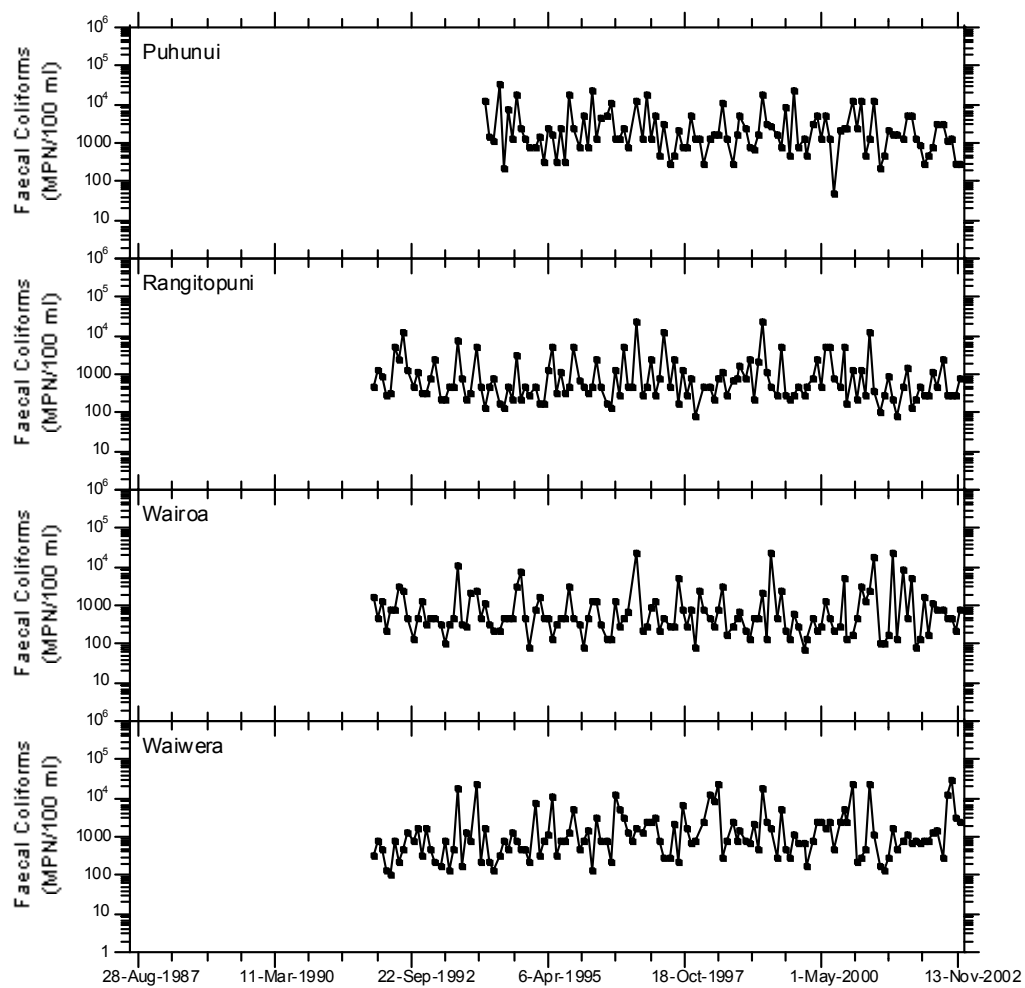




APPENDIX 9: FRESHWATER – AMMONIA NITROGEN

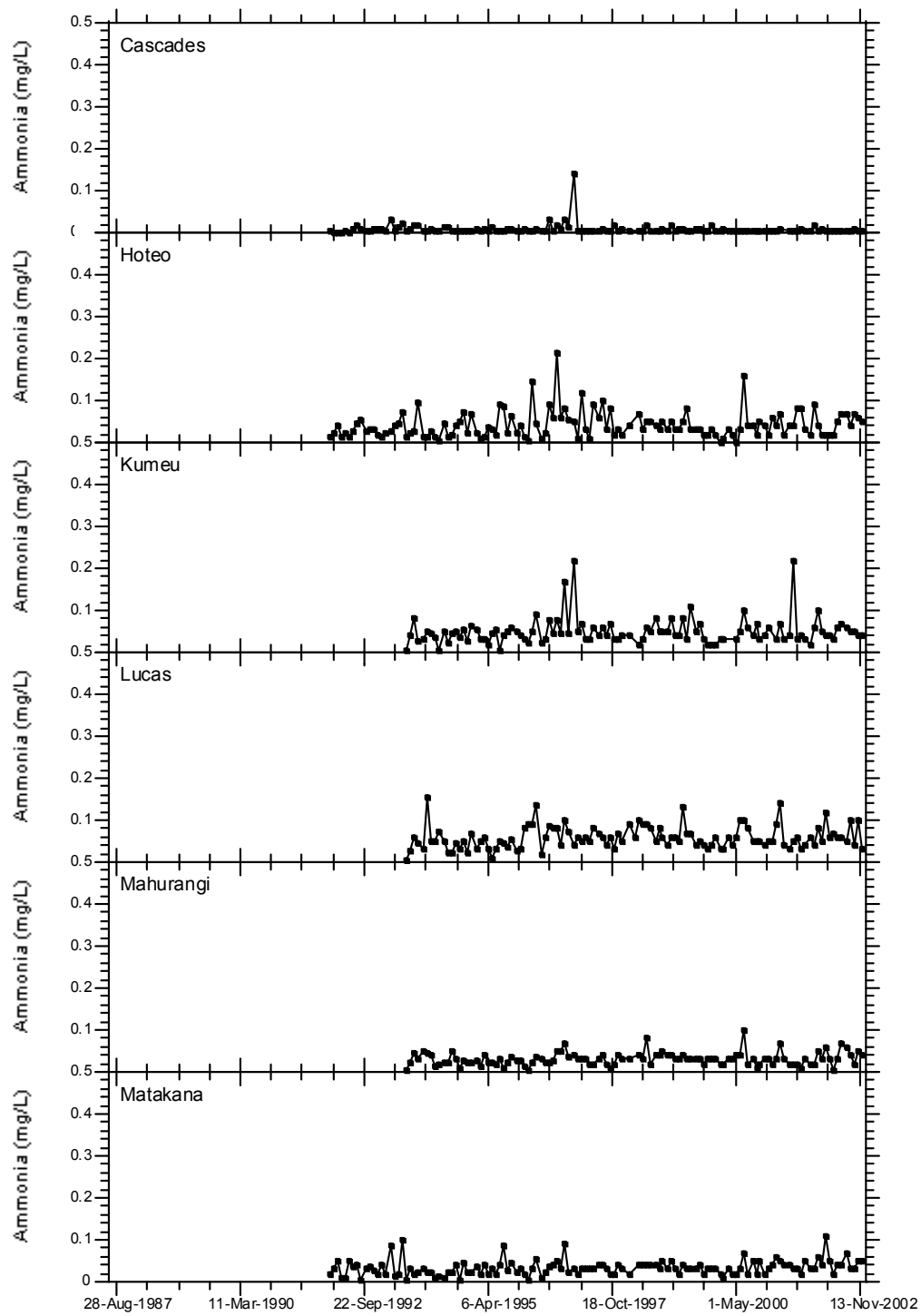
(Note that $\text{g/m}^3 = \text{g m}^{-3} = \text{mg/L}$)

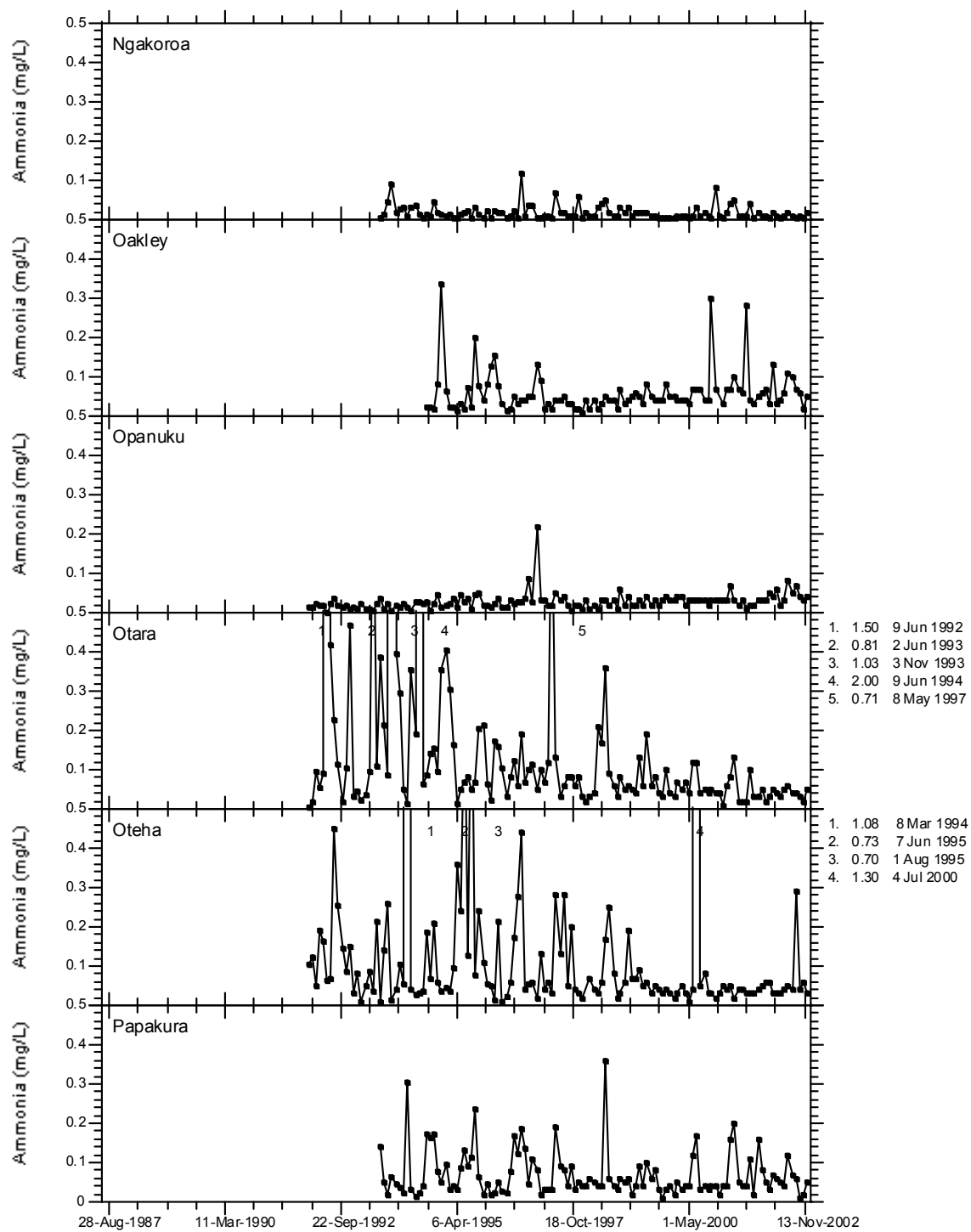
a) Ammonia nitrogen (mg/L) during January 2002 to December 2002

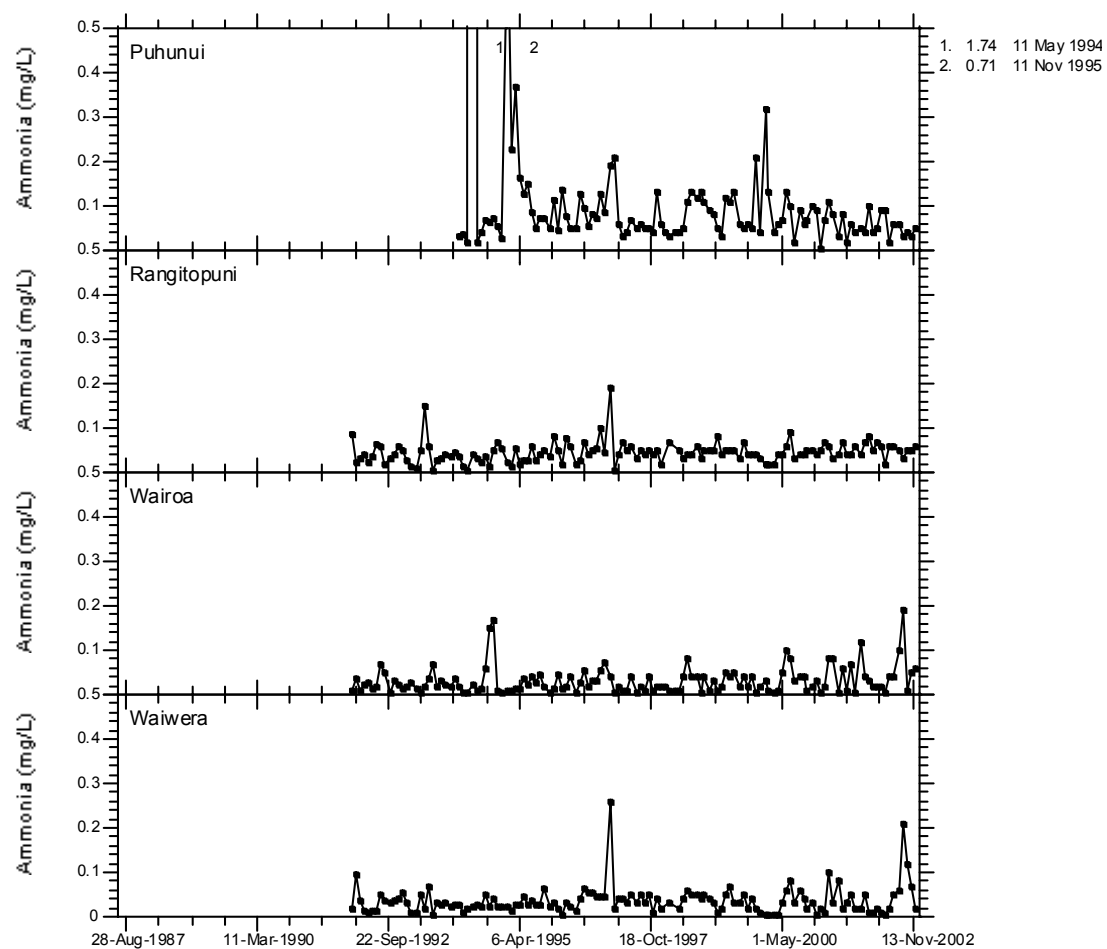
Date	Cascades	Hoteo	Kumeu	Lucas	Mahurangi	Matakana	Ngakoroa	Oakley	Opanuku	Otara	Oteha	Papakura	Puhinui	Rangitopuni	Wairoa	Waiwera
8-Jan-2002	0.005	0.04	0.10	0.08	0.05	0.06	0.01	0.07	0.03	0.02	0.06	0.05	0.10	0.08	0.03	0.01
5-Feb-2002	0.010	0.02	0.05	0.05	0.03	0.04	0.005	0.03	0.05	0.03	0.06	0.03	0.04	0.05	0.02	0.01
5-Mar-2002	0.005	0.02	0.04	0.12	0.06	0.11	0.02	0.13	0.04	0.05	0.03	0.07	0.05	0.07	0.02	0.02
3-Apr-2002	0.005	0.02	0.04	0.06	0.03	0.05	0.01	0.03	0.06	0.04	0.03	0.06	0.09	0.06	0.02	0.01
3-May-2002	0.005	0.02	0.03	0.07	0.005	0.02	0.005	0.04	0.02	0.03	0.03	0.05	0.09	0.02	0.01	0.01
4-Jun-2002	0.005	0.05	0.06	0.06	0.03	0.04	0.01	0.06	0.03	0.05	0.04	0.04	0.02	0.06	0.04	0.02
4-Jul-2002	0.005	0.07	0.07	0.06	0.07	0.04	0.02	0.11	0.08	0.06	0.05	0.12	0.06	0.06	0.04	0.05
5-Aug-2002	0.005	0.07	0.06	0.05	0.06	0.07	0.01	0.10	0.05	0.04	0.04	0.07	0.06	0.05	0.10	0.06
3-Sep-2002	0.005	0.04	0.05	0.10	0.04	0.03	0.005	0.07	0.07	0.04	0.29	0.06	0.03	0.03	0.19	0.21
30-Sep-2002	0.010	0.07	0.05	0.04	0.02	0.03	0.01	0.06	0.04	0.03	0.04	0.01	0.04	0.05	0.01	0.12
4-Nov-2002	0.005	0.06	0.04	0.10	0.05	0.05	0.005	0.02	0.03	0.02	0.06	0.02	0.03	0.05	0.05	0.07
3-Dec-2002	0.005	0.05	0.04	0.03	0.04	0.05	0.02	0.05	0.04	0.05	0.03	0.05	0.05	0.06	0.06	0.02
Median	0.005	0.05	0.05	0.06	0.04	0.05	0.01	0.06	0.04	0.04	0.040	0.050	0.05	0.06	0.04	0.02
IQR/median %	0	94	40	58	56	33	75	67	56	50	75	50	60	18	93	263

NB: The dates given are for sites N1-N9. Sites S1-S7 were measured on 10-Jan, 4-Feb, 7-Mar, 2-Apr, 1-May, 5-Jun, 3-Jul, 6-Aug, 5-Sep, 2-Oct, 5-Nov and 2-Dec.

b) The graphs on the following pages show ammonia nitrogen measurements from January 1992 to December 2002 (where data available).







APPENDIX 10: FRESHWATER – NITRATE PLUS NITRITE NITROGEN

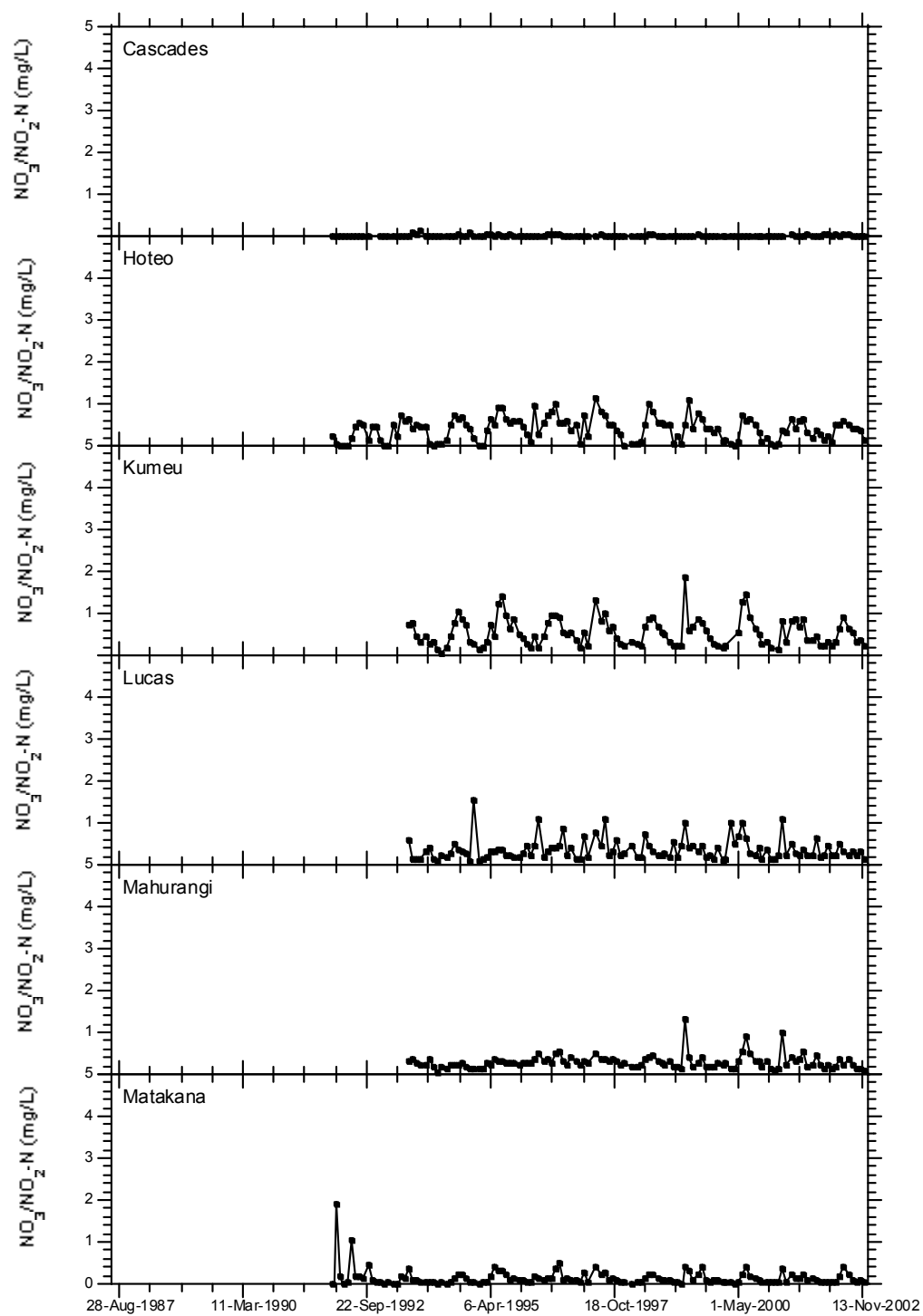
(Note that $\text{g/m}^3 = \text{g m}^{-3} = \text{mg/L}$)

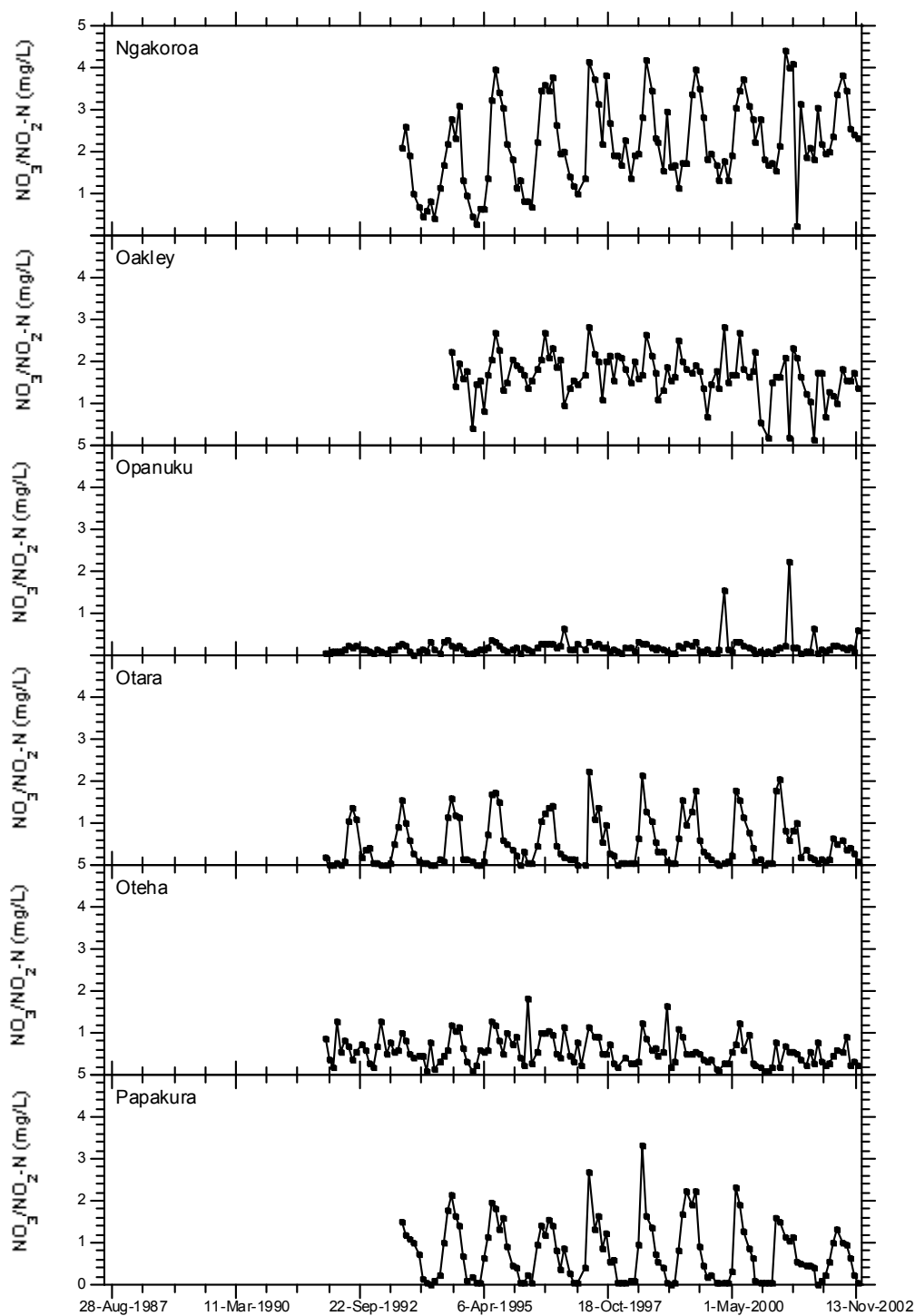
a) Nitrate plus nitrite nitrogen (mg/L) during January 2002 to December 2002

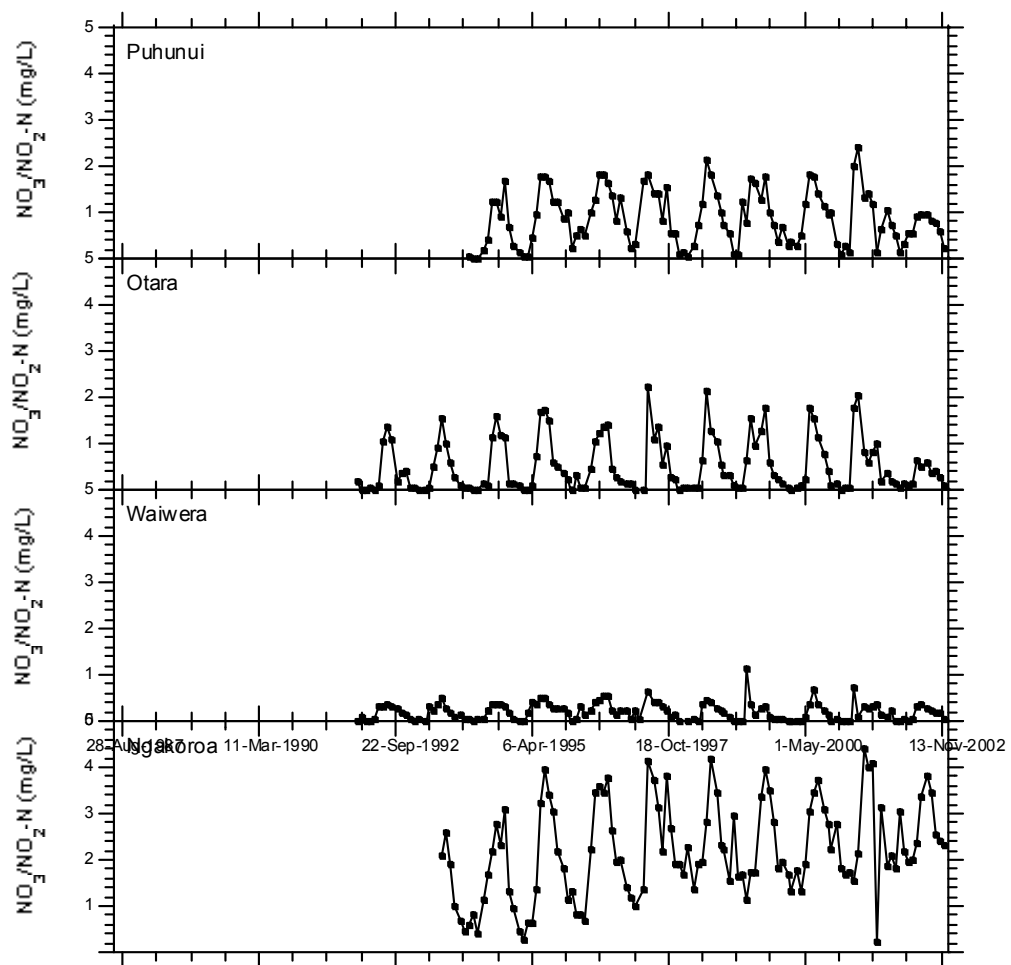
Date	Cascades	Hoteo	Kumeu	Lucas	Mahurangi	Matakana	Ngakoroa	Oakley	Opanuku	Otara	Oteha	Papakura	Puhinui	Rangitopuni	Wairoa	Waiwera
8-Jan-2002	0.017	0.279	0.211	0.192	0.215	0.029	1.81	0.139	0.647	0.126	0.297	0.422	0.511	0.074	0.263	0.016
5-Feb-2002	0.030	0.142	0.213	0.237	0.146	0.037	3.05	1.73	0.061	0.037	0.795	0.017	0.131	0.066	0.064	0.006
5-Mar-2002	0.029	0.232	0.335	0.444	0.225	0.036	2.18	1.71	0.154	0.120	0.331	0.100	0.309	0.232	0.189	0.050
3-Apr-2002	0.024	0.113	0.226	0.213	0.146	0.042	1.94	0.664	0.106	0.074	0.230	0.213	0.542	0.156	0.259	0.020
3-May-2002	0.035	0.506	0.334	0.212	0.181	0.055	2.01	1.29	0.122	0.134	0.279	0.561	0.537	0.173	0.176	0.059
4-Jun-2002	0.017	0.514	0.643	0.485	0.361	0.179	2.35	1.18	0.227	0.632	0.441	0.989	0.893	0.383	0.947	0.335
4-Jul-2002	0.027	0.592	0.904	0.325	0.210	0.416	3.38	1.01	0.243	0.522	0.611	1.30	0.978	0.383	1.00	0.362
5-Aug-2002	0.069	0.521	0.645	0.212	0.367	0.218	3.81	1.84	0.191	0.593	0.529	1.01	0.941	0.344	0.581	0.278
3-Sep-2002	0.022	0.399	0.530	0.310	0.237	0.096	3.47	1.56	0.147	0.370	0.924	0.938	0.805	0.304	0.500	0.241
30-Sep-2002	0.013	0.414	0.321	0.221	0.147	0.070	2.54	1.55	0.199	0.408	0.238	0.616	0.764	0.258	0.544	0.181
4-Nov-2002	0.017	0.380	0.364	0.305	0.155	0.111	2.43	1.72	0.106	0.285	0.323	0.249	0.608	0.219	0.505	0.168
3-Dec-2002	0.014	0.156	0.236	0.119	0.110	0.057	2.30	1.35	0.577	0.087	0.235	0.041	0.240	0.140	0.219	0.037
Median	0.023	0.390	0.335	0.229	0.196	0.064	2.39	1.45	0.173	0.210	0.327	0.492	0.575	0.226	0.382	0.114
IQR/median %	53	76	97	44	42	137	42	40	66	155	86	156	64	72	90	192

NB: The dates given are for sites N1-N9. Sites S1-S7 were measured on 10-Jan, 4-Feb, 7-Mar, 2-Apr, 1-May, 5-Jun, 3-Jul, 6-Aug, 5-Sep, 2-Oct, 5-Nov and 2-Dec.

b) The graphs on the following pages show nitrate plus nitrite nitrogen from January 1992 to August 2001 and nitrate plus nitrite nitrogen measurements from September 2001 to December 2002 (where data available).







APPENDIX 11: FRESHWATER – TOTAL PHOSPHORUS

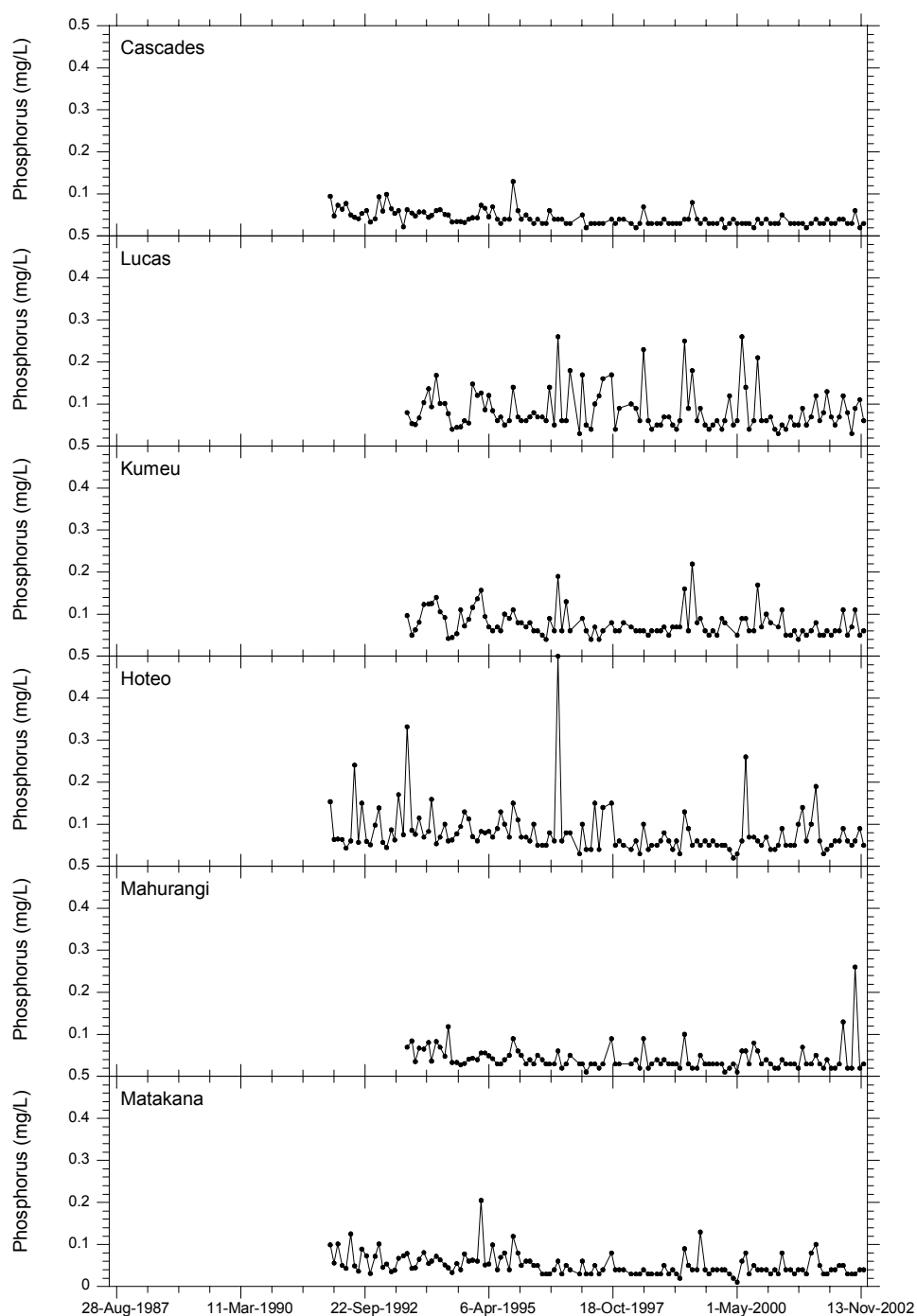
(Note that $\text{g/m}^3 = \text{g m}^{-3} = \text{mg/L}$)

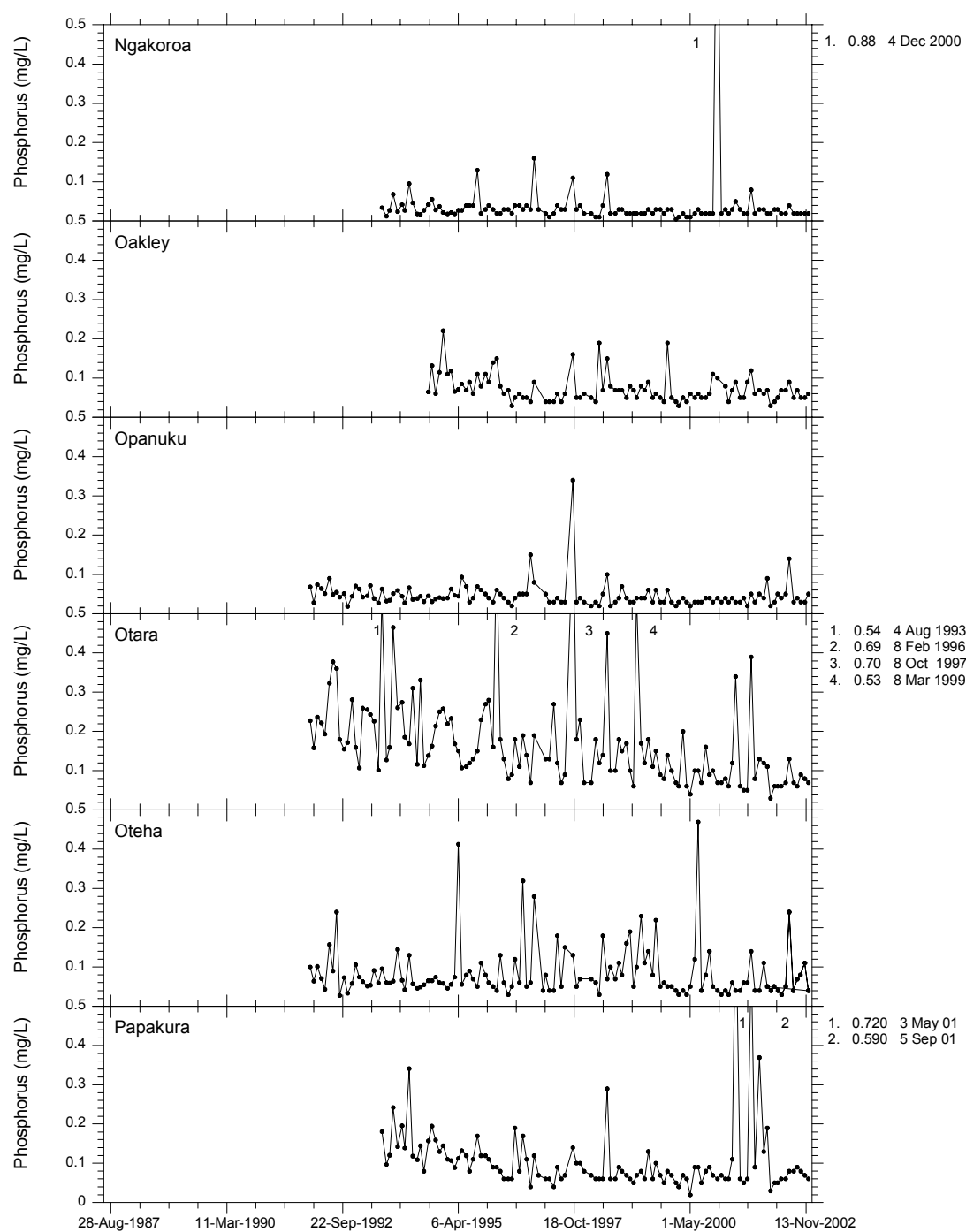
a) Total phosphorus (mg/L) during January 2002 to December 2002

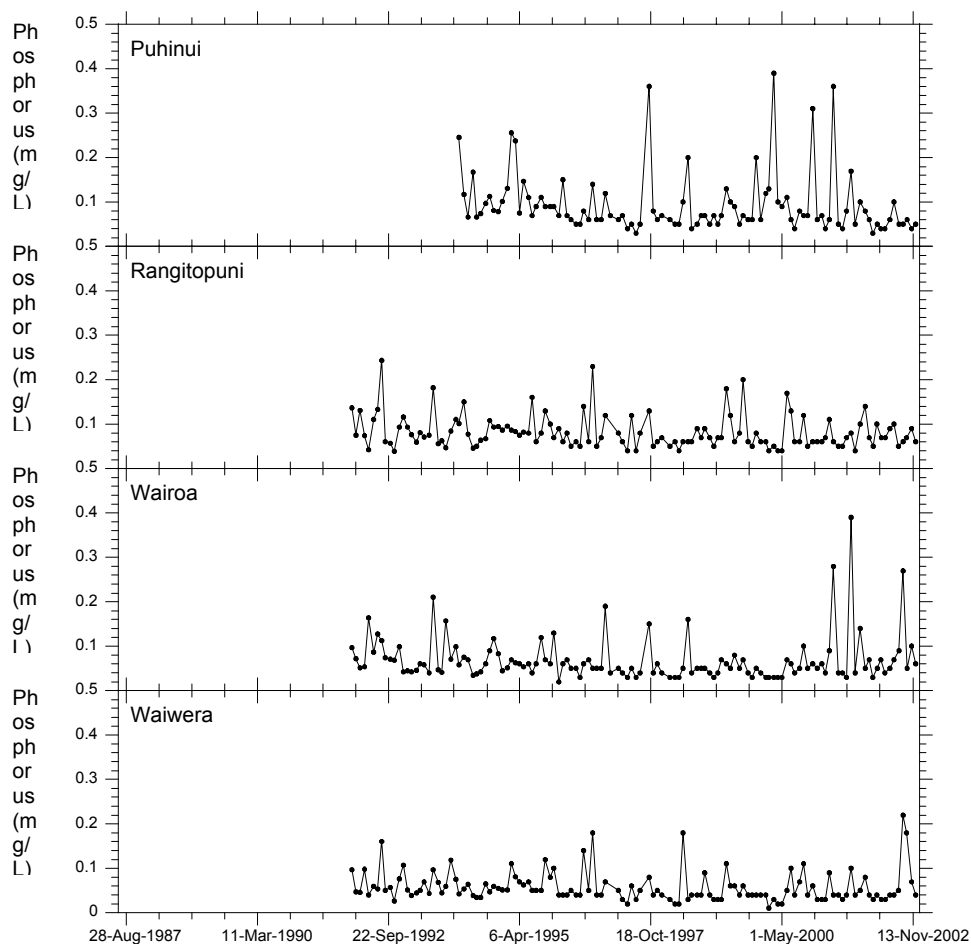
Date	Cascades	Hoteo	Kumeu	Lucas	Mahurangi	Matakana	Ngakoroa	Oakley	Opanuku	Otara	Oteha	Papakura	Puhinui	Rangitopuni	Wairoa	Waiwera
8-Jan-2002	0.03	0.06	0.05	0.06	0.03	0.05	0.02	0.07	0.09	0.11	0.05	0.19	0.06	0.07	0.07	0.04
5-Feb-2002	0.03	0.03	0.05	0.08	0.02	0.03	0.02	0.03	0.02	0.03	0.04	0.03	0.03	0.05	0.03	0.03
5-Mar-2002	0.04	0.04	0.06	0.13	0.04	0.03	0.03	0.04	0.03	0.06	0.05	0.05	0.05	0.10	0.05	0.04
3-Apr-2002	0.03	0.05	0.05	0.07	0.02	0.04	0.03	0.05	0.05	0.06	0.04	0.05	0.04	0.07	0.07	0.03
3-May-2002	0.03	0.06	0.06	0.05	0.02	0.04	0.02	0.07	0.04	0.06	0.03	0.06	0.04	0.07	0.04	0.03
4-Jun-2002	0.04	0.06	0.06	0.07	0.03	0.05	0.02	0.07	0.05	0.07	0.05	0.06	0.06	0.09	0.05	0.04
4-Jul-2002	0.04	0.09	0.11	0.12	0.13	0.05	0.04	0.09	0.14	0.13	0.24	0.08	0.10	0.10	0.07	0.04
5-Aug-2002	0.03	0.06	0.05	0.08	0.02	0.03	0.02	0.05	0.03	0.07	0.04	0.08	0.05	0.05	0.09	0.05
3-Sep-2002	0.03	0.05	0.07	0.03	0.02	0.03	0.02	0.07	0.04	0.06	0.07	0.09	0.05	0.06	0.27	0.22
30-Sep-2002	0.06	0.06	0.11	0.09	0.26	0.03	0.02	0.05	0.03	0.09	0.08	0.08	0.06	0.07	0.05	0.18
4-Nov-2002	0.02	0.09	0.05	0.11	0.02	0.04	0.02	0.05	0.03	0.08	0.11	0.07	0.04	0.09	0.10	0.07
3-Dec-2002	0.03	0.05	0.06	0.06	0.03	0.04	0.02	0.06	0.05	0.07	0.04	0.06	0.05	0.06	0.06	0.04
Median	0.03	0.06	0.06	0.08	0.03	0.04	0.02	0.06	0.04	0.07	0.05	0.07	0.05	0.07	0.07	0.04
IQR/median %	33	17	21	47	50	31	13	36	50	32	65	35	40	43	38	44

NB: The dates given are for sites N1-N9. Sites S1-S7 were measured on 10-Jan, 4-Feb, 7-Mar, 2-Apr, 1-May, 5-Jun, 3-Jul, 6-Aug, 5-Sep, 2-Oct, 5-Nov and 2-Dec.

b) The graphs on the following pages show total phosphorus measurements from January 1992 to December 2002 (where data available).







APPENDIX 12: FRESHWATER – DISSOLVED REACTIVE PHOSPHORUS

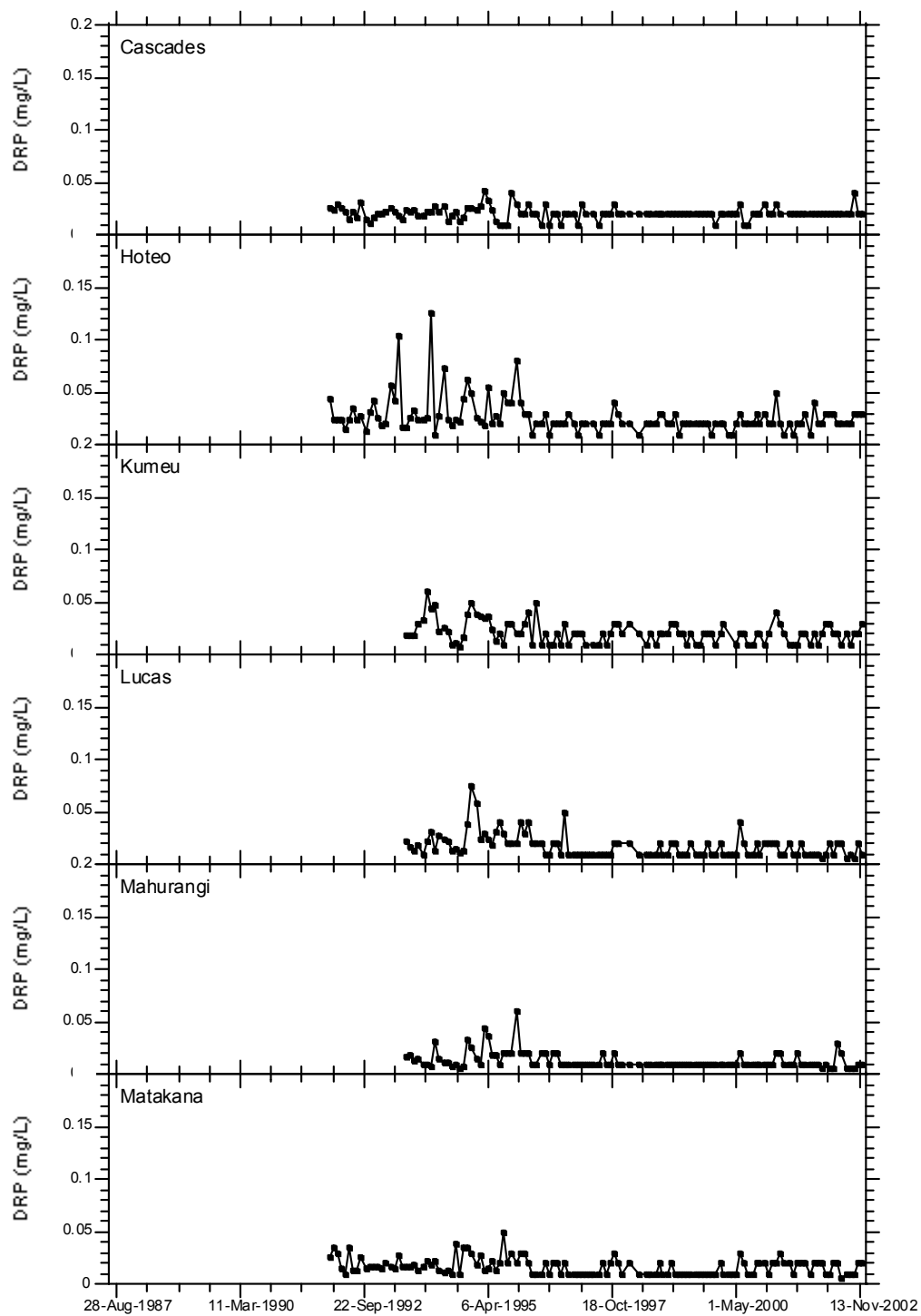
(Note that $\text{g/m}^3 = \text{g m}^{-3} = \text{mg/L}$)

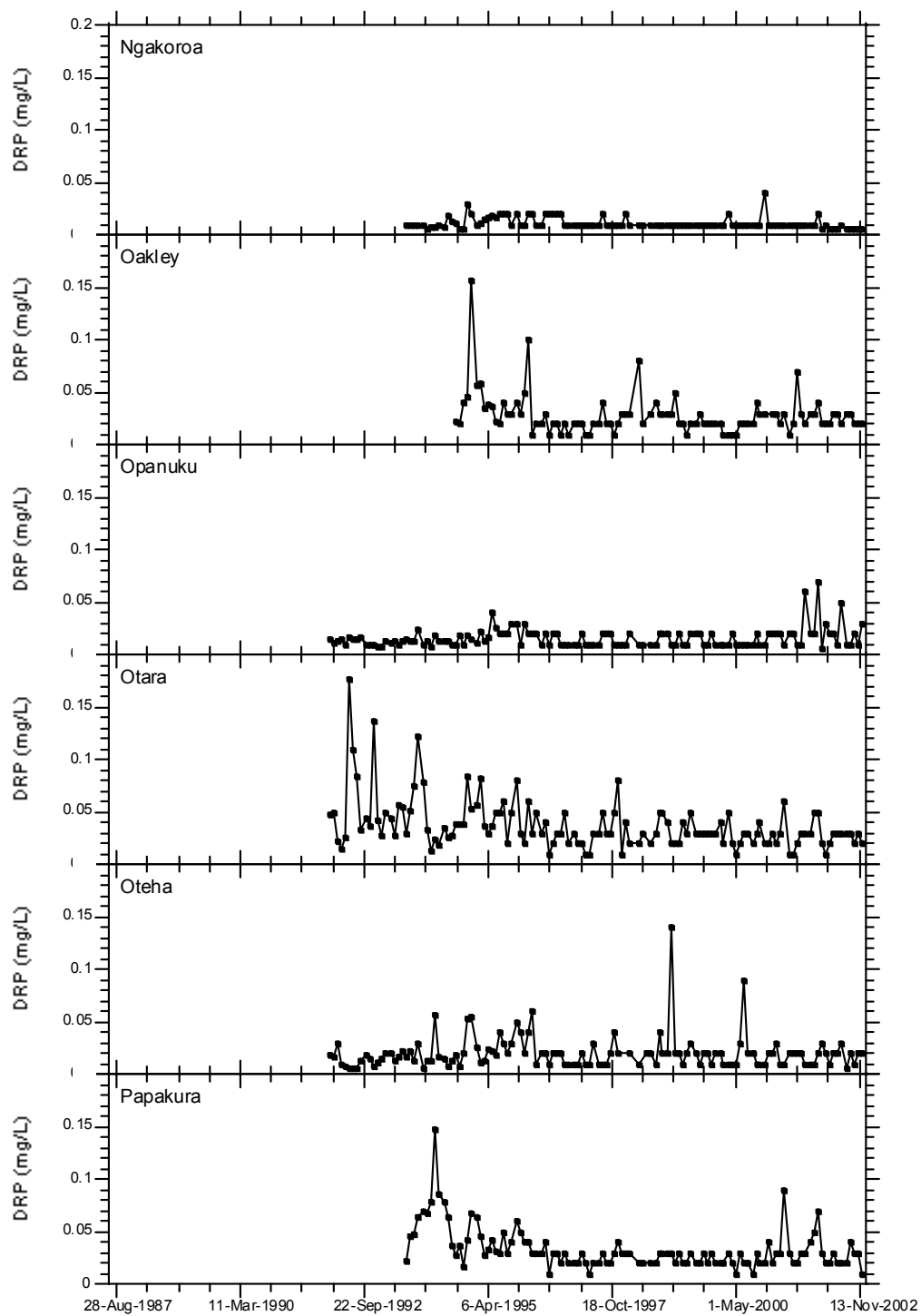
a) Dissolved reactive phosphorus (mg/L) during January 2002 to December 2002

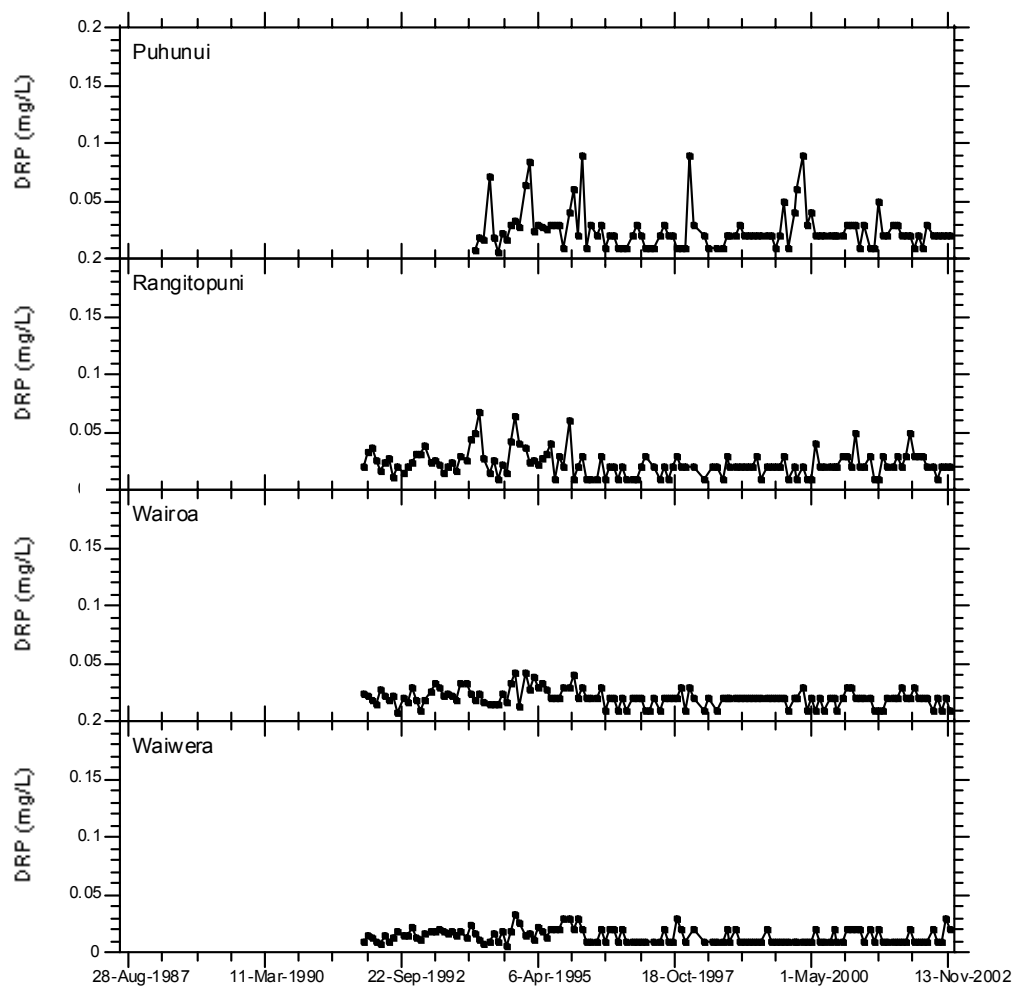
Date	Cascades	Hoteo	Kumeu	Lucas	Mahurangi	Matakana	Ngakoroa	Oakley	Opanuku	Otara	Oteha	Papakura	Puhinui	Rangitopuni	Wairoa	Waiwera
8-Jan-2002	0.020	0.020	0.010	0.010	0.010	0.020	0.020	0.040	0.070	0.050	0.020	0.070	0.020	0.020	0.030	0.010
5-Feb-2002	0.020	0.020	0.020	0.005	0.005	0.020	0.005	0.020	<0.01	0.020	0.030	0.030	0.020	0.030	0.020	0.010
5-Mar-2002	0.020	0.030	0.030	0.010	0.010	0.010	0.010	0.020	0.030	0.010	0.020	0.020	0.020	0.050	0.020	0.020
3-Apr-2002	0.020	0.030	0.030	0.020	0.005	0.010	0.005	0.020	0.020	0.020	0.010	0.020	0.010	0.030	0.030	0.010
3-May-2002	0.020	0.030	0.020	0.010	0.005	0.020	0.005	0.030	0.020	0.030	0.020	0.030	0.020	0.030	0.020	0.010
4-Jun-2002	0.020	0.020	0.020	0.020	0.030	0.020	0.005	0.030	0.010	0.030	0.020	0.020	0.010	0.030	0.020	0.010
4-Jul-2002	0.020	0.020	0.010	0.020	0.020	0.005	0.010	0.020	0.050	0.030	0.030	0.020	0.030	0.020	0.020	0.010
5-Aug-2002	0.020	0.020	0.020	0.005	0.005	0.010	0.005	0.030	0.010	0.030	0.005	0.020	0.020	0.020	0.010	0.020
3-Sep-2002	0.020	0.020	0.010	0.010	0.005	0.010	0.005	0.030	0.010	0.030	0.020	0.040	0.020	0.010	0.020	0.010
30-Sep-2002	0.040	0.030	0.020	0.005	0.005	0.010	0.005	0.020	0.020	0.020	0.010	0.030	0.020	0.020	0.010	0.010
4-Nov-2002	0.020	0.030	0.020	0.020	0.010	0.020	0.005	0.020	0.010	0.030	0.020	0.030	0.020	0.020	0.020	0.030
3-Dec-2002	0.020	0.030	0.030	0.010	0.010	0.020	0.005	0.020	0.030	0.020	0.020	0.010	0.020	0.020	0.010	0.020
Median	0.020	0.025	0.020	0.010	0.008	0.015	0.005	0.020	0.020	0.030	0.020	0.025	0.020	0.020	0.020	0.010
IQR/median %	0	40	25	113	67	67	25	50	100	33	13	40	0	50	13	100

NB: The dates given are for sites N1-N9. Sites S1-S7 were measured on 10-Jan, 4-Feb, 7-Mar, 2-Apr, 1-May, 5-Jun, 3-Jul, 6-Aug, 5-Sep, 2-Oct, 5-Nov and 2-Dec.

b) The graphs on the following pages show dissolved reactive phosphorous measurements from January 1992 to December 2002 (where data available).







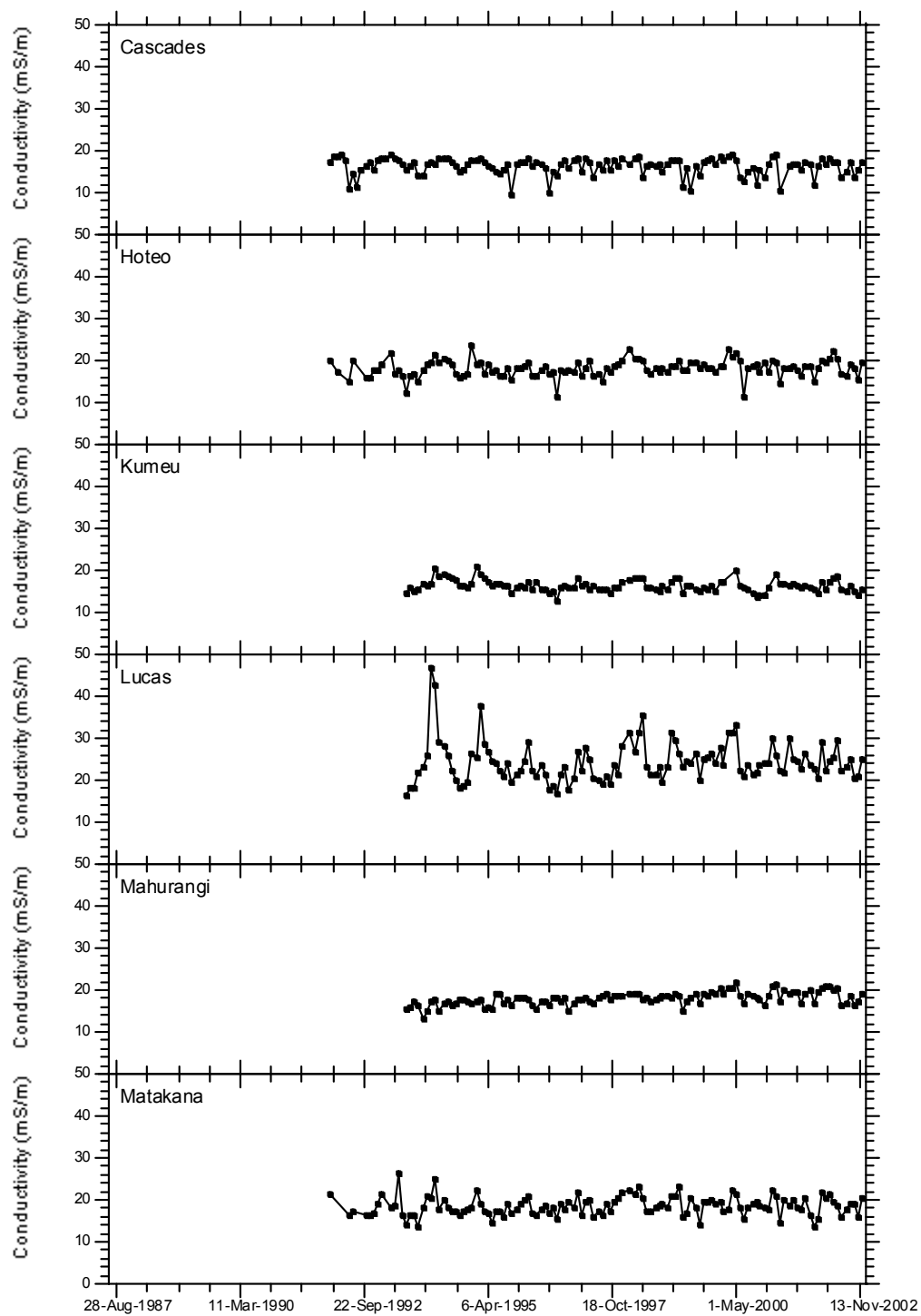
APPENDIX 13: FRESHWATER – CONDUCTIVITY

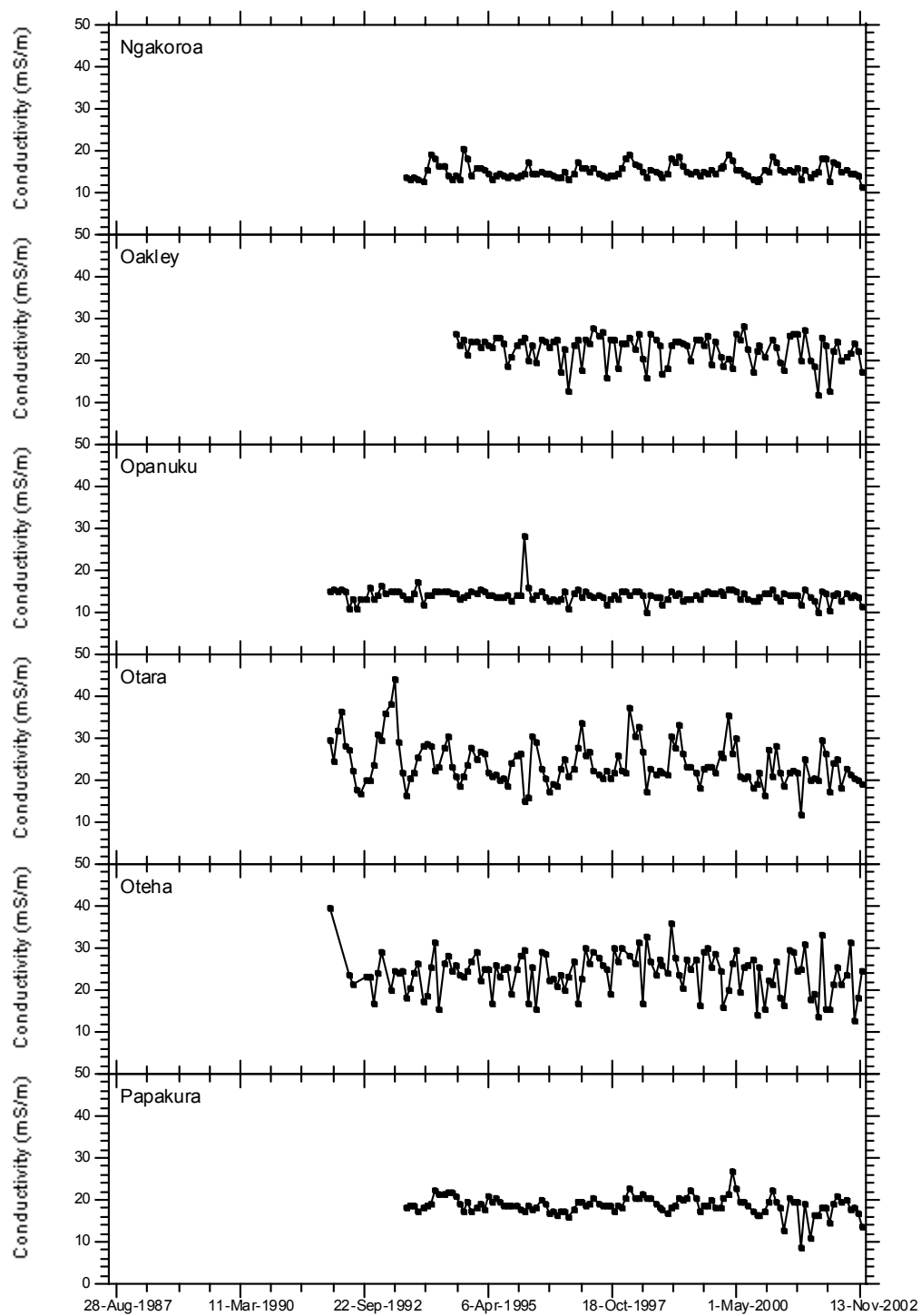
a) Conductivity (mS/m) during January 2002 to December 2002

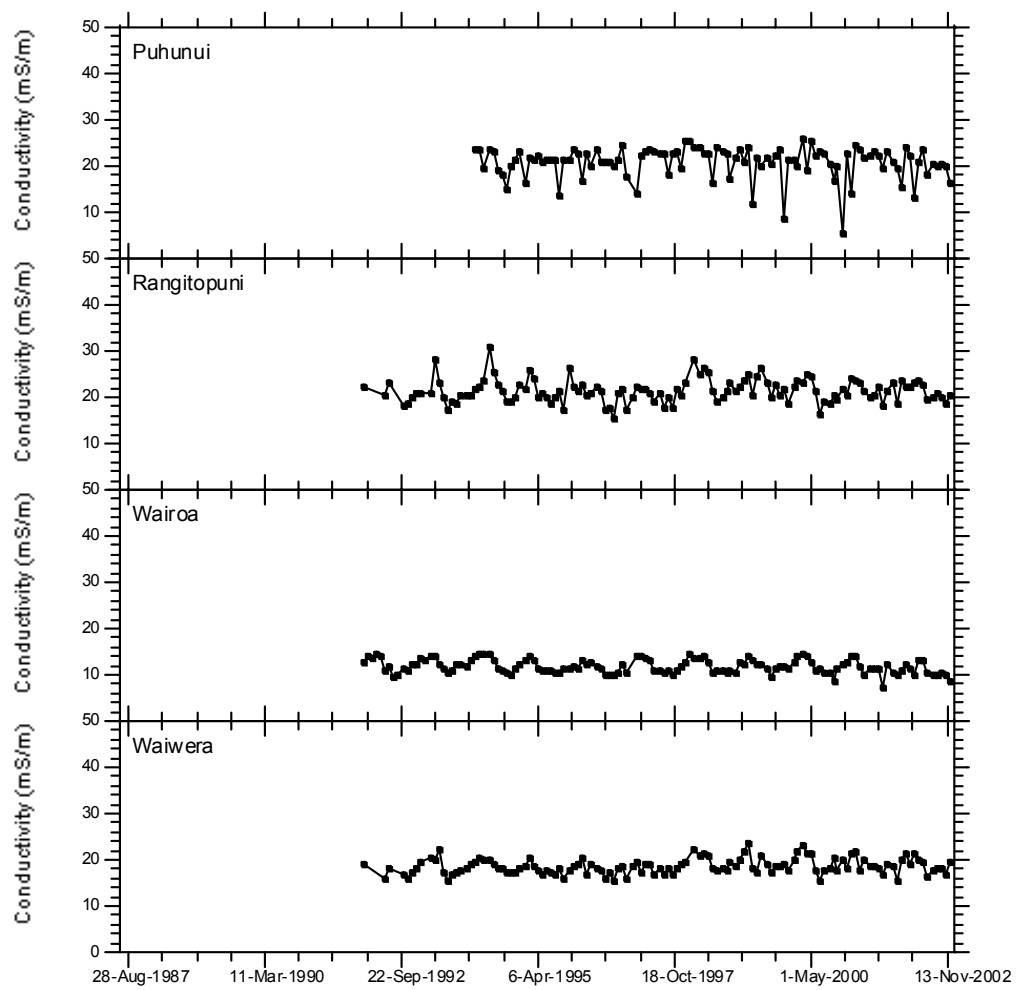
Date	Cascades	Hoteo	Kumeu	Lucas	Mahurangi	Matakana	Ngakoroa	Oakley	Opanuku	Otara	Oteha	Papakura	Puhinui	Rangitopuni	Wairoa	Waiwera
8-Jan-2002	16.3	18.1	14.7	20.7	19.7	15.4	14.9	11.8	10.2	19.9	13.5	16.6	15.5	23.7	11.1	19.9
5-Feb-2002	18.2	20.0	17.2	29.2	20.5	21.8	18.2	25.6	14.9	29.6	33.4	18.0	24.0	22.3	12.3	21.5
5-Mar-2002	16.8	19.6	15.7	22.5	21.0	20.6	18.0	23.8	14.6	26.2	15.6	18.4	22.3	22.5	11.4	19.2
3-Apr-2002	18.4	20.7	17.3	24.6	20.8	21.3	12.7	12.8	10.7	17.3	15.6	14.5	13.0	23.3	9.9	21.4
3-May-2002	17.4	22.2	18.1	25.7	20.2	19.6	17.1	22.5	14.3	24.1	21.2	19.3	20.9	23.8	13.3	20.2
4-Jun-2002	17.2	20.7	18.5	29.4	20.6	18.7	16.7	24.4	14.7	24.9	25.5	21.0	23.5	22.9	13.0	19.6
4-Jul-2002	13.7	16.7	15.6	22.1	16.2	16.0	15.0	20.1	12.6	18.2	21.5	19.5	18.2	19.4	10.6	16.6
5-Aug-2002	15.2	16.6	14.8	23.1	16.8	17.8	15.5	20.8	14.5	22.8	23.8	19.8	20.5	19.9	10.2	17.6
3-Sep-2002	17.1	19.3	16.5	25.0	18.7	19.2	14.7	21.8	13.7	21.4	31.3	17.9	20.0	20.9	10.0	18.1
30-Sep-2002	13.7	18.4	15.0	20.4	16.5	19.2	14.5	24.3	14.3	20.6	12.8	18.0	20.3	20.0	10.7	18.0
4-Nov-2002	15.4	15.6	14.0	20.8	17.4	16.0	13.9	22.4	13.8	20.1	18.2	16.9	20.1	18.6	10.1	16.7
3-Dec-2002	17.4	19.5	15.6	25.2	19.1	20.6	11.2	17.2	11.6	19.2	24.6	13.7	16.6	20.6	8.6	19.7
Median	17.0	19.4	15.7	23.9	19.4	19.2	15.0	22.1	14.1	21.0	21.4	18.0	20.2	21.6	10.7	19.4
IQR/median %	12	13	15	15	17	17	16	21	15	22	43	14	17	14	15	11

NB: The dates given are for sites N1-N9. Sites S1-S7 were measured on 10-Jan, 4-Feb, 7-Mar, 2-Apr, 1-May, 5-Jun, 3-Jul, 6-Aug, 5-Sep, 2-Oct, 5-Nov and 2-Dec.

b) The graphs on the following pages show conductivity measurements from January 1992 to December 2002 (where data available).







APPENDIX 14: FRESHWATER – CHLORIDE

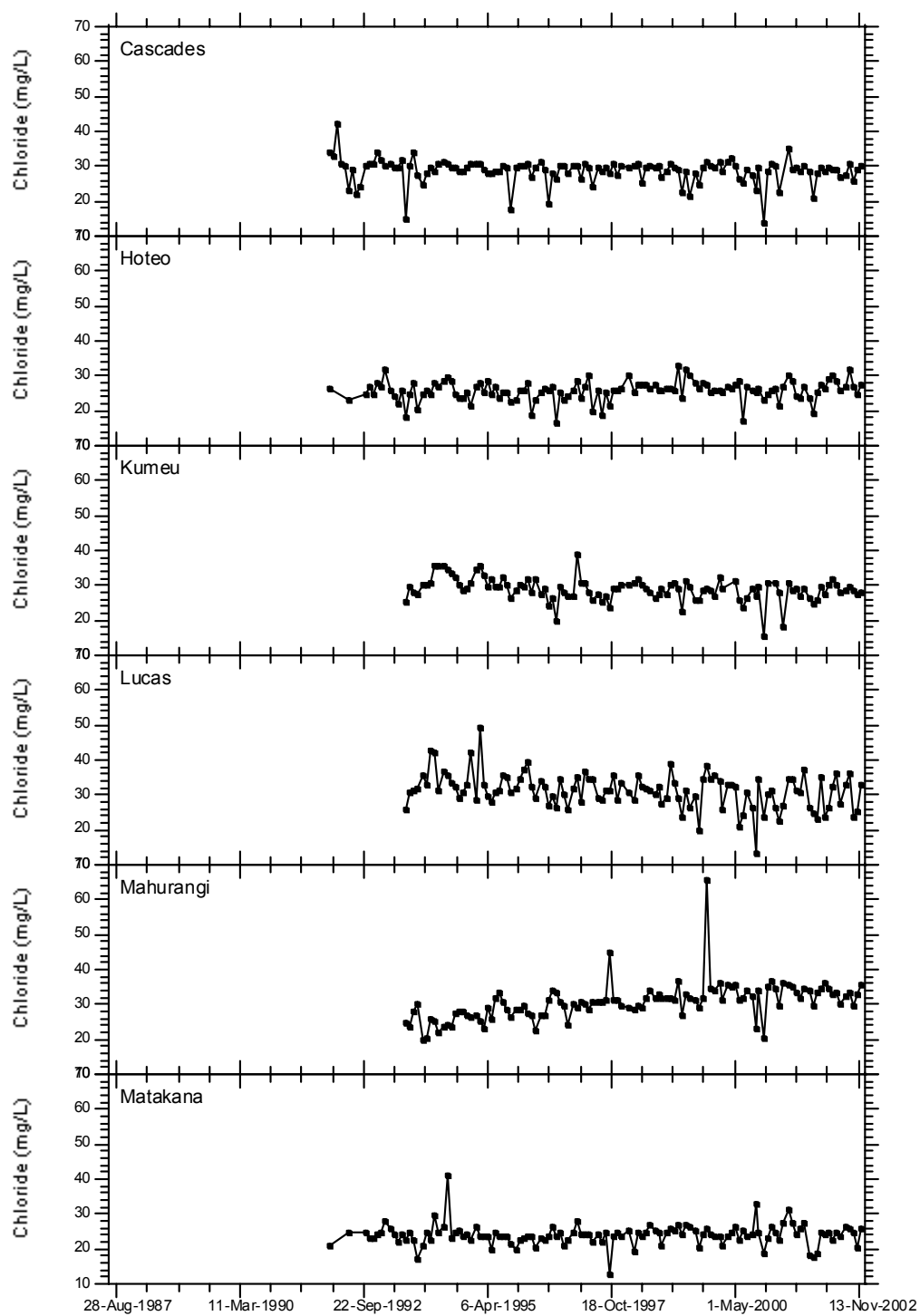
(Note that $\text{g/m}^3 = \text{g m}^{-3} = \text{mg/L}$)

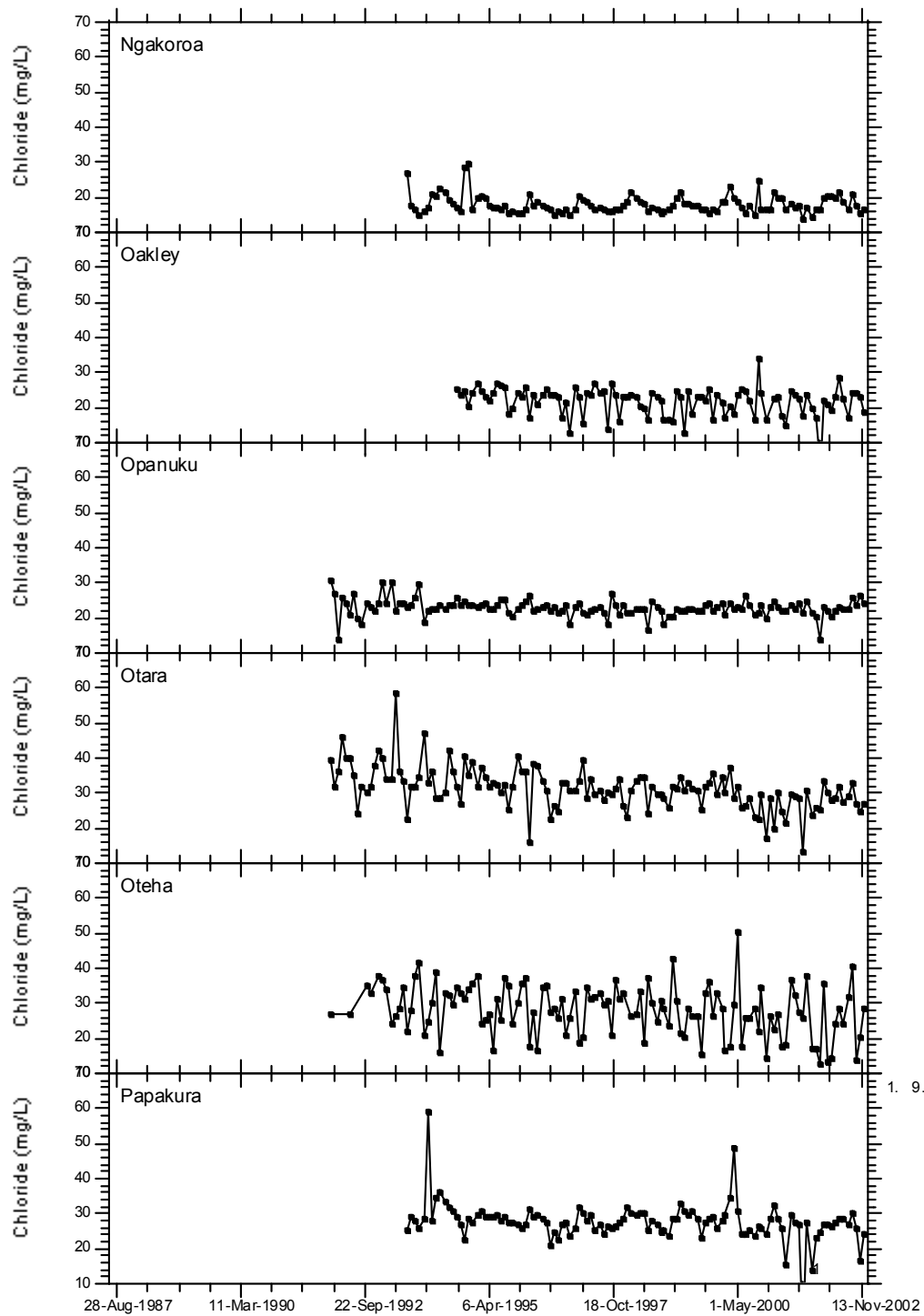
a) Chloride (mg/L) during January 2002 to December 2002

Date	Cascades	Hoteo	Kumeu	Lucas	Mahurangi	Matakana	Ngakoroa	Oakley	Opanuku	Otara	Oteha	Papakura	Puhinui	Rangitopuni	Wairoa	Waiwera
8-Jan-2002	27.8	25.2	25.6	23.1	33.6	18.5	16.3	8.7	14.1	25.3	13.0	24.5	16.2	26.3	14.4	24.7
5-Feb-2002	29.8	27.3	29.5	35.1	34.7	24.7	19.6	22.1	23.0	33.4	35.8	26.8	30.7	28.9	16.4	25.3
5-Mar-2002	28.8	26.3	27.6	23.7	36.3	24.2	20.5	20.8	22.0	30.3	13.1	26.9	25.7	26.8	16.0	24.9
3-Apr-2002	29.6	29.1	30.2	26.6	34.3	24.5	20.3	19.1	20.3	28.1	14.6	26.2	21.1	28.9	17.9	27.6
3-May-2002	29.2	30.2	32.1	32.4	33.2	22.5	20.0	23.1	21.9	28.4	24.0	27.4	22.0	26.7	17.2	25.4
4-Jun-2002	29.1	28.3	30.4	36.0	33.6	24.9	21.3	28.3	22.9	31.9	28.7	28.4	28.3	20.4	18.5	24.9
4-Jul-2002	27.2	25.6	28.0	27.4	30.4	23.5	18.6	22.8	22.3	27.7	24.4	28.6	27.4	26.3	16.4	25.6
5-Aug-2002	27.6	26.7	28.7	33.2	32.6	26.2	16.7	17.1	22.8	29.2	31.7	27.2	24.8	27.8	14.9	27.2
3-Sep-2002	30.8	31.6	29.9	36.2	33.5	25.6	21.2	24.0	25.7	33.0	40.7	30.4	29.8	29.8	19.1	25.4
30-Sep-2002	25.8	26.8	28.8	23.7	29.4	24.8	17.4	24.4	23.5	27.2	13.7	25.7	25.9	27.8	15.5	22.6
4-Nov-2002	29.1	24.6	27.3	25.2	32.9	20.5	15.4	23.3	26.6	24.7	20.5	16.5	25.8	25.5	25.9	21.3
3-Dec-2002	30.2	27.5	28.2	33.1	35.8	26.1	16.3	18.6	24.0	27.0	28.4	24.1	25.7	21.7	9.0	26.5
Median	29.1	27.1	28.8	29.9	33.6	24.6	19.1	22.5	22.9	28.3	24.2	26.9	25.8	26.8	16.4	25.4
IQR/median %	7	9	7	30	5	7	20	20	7	13	62	8	14	7	16	4

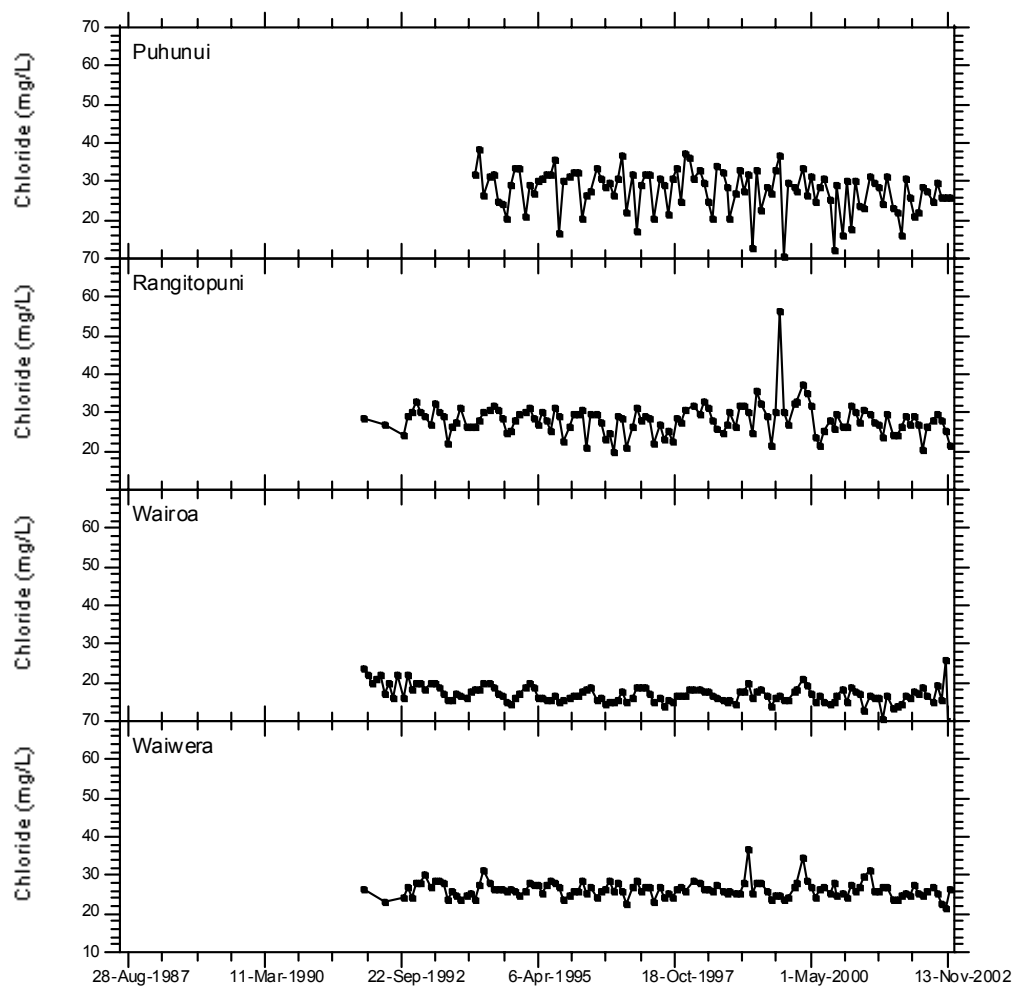
NB: The dates given are for sites N1-N9. Sites S1-S7 were measured on 10-Jan, 4-Feb, 7-Mar, 2-Apr, 1-May, 5-Jun, 3-Jul, 6-Aug, 5-Sep, 2-Oct, 5-Nov and 2-Dec.

b) The graphs on the following pages show chloride measurements from January 1992 to December 2002 (where data available).





1. 9.7 5 Sep 2001



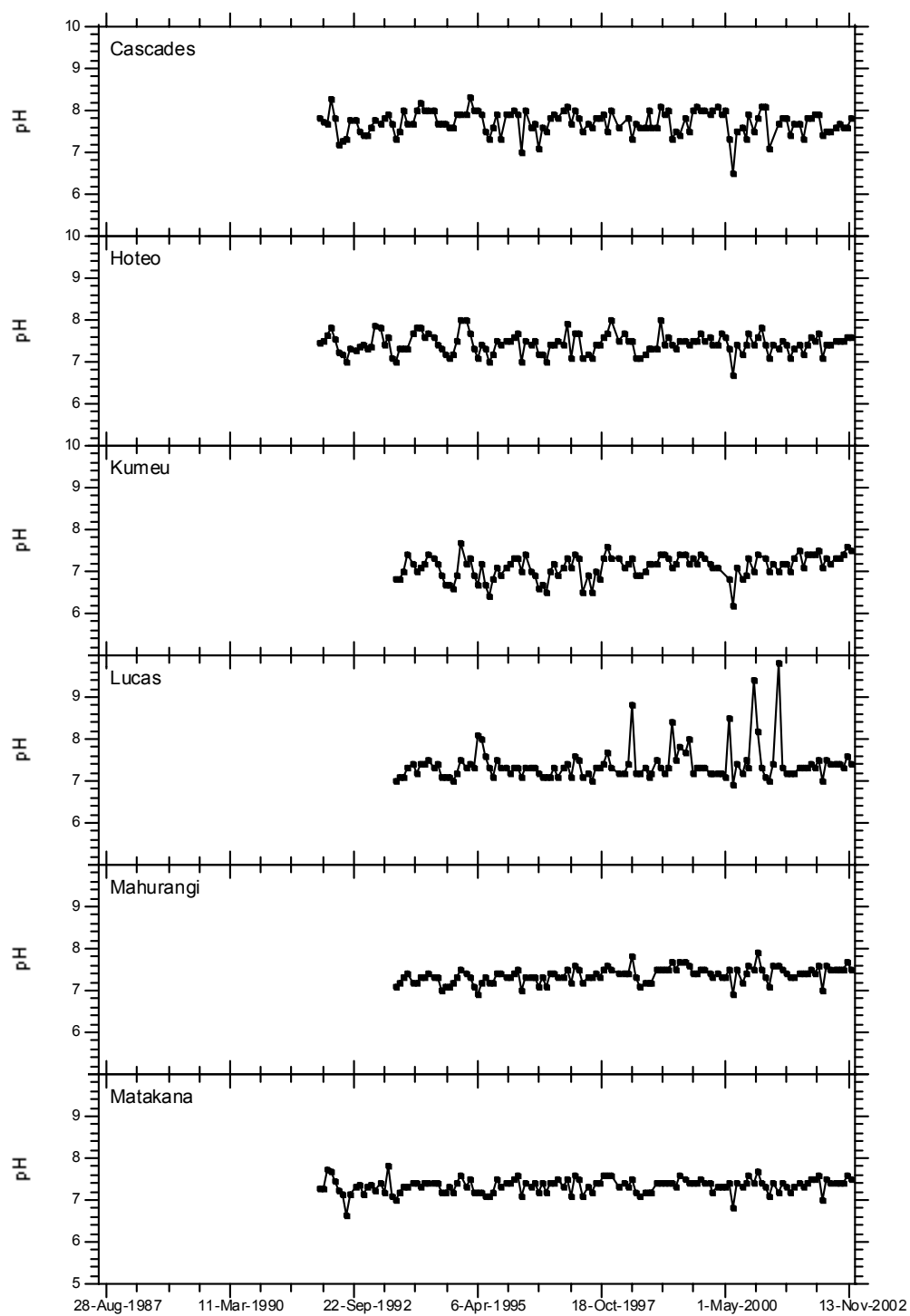
APPENDIX 15: FRESHWATER – pH

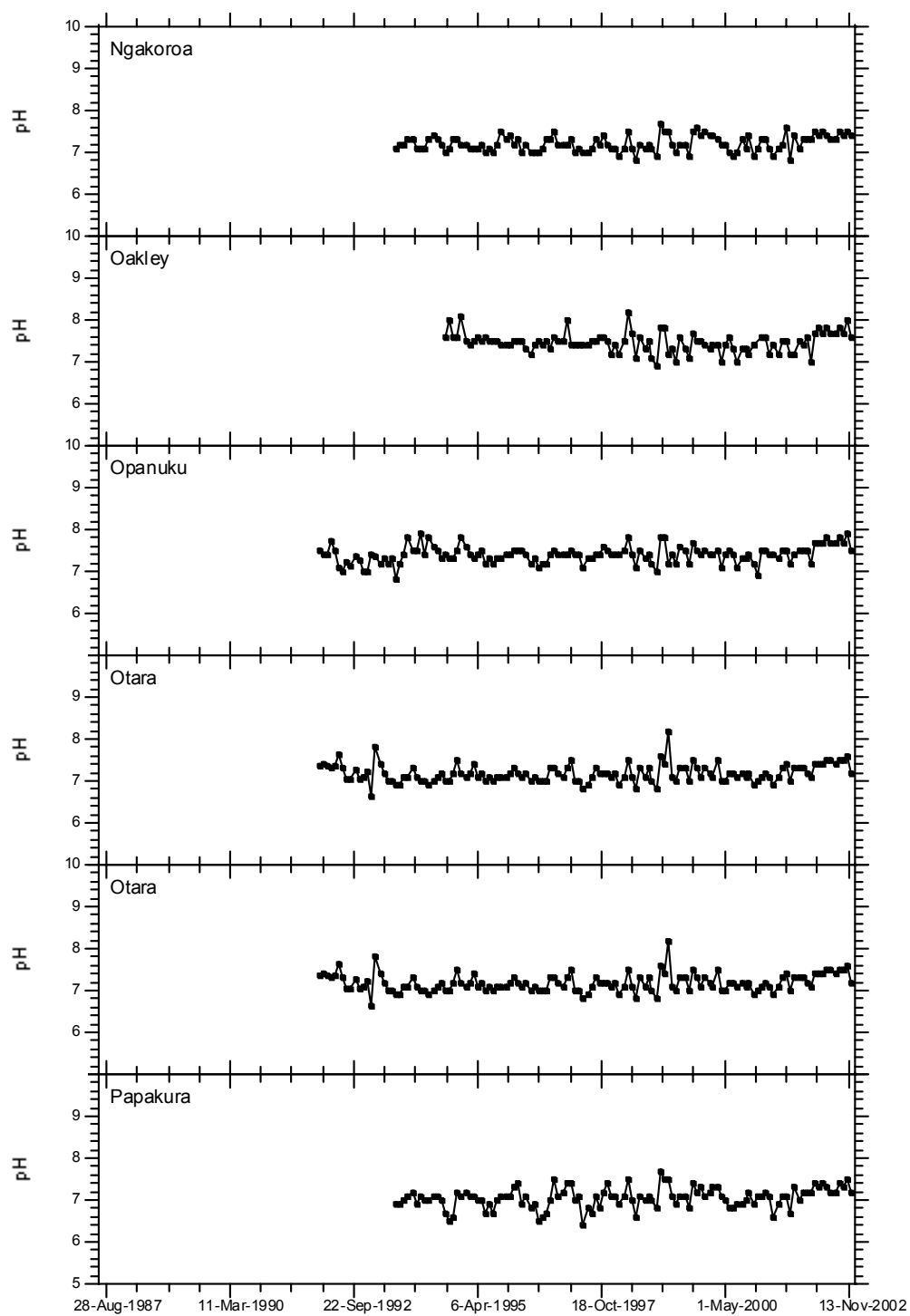
a) pH (units) during January 2002 to December 2002

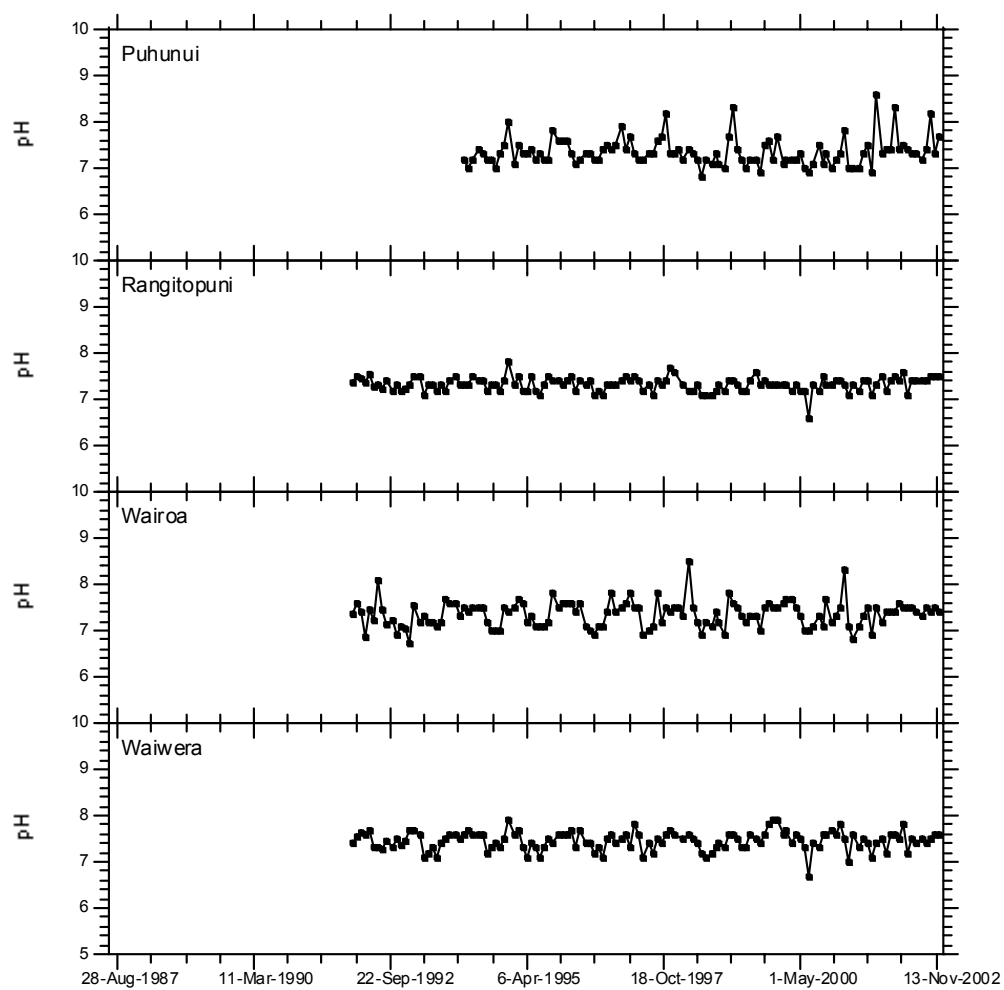
Date	Cascades	Hoteo	Kumeu	Lucas	Mahurangi	Matakana	Ngakoroa	Oakley	Opanuku	Otara	Oteha	Papakura	Puhinui	Rangitopuni	Wairoa	Waiwera
8-Jan-2002	7.8	7.4	7.4	7.3	7.4	7.4	7.3	7.6	7.5	7.2	7.2	7.2	7.4	7.4	7.4	7.6
5-Feb-2002	7.8	7.6	7.4	7.4	7.5	7.5	7.3	7.0	7.2	7.1	7.3	7.2	8.3	7.5	7.4	7.6
5-Mar-2002	7.9	7.5	7.4	7.3	7.4	7.5	7.5	7.7	7.7	7.4	7.3	7.4	7.4	7.4	7.6	7.5
3-Apr-2002	7.9	7.7	7.5	7.5	7.6	7.6	7.4	7.8	7.7	7.4	7.4	7.3	7.5	7.6	7.5	7.8
3-May-2002	7.4	7.1	7.1	7.0	7.0	7.0	7.5	7.7	7.7	7.4	7.0	7.4	7.4	7.1	7.5	7.2
4-Jun-2002	7.5	7.4	7.3	7.5	7.6	7.5	7.4	7.8	7.8	7.5	7.4	7.3	7.3	7.4	7.5	7.5
4-Jul-2002	7.5	7.4	7.2	7.4	7.5	7.4	7.3	7.7	7.7	7.5	7.5	7.2	7.3	7.4	7.4	7.4
5-Aug-2002	7.6	7.5	7.3	7.4	7.5	7.4	7.3	7.7	7.7	7.4	7.4	7.2	7.2	7.4	7.3	7.5
3-Sep-2002	7.7	7.5	7.3	7.4	7.5	7.4	7.5	7.8	7.8	7.5	7.3	7.4	7.4	7.4	7.5	7.4
30-Sep-2002	7.6	7.5	7.4	7.3	7.5	7.4	7.4	7.7	7.7	7.5	7.3	7.3	8.2	7.5	7.4	7.5
4-Nov-2002	7.6	7.6	7.6	7.6	7.7	7.6	7.5	8.0	7.9	7.6	7.6	7.5	7.3	7.5	7.5	7.6
3-Dec-2002	7.8	7.6	7.5	7.4	7.5	7.5	7.4	7.6	7.5	7.2	7.4	7.2	7.7	7.5	7.4	7.6
Median	7.7	7.5	7.4	7.4	7.5	7.5	7.4	7.7	7.7	7.4	7.4	7.3	7.4	7.4	7.5	7.5
IQR/median %	3	3	2	2	1	1	3	2	1	2	1	3	3	1	1	2

NB: The dates given are for sites N1-N9. Sites S1-S7 were measured on 10-Jan, 4-Feb, 7-Mar, 2-Apr, 1-May, 5-Jun, 3-Jul, 6-Aug, 5-Sep, 2-Oct, 5-Nov and 2-Dec.

b) The graphs on the following pages show pH measurements from January 1992 to December 2002 (where data available).







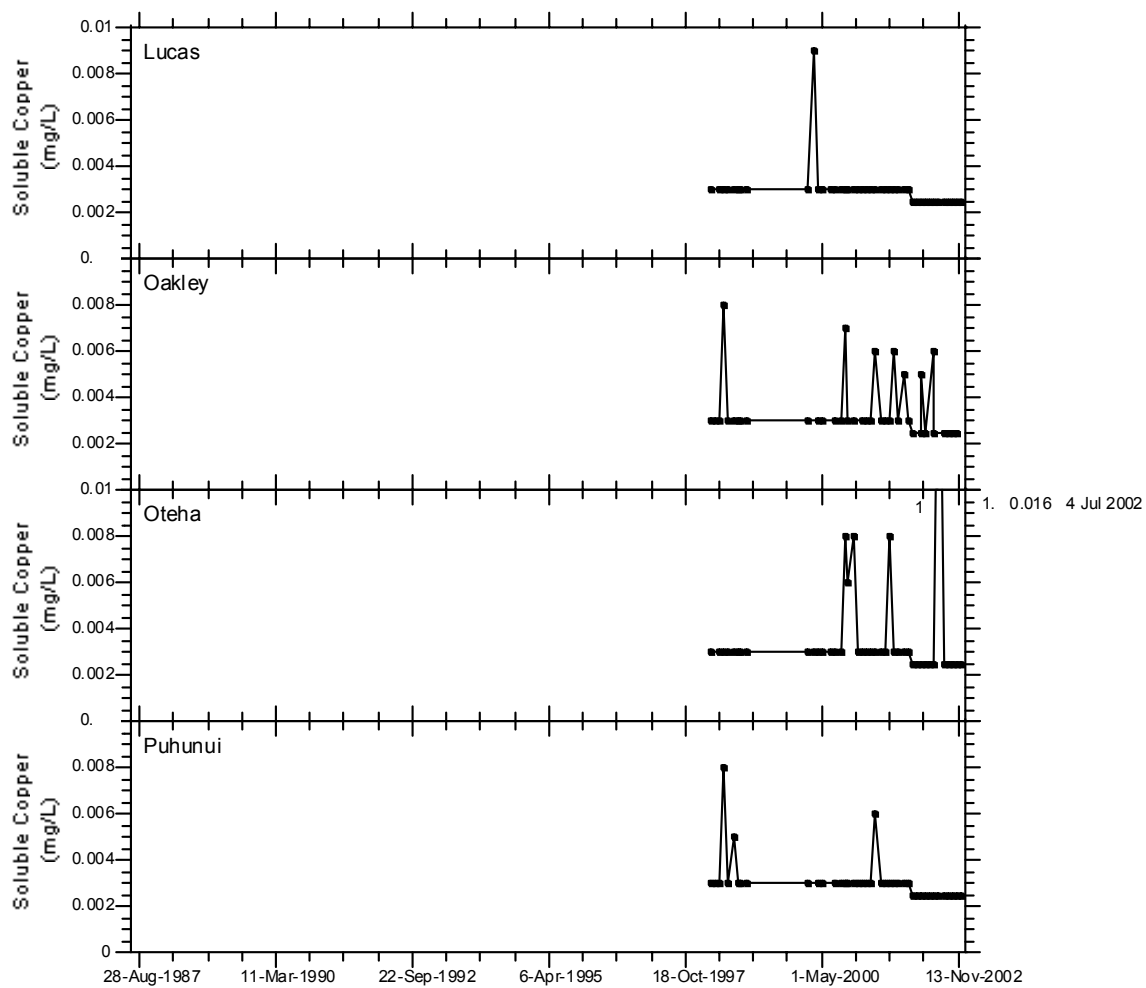
APPENDIX 16: FRESHWATER – SOLUBLE COPPER

(Note that $\text{g/m}^3 = \text{g m}^{-3} = \text{mg/L}$)

a) Soluble copper (mg/L) during January 2002 to December 2002

Date	Lucas	Oakley	Oteha	Puhinui
10-Jan-02	0.0025	0.0025	0.0025	0.0025
4-Feb-02	0.0025	0.0025	0.0025	0.0025
7-Mar-02	0.0025	0.0025	0.0025	0.0025
2-Apr-02	0.0025	0.0050	0.0025	0.0025
1-May-02	0.0025	0.0025	0.0025	0.0025
5-Jun-02	0.0025	0.0060	0.0025	0.0025
3-Jul-02	0.0025	0.0025		0.0025
6-Aug-02	0.0025	0.0025	0.0025	0.0025
5-Sep-02	0.0025	0.0025	0.0025	0.0025
2-Oct-02	0.0025	0.0025	0.0025	0.0025
5-Nov-02	0.0025	0.0025	0.0025	0.0025
02-Dec-02	0.0025	0.0025	0.0025	0.0025
Median	0.0025	0.0025	0.0025	0.0025
IQR/median %	0	0	0	0

b) The graphs on the following pages show soluble copper measurements from January 1992 to December 2002 (where data available).



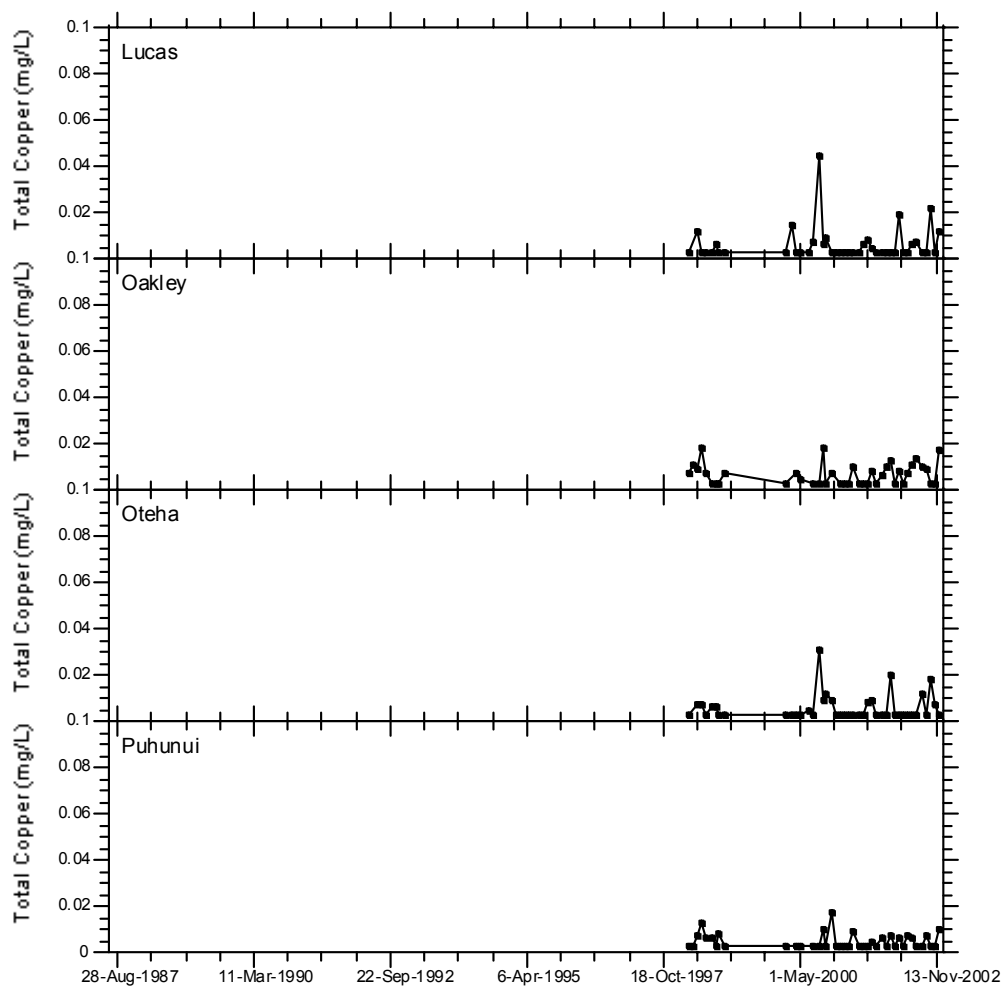
APPENDIX 17: FRESHWATER – TOTAL COPPER

(Note that $\text{g/m}^3 = \text{g m}^{-3} = \text{mg/L}$)

a) Total copper (mg/L) during January 2002 to December 2002

Date	Lucas	Oakley	Oteha	Puhinui
10-Jan-02	0.003	0.013	0.020	0.007
4-Feb-02	0.003	0.003	0.003	0.003
7-Mar-02	0.019	0.008	0.003	0.006
2-Apr-02	0.003	0.003	0.003	0.003
1-May-02	0.003	0.007	0.003	0.007
5-Jun-02	0.006	0.011	0.003	0.006
3-Jul-02	0.007	0.014	0.003	0.003
6-Aug-02	0.003	0.010	0.012	0.003
5-Sep-02	0.003	0.009	0.003	0.007
2-Oct-02	0.022	0.003	0.018	0.003
5-Nov-02	0.003	0.003	0.007	0.003
02-Dec-02	0.012	0.017	0.003	0.010
Median	0.003	0.009	0.003	0.005
IQR/median %	175	100	175	89

b) The graphs on the following pages show total copper measurements from January 1992 to December 2002 (where data available).



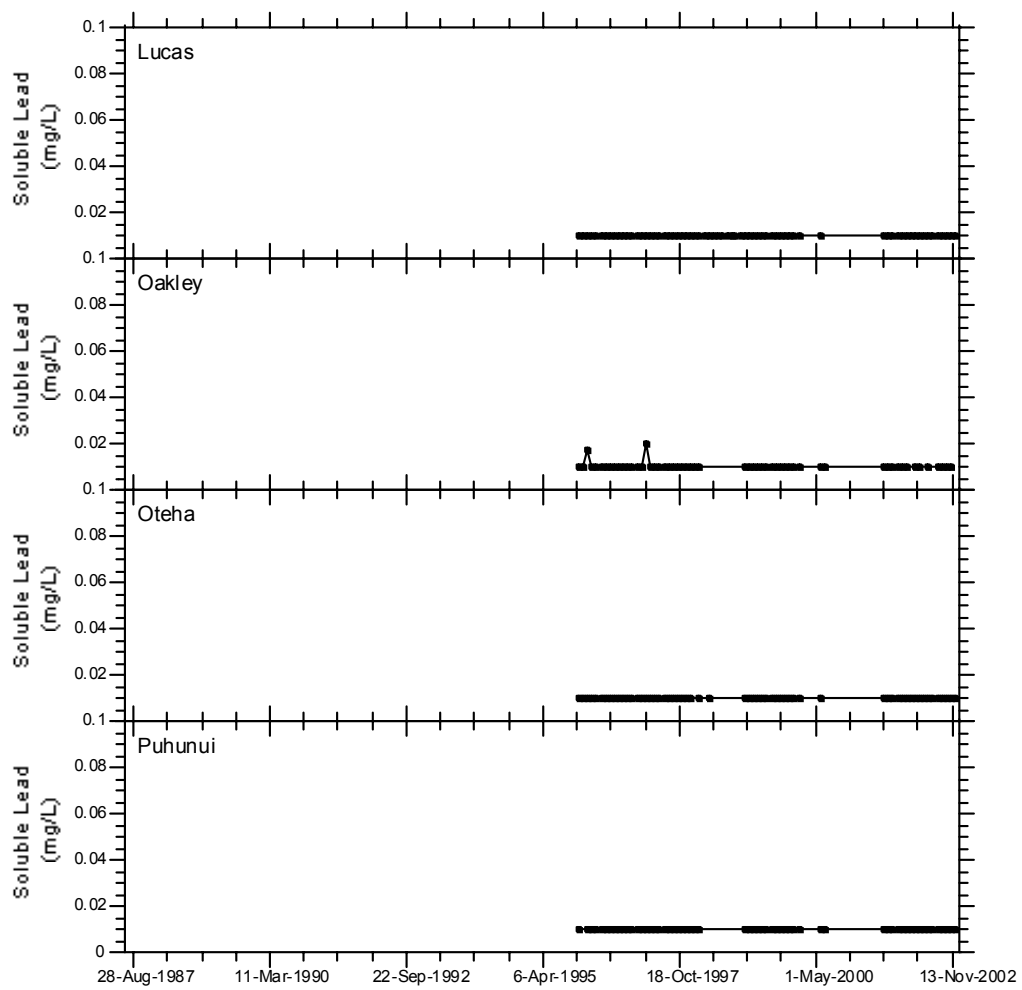
APPENDIX 18: FRESHWATER – SOLUBLE LEAD

(Note that $\text{g/m}^3 = \text{g m}^{-3} = \text{mg/L}$)

a) Soluble lead (mg/L) during January 2002 to December 2002

Date	Lucas	Oakley	Oteha	Puhinui
10-Jan-02	0.01	0.01	0.01	0.01
4-Feb-02	0.01	0.01	0.01	0.01
7-Mar-02	0.01	0.01	0.01	0.01
2-Apr-02	0.01	0.01	0.01	0.01
1-May-02	0.01	0.01	0.01	0.01
5-Jun-02	0.01	0.01	0.01	0.01
3-Jul-02	0.01	0.01	0.01	0.01
6-Aug-02	0.01	0.01	0.01	0.01
5-Sep-02	0.01	0.01	0.01	0.01
2-Oct-02	0.01	0.01	0.01	0.01
5-Nov-02	0.01	0.01	0.01	0.01
02-Dec-02	0.01	0.01	0.01	0.01
Median	0.01	0.01	0.01	0.01
IQR/median %	0	0	0	0

b) The graphs on the following pages show soluble lead measurements from January 1992 to December 2002 (where data available).



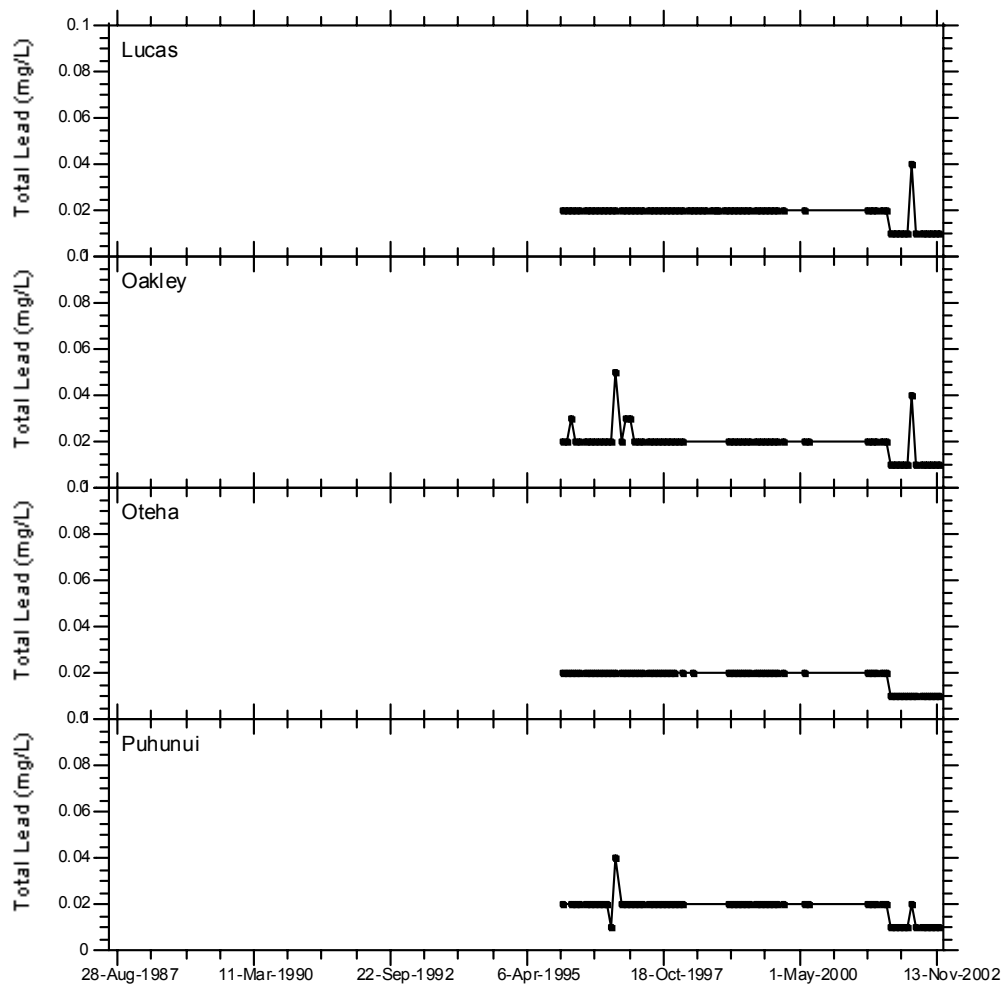
APPENDIX 19: FRESHWATER – TOTAL LEAD

(Note that $\text{g/m}^3 = \text{g m}^{-3} = \text{mg/L}$)

a) Total lead (mg/L) during January 2002 to December 2002

Date	Lucas	Oakley	Oteha	Puhinui
10-Jan-02	0.01	0.01	0.01	0.01
4-Feb-02	0.01	0.01	0.01	0.01
7-Mar-02	0.01	0.01	0.01	0.01
2-Apr-02	0.01	0.01	0.01	0.01
1-May-02	0.01	0.01	0.01	0.01
5-Jun-02	0.04	0.04	0.01	0.02
3-Jul-02	0.01	0.01	0.01	0.01
6-Aug-02	0.01	0.01	0.01	0.01
5-Sep-02	0.01	0.01	0.01	0.01
2-Oct-02	0.01	0.01	0.01	0.01
5-Nov-02	0.01	0.01	0.01	0.01
02-Dec-02	0.01	0.01	0.01	0.01
Median	0.01	0.01	0.01	0.01
IQR/median %	0	0	0	0

b) The graphs on the following pages show total lead measurements from January 1992 to December 2002 (where data available).



APPENDIX 20: FRESHWATER – SOLUBLE ZINC

(Note that $\text{g/m}^3 = \text{g m}^{-3} = \text{mg/L}$)

a) Soluble zinc (mg/L) during January 2002 to December 2002

Date	Lucas	Oakley	Oteha	Puhinui
10-Jan-02	0.0150	0.015	0.037	0.039
4-Feb-02	0.0025	0.007	0.014	0.006
7-Mar-02	0.0150	0.013	0.021	0.040
2-Apr-02	0.0025	0.012	0.021	0.050
1-May-02	0.0025	0.017	0.026	0.034
5-Jun-02	0.0080	0.030	0.061	0.061
3-Jul-02	0.0210	0.041		0.208
6-Aug-02	0.0220	0.030	0.049	0.044
5-Sep-02	0.0025	0.018	0.033	0.046
2-Oct-02	0.0050	0.020	0.036	0.073
5-Nov-02	0.0100	0.011	0.030	0.021
02-Dec-02	0.0025	0.008	0.030	0.028
Median	0.0065	0.016	0.032	0.042
IQR/median %	192	67	43	48

b) The graphs on the following pages show soluble zinc measurements from January 1992 to December 2002 (where data available).

