

Aooendix G. Status of primary productivity for the Virginia tributaries and Chesapeake Bay Mainstem for the period of 1999 to 2001.

Station	Season	Median Value	Status Score	Status
TF5.5	Annual	75.83	77.60	Poor
TF5.5	Fall	96.35	91.80	Poor
TF5.5	SAV1	87.43	81.90	Poor
TF5.5	SAV2	104.71	72.00	Poor
TF5.5	Spring1	47.99	71.60	Poor
TF5.5	Spring2	96.28	78.80	Poor
TF5.5	Summer1	109.18	65.30	Poor
TF5.5	Summer2	104.71	61.70	Poor
TF5.5	Winter	12.41	83.80	Poor
RET5.2	Annual	27.93	34.50	Good
RET5.2	Fall	20.80	40.80	Good
RET5.2	SAV1	39.72	45.80	Fair
RET5.2	SAV2	31.97	23.40	Good
RET5.2	Spring1	92.25	77.30	Poor
RET5.2	Spring2	49.56	26.90	Good
RET5.2	Summer1	29.69	16.80	Good
RET5.2	Summer2	29.69	14.30	Good
RET5.2	Winter	14.82	43.70	Fair
LE5.5	Annual	31.14	54.70	Fair
LE5.5	Fall	34.07	65.60	Poor
LE5.5	SAV1	30.96	59.00	Poor
LE5.5	SAV2	44.81	68.40	Poor
LE5.5	Spring1	25.90	58.90	Poor
LE5.5	Spring2	31.14	65.80	Poor
LE5.5	Summer1	55.91	71.70	Poor
LE5.5	Summer2	57.06	71.30	Poor
LE5.5	Winter	16.10	20.70	Good
SBE5	Annual	11.93	9.30	Good
SBE5	Fall	6.15	7.90	Good
SBE5	SAV1	9.50	5.80	Good
SBE5	SAV2	14.88	7.70	Good
SBE5	Spring1	9.64	7.70	Good
SBE5	Spring2	14.59	6.30	Good
SBE5	Summer1	17.80	7.30	Good
SBE5	Summer2	20.71	14.70	Good
SBE5	Winter	13.43	19.50	Good
TF4.2	Annual	10.04	24.00	Good
TF4.2	Fall	11.39	41.80	Good
TF4.2	SAV1	10.63	21.80	Good
TF4.2	SAV2	13.42	15.20	Good
TF4.2	Spring1	6.23	14.40	Good
TF4.2	Spring2	10.34	9.50	Good
TF4.2	Summer1	21.32	14.40	Good
TF4.2	Summer2	21.35	17.40	Good
TF4.2	Winter	4.29	42.50	Fair

Aooendix G. Continued.

Station	Season	Median Value	Status Score	Status
RET4.3	Annual	33.75	38.10	Good
RET4.3	Fall	19.85	49.80	Fair
RET4.3	SAV1	31.45	38.30	Good
RET4.3	SAV2	34.17	30.60	Good
RET4.3	Spring1	66.86	61.60	Poor
RET4.3	Spring2	34.17	31.80	Good
RET4.3	Summer1	34.46	25.70	Good
RET4.3	Summer2	34.75	27.30	Good
RET4.3	Winter	38.86	60.60	Poor
WE4.2	Annual	27.24	50.10	Fair
WE4.2	Fall	29.06	56.40	Fair
WE4.2	SAV1	23.99	45.70	Fair
WE4.2	SAV2	41.85	63.80	Poor
WE4.2	Spring1	18.10	42.10	Good
WE4.2	Spring2	33.51	61.40	Poor
WE4.2	Summer1	49.22	66.90	Poor
WE4.2	Summer2	50.52	69.90	Poor
WE4.2	Winter	8.60	8.00	Good
TF3.3	Annual	48.19	54.20	Fair
TF3.3	Fall	76.46	81.00	Poor
TF3.3	SAV1	61.45	62.30	Poor
TF3.3	SAV2	66.66	51.30	Fair
TF3.3	Spring1	50.94	59.60	Poor
TF3.3	Spring2	64.76	59.50	Poor
TF3.3	Summer1	50.05	35.40	Good
TF3.3	Summer2	48.64	36.80	Good
TF3.3	Winter	12.18	45.80	Fair
RET3.1	Annual	50.18	54.20	Fair
RET3.1	Fall	49.38	77.50	Poor
RET3.1	SAV1	53.03	58.80	Poor
RET3.1	SAV2	56.28	52.50	Fair
RET3.1	Spring1	75.88	67.70	Poor
RET3.1	Spring2	82.05	67.70	Poor
RET3.1	Summer1	54.57	43.70	Fair
RET3.1	Summer2	54.87	44.70	Fair
RET3.1	Winter	24.30	41.80	Fair
LE3.6	Annual	13.88	12.00	Good
LE3.6	Fall	13.36	19.70	Good
LE3.6	SAV1	13.36	10.50	Good
LE3.6	SAV2	19.06	11.20	Good
LE3.6	Spring1	10.57	6.60	Good
LE3.6	Spring2	15.09	10.10	Good
LE3.6	Summer1	22.37	14.30	Good
LE3.6	Summer2	22.76	17.40	Good
LE3.6	Winter	13.62	19.40	Good

Aooendix G. Continued.

Station	Season	Median Value	Status Score	Status
CB6.1	Annual	14.84	13.50	Good
CB6.1	Fall	14.61	20.30	Good
CB6.1	SAV1	14.61	10.80	Good
CB6.1	SAV2	19.14	12.20	Good
CB6.1	Spring1	10.52	7.10	Good
CB6.1	Spring2	15.48	10.70	Good
CB6.1	Summer1	22.66	12.00	Good
CB6.1	Summer2	23.28	13.90	Good
CB6.1	Winter	9.68	16.30	Good
CB6.4	Annual	15.34	21.50	Good
CB6.4	Fall	16.40	30.20	Good
CB6.4	SAV1	13.78	22.90	Good
CB6.4	SAV2	21.52	29.00	Good
CB6.4	Spring1	11.27	26.50	Good
CB6.4	Spring2	12.70	27.50	Good
CB6.4	Summer1	23.46	36.20	Good
CB6.4	Summer2	25.35	35.70	Good
CB6.4	Winter	7.13	4.00	Good
CB7.3E	Annual	12.88	17.10	Good
CB7.3E	Fall	20.37	39.80	Good
CB7.3E	SAV1	18.37	23.10	Good
CB7.3E	SAV2	14.68	19.80	Good
CB7.3E	Spring1	7.42	14.50	Good
CB7.3E	Spring2	9.47	20.00	Good
CB7.3E	Summer1	14.68	20.60	Good
CB7.3E	Summer2	15.99	20.30	Good
CB7.3E	Winter	6.75	3.60	Good
CB7.4	Annual	12.98	16.40	Good
CB7.4	Fall	18.97	32.40	Good
CB7.4	SAV1	12.82	11.50	Good
CB7.4	SAV2	14.35	18.20	Good
CB7.4	Spring1	4.39	7.10	Good
CB7.4	Spring2	7.22	15.10	Good
CB7.4	Summer1	15.32	19.50	Good
CB7.4	Summer2	19.65	25.90	Good
CB7.4	Winter	8.21	6.30	Good

Appendix H. Long term trends in primary productivity at the Virginia tributary and mainstem stations for the period of 1989 through 2001.

Station	Season	Baseline	Slope	Percent Change	Absolute Change	Homogeneity Test p Value	p Value
TF5.5	Annual	39.91	-0.23	-6.92	-2.76	0.1850	0.6192
TF5.5	Fall	29.95	3.90	156.26	46.80	0.9803	0.0486
TF5.5	SAV1	47.57	0.87	21.95	10.44	0.3027	0.5860
TF5.5	SAV2	165.84	-7.49	-54.20	-89.88	0.4815	0.0335
TF5.5	Spring1	165.84	-0.07	-0.46	-0.77	0.2227	0.9316
TF5.5	Spring2	215.40	11.89	60.72	130.79	0.6140	0.0483
TF5.5	Summer1	355.97	11.68	39.37	140.16	0.7795	0.0099
TF5.5	Summer2	225.91	-9.96	-52.91	-119.52	0.6826	0.0486
TF5.5	Winter	3.59	0.02	6.13	0.22	0.4379	1.0000
RET5.2	Annual	134.69	-4.89	-43.57	-58.68	0.0040	0.0000
RET5.2	Fall	96.59	-4.33	-53.79	-51.96	0.0565	0.0007
RET5.2	SAV1	143.18	-5.86	-49.11	-70.32	0.0061	0.0000
RET5.2	SAV2	168.20	-8.44	-60.21	-101.28	0.1064	0.0000
RET5.2	Spring1	179.67	-5.09	-31.16	-55.99	0.0136	0.1635
RET5.2	Spring2	179.67	-8.57	-52.47	-94.27	0.0528	0.0134
RET5.2	Summer1	189.66	-8.44	-53.40	-101.28	0.5058	0.0000
RET5.2	Summer2	178.17	-8.34	-56.17	-100.08	0.9264	0.0000
RET5.2	Winter	3.74	-0.17	-50.00	-1.87	0.3322	0.6981
LE5.5	Annual	46.79	-3.13	-80.27	-37.56	0.7682	0.0000
LE5.5	Fall	43.66	-1.40	-38.48	-16.80	0.1353	0.0670
LE5.5	SAV1	40.67	-2.60	-76.72	-31.20	0.4862	0.0005
LE5.5	SAV2	70.19	-3.65	-62.40	-43.80	0.8900	0.0000
LE5.5	Spring1	39.75	-5.17	-143.07	-56.87	0.6492	0.0045
LE5.5	Spring2	41.91	-3.47	-91.08	-38.17	0.7500	0.0121
LE5.5	Summer1	81.69	-3.90	-57.29	-46.80	0.9621	0.0058
LE5.5	Summer2	86.52	-3.96	-54.92	-47.52	0.8746	0.0201
LE5.5	Winter	52.10	-7.13	-150.54	-78.43	0.3715	0.0024
SBE5	Annual	62.66	-3.09	-49.31	-30.90	0.9504	0.0000
SBE5	Fall	14.53	-1.03	-70.89	-10.30	0.5743	0.0342
SBE5	SAV1	29.57	-2.73	-92.32	-27.30	0.9638	0.0002
SBE5	SAV2	73.18	-5.11	-69.83	-51.10	0.8557	0.0002
SBE5	Spring1	82.04	-5.49	-66.92	-54.90	0.8711	0.0129
SBE5	Spring2	82.04	-3.98	-48.51	-39.80	0.6000	0.0516
SBE5	Summer1	124.23	-7.06	-56.83	-70.60	0.5497	0.0026
SBE5	Summer2	124.23	-9.71	-78.16	-97.10	0.7498	0.0012
SBE5	Winter	115.05	-6.39	-49.99	-57.51	0.5553	0.2382
TF4.2	Annual	9.14	-0.28	-36.76	-3.36	0.5379	0.0490
TF4.2	Fall	10.19	0.02	2.36	0.24	0.3406	0.9438
TF4.2	SAV1	10.52	-0.18	-20.53	-2.16	0.5681	0.3269
TF4.2	SAV2	24.57	-1.15	-56.17	-13.80	0.4746	0.0111
TF4.2	Spring1	5.58	-0.21	-41.40	-2.31	0.8163	0.4922
TF4.2	Spring2	48.00	-1.44	-33.00	-15.84	0.0797	0.0654
TF4.2	Summer1	24.57	-1.78	-86.94	-21.36	0.3207	0.0086
TF4.2	Summer2	17.54	-1.18	-80.73	-14.16	0.8045	0.1289
TF4.2	Winter	6.56	-0.10	-16.77	-1.10	0.9227	0.6278

Appendix H. Continued.

Station	Season	Baseline	Slope	Percent Change	Absolute Change	Homogeneity Test p Value	p Value
RET4.3	Annual	22.40	-0.63	-33.75	-7.56	0.3356	0.2195
RET4.3	Fall	17.12	0.17	11.92	2.04	0.5168	0.7781
RET4.3	SAV1	41.64	-0.67	-19.31	-8.04	0.4713	0.2528
RET4.3	SAV2	44.52	-2.50	-67.39	-30.00	0.6863	0.0070
RET4.3	Spring1	91.32	-0.57	-6.87	-6.27	0.6564	0.5479
RET4.3	Spring2	91.32	-2.71	-32.64	-29.81	0.2119	0.1380
RET4.3	Summer1	100.38	-4.56	-54.51	-54.72	0.7894	0.0037
RET4.3	Summer2	73.77	-3.95	-64.25	-47.40	0.7769	0.0277
RET4.3	Winter	4.34	1.08	273.73	11.88	1.0000	0.1746
WE4.2	Annual	50.81	-2.14	-50.54	-25.68	0.8169	0.0002
WE4.2	Fall	41.48	-1.41	-40.79	-16.92	0.4316	0.1251
WE4.2	SAV1	41.73	-2.08	-59.81	-24.96	0.6029	0.0035
WE4.2	SAV2	55.41	-2.02	-43.75	-24.24	0.7973	0.0151
WE4.2	Spring1	48.93	-3.94	-88.58	-43.34	0.7925	0.0035
WE4.2	Spring2	55.41	-3.65	-72.46	-40.15	0.9052	0.0256
WE4.2	Summer1	76.74	-1.03	-16.11	-12.36	0.8313	0.3721
WE4.2	Summer2	64.72	-0.74	-13.72	-8.88	0.7807	0.6092
WE4.2	Winter	60.41	-5.25	-95.60	-57.75	0.8760	0.0105
TF3.3	Annual	44.88	-0.28	-7.49	-3.36	0.5909	0.6540
TF3.3	Fall	18.27	2.11	138.59	25.32	0.9010	0.0909
TF3.3	SAV1	38.78	0.44	13.62	5.28	0.8231	0.7685
TF3.3	SAV2	88.95	-1.63	-21.99	-19.56	0.6821	0.1100
TF3.3	Spring1	50.99	-0.43	-9.28	-4.73	0.7168	0.7111
TF3.3	Spring2	121.20	-4.08	-37.03	-44.88	0.5142	0.0860
TF3.3	Summer1	88.95	-2.53	-34.13	-30.36	0.7233	0.0441
TF3.3	Summer2	85.78	-1.44	-20.14	-17.28	0.8725	0.1968
TF3.3	Winter	9.95	-0.03	-3.32	-0.33	0.8688	0.8773
RET3.1	Annual	52.14	-0.33	-7.59	-3.96	0.8918	0.8000
RET3.1	Fall	30.35	-0.40	-15.82	-4.80	0.8322	0.8880
RET3.1	SAV1	31.16	0.12	4.62	1.44	0.9885	0.8514
RET3.1	SAV2	75.56	-0.95	-15.09	-11.40	0.7242	0.5362
RET3.1	Spring1	55.43	0.62	12.30	6.82	0.9264	0.8370
RET3.1	Spring2	103.17	-0.67	-7.14	-7.37	0.5745	0.7967
RET3.1	Summer1	75.56	-1.10	-17.47	-13.20	0.4051	0.4326
RET3.1	Summer2	70.67	-0.72	-12.23	-8.64	0.2915	0.7042
RET3.1	Winter	17.28	0.31	19.73	3.41	0.2641	0.6433
LE3.6	Annual	34.23	-1.98	-69.41	-23.76	0.9244	0.0001
LE3.6	Fall	27.11	-1.57	-69.49	-18.84	0.9257	0.0160
LE3.6	SAV1	34.77	-2.48	-85.59	-29.76	0.9334	0.0010
LE3.6	SAV2	34.10	-1.97	-69.33	-23.64	0.8543	0.0403
LE3.6	Spring1	39.24	-2.96	-82.98	-32.56	0.5769	0.0191
LE3.6	Spring2	28.95	-2.68	-101.83	-29.48	0.6341	0.0610
LE3.6	Summer1	34.37	-1.16	-40.50	-13.92	0.8017	0.3054
LE3.6	Summer2	34.57	-1.10	-38.18	-13.20	0.6966	0.5110
LE3.6	Winter	31.68	-3.33	-115.63	-36.63	0.5466	0.0105

Appendix H. Continued.

Station	Season	Baseline	Slope	Percent Change	Absolute Change	Homogeneity Test p Value	p Value
CB6.1	Annual	18.99	-1.48	-93.52	-17.76	0.9460	0.0011
CB6.1	Fall	20.94	-1.15	-65.90	-13.80	0.5846	0.0380
CB6.1	SAV1	19.86	-1.53	-92.45	-18.36	0.7908	0.0084
CB6.1	SAV2	10.77	-1.10	-122.56	-13.20	0.9956	0.1999
CB6.1	Spring1	19.86	-2.01	-111.33	-22.11	0.6650	0.0367
CB6.1	Spring2	7.92	-2.05	-284.72	-22.55	0.9993	0.1535
CB6.1	Summer1	10.77	-0.59	-65.74	-7.08	0.9421	0.4875
CB6.1	Summer2	17.69	-0.44	-29.85	-5.28	0.9581	0.7150
CB6.1	Winter	22.19	-2.33	-115.50	-25.63	0.8166	0.0338
CB6.4	Annual	27.64	-2.13	-92.47	-25.56	0.6726	0.0000
CB6.4	Fall	38.12	-1.44	-45.33	-17.28	0.7448	0.0037
CB6.4	SAV1	25.62	-1.27	-59.48	-15.24	0.5772	0.0128
CB6.4	SAV2	25.62	-1.74	-81.50	-20.88	0.4880	0.0116
CB6.4	Spring1	21.69	-1.60	-81.14	-17.60	0.9735	0.1497
CB6.4	Spring2	13.98	-3.02	-237.63	-33.22	0.7880	0.0531
CB6.4	Summer1	25.92	-1.75	-81.02	-21.00	0.2356	0.1326
CB6.4	Summer2	30.85	-1.06	-41.23	-12.72	0.1973	0.3979
CB6.4	Winter	25.07	-4.06	-178.14	-44.66	0.3453	0.0087
CB7.3E	Annual	19.15	-1.33	-83.34	-15.96	0.7808	0.0011
CB7.3E	Fall	33.68	-1.12	-39.90	-13.44	0.8661	0.1111
CB7.3E	SAV1	18.57	-0.97	-62.68	-11.64	0.5855	0.0871
CB7.3E	SAV2	16.95	-1.23	-87.08	-14.76	0.5457	0.0500
CB7.3E	Spring1	17.04	-1.09	-70.36	-11.99	0.4436	0.0964
CB7.3E	Spring2	11.72	-1.56	-146.42	-17.16	0.4436	0.0964
CB7.3E	Summer1	15.23	-1.47	-115.82	-17.64	0.3205	0.1172
CB7.3E	Summer2	16.09	-1.13	-84.28	-13.56	0.2158	0.2906
CB7.3E	Winter	14.73	-2.53	-188.93	-27.83	0.2730	0.0568
CB7.4	Annual	10.70	-0.61	-68.41	-7.32	0.9709	0.0645
CB7.4	Fall	16.18	-0.09	-6.67	-1.08	0.8594	0.7702
CB7.4	SAV1	15.05	-0.63	-50.23	-7.56	0.8664	0.1353
CB7.4	SAV2	15.05	-0.78	-62.19	-9.36	0.8601	0.0870
CB7.4	Spring1	7.71	-1.14	-162.65	-12.54	0.5524	0.0964
CB7.4	Spring2	7.71	-1.16	-165.50	-12.76	0.7942	0.0451
CB7.4	Summer1	9.93	-0.70	-84.59	-8.40	0.8013	0.3803
CB7.4	Summer2	12.88	-0.65	-60.56	-7.80	0.6303	0.5261
CB7.4	Winter	6.54	-1.04	-174.92	-11.44	0.5928	0.2799

**Appendix I. Scatterplots of primary productivity.**

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# TF5.5

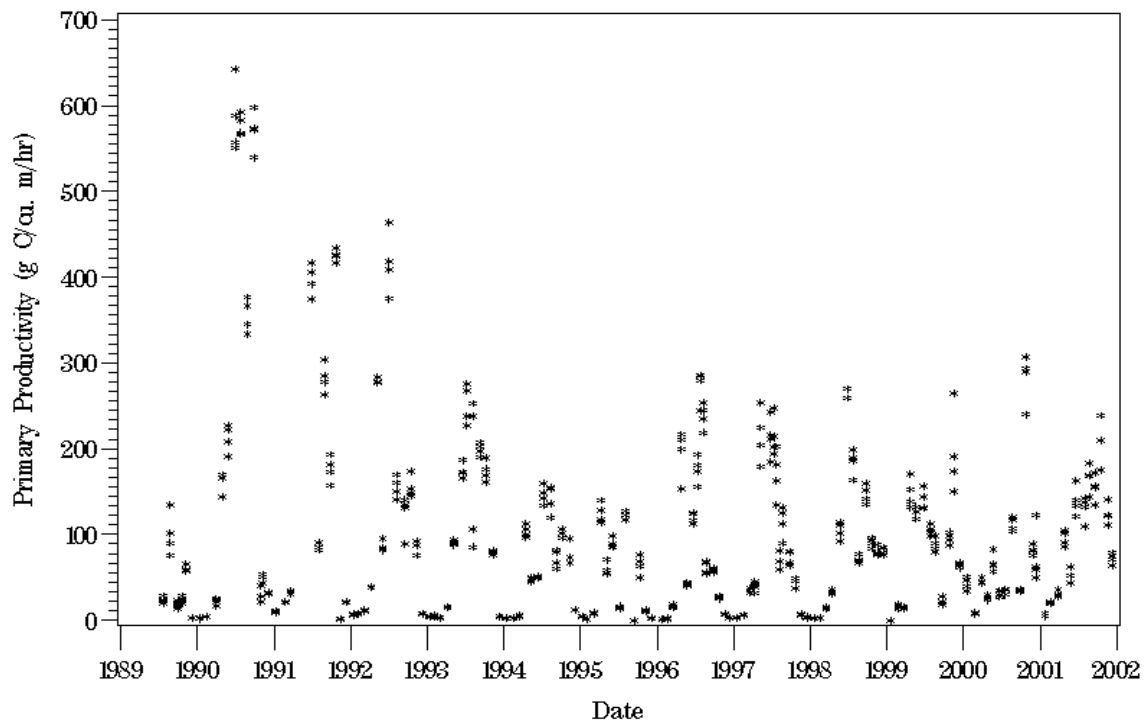


Figure 11. Plot of primary productivity against time at station TF5.5 for the period of 1989 through 2001.

## RET5.2

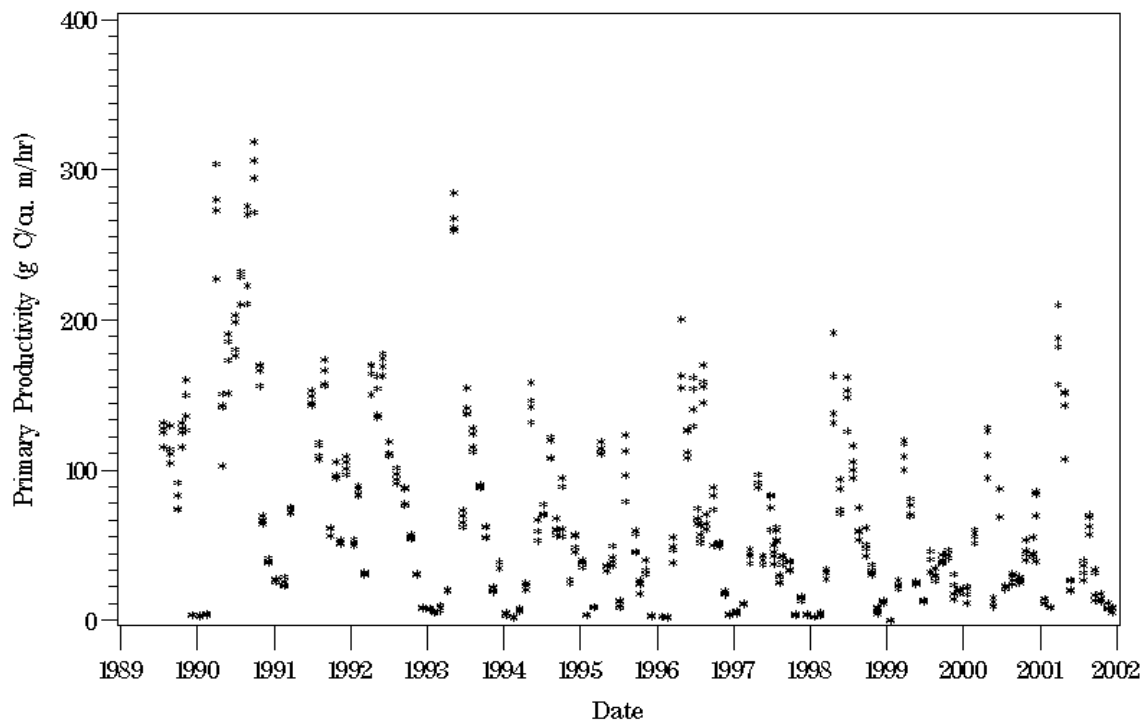


Figure 12. Plot of primary productivity against time at station RET5.2 for the period of 1989 through 2001.

# LE5.5

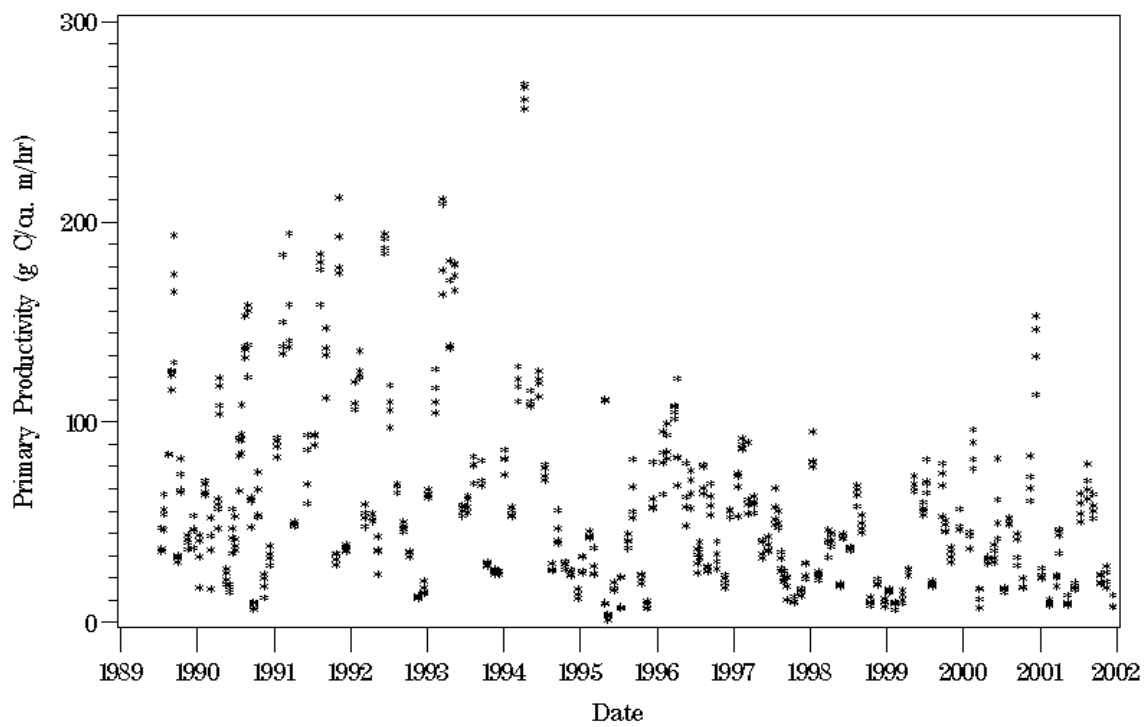


Figure 13. Plot of primary productivity against time at station LE5.5 for the period of 1989 through 2001.

# SBE5

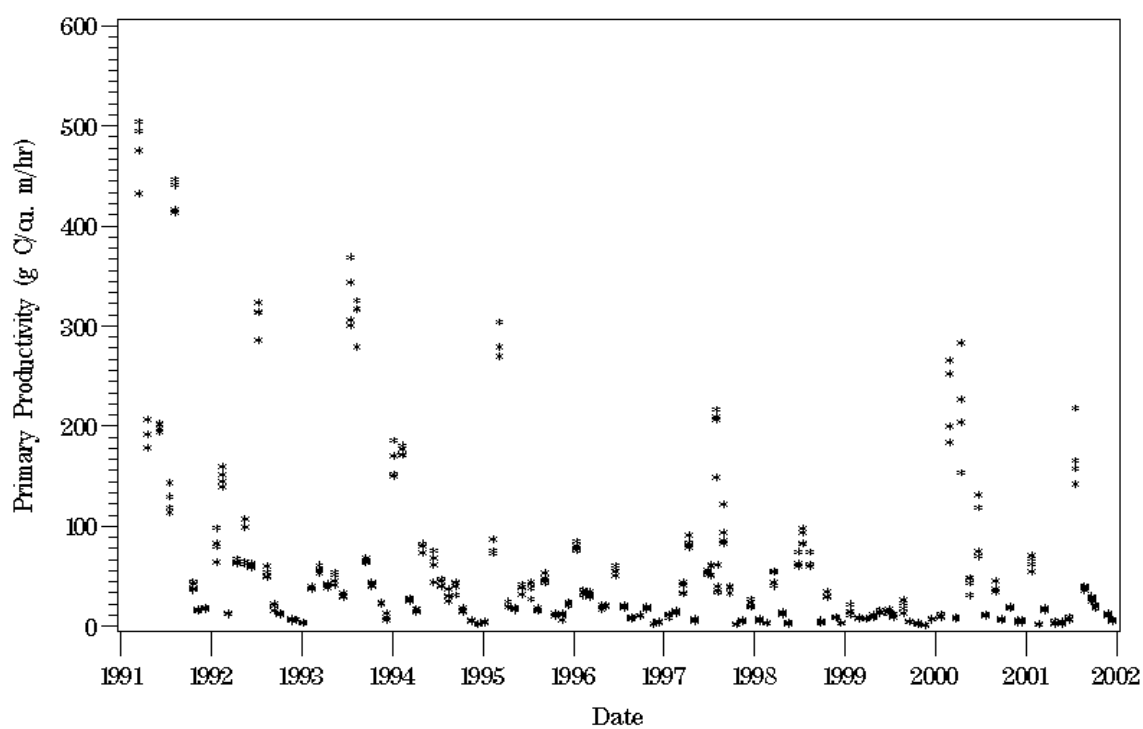


Figure 14. Plot of primary productivity against time at station SBE5 for the period of 1989 through 2001.

## TF4.2

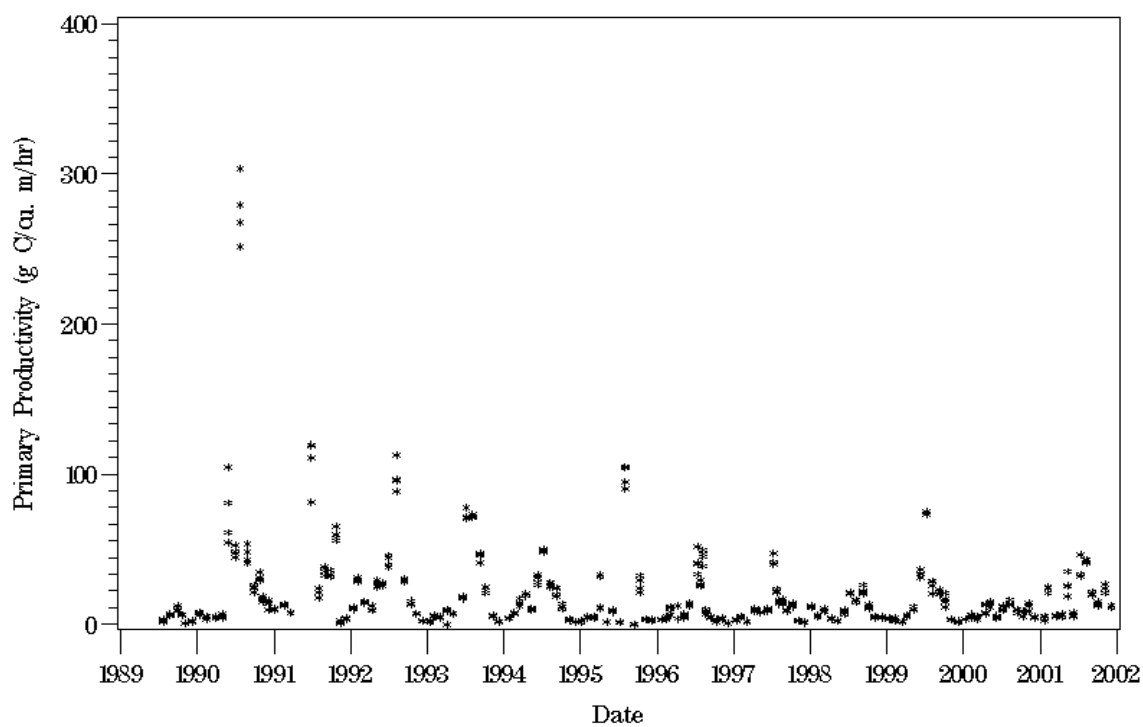


Figure 15. Plot of primary productivity against time at station TF4.2 for the period of 1989 through 2001.

## RET4.3

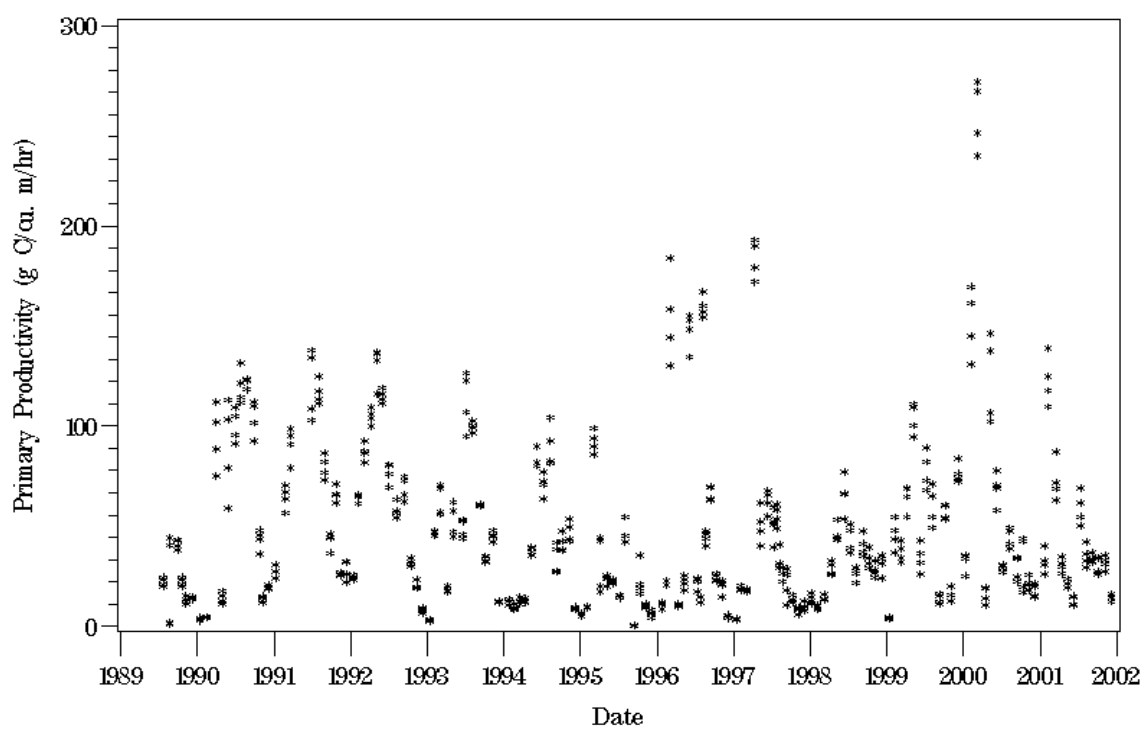


Figure I6. Plot of primary productivity against time at station RET4.3 for the period of 1989 through 2001.

# WE4.2

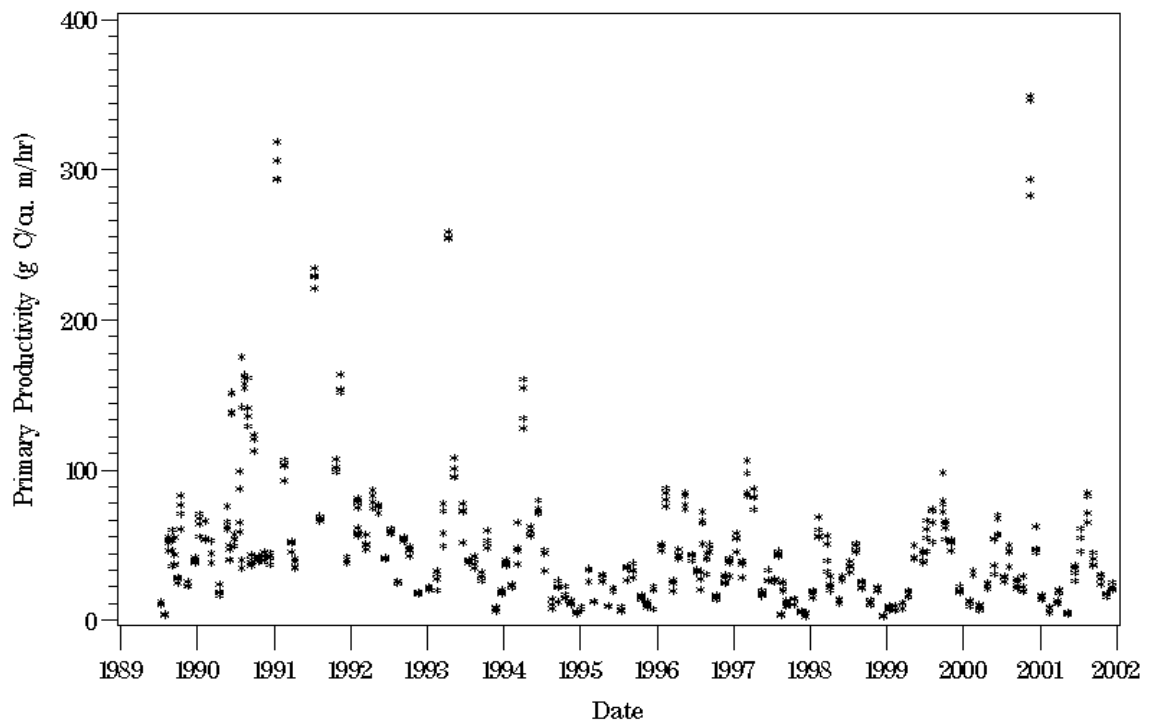


Figure 17. Plot of primary productivity against time at station WE4.2 for the period of 1989 through 2001.

### TF3.3

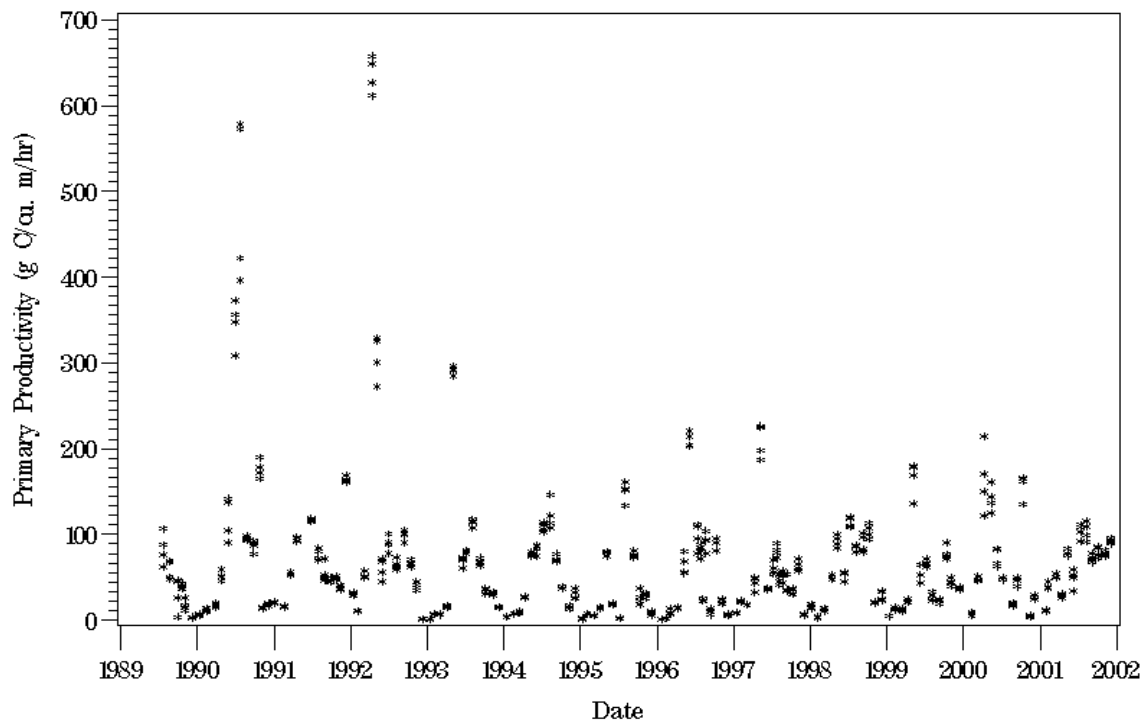


Figure 18. Plot of primary productivity against time at station TF3.3 for the period of 1989 through 2001.



# RET3.1

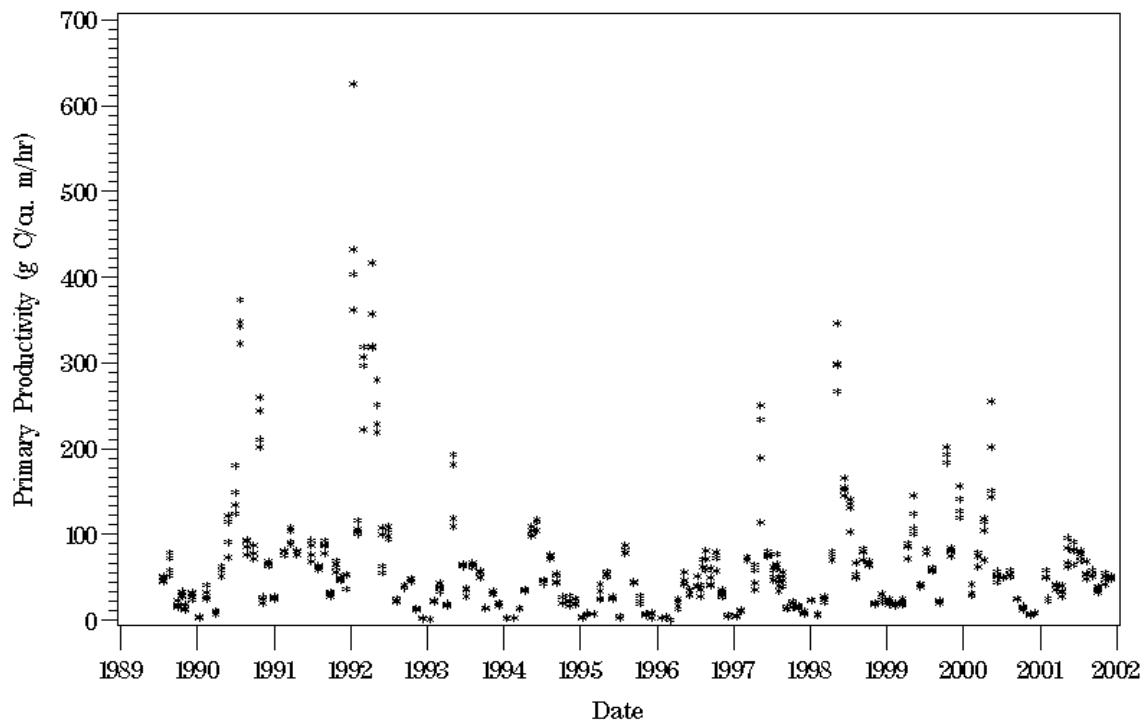


Figure 19. Plot of primary productivity against time at station RET3.1 for the period of 1989 through 2001.

# LE3.6

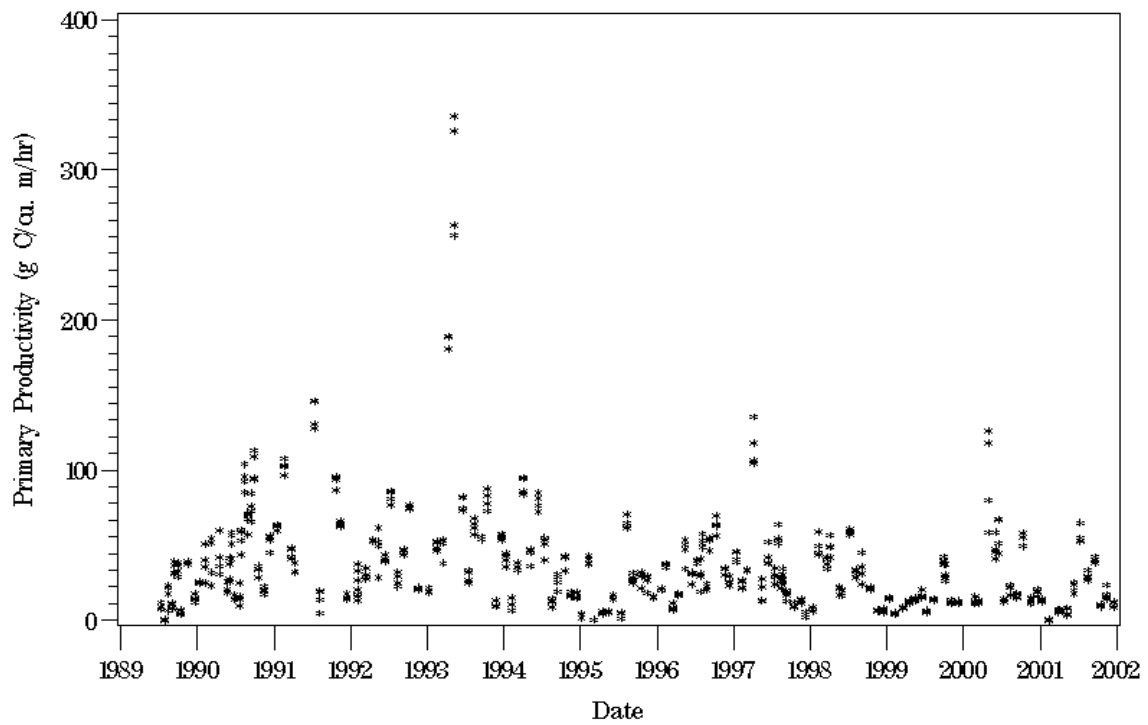


Figure I10. Plot of primary productivity against time at station LE3.6 for the period of 1989 through 2001.

# CB6.1

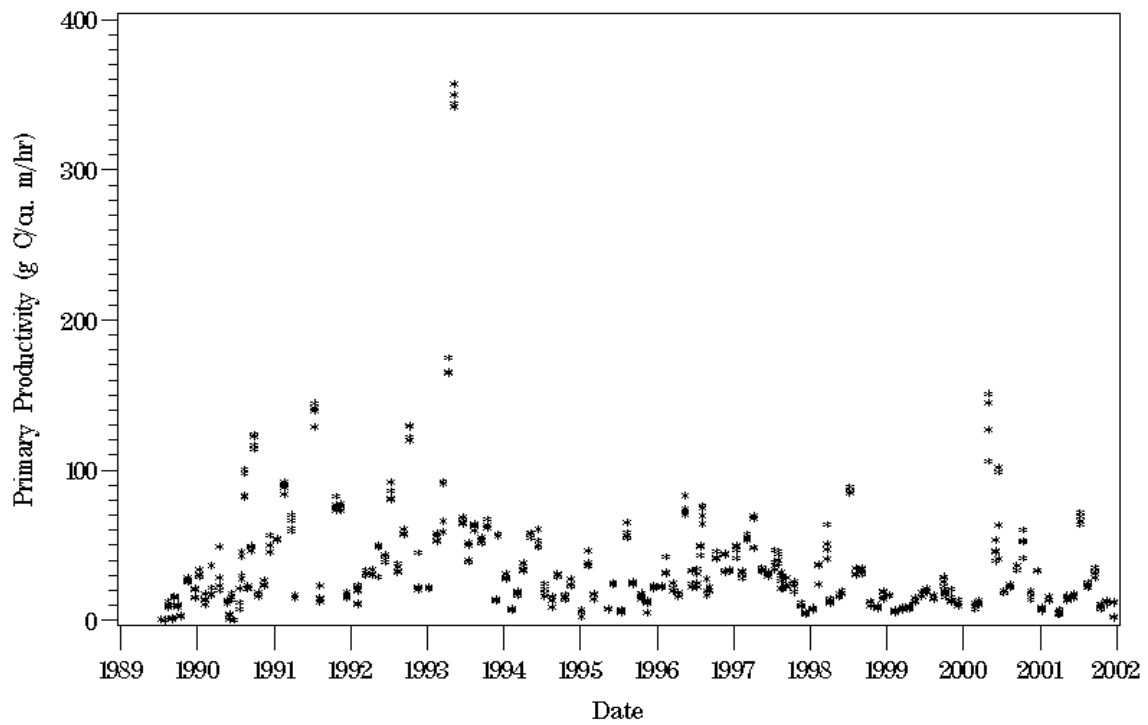


Figure I11. Plot of primary productivity against time at station CB6.1 for the period of 1989 through 2001.

# CB6.4

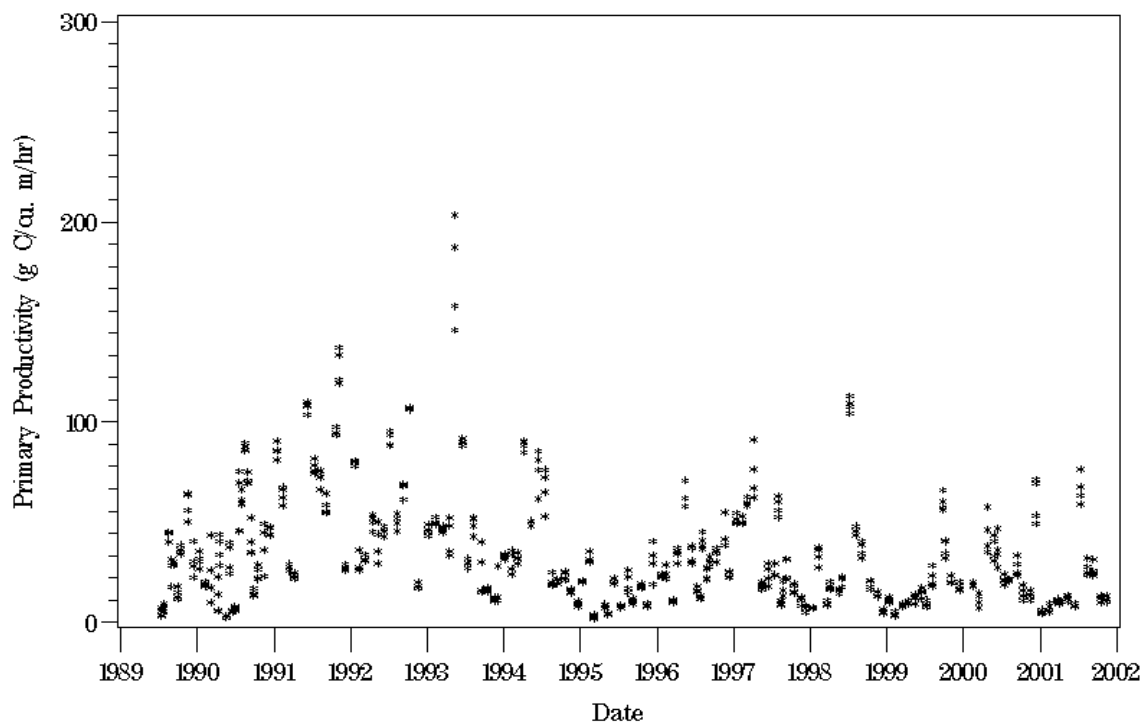


Figure I12. Plot of primary productivity against time at station CB6.4 for the period of 1989 through 2001.

# CB7.3E

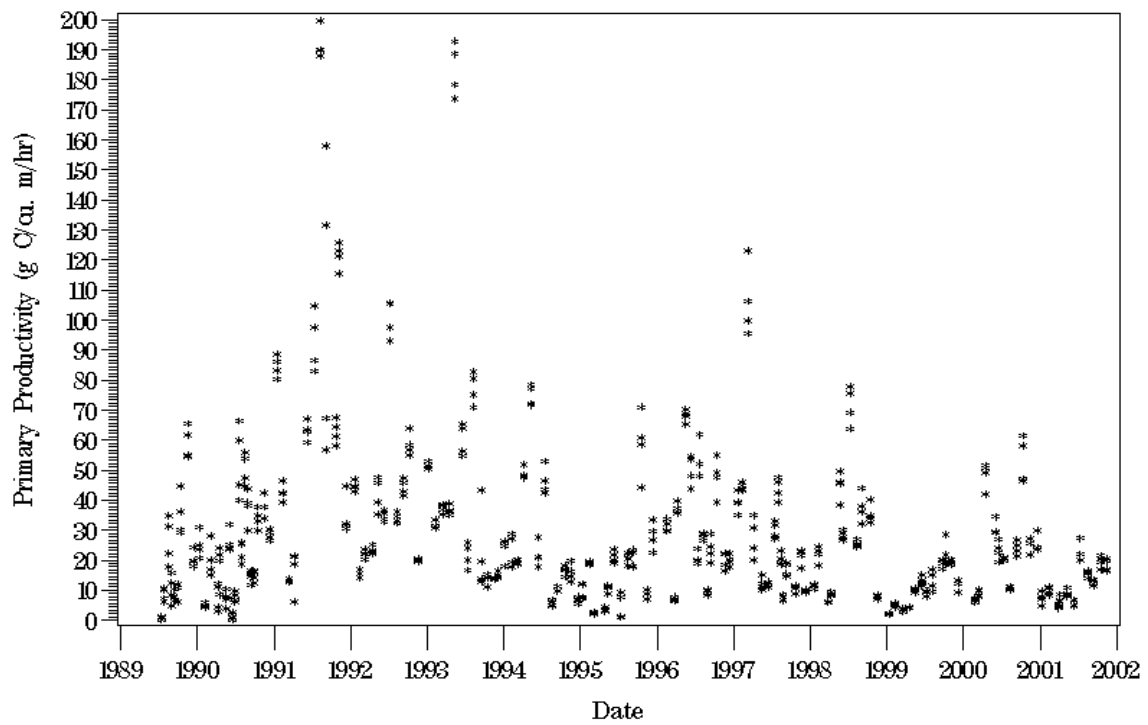


Figure I13. Plot of primary productivity against time at station CB7.3E for the period of 1989 through 2001.

# CB7.4

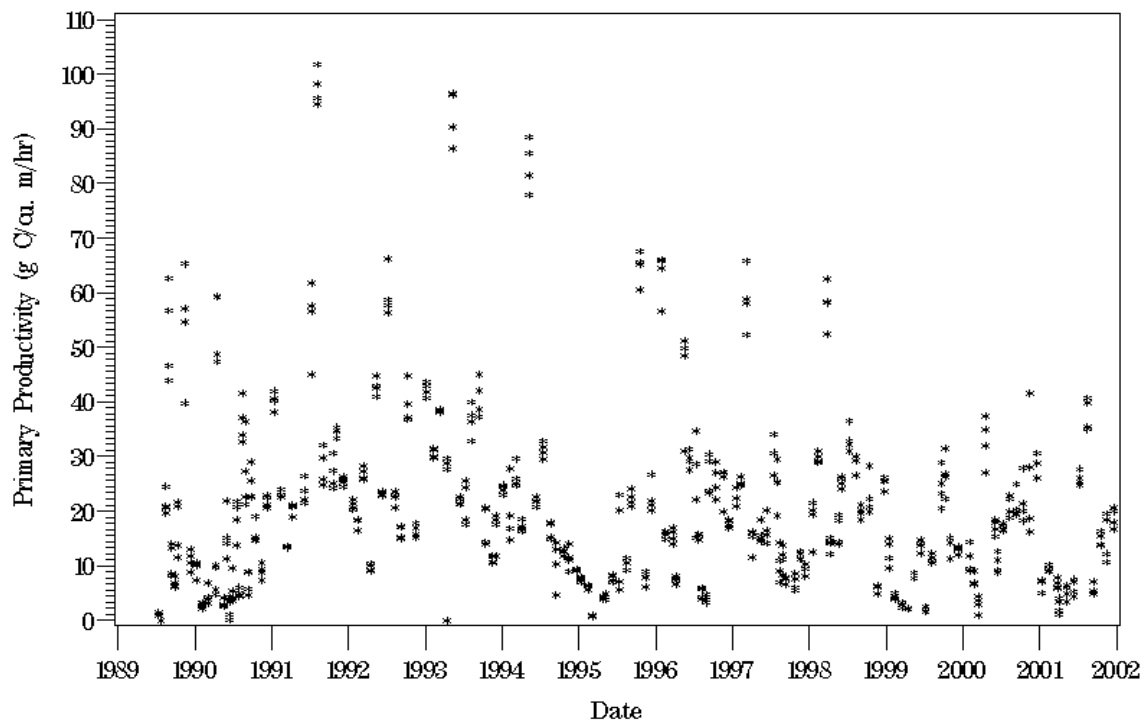


Figure I14. Plot of primary productivity against time at station CB7.4 for the period of 1989 through 2001.