : C	0	30	CE-QUAL-ICM (1995)
65	ktg1	Suboptimal temperature effect for algae	0.02	No Units	0	0.005	CE-QUAL-ICM (1995)
66	ktg2	Superoptimal temperature effect for algae	0.02	No Units	0	0.1	CE-QUAL-ICM (1995)
67	fd5	Fraction of dead phytoplankton recycled to	0.75	No Units			CE-QUAL-ICM (1995)
68	fon	Organic nitrogen from dead algae	0.5	No Units	0	0.5	WASP5; pp.105
69	fop	Organic phosphorous from dead algae	0.5	No Units	0	0.5	WASP5; pp. 98
70	foc	Organic carbon from dead algae	0.5	No Units	0	0.5	WASP5; pp. 98
71	**TVRC File Settings**						
72	UseTVRCData	Use time varying rates and constants data	☐				
73	TVRCFileName	Time varying rates and constants file name	p_Data_File	Browse	View		