Rates and Constants Table - SPS17_base4 (scratch)

	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	0.025	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	2.78	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	0.02	0 : 1/day	0.015	0.2	WDOE (1984)
11	fe	Excretion fraction	0	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	0.1	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	70	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	100	1 : W/m^2	28.8	115.2	QUAL2Kw (2004)
24	khn	Constant for algae nitrogen uptake	0.014	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	9	0 : C	0	30	CE-QUAL-ICM (1995)
30	ktg1	Suboptimal temperature effect for algae	0.0239	No Units	0	0.005	CE-QUAL-ICM (1995)
31	ktg2	Superoptimal temperature effect for algae	0.0239	No Units	0	0.1	CE-QUAL-ICM (1995)
32	fd5	Fraction of dead phytoplankton recycled to	0.5	No Units			CE-QUAL-ICM (1995)
33	fon	Organic nitrogen from dead algae	0.1	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	0.25	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 - SPS17_base4 (scratch)

	Parameter	Description	Value	Unit	Min	Max	Reference
41	k1r	Respiration rate @t 20 °C	0.025	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	2.78	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	0.02	0 : 1/day	0.015	0.2	WDOE (1984)
46	fe	Excretion fraction	0	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	0.1	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	70	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	100	1 : W/m^2	28.8	115.2	QUAL2Kw (2004)
59	khn	Constant for algae nitrogen uptake	0.014	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	0.0239	No Units	0	0.005	CE-QUAL-ICM (1995)
66	ktg2	Superoptimal temperature effect for algae	0.0239	No Units	0	0.1	CE-QUAL-ICM (1995)
67	fd5	Fraction of dead phytoplankton recycled to	0.5	No Units			CE-QUAL-ICM (1995)
68	fon	Organic nitrogen from dead algae	0.1	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	0.25	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		