

Appendix B. PRZM/EXAMS Inputs and Outputs and results of non-cropland refinements

Citrus

stored as bromacil.out

Chemical: bromacil

PRZM environment: C:\Citrus_NirrigC.txt modified Thuday, 17 June 2004 at 08:14:54

EXAMS environment: pond298.exv modified Thuday, 29 August 2002 at 16:33:30

Metfile: w23155.dvf modified Wedday, 3 July 2002 at 09:04:20

Water segment concentrations (ppb)

Year	Peak	96 hr	21 Day	60 Day	90 Day	Yearly
1961	3.6	3.591	3.564	3.512	3.48	3.037
1962	7.919	7.91	7.875	7.802	7.747	7.016
1963	16.05	16.03	15.95	15.79	15.69	14.13
1964	17.61	17.6	17.55	17.44	17.36	16.35
1965	19.08	19.07	19.02	18.94	18.89	17.88
1966	21.22	21.21	21.15	21.03	20.92	19.73
1967	22.29	22.28	22.22	22.11	22.07	20.96
1968	23.37	23.35	23.29	23.15	23.04	21.73
1969	24.08	24.06	24.01	23.88	23.78	22.41
1970	28.26	28.24	28.15	27.95	27.8	25.88
1971	28.16	28.15	28.09	27.94	27.83	26.33
1972	28.95	28.91	28.77	28.44	28.18	27.43
1973	30.12	30.11	30.04	29.87	29.75	28.09
1974	33.46	33.43	33.33	33.1	32.9	30.77
1975	33.41	33.39	33.31	33.14	33.04	31.28
1976	32.97	32.95	32.87	32.7	32.56	30.82
1977	33.36	33.35	33.25	33.01	32.81	31.29
1978	52.93	52.87	52.65	52.18	51.85	47.01
1979	49.22	49.2	49.1	48.88	48.69	46.16
1980	46.64	46.62	46.52	46.3	46.12	43.93
1981	44.8	44.78	44.68	44.47	44.29	41.94
1982	42.8	42.78	42.69	42.48	42.31	40.1
1983	64.71	64.65	64.39	63.86	63.5	58.62
1984	59.86	59.84	59.73	59.46	59.25	56.42
1985	56.56	56.54	56.44	56.19	55.98	53.34
1986	53.82	53.8	53.69	53.43	53.23	50.73
1987	51.35	51.33	51.24	51.01	50.81	48.37
1988	49.06	49.04	48.94	48.7	48.5	46.11
1989	46.84	46.82	46.74	46.52	46.33	44.05
1990	45.03	45.01	44.92	44.72	44.53	42.31

Sorted results

Prob.	Peak	96 hr	21 Day	60 Day	90 Day	Yearly
0.032258064516129			64.71	64.65	64.39	63.86
0.0645161290322581			59.86	59.84	59.73	59.46
0.0967741935483871			56.56	56.54	56.44	56.19
0.129032258064516			53.82	53.8	53.69	53.43
0.161290322580645			52.93	52.87	52.65	52.18
0.193548387096774			51.35	51.33	51.24	51.01
0.225806451612903			49.22	49.2	49.1	48.88
0.258064516129032			49.06	49.04	48.94	48.7
0.290322580645161			46.84	46.82	46.74	46.52
						46.33
						44.05

0.32258064516129	46.64	46.62	46.52	46.3	46.12	43.93
0.354838709677419	45.03	45.01	44.92	44.72	44.53	42.31
0.387096774193548	44.8	44.78	44.68	44.47	44.29	41.94
0.419354838709677	42.8	42.78	42.69	42.48	42.31	40.1
0.451612903225806	33.46	33.43	33.33	33.14	33.04	31.29
0.483870967741936	33.41	33.39	33.31	33.1	32.9	31.28
0.516129032258065	33.36	33.35	33.25	33.01	32.81	30.82
0.548387096774194	32.97	32.95	32.87	32.7	32.56	30.77
0.580645161290323	30.12	30.11	30.04	29.87	29.75	28.09
0.612903225806452	28.95	28.91	28.77	28.44	28.18	27.43
0.645161290322581	28.26	28.24	28.15	27.95	27.83	26.33
0.67741935483871	28.16	28.15	28.09	27.94	27.8	25.88
0.709677419354839	24.08	24.06	24.01	23.88	23.78	22.41
0.741935483870968	23.37	23.35	23.29	23.15	23.04	21.73
0.774193548387097	22.29	22.28	22.22	22.11	22.07	20.96
0.806451612903226	21.22	21.21	21.15	21.03	20.92	19.73
0.838709677419355	19.08	19.07	19.02	18.94	18.89	17.88
0.870967741935484	17.61	17.6	17.55	17.44	17.36	16.35
0.903225806451613	16.05	16.03	15.95	15.79	15.69	14.13
0.935483870967742	7.919	7.91	7.875	7.802	7.747	7.016
0.967741935483871	3.6	3.591	3.564	3.512	3.48	3.037

0.1	56.286	56.266	56.165	55.914	55.705	53.079	
					Average of yearly averages:		33.1407666666667

Inputs generated by pe4.pl - 8-August-2003

Data used for this run:

Output File: bromacil

Metfile: w23155.dvf

PRZM scenario: CAcitrus_NirrigC.txt

EXAMS environment file: pond298.exv

Chemical Name: bromacil

Description	Variable Name	Value	Units	Comments
Molecular weight	mw	261.12	g/mol	
Henry's Law Const.	henry	1.1e-9	atm-m ³ /mol	
Vapor Pressure	vapr	3.1e-7	torr	
Solubility	sol	8150	mg/L	
Kd	Kd		mg/L	
Koc	Koc	32	mg/L	
Photolysis half-life	kdp	102	days	Half-life
Aerobic Aquatic Metabolism	kbacw	1650	days	Halfife
Anaerobic Aquatic Metabolism	kbacs	0	days	Halfife
Aerobic Soil Metabolism	asm	825	days	Halfife
Hydrolysis:	pH 5	0	days	Half-life
Hydrolysis:	pH 7	0	days	Half-life
Hydrolysis:	pH 9	0	days	Half-life
Method: CAM	1	integer	See PRZM manual	
Incorporation Depth:	DEPI	0	cm	
Application Rate: TAPP	7.2	kg/ha		
Application Efficiency:	APPEFF	.99	fraction	
Spray Drift	DRFT	.01	fraction of application rate applied to pond	
Application Date	Date	25-01	dd/mm or dd/mm/yy or dd-mm or dd-mm/yy	
Record 17:	FILTRA			
	IPSCND1			
	UPTKF			

Record 18: PLVKRT
 PLDKRT
 FEXTRC 0.5
 Flag for Index Res. Run IR Pond
 Flag for runoff calc. RUNOFF none none, monthly or total(average of entire run)

Non-cropland (pre refined impervious modeling)

stored as bromacil.out

Chemical: bromacil

PRZM environment: CAImpervious.txt modified Tuesday, 20 February 2007 at 12:05:45

EXAMS environment: pond298.exv modified Thuday, 29 August 2002 at 16:33:30

Metfile: w23234.dvf modified Wedday, 3 July 2002 at 09:04:22

Water segment concentrations (ppb)

Year	Peak	96 hr	21 Day	60 Day	90 Day	Yearly
1961	22.78	22.76	22.67	22.44	22.3	19.81
1962	46.62	46.59	46.42	46.01	45.74	41.62
1963	70.79	70.75	70.66	70.39	70.28	66.02
1964	73.87	73.83	73.72	73.43	73.17	70.48
1965	74.76	74.73	74.63	74.36	74.21	72.24
1966	89.34	89.28	89.15	88.83	88.5	84.69
1967	100	100	100	99.67	99.29	95.14
1968	110	110	110	110	110	105
1969	131	131	130	130	129	123
1970	135	134	134	134	133	129
1971	138	137	137	137	136	131
1972	136	136	136	135	135	132
1973	143	143	143	142	142	136
1974	142	142	141	141	140	136
1975	155	155	155	154	154	148
1976	151	151	151	150	150	146
1977	149	149	149	148	148	144
1978	163	163	163	162	162	155
1979	184	184	184	183	182	174
1980	194	194	194	193	192	184
1981	201	201	201	200	199	193
1982	206	206	205	205	204	197
1983	211	210	210	209	209	202
1984	201	201	200	200	199	193
1985	207	207	207	206	206	199
1986	215	215	214	213	213	205
1987	219	219	219	218	217	209
1988	208	208	207	206	206	202
1989	206	206	206	205	204	198
1990	205	205	205	205	204	197

Sorted results

Prob.	Peak	96 hr	21 Day	60 Day	90 Day	Yearly		
0.032258064516129			219	219	219	218	217	209
0.0645161290322581			215	215	214	213	213	205
0.0967741935483871			211	210	210	209	209	202

0.129032258064516	208	208	207	206	206	202
0.161290322580645	207	207	207	206	206	199
0.193548387096774	206	206	206	205	204	198
0.225806451612903	206	206	205	205	204	197
0.258064516129032	205	205	205	205	204	197
0.290322580645161	201	201	201	200	199	193
0.32258064516129	201	201	200	200	199	193
0.354838709677419	194	194	194	193	192	184
0.387096774193548	184	184	184	183	182	174
0.419354838709677	163	163	163	162	162	155
0.451612903225806	155	155	155	154	154	148
0.483870967741936	151	151	151	150	150	146
0.516129032258065	149	149	149	148	148	144
0.548387096774194	143	143	143	142	142	136
0.580645161290323	142	142	141	141	140	136
0.612903225806452	138	137	137	137	136	132
0.645161290322581	136	136	136	135	135	131
0.67741935483871	135	134	134	134	133	129
0.709677419354839	131	131	130	130	129	123
0.741935483870968	110	110	110	110	110	105
0.774193548387097	100	100	100	99.67	99.29	95.14
0.806451612903226	89.34	89.28	89.15	88.83	88.5	84.69
0.838709677419355	74.76	74.73	74.63	74.36	74.21	72.24
0.870967741935484	73.87	73.83	73.72	73.43	73.17	70.48
0.903225806451613	70.79	70.75	70.66	70.39	70.28	66.02
0.935483870967742	46.62	46.59	46.42	46.01	45.74	41.62
0.967741935483871	22.78	22.76	22.67	22.44	22.3	19.81

0.1	210.7	209.8	209.7	208.7	208.7	202	
Average of yearly averages:							142.933333333333

Inputs generated by pe4.pl - 8-August-2003

Data used for this run:

Output File: bromacil

Metfile: w23234.dvf

PRZM scenario: CAImpervious.txt

EXAMS environment file: pond298.exv

Chemical Name: bromacil

Description	Variable Name	Value	Units	Comments
Molecular weight	mwt	261.12	g/mol	
Henry's Law Const.	henry	1.1e-9	atm-m ³ /mol	
Vapor Pressure	vapr	3.1e-7	torr	
Solubility	sol	8150	mg/L	
Kd	Kd		mg/L	
Koc	Koc	32	mg/L	
Photolysis half-life	kdp	102	days	Half-life
Aerobic Aquatic Metabolism	kbacw	1650	days	Halfife
Anaerobic Aquatic Metabolism	kbacs	0	days	Halfife
Aerobic Soil Metabolism	asm	825	days	Halfife
Hydrolysis:	pH 5	0	days	Half-life
Hydrolysis:	pH 7	0	days	Half-life
Hydrolysis:	pH 9	0	days	Half-life
Method: CAM	1	integer	See PRZM manual	
Incorporation Depth:	DEPI	0	cm	
Application Rate: TAPP	0.173	kg/ha		

Application Efficiency: APPEFF1 fraction
 Spray Drift DRFT 0 fraction of application rate applied to pond
 Application Date Date 25-01 dd/mm or dd/mm or dd-mm or dd-mmm
 Interval 1 interval 14 days Set to 0 or delete line for single app.
 Record 17: FILTRA
 IPSCND1
 UPTKF
 Record 18: PLVKRT
 PLDKRT
 FEXTRC 0.5
 Flag for Index Res. Run IR Pond
 Flag for runoff calc. RUNOFF none none, monthly or total(average of entire run)

Non-cropland (pre refined pervious modeling)

stored as bromacil.out

Chemical: bromacil

PRZM environment: CArighofway.txt modified Tuesday, 20 February 2007 at 12:04:23

EXAMS environment: pond298.exv modified Thuday, 29 August 2002 at 16:33:30

Metfile: w23234.dvf modified Wedday, 3 July 2002 at 09:04:22

Water segment concentrations (ppb)

Year	Peak	96 hr	21 Day	60 Day	90 Day	Yearly
1961	676	675	670	662	656	581
1962	1040	1040	1030	1030	1020	944
1963	1470	1460	1460	1450	1440	1360
1964	1350	1350	1350	1340	1340	1310
1965	1350	1350	1350	1340	1340	1300
1966	1650	1650	1640	1630	1630	1550
1967	1760	1760	1760	1750	1740	1680
1968	1940	1940	1930	1920	1910	1840
1969	2760	2750	2750	2730	2710	2550
1970	2800	2800	2800	2780	2770	2680
1971	2800	2800	2800	2780	2770	2680
1972	2740	2740	2730	2730	2720	2640
1973	2970	2970	2960	2940	2930	2810
1974	2770	2770	2770	2760	2750	2680
1975	3290	3290	3280	3260	3250	3100
1976	3040	3040	3040	3030	3030	2950
1977	2860	2860	2850	2840	2840	2770
1978	3360	3350	3340	3330	3310	3150
1979	3900	3890	3880	3860	3840	3640
1980	3920	3920	3910	3890	3880	3740
1981	4100	4100	4090	4070	4060	3910
1982	3980	3980	3980	3960	3950	3830
1983	4460	4460	4450	4430	4410	4240
1984	4140	4140	4130	4120	4100	3990
1985	4640	4640	4630	4610	4590	4380
1986	4520	4520	4510	4490	4470	4340
1987	4650	4650	4640	4620	4600	4430
1988	4280	4280	4280	4270	4260	4150
1989	4140	4130	4130	4110	4100	3980

1990 4080 4080 4070 4050 4040 3900

Sorted results

Prob.	Peak	96 hr	21 Day	60 Day	90 Day	Yearly	
0.032258064516129			4650	4650	4640	4620	4600 4430
0.0645161290322581			4640	4640	4630	4610	4590 4380
0.0967741935483871			4520	4520	4510	4490	4470 4340
0.129032258064516			4460	4460	4450	4430	4410 4240
0.161290322580645			4280	4280	4280	4270	4260 4150
0.193548387096774			4140	4140	4130	4120	4100 3990
0.225806451612903			4140	4130	4130	4110	4100 3980
0.258064516129032			4100	4100	4090	4070	4060 3910
0.290322580645161			4080	4080	4070	4050	4040 3900
0.32258064516129			3980	3980	3980	3960	3950 3830
0.354838709677419			3920	3920	3910	3890	3880 3740
0.387096774193548			3900	3890	3880	3860	3840 3640
0.419354838709677			3360	3350	3340	3330	3310 3150
0.451612903225806			3290	3290	3280	3260	3250 3100
0.483870967741936			3040	3040	3040	3030	3030 2950
0.516129032258065			2970	2970	2960	2940	2930 2810
0.548387096774194			2860	2860	2850	2840	2840 2770
0.580645161290323			2800	2800	2800	2780	2770 2680
0.612903225806452			2800	2800	2800	2780	2770 2680
0.645161290322581			2770	2770	2770	2760	2750 2680
0.67741935483871			2760	2750	2750	2730	2720 2640
0.709677419354839			2740	2740	2730	2730	2710 2550
0.741935483870968			1940	1940	1930	1920	1910 1840
0.774193548387097			1760	1760	1760	1750	1740 1680
0.806451612903226			1650	1650	1640	1630	1630 1550
0.838709677419355			1470	1460	1460	1450	1440 1360
0.870967741935484			1350	1350	1350	1340	1340 1310
0.903225806451613			1350	1350	1350	1340	1340 1300
0.935483870967742			1040	1040	1030	1030	1020 944
0.967741935483871			676	675	670	662	656 581

0.1 4514 4514 4504 4484 4464 4330

Average of yearly averages: 2903.5

Inputs generated by pe4.pl - 8-August-2003

Data used for this run:

Output File: bromacil

Metfile: w23234.dvf

PRZM scenario: CArightofway.txt

EXAMS environment file: pond298.exv

Chemical Name: bromacil

Description	Variable Name	Value	Units	Comments
Molecular weight	mwt	261.12	g/mol	
Henry's Law Const.	henry	1.1e-9	atm-m ³ /mol	
Vapor Pressure	vapr	3.1e-7	torr	
Solubility	sol	8150	mg/L	
Kd	Kd		mg/L	
Koc	Koc	32	mg/L	
Photolysis half-life	kdp	102	days	Half-life
Aerobic Aquatic Metabolism	kbacw	1650	days	Halfife
Anaerobic Aquatic Metabolism	kbacs	0	days	Halfife

Aerobic Soil Metabolism	asm	825	days	Halfife
Hydrolysis:	pH 5	0	days	Half-life
Hydrolysis:	pH 7	0	days	Half-life
Hydrolysis:	pH 9	0	days	Half-life
Method: CAM	1	integer	See PRZM manual	
Incorporation Depth:	DEPI	0	cm	
Application Rate: TAPP	17.3	kg/ha		
Application Efficiency:	APPEFF	.99	fraction	
Spray Drift	DRFT	.01	fraction of application rate applied to pond	
Application Date	Date	25-01	dd/mm or dd/mm or dd-mm or dd-mmm	
Interval 1	interval	14	days	Set to 0 or delete line for single app.
Record 17:	FILTRA			
	IPSCND1			
	UPTKF			
Record 18:	PLVKRT			
	PLDKRT			
	FEXTRC	0.5		
Flag for Index Res. Run	IR	Pond		
Flag for runoff calc.	RUNOFF	none	none, monthly or total(average of entire run)	

Non-cropland (refined modeling results)

Table B1. Refined maximum peak, 4-d, 14-d, 21-d, 30-d, 60-d, 90-d and annual estimates of exposure (in ppm) for each simulate year. 90th percentiles used for acute and chronic EECs are also presented.

Year	Max Peak	4-day	Max 14 day	Max 21 day	Max 30 day	Max 60 day	Max 90 day	Annual
1961	0.35	0.35	0.35	0.35	0.34	0.34	0.34	0.40
1962	0.54	0.54	0.54	0.54	0.54	0.54	0.53	0.60
1963	0.77	0.77	0.77	0.76	0.76	0.76	0.76	0.73
1964	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71
1965	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.75
1966	0.87	0.87	0.87	0.87	0.86	0.86	0.86	0.86
1967	0.93	0.93	0.93	0.93	0.93	0.92	0.92	0.93
1968	1.03	1.03	1.02	1.02	1.02	1.02	1.01	1.14
1969	1.45	1.44	1.44	1.44	1.44	1.43	1.42	1.39
1970	1.47	1.47	1.47	1.46	1.46	1.46	1.45	1.41
1971	1.47	1.47	1.47	1.47	1.47	1.46	1.46	1.42
1972	1.44	1.44	1.43	1.43	1.43	1.43	1.43	1.42
1973	1.56	1.56	1.55	1.55	1.55	1.54	1.54	1.49
1974	1.46	1.46	1.46	1.45	1.45	1.45	1.44	1.51
1975	1.72	1.72	1.72	1.72	1.71	1.71	1.70	1.64
1976	1.60	1.60	1.60	1.59	1.59	1.59	1.59	1.60
1977	1.50	1.50	1.50	1.50	1.50	1.50	1.49	1.54
1978	1.76	1.76	1.76	1.75	1.75	1.74	1.74	1.78
1979	2.04	2.04	2.04	2.03	2.03	2.02	2.01	1.95
1980	2.06	2.06	2.05	2.05	2.05	2.04	2.03	2.01
1981	2.15	2.15	2.15	2.15	2.14	2.13	2.13	2.06
1982	2.09	2.09	2.09	2.09	2.09	2.08	2.08	2.12
1983	2.34	2.33	2.33	2.33	2.33	2.32	2.31	2.23
1984	2.17	2.17	2.17	2.17	2.17	2.16	2.15	2.18
1985	2.42	2.42	2.42	2.42	2.41	2.41	2.40	2.31
1986	2.37	2.37	2.37	2.36	2.36	2.35	2.34	2.29
1987	2.43	2.43	2.43	2.43	2.43	2.42	2.41	2.32
1988	2.24	2.24	2.24	2.24	2.24	2.24	2.25	2.25
1989	2.17	2.17	2.17	2.17	2.16	2.16	2.15	2.13
1990	2.14	2.14	2.14	2.14	2.13	2.13	2.12	2.07
90th % (ppm)	2.34		2.33	2.33	2.33	2.32	2.32	2.26