

Appendix G. Status of primary productivity for the Virginia tributary and mainstem stations for the period of 2000 to 2002.

Station	Layer	Season	Median Value	Score	Status
TF5.5	AP	Annual	91.41	84.6	Poor
TF5.5	AP	Fall	122.55	93.5	Poor
TF5.5	AP	SAV1	96.28	86	Poor
TF5.5	AP	SAV2	144.63	80.1	Poor
TF5.5	AP	Spring1	60.71	78.2	Poor
TF5.5	AP	Spring2	96.28	79.5	Poor
TF5.5	AP	Summer1	140.83	72.5	Poor
TF5.5	AP	Summer2	155.84	75.4	Poor
TF5.5	AP	Winter	14.76	86.7	Poor
RET5.2	AP	Annual	32.32	39.4	Good
RET5.2	AP	Fall	14.54	27.7	Good
RET5.2	AP	SAV1	29.16	37.2	Good
RET5.2	AP	SAV2	34.69	24.9	Good
RET5.2	AP	Spring1	42.19	54.5	Fair
RET5.2	AP	Spring2	42.19	45.5	Fair
RET5.2	AP	Summer1	34.25	18	Good
RET5.2	AP	Summer2	27.94	14.7	Good
RET5.2	AP	Winter	14.82	43.7	Fair
LE5.5	AP	Annual	30.96	55.1	Fair
LE5.5	AP	Fall	22.19	45.6	Fair
LE5.5	AP	SAV1	29.95	57.8	Fair
LE5.5	AP	SAV2	44.04	67.6	Poor
LE5.5	AP	Spring1	29.13	65.7	Poor
LE5.5	AP	Spring2	31.14	65.8	Poor
LE5.5	AP	Summer1	53.16	69.7	Poor
LE5.5	AP	Summer2	57.06	71.3	Poor
LE5.5	AP	Winter	23.36	36.1	Good
SBE5	AP	Annual	18.06	17.2	Good
SBE5	AP	Fall	7.33	10	Good
SBE5	AP	SAV1	14.31	12.1	Good
SBE5	AP	SAV2	23.81	17.6	Good
SBE5	AP	Spring1	16.77	16	Good
SBE5	AP	Spring2	23.81	15.2	Good
SBE5	AP	Summer1	33.26	22.7	Good
SBE5	AP	Summer2	37.92	26.9	Good
SBE5	AP	Winter	41.47	52.2	Fair
TF4.2	AP	Annual	13.27	38.7	Good
TF4.2	AP	Fall	11.82	46.2	Fair
TF4.2	AP	SAV1	13.42	37	Good
TF4.2	AP	SAV2	21.28	25.7	Good

Appendix G. Continued.

Station	Layer	Season	Median		Status
			Value	Score	
TF4.2	AP	Spring1	13.13	33.9	Good
TF4.2	AP	Spring2	13.13	25.3	Good
TF4.2	AP	Summer1	23.85	20.4	Good
TF4.2	AP	Summer2	32.93	30.6	Good
TF4.2	AP	Winter	5.02	55.8	Fair
RET4.3	AP	Annual	32.77	38.1	Good
RET4.3	AP	Fall	18.39	30.8	Good
RET4.3	AP	SAV1	30.69	37.7	Good
RET4.3	AP	SAV2	33.33	29.4	Good
RET4.3	AP	Spring1	54.15	58.2	Poor
RET4.3	AP	Spring2	53.39	49.3	Fair
RET4.3	AP	Summer1	39.06	29.7	Good
RET4.3	AP	Summer2	34.75	27.3	Good
RET4.3	AP	Winter	76.65	75.8	Poor
WE4.2	AP	Annual	27.24	53.6	Fair
WE4.2	AP	Fall	25.27	48.2	Fair
WE4.2	AP	SAV1	23.35	45.7	Fair
WE4.2	AP	SAV2	35.99	58	Fair
WE4.2	AP	Spring1	15.71	48	Fair
WE4.2	AP	Spring2	35.37	68.8	Poor
WE4.2	AP	Summer1	49.17	67.1	Poor
WE4.2	AP	Summer2	47.92	64.4	Poor
WE4.2	AP	Winter	15.41	13.9	Good
TF3.3	AP	Annual	65.85	66	Poor
TF3.3	AP	Fall	77.11	81.2	Poor
TF3.3	AP	SAV1	77.11	69.9	Poor
TF3.3	AP	SAV2	74.13	55.5	Fair
TF3.3	AP	Spring1	118.36	82.3	Poor
TF3.3	AP	Spring2	81.93	71.5	Poor
TF3.3	AP	Summer1	65.31	43.6	Fair
TF3.3	AP	Summer2	65.85	39.6	Fair
TF3.3	AP	Winter	12.18	46.6	Fair
RET3.1	AP	Annual	54.27	57.8	Fair
RET3.1	AP	Fall	37.30	73.1	Poor
RET3.1	AP	SAV1	56.28	61	Poor
RET3.1	AP	SAV2	57.67	53.5	Fair
RET3.1	AP	Spring1	75.88	68.9	Poor
RET3.1	AP	Spring2	82.05	68.4	Poor
RET3.1	AP	Summer1	55.57	45.9	Fair
RET3.1	AP	Summer2	54.87	43.4	Fair
RET3.1	AP	Winter	30.50	51.1	Fair
LE3.6	AP	Annual	17.92	17.4	Good
LE3.6	AP	Fall	16.87	29.2	Good

Appendix G. Continued.

Station	Layer	Season	Median		Status
			Value	Score	
LE3.6	AP	SAV1	16.14	14.2	Good
LE3.6	AP	SAV2	27.73	22.7	Good
LE3.6	AP	Spring1	7.07	5.9	Good
LE3.6	AP	Spring2	21.98	16.9	Good
LE3.6	AP	Summer1	32.55	26.7	Good
LE3.6	AP	Summer2	36.22	28.4	Good
LE3.6	AP	Winter	13.62	19.2	Good
CB6.1	AP	Annual	16.81	14.9	Good
CB6.1	AP	Fall	14.71	24.2	Good
CB6.1	AP	SAV1	14.85	13.6	Good
CB6.1	AP	SAV2	24.82	15.8	Good
CB6.1	AP	Spring1	12.37	12.5	Good
CB6.1	AP	Spring2	16.84	13	Good
CB6.1	AP	Summer1	29.16	19.4	Good
CB6.1	AP	Summer2	26.37	17	Good
CB6.1	AP	Winter	7.39	10.3	Good
CB6.4	AP	Annual	18.33	29.8	Good
CB6.4	AP	Fall	15.22	29.4	Good
CB6.4	AP	SAV1	15.22	35.7	Good
CB6.4	AP	SAV2	22.62	37	Good
CB6.4	AP	Spring1	11.99	29.9	Good
CB6.4	AP	Spring2	20.44	42.8	Fair
CB6.4	AP	Summer1	23.43	36	Good
CB6.4	AP	Summer2	25.35	35.2	Good
CB6.4	AP	Winter	7.13	4.8	Good
CB7.3E	AP	Annual	15.04	22.3	Good
CB7.3E	AP	Fall	23.96	43	Fair
CB7.3E	AP	SAV1	17.17	30.3	Good
CB7.3E	AP	SAV2	15.98	23.7	Good
CB7.3E	AP	Spring1	8.24	18.5	Good
CB7.3E	AP	Spring2	14.77	30.6	Good
CB7.3E	AP	Summer1	15.38	20.6	Good
CB7.3E	AP	Summer2	15.98	18.6	Good
CB7.3E	AP	Winter	7.59	7	Good
CB7.4	AP	Annual	14.38	20	Good
CB7.4	AP	Fall	21.31	41.2	Good
CB7.4	AP	SAV1	14.38	16.4	Good
CB7.4	AP	SAV2	14.69	20.5	Good
CB7.4	AP	Spring1	6.51	13.5	Good
CB7.4	AP	Spring2	7.97	15.9	Good
CB7.4	AP	Summer1	15.36	20.3	Good
CB7.4	AP	Summer2	16.99	21.8	Good
CB7.4	AP	Winter	8.21	6.3	Good

Appendix H. Long term trends in primary productivity at the Virginia tributary and mainstem stations for the period of 1989 through 2002.

Station	Season	Baseline	Slope	Percent Change	Absolute Change	Homogeneity Test p Value	Trend Test p Value
TF5.5	Annual	37.34	0.39	14.04	5.46	0.3837	0.4682
TF5.5	Fall	7.04	4.23	796.6	59.22	0.9983	0.0387
TF5.5	SAV1	41.35	2.14	69.13	29.96	0.6048	0.0921
TF5.5	SAV2	86.03	-1.53	-24.04	-21.42	0.5568	0.5128
TF5.5	Spring1	42.83	1.75	52.3	24.5	0.3037	0.2548
TF5.5	Spring2	120.65	-4.06	-42.93	-56.84	0.4009	0.3237
TF5.5	Summer1	103.85	-5.85	-76.02	-81.9	0.6232	0.1497
TF5.5	Summer2	86.03	-3	-47.15	-42	0.6794	0.4328
TF5.5	Winter	2.69	0.02	7.96	0.28	0.4379	1.0000
RET5.2	Annual	37.76	-5.09	-181.89	-71.26	0.0092	0.0000
RET5.2	Fall	15.22	-4.69	-408.16	-65.66	0.0400	0.0003
RET5.2	SAV1	42.79	-5.65	-175.89	-79.1	0.0205	0.0000
RET5.2	SAV2	51.89	-8.24	-214.27	-115.36	0.2419	0.0000
RET5.2	Spring1	48.14	-5.9	-157.38	-82.6	0.0528	0.0686
RET5.2	Spring2	90.38	-9.32	-131.5	-130.48	0.1515	0.0034
RET5.2	Summer1	58.01	-8.1	-188.42	-113.4	0.6107	0.0000
RET5.2	Summer2	51.89	-7.96	-207.25	-111.44	0.7280	0.0000
RET5.2	Winter	4.69	-0.17	-43.43	-2.38	0.3322	0.6981
LE5.5	Annual	41.94	-2.89	-93.09	-40.46	0.4013	0.0000
LE5.5	Fall	22.68	-1.36	-79.61	-19.04	0.0596	0.0776
LE5.5	SAV1	34.85	-2.36	-90.42	-33.04	0.2115	0.0004
LE5.5	SAV2	37.65	-2.85	-102.13	-39.9	0.6967	0.0000
LE5.5	Spring1	60.23	-4.11	-87.66	-57.54	0.3986	0.0035
LE5.5	Spring2	59.94	-3.22	-68.54	-45.08	0.4569	0.0106
LE5.5	Summer1	39.2	-2.64	-90.9	-36.96	0.9856	0.0107
LE5.5	Summer2	40.74	-2.57	-85.14	-35.98	0.9494	0.0342
LE5.5	Winter	76.4	-6.75	-114.89	-94.5	0.3258	0.0004
SBE5	Annual	21.55	-2.18	-119.92	-30.52	0.8891	0.0000
SBE5	Fall	10.71	-0.52	-54.98	-7.28	0.6822	0.1133
SBE5	SAV1	18.62	-2.04	-129.98	-28.56	0.9857	0.0004
SBE5	SAV2	20.7	-3.24	-183.65	-45.36	0.9973	0.0004
SBE5	Spring1	22.4	-4.05	-214.09	-56.7	0.8645	0.0045
SBE5	Spring2	22.4	-3.69	-193.62	-51.66	0.9886	0.0121
SBE5	Summer1	39.82	-4.51	-131.11	-63.14	0.9488	0.0053
SBE5	Summer2	39.31	-4.63	-135.4	-64.82	0.8436	0.0190
SBE5	Winter	24.39	-2.86	-129.02	-40.04	0.0986	0.3784
TF4.2	Annual	5	-0.06	-15.44	-0.84	0.6835	0.6391
TF4.2	Fall	3.48	0.15	59.01	2.1	0.6243	0.6113
TF4.2	SAV1	4.85	0.1	26.34	1.4	0.8717	0.5858
TF4.2	SAV2	10.28	-0.31	-40.9	-4.34	0.3726	0.4283
TF4.2	Spring1	5.61	0.08	18.32	1.12	0.8390	0.5436
TF4.2	Spring2	9.18	-0.5	-69.99	-7	0.0446	0.4285
TF4.2	Summer1	14.01	-1.15	-110.92	-16.1	0.2642	0.1534

Appendix H. Continued.

Station	Season	Baseline	Slope	Percent Change	Absolute Change	Homogeneity Test p Value	Trend Test p Value
TF4.2	Summer2	19.81	-0.16	-10.78	-2.24	0.9363	0.7094
TF4.2	Winter	4.05	-0.1	-30.44	-1.4	0.9227	0.6278
RET4.3	Annual	21.41	-0.64	-40.35	-8.96	0.2458	0.1941
RET4.3	Fall	10.26	-0.12	-15.78	-1.68	0.2940	0.9190
RET4.3	SAV1	22.27	-0.74	-44.37	-10.36	0.2873	0.1654
RET4.3	SAV2	29.06	-1.91	-88.93	-26.74	0.4277	0.0119
RET4.3	Spring1	31.64	-0.42	-17.18	-5.88	0.5518	0.7042
RET4.3	Spring2	40.82	-2.31	-72.23	-32.34	0.1240	0.2349
RET4.3	Summer1	41.32	-3.77	-123.03	-52.78	0.4829	0.0082
RET4.3	Summer2	29.35	-2.55	-117.28	-35.7	0.4817	0.0624
RET4.3	Winter	10.67	1.08	121.7	15.12	1.0000	0.1746
WE4.2	Annual	28.18	-2.02	-96.76	-28.28	0.2922	0.0002
WE4.2	Fall	15.77	-1.16	-97.22	-16.24	0.1752	0.0919
WE4.2	SAV1	20.3	-2.02	-132.81	-28.28	0.1774	0.0025
WE4.2	SAV2	29.28	-1.61	-74.37	-22.54	0.3737	0.0264
WE4.2	Spring1	29.28	-3.85	-168.76	-53.9	0.5721	0.0011
WE4.2	Spring2	29.28	-2.89	-125.97	-40.46	0.7930	0.0395
WE4.2	Summer1	32.75	-0.47	-19.28	-6.58	0.6359	0.7233
WE4.2	Summer2	33.32	-0.11	-4.48	-1.54	0.5005	0.9479
WE4.2	Winter	43.85	-4.63	-137.27	-64.82	0.7742	0.0046
TF3.3	Annual	27.5	-0.03	-1.33	-0.42	0.6268	0.9569
TF3.3	Fall	24.9	1.62	86.41	22.68	0.8680	0.1113
TF3.3	SAV1	31.84	0.7	29.29	9.8	0.7801	0.4650
TF3.3	SAV2	50.82	-1.16	-30.69	-16.24	0.7620	0.2152
TF3.3	Spring1	18.2	0.89	62.52	12.46	0.4511	0.6613
TF3.3	Spring2	47.09	-2.89	-78.26	-40.46	0.4635	0.2878
TF3.3	Summer1	60.17	-1.98	-44.43	-27.72	0.8446	0.0731
TF3.3	Summer2	60.17	-1.24	-27.78	-17.36	0.8291	0.2100
TF3.3	Winter	5.23	-0.03	-7.8	-0.42	0.8688	0.8773
RET3.1	Annual	25.62	0.07	3.53	0.98	0.8807	0.9282
RET3.1	Fall	15.95	-0.25	-20.62	-3.5	0.8943	0.9730
RET3.1	SAV1	30.65	0.28	12.35	3.92	0.9864	0.6968
RET3.1	SAV2	44.82	-0.54	-16.15	-7.56	0.7012	0.7135
RET3.1	Spring1	39.21	0.98	31.93	13.72	0.8239	0.6613
RET3.1	Spring2	42.15	-0.67	-20.33	-9.38	0.7014	0.8198
RET3.1	Summer1	45.38	-0.61	-18.2	-8.54	0.3422	0.6486
RET3.1	Summer2	45.38	-0.36	-10.82	-5.04	0.2134	0.8655
RET3.1	Winter	4.83	0.31	78.24	4.34	0.2641	0.6433
LE3.6	Annual	27.32	-1.7	-83.81	-23.8	0.7614	0.0002
LE3.6	Fall	25.71	-1.08	-55.8	-15.12	0.9711	0.0540
LE3.6	SAV1	22.88	-1.89	-110.11	-26.46	0.8230	0.0034
LE3.6	SAV2	27.83	-1.5	-72.63	-21	0.8076	0.0849
LE3.6	Spring1	17.18	-2.96	-221.04	-41.44	0.4785	0.0084

Appendix H. Continued.

Station	Season	Baseline	Slope	Percent Change	Absolute Change	Homogeneity Test p Value	Trend Test p Value
LE3.6	Spring2	17.94	-2.54	-180.66	-35.56	0.6788	0.0531
LE3.6	Summer1	32.18	-0.37	-15.56	-5.18	0.7770	0.5163
LE3.6	Summer2	36.54	-0.16	-5.74	-2.24	0.8191	0.8445
LE3.6	Winter	30.74	-2.94	-124.26	-41.16	0.3810	0.0046
CB6.1	Annual	26.19	-1.35	-69.34	-18.9	0.8095	0.0010
CB6.1	Fall	22.05	-1.04	-62.37	-14.56	0.8374	0.0968
CB6.1	SAV1	23.6	-1.38	-77.74	-19.32	0.8446	0.0119
CB6.1	SAV2	26.97	-0.8	-39.99	-11.2	0.9802	0.2673
CB6.1	Spring1	23.42	-2.01	-110.18	-28.14	0.5017	0.0250
CB6.1	Spring2	28.73	-1.92	-85.35	-26.88	0.9813	0.2326
CB6.1	Summer1	27.85	-0.49	-23.71	-6.86	0.8439	0.5954
CB6.1	Summer2	26.97	-0.35	-17.73	-4.9	0.6929	0.7438
CB6.1	Winter	31.8	-2.74	-111.82	-38.36	0.9157	0.0046
CB6.4	Annual	23.62	-1.86	-106.24	-26.04	0.6322	0.0000
CB6.4	Fall	17.82	-1.18	-87.54	-16.52	0.9200	0.0243
CB6.4	SAV1	17.96	-1.02	-75.51	-14.28	0.6861	0.0390
CB6.4	SAV2	20.37	-1.45	-96.18	-20.3	0.3947	0.0100
CB6.4	Spring1	18.1	-1.61	-114.15	-22.54	0.8870	0.0949
CB6.4	Spring2	24.65	-2.63	-136.24	-36.82	0.6766	0.0484
CB6.4	Summer1	22.51	-1.67	-100.07	-23.38	0.1232	0.0681
CB6.4	Summer2	20.01	-1.12	-75.9	-15.68	0.0950	0.2686
CB6.4	Winter	27.58	-3.57	-168.47	-49.98	0.5257	0.0026
CB7.3E	Annual	20.57	-1.36	-89.51	-19.04	0.8586	0.0002
CB7.3E	Fall	20.36	-1.12	-72.72	-15.68	0.9829	0.1266
CB7.3E	SAV1	20.46	-0.89	-58.2	-12.46	0.7450	0.0611
CB7.3E	SAV2	21.06	-1.38	-88.14	-19.32	0.5806	0.0098
CB7.3E	Spring1	11.79	-1.09	-118.3	-15.26	0.4557	0.0767
CB7.3E	Spring2	21.06	-1.56	-94.45	-21.84	0.4858	0.0908
CB7.3E	Summer1	20.81	-1.69	-109.73	-23.66	0.3268	0.0307
CB7.3E	Summer2	20.57	-1.33	-87.15	-18.62	0.1951	0.0939
CB7.3E	Winter	31.16	-2.46	-102.64	-34.44	0.4778	0.0307
CB7.4	Annual	15.7	-0.59	-50.47	-8.26	0.9250	0.0361
CB7.4	Fall	17.84	0.12	9.22	1.68	0.9723	0.8397
CB7.4	SAV1	15.5	-0.44	-37.64	-6.16	0.7558	0.2001
CB7.4	SAV2	15.36	-0.8	-70.19	-11.2	0.8095	0.0328
CB7.4	Spring1	15.36	-1.28	-106.54	-17.92	0.5834	0.0767
CB7.4	Spring2	15.36	-1.11	-92.5	-15.54	0.8939	0.0250
CB7.4	Summer1	14.75	-0.78	-71.81	-10.92	0.6900	0.1369
CB7.4	Summer2	13.67	-0.78	-77.48	-10.92	0.4969	0.2422
CB7.4	Winter	19.19	-1.07	-72.4	-14.98	0.9403	0.2019

Appendix I. Scatterplots of primary productivity.

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TF5.5

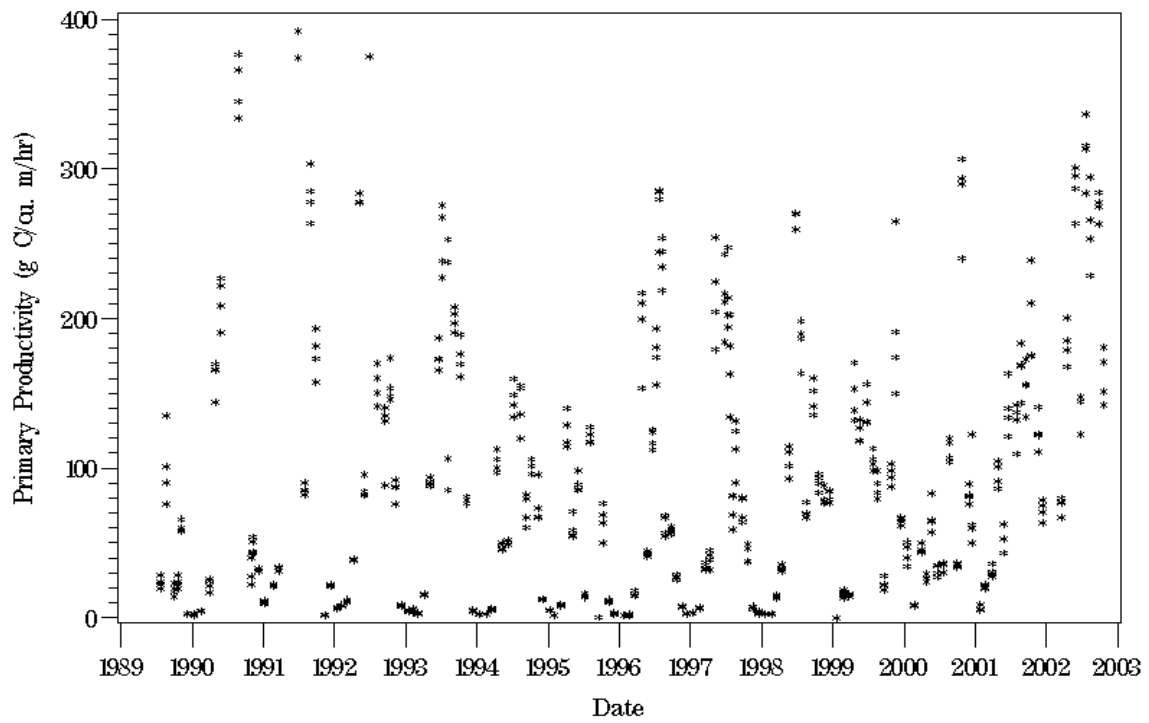


Figure II. Plot of primary productivity against time at station TF5.5 for the period of 1989 through 2002.

RET5.2

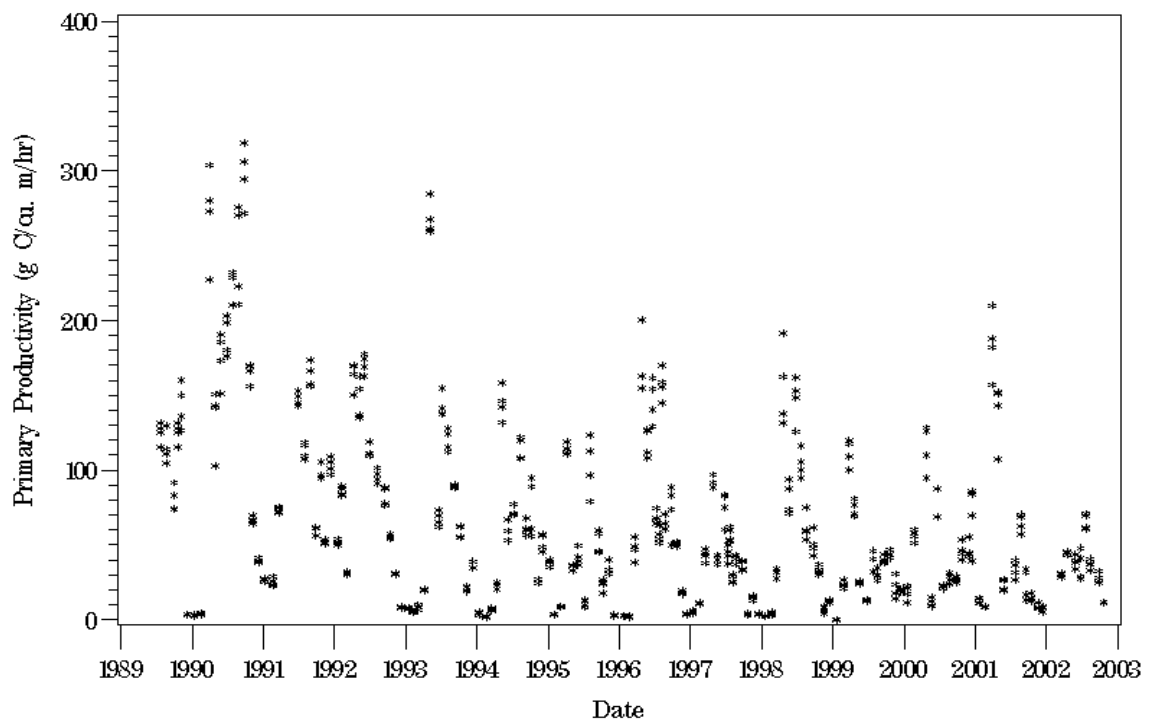


Figure I2. Plot of primary productivity against time at station RET5.2 for the period of 1989 through 2002.

LE5.5

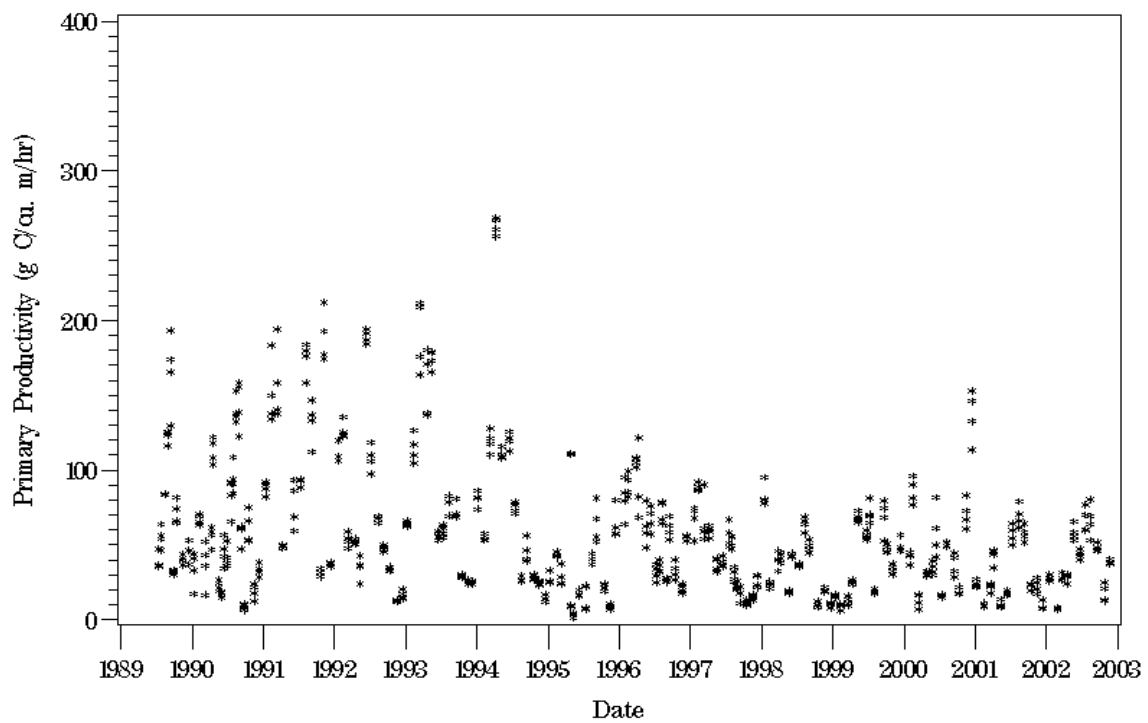


Figure I3. Plot of primary productivity against time at station LE5.5 for the period of 1989 through 2002.

SBE5

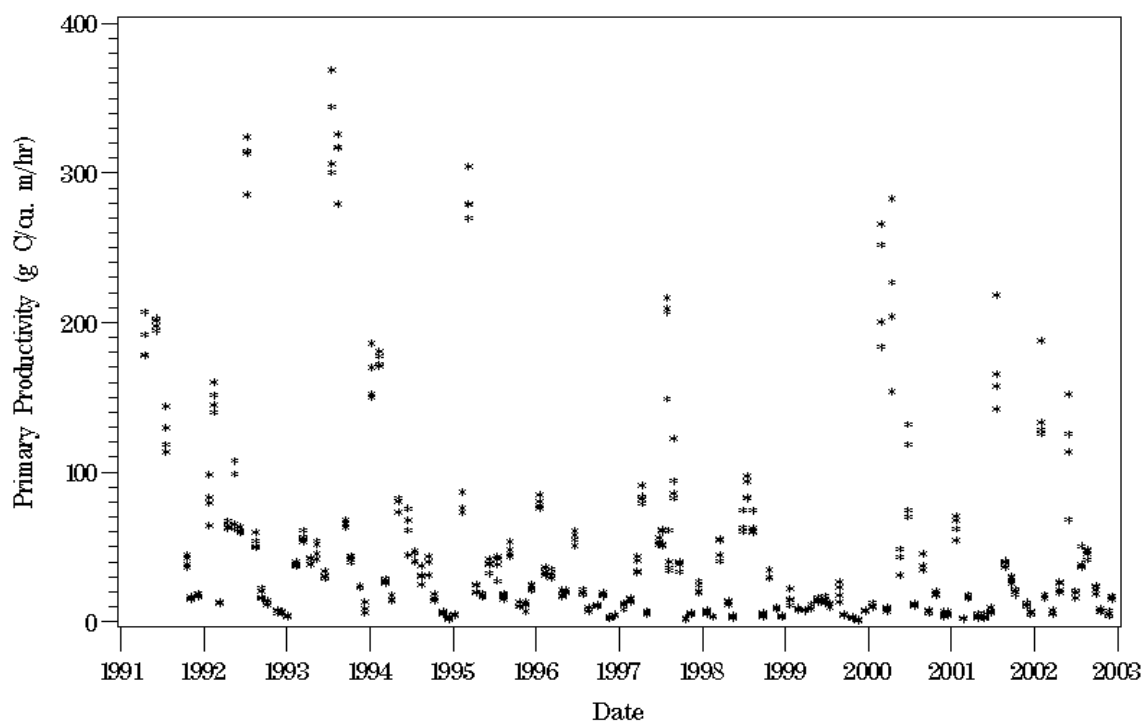


Figure I4. Plot of primary productivity against time at station SBE5 for the period of 1989 through 2002.

TF4.2

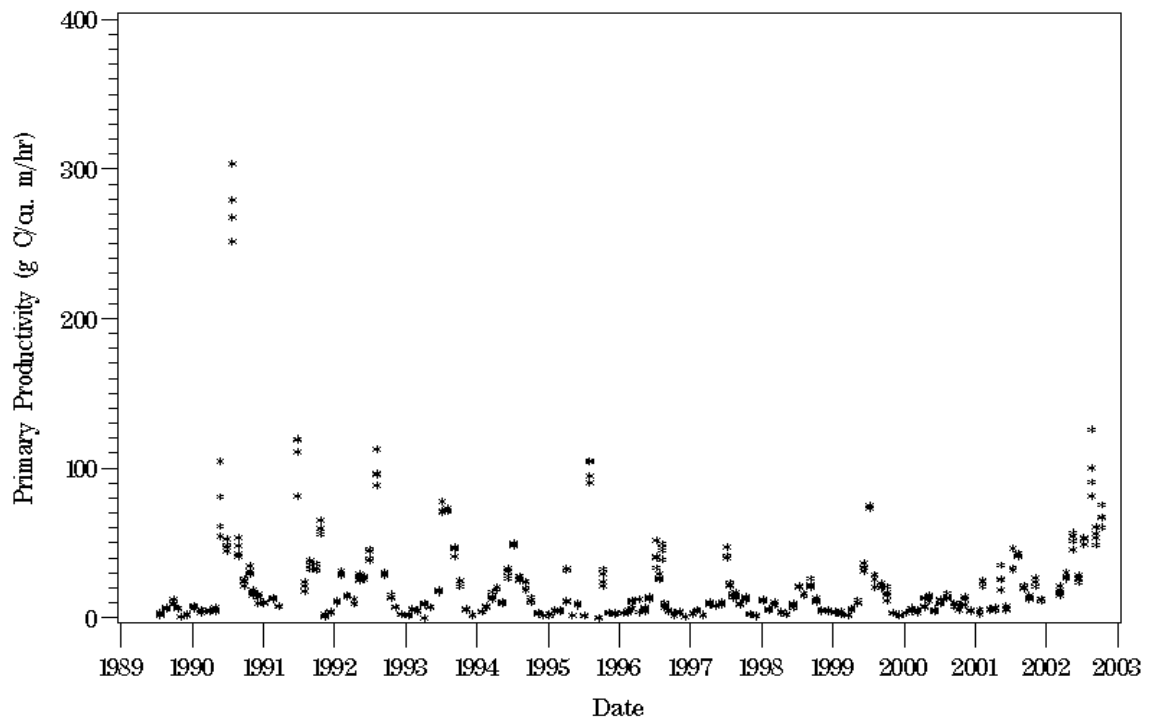


Figure I5. Plot of primary productivity against time at station TF4.2 for the period of 1989 through 2002.

RET4.3

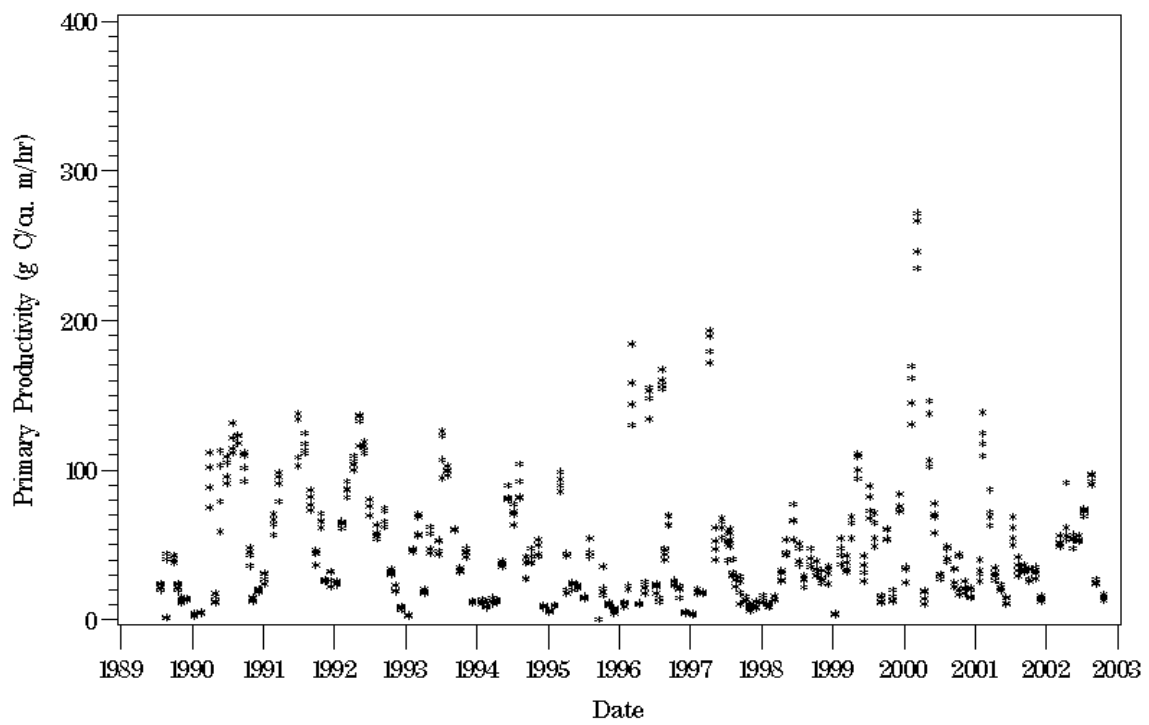


Figure I6. Plot of primary productivity against time at station RET4.3 for the period of 1989 through 2002.

WE4.2

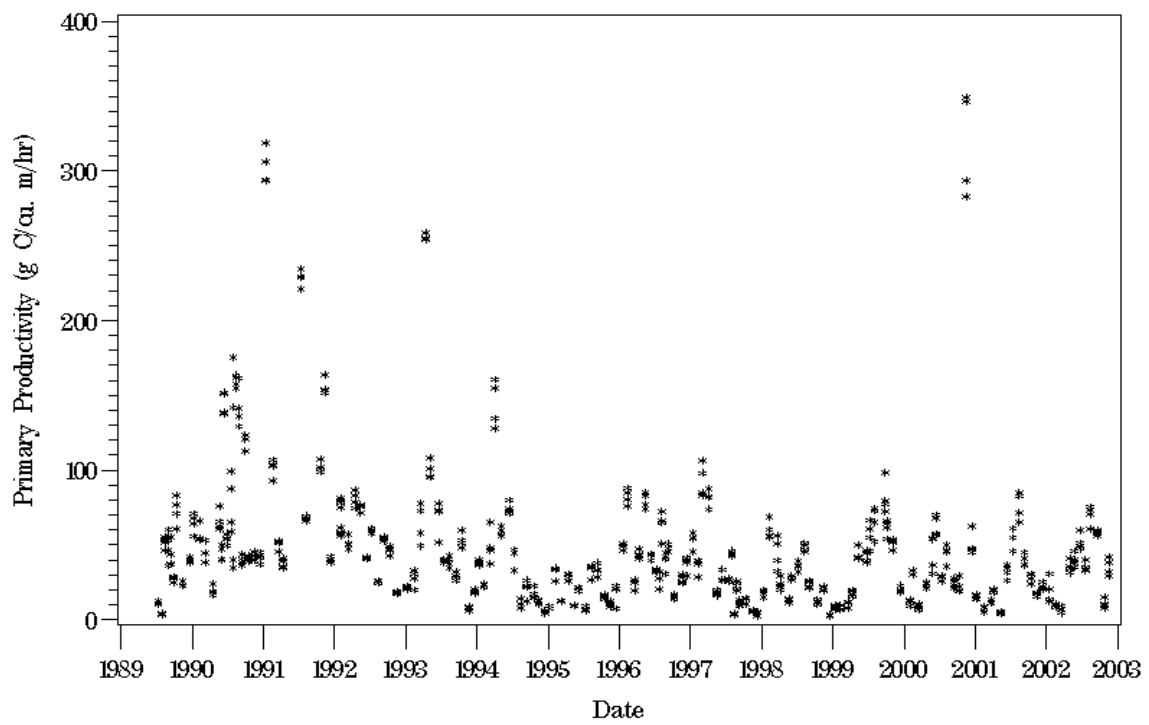


Figure I7. Plot of primary productivity against time at station WE4.2 for the period of 1989 through 2002.

TF3.3

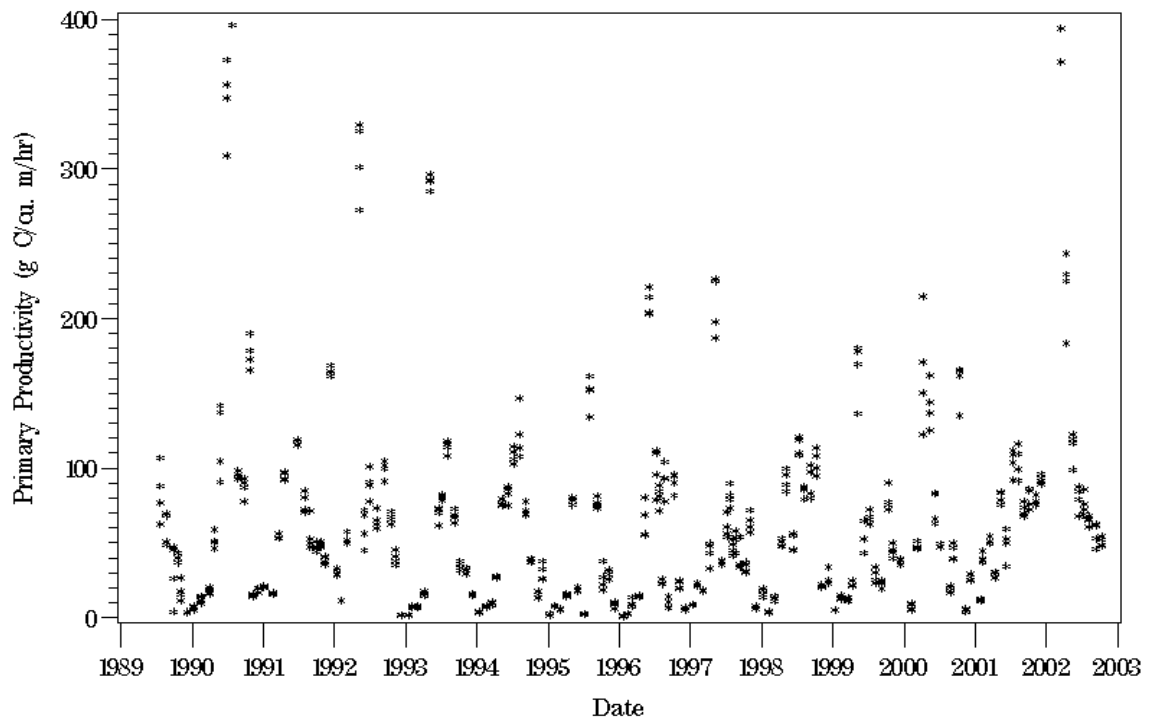


Figure I8. Plot of primary productivity against time at station TF3.3 for the period of 1989 through 2002.

RET3.1

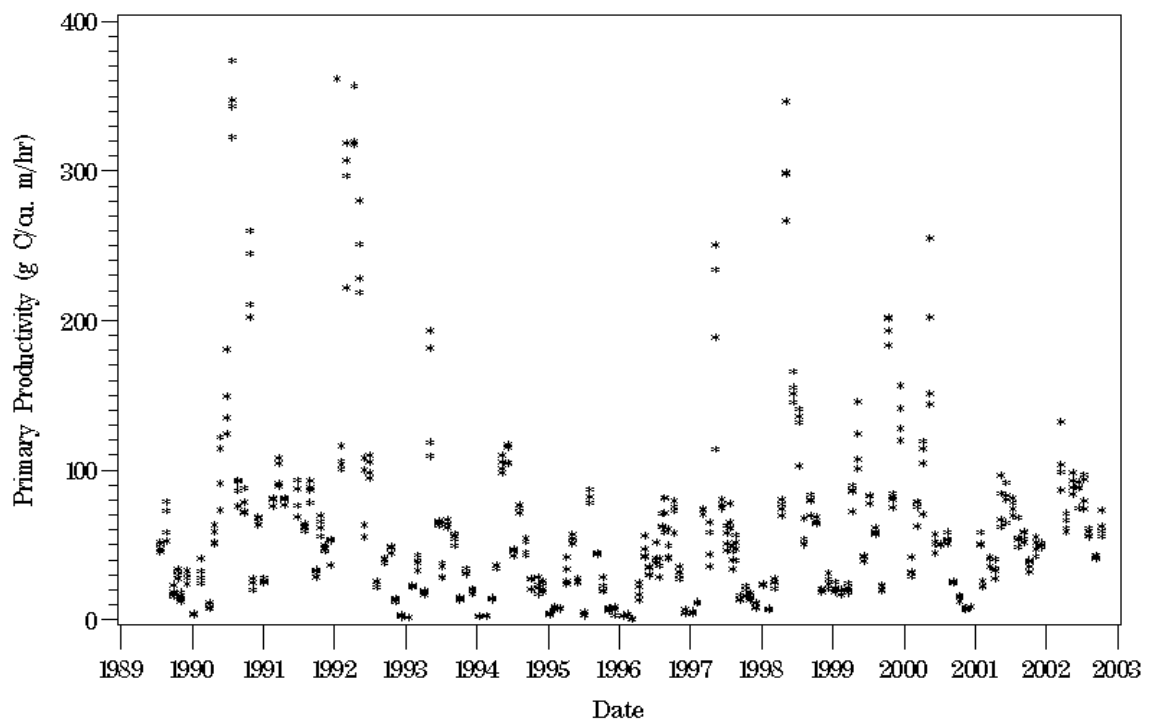


Figure 19. Plot of primary productivity against time at station RET3.1 for the period of 1989 through 2002.

LE3.6

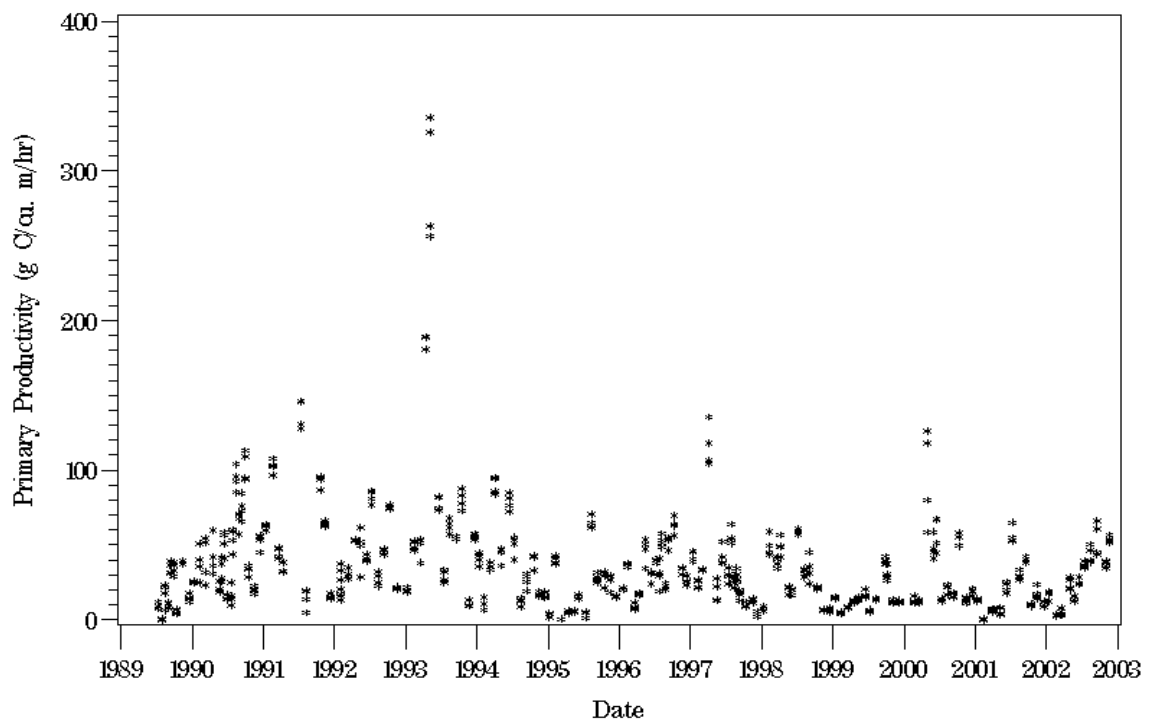


Figure I10. Plot of primary productivity against time at station LE3.6 for the period of 1989 through 2002.

CB6.1

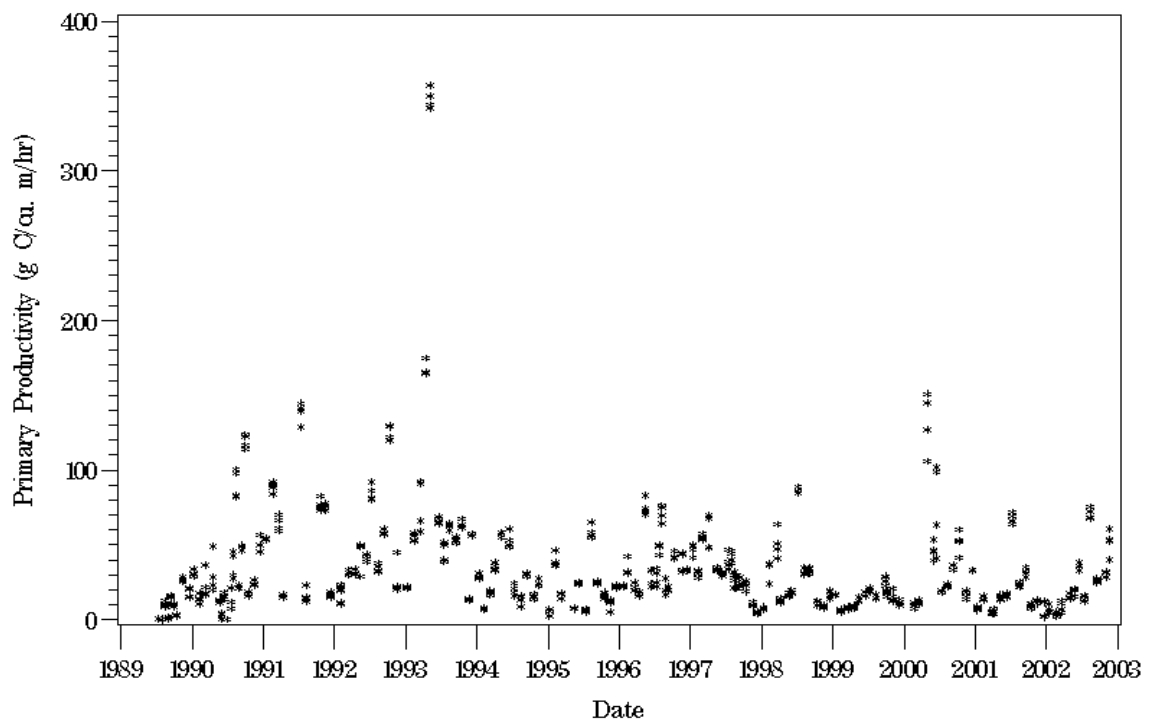


Figure I11. Plot of primary productivity against time at station CB6.1 for the period of 1989 through 2002.

CB6.4

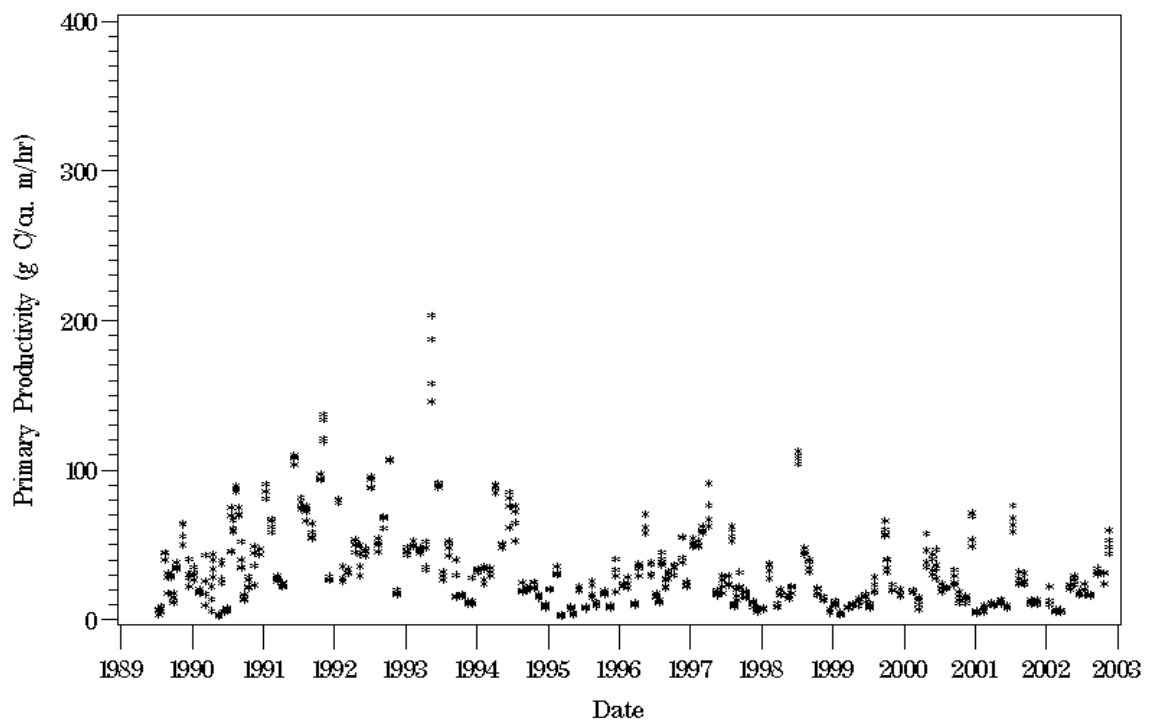


Figure I12. Plot of primary productivity against time at station CB6.4 for the period of 1989 through 2002.

CB7.3E

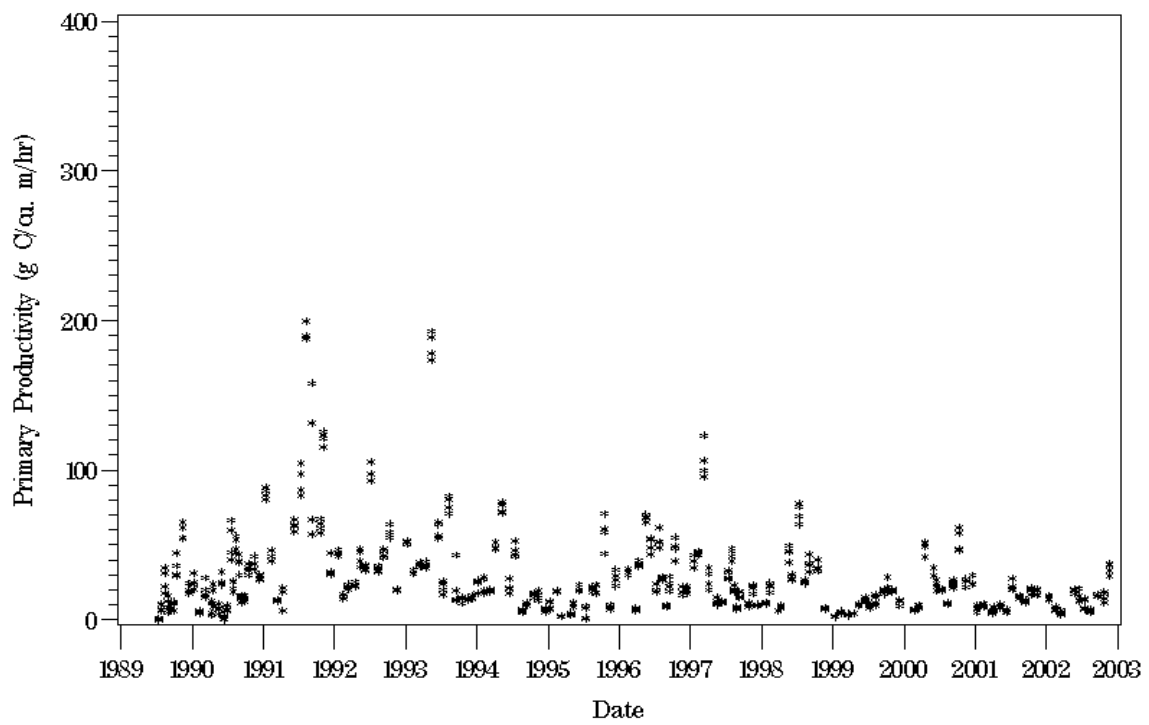


Figure I13. Plot of primary productivity against time at station CB7.3E for the period of 1989 through 2002.

CB7.4

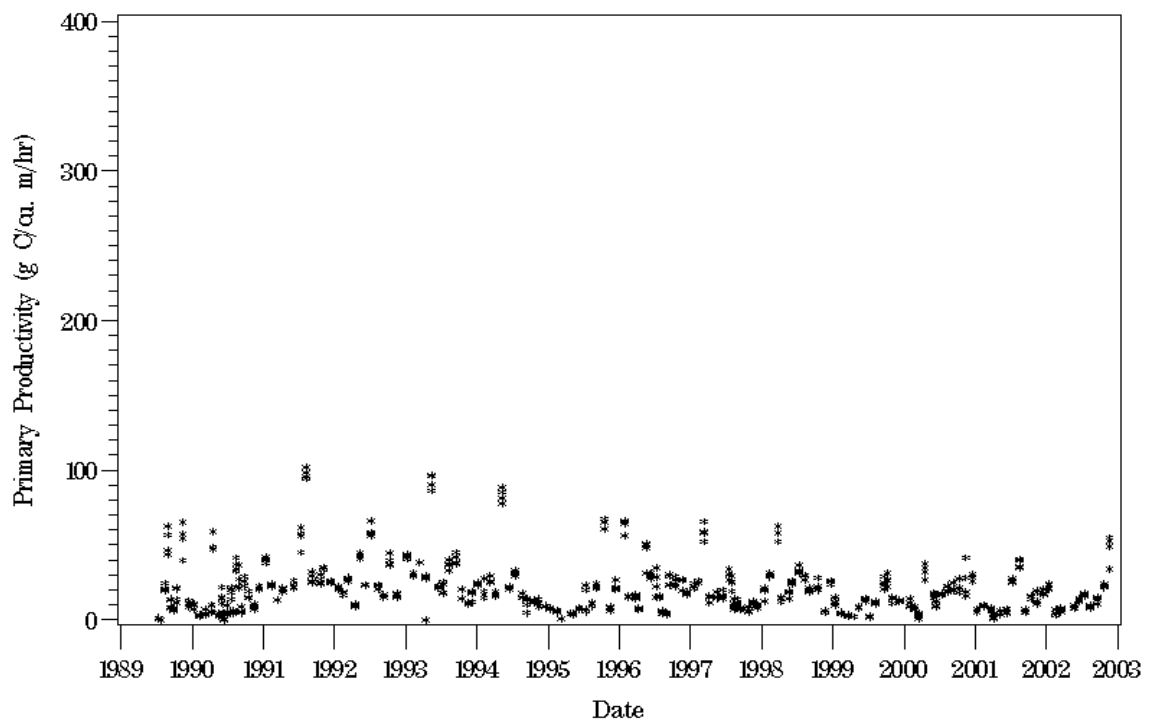


Figure I14. Plot of primary productivity against time at station CB7.4 for the period of 1989 through 2002.