Executive Summary

This report presents the results of the Newfoundland Environment Precipitation Monitoring Network (NEPMoN) program for the period 1994 to 1998. Due to funding restraints, both at the federal and provincial level, it proved impossible to maintain seven sites in operation during this time frame and in 1996 the number of collector sites in operation was reduced to two. With the assistance of funding from industry, the network was gradually been built back up to five sites in operation at the end of 1998.

In 1994 the acid rain network consisted of sites at Bay D'Espoir, Cormack, Gros Morne National Park, Hope Brook Gold Mine, Salmonier Nature Park and Terra Nova B. A further site was opened at Loch Leven in November 1994, but closed in mid 1996 when the network was reduced to only two sites (Cormack and Terra Nova B). Loch Leven was reopened in June 1998, at the same time that a new site was established at Burgeo (to replace the one at Hope Brook Gold Mine as the mine had closed). In November 1998, a site was created at the Wooddale Tree Nursery near Grand Falls - Windsor next to a rainfall monitoring station.

Each site is equipped with an automated precipitation sampler which collects wet deposition (i.e. rain, snow, hail etc.). Once a week an operator removes the collected precipitation from the sampler, weighs it and transfers a sample to a labelled polyethylene bottle. The sample is analysed for a selection of parameters using equipment located at Environment Canada's Environmental Quality Laboratory in St. John's.

Site performance measures and overall data quality evaluations are provided for each site over most of the last decade. The Cormack and Terra Nova B sites have performed very consistently, producing good quality data. The performance of other sites has been somewhat erratic producing data that varied from good to "unacceptable for trend monitoring". A noted weakness with the sites is the measurement of the precipitation. The Belfort rain gauges have given erratic results, particularly during winter. These will be replaced by models consistent with Canadian Air and Precipitation Monitoring Network (CAPMoN) standards during the fiscal year 2000-2001.

The results from the various sites show a pronounced spatial variation in the deposition across the island. The largest depositions occur on the south west corner of the island, with the quantity diminishing as one progresses to the north and to the east. There are indications that the rate of deposition of sulphate has been diminishing steadily over the last decade but the rate of deposition of nitrate has increased. It is impossible to say whether these trends have any relationship to emission abatement measures, or if they result from changes in weather patterns. These questions can only be answered in the context of a continental-wide monitoring program.

Newfoundland Environment Precipitation Monitoring Network (NEPMoN)

Report on Activities 1994 -1998

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In 1998, the Newfoundland Environment Precipitation Monitoring Network was able to continue operation and increase its number of monitoring sites through the generous financial contributions from industries in the province. The Newfoundland Department of Environment and Labour would like to thank the following companies for their valuable contributions.

North Atlantic Refining Limited
Newfoundland Hydro
Voisey's Bay Nickel Company Limited
Iron Ore Company of Canada
Wabush Mines
Corner Brook Pulp and Paper Mill
Abitibi-Consolidated Stephenville
Abitibi-Consolidated Grand Falls

Newfoundland Environment Precipitation Monitoring Network (NEPMoN)

Mission Statement:

To determine the spatial and temporal variations in the long range transport of acidic pollutants into this province.

Objectives:

(i) To ensure wet sulphate and nitrate deposition trends are monitored and evaluated according to the protocols of the Canadian Air and Precipitation Monitoring Network (CAPMoN).

(ii) To ensure that a comprehensive, and integrated, sulphate and nitrate deposition monitoring and analysis program is continued in the Province of Newfoundland.

(iii) To monitor other components of acid deposition which may have an impact on the Newfoundland environment.

(iv) To assist in any research efforts designed to obtain a better understanding of the effects of acid rain.

(v) To provide reliable data to the National Atmospheric Chemistry (NATChem) Database and Analysis System.

The Network.

The network consists of a number of wet-only precipitation collectors located at sites around the island which have been specially selected to be representative of different regions (see Appendix B for a listing of the siting criteria). Sampling sites are located strategically throughout the island portion of the province so that a better estimate of the depositional loading pattern of sulphates and nitrates in our province could be obtained. The number of sites reached a maximum in 1995 when seven collectors were in operation. Due to lack of funding, this number was reduced to two in 1996, but with generous support from provincial industries, the number was increased back up to five collectors by the end of 1998. One of the previously-closed sites has been reactivated, and two new sites have been added to the network. Site operators record the occurrence and type of precipitation on a daily basis, and collect the precipitation sample weekly. Individual site history sheets are provided in Appendix A. These include measures of the site's performance (descriptions of these measures are provided in Appendix C). Figure 1 shows the location of the sites.

Chemical Analysis

Environment Canada assists the department to meet the program objectives by providing laboratory space and the equipment necessary to undertake the required chemical analysis. The parameters measured are as follows:

Table 1

Parameter	Technique	MDL Value
pH	Electrometric	0.01
Conductivity	Conductivity Meter	0.1 µS/cm
SO_4^{2-}	Ion Chromatography	0.02 mg/L
NO_3^--N	Ion Chromatography	0.008 mg/L
Cl^-	Ion Chromatography	0.02 mg/L
NH_4^+-N	Auto Analyzer Ion Chromatography	0.009 mg/L 0.03 mg/L
Na^+	Atomic Absorption Ion Chromatography	0.02 mg/L 0.04 mg/L
Ca^{2+}	Atomic Absorption Ion Chromatography	0.06 mg/L 0.07 mg/L
Mg^{2+}	Atomic Absorption Ion Chromatography	0.002 mg/L 0.04 mg/L
K^+	Atomic Absorption Ion Chromatography	0.02 mg/L 0.03 mg/L
Alkalinity	Gran Titration	0.2 mg/L

MDL = Method Detection Limit

It should be mentioned that the use of ion chromatography for the determination of cations is a fairly recent introduction. The precision of the method compares quite favorably with that obtained by other techniques, and the results are more than adequate for our purposes. The cation results for the 1994, 1995 and part of the 1996 seasons were obtained using atomic absorption and the auto analyzer. The remaining 1996, 1997 and 1998 cation analyses were obtained using ion chromatography.

A minimum of 60 ml of sample is required to do all the chemical parameters at least once. If the sample volume is less than 60 ml the analyses are done in the following order until the sample is depleted: - SO_4^{2-}, NO_3^--N, Cl^-: Na^+, K^+, Mg^{2+}, Ca^{2+}, NH_4^+-N; pH, alkalinity; and conductivity. It has been noted that small samples usually have a high concentration of analytes, so these samples are diluted before being run on the ion chromatograph. This means that the cation and anion contents can be determined on very small samples.

Evaluation of Data Quality

In the acid precipitation sample, some constituents are present at the ultra-trace level concentration. It is very easy for contamination to occur at any stage of the process, and a rigorous quality control procedure is followed to screen out any samples which could bias the results.

Operators are requested to comment on any unusual occurrence, such as the presence of extraneous material in the sample and on the performance of the collector.

Laboratory analysis follows standardized procedures that satisfy the requirements of the Canadian Association of Environmental Analytical Laboratories (CAEAL). These procedures include the use of Certified Reference Materials (CRMs), and repeatability verification. Once all the chemical parameters have been measured, an ionic balance is generated to verify that the anionic and cationic components are in equilibrium. Any samples falling outside experimental error tolerance levels are re-analyzed.

The final laboratory results for the individual samples are merged with the respective weekly rainfall collection data to give a spreadsheet file which is screened once more for outliers before the calculation of summary statistics for the year. This process is described in greater detail in Appendix E. The weekly rainfall collection statistics and the ion concentrations are published as separate tables. The annual statistics are collected onto a third report form. The latter are examined graphically to identify any trends within the data.

Results and discussion

In general the collection sites operated well over the last five years. The main concern with the system involves the rain gauge measurements. The Belfort rain gauges at the Loch Leven and Terra Nova sites have provided readings that do not correlate well with the collector data. It is often difficult to read the trace on the chart produced on the gauge, which affects the accuracy of the measurements. Evaporation of the sample, as well as diurnal variation was observed when the charts were analyzed. Due to breaks in the trace of the instrument at Terra Nova, the rain gauge measurements were obtained from a gauge located nearby at the Ranger Station at the Terra Nova National Park. Arrangements are being made to replace these instruments with models consistent with CAPMoN standards during the 2000-2001 fiscal year.

Measures of repeatability and reproducibility in the labwork were very good. Some biases were observed between the certified values for the CRMs and the ion chromatograph results for certain elements (Na, Ca) but these were well within the tolerance limits provided by the manufacturer. These biases are considered to have had a negligible effect on the final chemical results. There is a possibility that the pH measurements were biased on the low side for the 1997 and some of the 1998 results. This was related to a problem with the reference electrode for the Mettler Titrator.

Graphical display of the annual depositions at the different collector sites is restricted to the ones of greatest interest:

Excess Sulphate Deposition (Kg per hectare per year);
Nitrate Deposition (Kg per hectare per year);
pH;
Annual Rainfall.

There appears to be a slight trend towards a lessening in the deposition of excess sulphate over the province, although with the exception of Terra Nova B, the deposition still exceeds the 8 kg per hectare per year critical load limit. Interestingly, Cormack exhibited an increase in sulphate deposition in 1998. This does not appear to be an artifact of increased precipitation but is a real increase as the sulphate concentration increased as well. Nitrate deposition showed a similar trend to that of sulphate deposition, including the spike in 1998 at Cormack. The pH values of the precipitation show signs of having reached a minimum, and are now increasing again. In other words, the rain is becoming less acidic.

Given that the spatial distribution of deposition indicates that the greatest quantities fall onto the south-west corner of the island, it is clear that the major sources of pollution lie outside the province. This means that efforts to reduce acid precipitation will be dependant on the actions of other agencies. The data that NEPMoN supplies to the Meteorological Service of Canada is used to monitor actions taken in other parts of the continent. In other words, the onus is on the department to follow nationally approved protocols. Generally speaking, the department's protocols are compatible with CAPMoN standards, although there is room for improvement, particularly with respect to the rain gauge measurements.

Conclusion

A gradual reduction is noticeable in the deposition of sulphate and nitrate on the province, although further reductions are required to achieve the 8 kg/ha/year critical loading necessary for the sensitive parts of the province. It is important that the monitoring program be

continued and improved in order to ensure that emission abatement projects continue to receive attention.

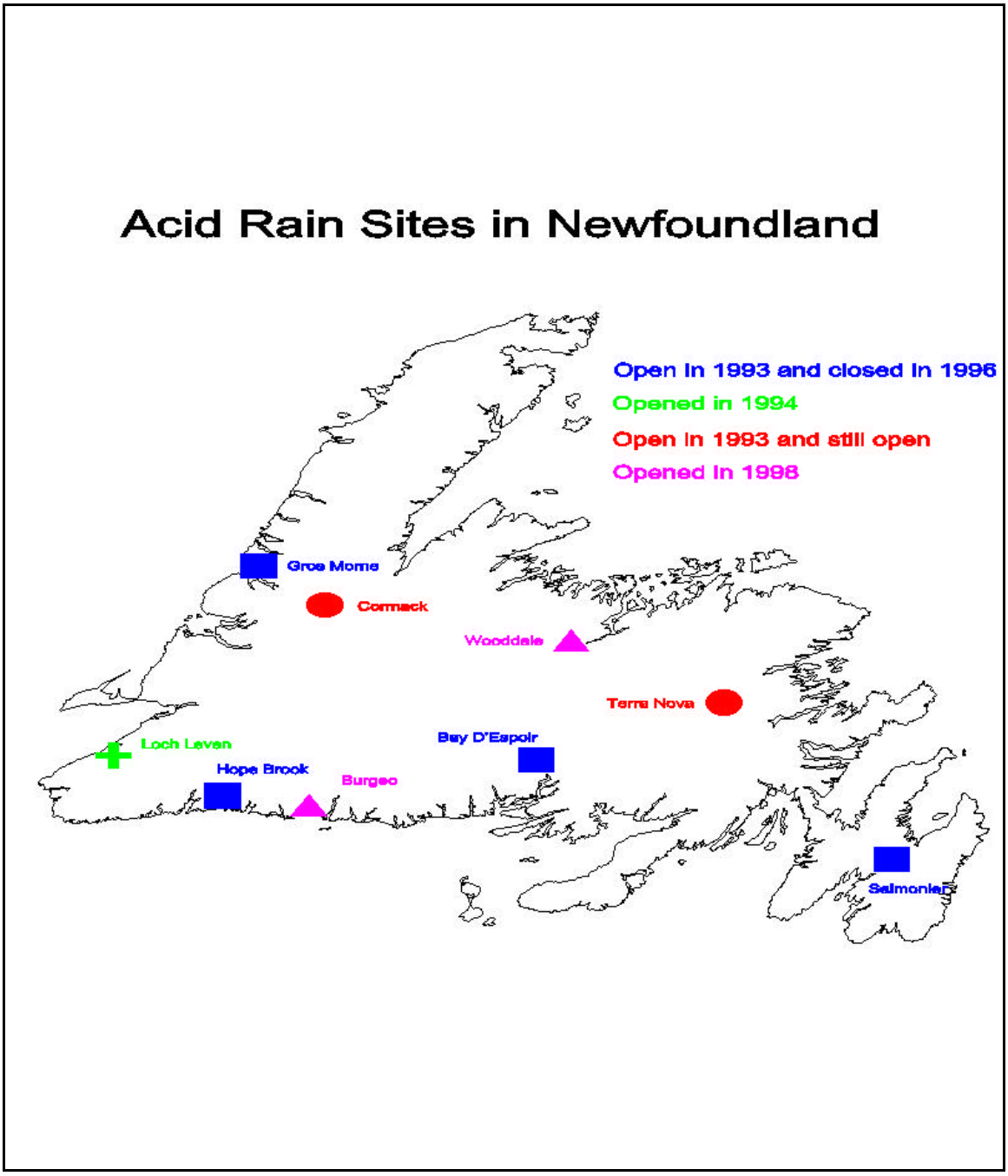

Figure 1

NB: The Loch Leven site was opened in 1994, closed in 1996, and reopened in 1998. The Salmonier site was closed in 1996, and reopened in 1999, principally to assist in a research project monitoring the Salmonier River basin.

1994 - 1998 Precipitation Chemistry Listings

The 1994 - 1998 precipitation chemistry listings are presented in the following order:

(a) Rain Collection Statistics (weekly basis);
(b) Ion Concentrations Table (weekly basis);
(c) Deposition and Annual Summary Table.

Bay D'Espoir

Burgeo

Cormack

Gros Morne National Park

Hope Brook

Loch Leven

Salmonier Nature Park

Terra Nova B

Wooddale Tree Nursery

An explanation of the terms and abbreviations used in the following tables is given in Appendix D. The data validity flags used by NEPMoN are defined in Appendix F.

Newfoundland Environment Precipitation Monitoring Network
(NEPMoN)
Site: Bay D'Espoir Year: 1994

Rain Collection Statistics

Sample Id No	Start Date	End Date	Effic. (%) flg	Coll. Gauge Days Type	No. of Gauge Type	Sample Volume Prec (ml)	Sample Depth (mm) flg	Gauge Depth (mm) flg
4201	02-Jan-94	09-Jan-94	66.4	SG	7	2154.8 M	33.6	50.6
4202	09-Jan-94	16-Jan-94	53.5	SG	7	835.8 M	13.0	24.3
4203	16-Jan-94	23-Jan-94	92.5	SG	7	2773.2 M	43.2	46.7
4204	23-Jan-94	30-Jan-94	80.6	SG	7	4138.8 M	64.5	80.0
4205	30-Jan-94	06-Feb-94	36.3	SG	7	534.0 S	8.3	22.9
4206	06-Feb-94	13-Feb-94	50.1	SG	7	321.8 S	5.0	10.0
4207	13-Feb-94	20-Feb-94	11.5	SG	7	323.4 S	5.0	43.8
4208	20-Feb-94	27-Feb-94	42.5	SG	7	450.0 M	7.0	16.5
4209	27-Feb-94	06-Mar-94	75.5	SG	7	3547.7 M	55.3	73.2
4210	06-Mar-94	13-Mar-94	60.9	SG	7	3831.7 M	59.7	98.0
4211	13-Mar-94	20-Mar-94	85.9	SG	7	1675.2 M	26.1	30.4
4212	20-Mar-94	27-Mar-94	94.0	SG	7	1099.7 M	17.1	18.2
4213	27-Mar-94	03-Apr-94	66.4	SG	7	1182.1 M	18.4	27.7
4214	03-Apr-94	10-Apr-94	108.9	SG	7	868.4 M	13.5	12.4
4215	10-Apr-94	17-Apr-94	102.0	SG	7	4544.1 M	70.8	69.4
4216	17-Apr-94	24-Apr-94			7	1968.2	30.7	33.2

			92.5		SG		M		
4217	24-Apr-94	01-May-94		7	382.6	6.0		6.5	
			91.7		SG		M		
4218	01-May-94	08-May-94		7	6100.9	95.0		100.5	
			94.5		RG		M		
4219	08-May-94	15-May-94		7	3522.6	54.9		54.2	
			101.3		RG		R		
4220	15-May-94	22-May-94		7	182.5	2.8		3.8	
			74.7		RG		R		
4221	22-May-94	29-May-94		7	1273.1	19.8		21.0	
			94.3		RG		R		
4222	29-May-94	05-Jun-94		7	1458.9	22.7		26.8	
			84.7		RG		R		
4223	05-Jun-94	12-Jun-94		7	2614.6	40.7		40.3	
			101.0		RG		R		
4224	12-Jun-94	19-Jun-94		7	111.0	1.7		2.6	
			66.5		RG		R		
4225	19-Jun-94	26-Jun-94		7	2595.4	40.4		38.3	
			105.5		RG		R		
4226	26-Jun-94	03-Jul-94		7	1046.8	16.3		17.8	
			91.6		RG		R		
4227	03-Jul-94	10-Jul-94		7	87.2	1.4		4.1	
			33.2		RG		R		
4228	10-Jul-94	17-Jul-94		7	1864.9	29.0		43.1	
			67.3		RG		R		
4229	17-Jul-94	24-Jul-94		7	558.3	8.7		9.6	
			90.6		RG		R		
4230	24-Jul-94	07-Aug-94		14	3462.4	53.9		55.6	
			96.9		RG		R		
4231	07-Aug-94	14-Aug-94		7	1622.5	25.3		27.6	
			91.7		RG		R		
4232	14-Aug-94	21-Aug-94		7	191.9	3.0		3.4	
			87.9		RG		R		
4233	21-Aug-94	28-Aug-94		7	231.1	3.6		4.1	
			87.8		RG		R		
4234	28-Aug-94	04-Sep-94		7	1820.4	28.4		27.0	
			105.2		RG		R		
4235	04-Sep-94	11-Sep-94		7			I1	41.4	
			I1		RG		R		
4236	11-Sep-94	18-Sep-94		7	4253.5	66.3		66.9	
			99.1		RG		R		
4237	18-Sep-94	25-Sep-94		7	515.6	8.0		9.2	

			87.3	RG		R		
4238	25-Sep-94	02-Oct-94		7	2099.5	32.7		34.0
			96.2	RG		R		
4239	02-Oct-94	09-Oct-94		7	143.3	2.2		3.8
			58.7	RG		R		
4240	09-Oct-94	16-Oct-94		7	1602.2	25.0		27.2
			91.9	RG		R		
4241	16-Oct-94	23-Oct-94		7	307.8	4.8		5.6
			85.5	RG		R		
4242	23-Oct-94	30-Oct-94		7	2565.2	40.0		42.4
			94.3	RG		R		
4243	30-Oct-94	06-Nov-94		7	3746.1	58.4		59.0
			99.0	RG		R		
4244	06-Nov-94	13-Nov-94		7	3636.5	56.6		58.3
			97.1	RG		R		
4245	13-Nov-94	20-Nov-94		7	466.3	7.3		6.2
			117.1	SG		M		
4246	20-Nov-94	27-Nov-94		7	2133.9	33.2		33.4
			99.4	SG		R		
4247	27-Nov-94	04-Dec-94		7	1019.6	15.9		28.7
			55.4	SG		M		
4248	04-Dec-94	11-Dec-94		7	1804.1	2.8		38.5
			7.3	SG		M		
4249	11-Dec-94	18-Dec-94		7	633.1	9.9		14.3
			69.0	SG		M		
4250	18-Dec-94	25-Dec-94		7	687.9	10.7		12.0
			89.2	SG		M		
4251	25-Dec-94	01-Jan-95		7	1426.9	22.2		35.2
			63.1	SG		M		

Newfoundland Environment Precipitation Monitoring Network (NEPMoN)
Site: Bay D'Espoir Year: 1994
Ion Concentrations

Start Date	Ion Bal.	flg	H pH	flg	Cond. (mg/l)	flg	SO4 umhos	flg	Alk CaCO3 (mg/l)	flg	XSO4 (mg/l)	flg	NNO3 (mg/l)	flg	Cl (mg/l)	flg	NNH4 (mg/l)	flg	Na (mg/l)	flg	Ca (mg/l)	flg	Mg (mg/l)	flg	K (mg/l)	flg
02-Jan-94	-1.86		4.49		.0326		23.0		1.43		.993		0.250		2.79		0.015		1.75		0.08		0.198		0.05	
09-Jan-94	-2.43		4.63		.0236		13.3		0.77		.582		0.112		1.36		<0.005		0.75		<0.06		0.088		0.02	
16-Jan-94	1.57		4.64		.0231		60.5	Q3	3.14	Q3	1.092		0.119		15.0	Q3	0.030		8.2	Q3	0.32		0.998	Q3	0.07	
23-Jan-94	-3.36		5.22		.0061		5.5		0.29		.177		0.017		0.80		<0.005		0.45		<0.06		0.053		0.01	
30-Jan-94	-4.30		4.56		.0278		10.6		0.73		.685		0.172		0.36		0.028		0.18		<0.06		0.023		0.01	
06-Feb-94	-2.22		4.24		.0580			I1	1.08		.905		0.473		1.53		0.090		0.70		<0.06		0.088		0.03	
13-Feb-94	-3.80		4.05		.0898		40.2	Q3	2.29		2.112		0.872	Q3	1.40		0.324	Q3	0.71		0.20		0.086		0.04	
20-Feb-94	-6.17		4.16		.0697		27.8		2.35		2.237		0.364		0.68		0.132		0.45		0.06		0.058		0.02	
27-Feb-94	-1.69		5.00		.0101		6.7		0.34		.235		0.054		0.80		<0.005		0.42		<0.06		0.051		0.02	
06-Mar-94	-0.79		4.92		.0121		7.2		0.37		.285		0.037		0.74		<0.005		0.34		<0.06		0.033		0.02	
13-Mar-94	1.24		4.80		.0160		8.1		0.62		.550		0.064		0.59		0.011		0.28		<0.06		0.033		0.01	
20-Mar-94	3.05		4.64		.0231		9.8		1.10		1.081	V3	0.113		0.18		0.086		0.02		0.06		0.009		0.01	
27-Mar-94	-3.14		4.55		.0284			I1	1.07		.942		0.387		0.74		0.042		0.51		0.27		0.085		0.06	
03-Apr-94		I1	3.94		.1157			I1	4.93		4.230		0.604		4.61		0.328		2.8			I1	0.355		0.12	

Start Date	Cond. umhos	flg	SO4 (mg/l)	flg	XSO4 (mg/l)	flg	NNO3 (mg/l)	flg	Cl (mg/l)	flg	NNH4 (mg/l)	flg	Na (mg/l)	flg	Ca (mg/l)	flg	Mg (mg/l)	flg	K (mg/l)	flg	Alk CaCO3 (mg/l)	flg
02-Jan-94	23.0		1.43		.993		0.250		2.79		0.015		1.75		0.08		0.198		0.05		-1.40	
09-Jan-94	13.3		0.77		.582		0.112		1.36		<0.005		0.75		<0.06		0.088		0.02		-1.06	
16-Jan-94	60.5	Q3	3.14	Q3	1.092		0.119		15.0	Q3	0.030		8.2	Q3	0.32		0.998	Q3	0.07		-1.04	
23-Jan-94	5.5		0.29		.177		0.017		0.80		<0.005		0.45		<0.06		0.053		0.01		-0.12	
30-Jan-94	10.6		0.73		.685		0.172		0.36		0.028		0.18		<0.06		0.023		0.01		-1.11	
06-Feb-94		I1	1.08		.905		0.473		1.53		0.090		0.70		<0.06		0.088		0.03		-2.58	
13-Feb-94	40.2	Q3	2.29		2.112		0.872	Q3	1.40		0.324	Q3	0.71		0.20		0.086		0.04		-3.91	
20-Feb-94	27.8		2.35		2.237		0.364		0.68		0.132		0.45		0.06		0.058		0.02		-2.99	
27-Feb-94	6.7		0.34		.235		0.054		0.80		<0.005		0.42		<0.06		0.051		0.02		-0.47	
06-Mar-94	7.2		0.37		.285		0.037		0.74		<0.005		0.34		<0.06		0.033		0.02		-0.38	
13-Mar-94	8.1		0.62		.550		0.064		0.59		0.011		0.28		<0.06		0.033		0.01		-0.76	
20-Mar-94	9.8		1.10		1.081	V3	0.113		0.18		0.086		0.02		0.06		0.009		0.01		-1.07	
27-Mar-94		I1	1.07		.942		0.387		0.74		0.042		0.51		0.27		0.085		0.06		-1.24	
03-Apr-94		I1	4.93		4.230		0.604		4.61		0.328		2.8			I1	0.355		0.12		-5.17	

10-Apr-94 -4.97 5.07 .0086 5.8 0.45 .367
0.020 0.57 0.020 0.33 <0.06 0.038 0.03
-0.24
17-Apr-94 -2.99 4.62 .0242 10.7 1.15 1.132
0.086 0.15 0.085 0.07 <0.06 0.016 0.02
-0.91
24-Apr-94 -5.63 4.00 .1008 32.5 3.31 3.242
0.563 0.50 0.191 0.27 0.16 0.049 0.02
-4.50
01-May-94 -4.50 4.98 .0106 4.3 0.35 .335 V3
0.054 0.10 0.020 0.03 <0.06 0.007 0.00
-0.36
08-May-94 -2.60 4.64 .0231 13.0 1.15 .995
0.094 1.07 0.074 0.62 <0.06 0.084 0.02
-0.96
15-May-94 -2.61 4.83 .0149 12.2 0.65 .457
0.086 1.31 0.010 0.77 <0.06 0.102 0.03
-0.58
22-May-94 -1.61 4.60 .0253 11.4 0.95 .912 V3
0.137 0.30 0.098 0.09 <0.06 0.018 <0.02
-1.14
29-May-94 -4.59 4.31 .0494 21.0 1.87 1.852 V2
0.309 0.27 0.226 0.07 0.09 0.028 <0.02
-2.29
05-Jun-94 -8.76 4.73 .0188 8.9 0.78 .775 V2
0.120 0.02 0.097 0.02 0.06 0.007 <0.02
-0.77
12-Jun-94 0.01 4.41 .0392 22.2 1.38 1.215 V2
0.249 1.37 0.062 0.66 0.06 0.104 0.06
-1.73
19-Jun-94 -8.37 5.14 .0073 3.6 0.21 .192
0.028 0.21 <0.005 0.07 0.06 0.010 <0.02
-0.14
26-Jun-94 I6 I6 I6 I6 I6 I6
I6 I6 I6 I6 I6 I6 I6
I6
03-Jul-94 -4.68 4.32 .0482 23.3 1.84 1.797
0.208 0.34 0.139 0.17 <0.06 0.024 <0.02
-2.52
10-Jul-94 -4.22 4.57 .0271 12.6 0.93 .920
0.172 0.08 0.085 0.04 <0.06 0.005 <0.02
-1.33

17-Jul-94	-5.49	4.42	.0383	16.3	0.97	.957	0.262	0.18	0.092	0.05	<0.06	0.007	<0.02	-1.83
24-Jul-94	-3.00	4.46	.0350	16.3	1.32	1.297	0.174	0.26	0.126	0.09	<0.06	0.010	<0.02	-1.67
07-Aug-94	-0.04	5.26	.0055	2.7	0.13	.125 V2	0.028	0.13	<0.005	0.02	<0.06	<0.002	<0.02	-0.08
14-Aug-94	-4.83	3.93	.1184	51.3	4.80	4.716 V3	0.471	0.64	0.445	0.24	0.07	0.040	0.02	-5.92
21-Aug-94	-6.87	4.74	.0183	8.4	0.34	.317	0.133	0.20	0.009	0.09	<0.06	0.012	<0.02	-0.66
28-Aug-94	-3.70	3.82	.1526	63.8	6.39 Q3	6.305 Q3	0.500 Q3	0.78	0.452 Q3	0.34	0.06	0.045	<0.02	-5.56
04-Sep-94	-5.67	4.82	.0153	7.6	0.49	.457	0.085	0.28	0.045	0.13	<0.06	0.016	<0.02	-0.64
11-Sep-94	-10.28	5.06	.0088	4.2	0.26	.242	0.041	0.15	0.018	0.07	<0.06	0.008	<0.02	-0.34
18-Sep-94	-9.06	4.86	.0139	10.9	0.16	I6	0.065	1.28	0.022	0.67	<0.06	0.077	0.02	-0.48
25-Sep-94	-6.94	5.23	.0059	3.5	0.16	.127	0.023	0.28	<0.005	0.13	<0.06	0.016	<0.02	-0.22
02-Oct-94	I1	4.76	.0175	I1	I1	I1	I1	I1	<0.005	I1	I1	I1	<0.02	-0.81
09-Oct-94	-7.68	5.19	.0065	3.6	0.18	.150	0.025	0.25	<0.005	0.12	<0.06	0.013	<0.02	-0.20
16-Oct-94	-4.18	5.24	.0058	4.2	0.13	.072	0.025	0.49	<0.005	0.23	<0.06	0.027	<0.02	-0.08
23-Oct-94	-3.52	4.61	.0247	11.8	0.85	.797	0.126	0.42	0.054	0.21	<0.06	0.025	<0.02	-1.03

30-Oct-94	4.33	4.71	.0197	15.9	0.96	.705
0.109	2.09	0.048	1.02	<0.06	0.118	0.04
-0.78						
06-Nov-94	-0.00	4.72	.0192	11.9	0.76	.625
0.095	1.07	0.038	0.54	<0.06	0.064	0.03
-0.75						
13-Nov-94	1.29	4.65	.0226	16.2	1.06	.810
0.074	1.89	0.007	1.00	<0.06	0.118	0.04
-0.92						
20-Nov-94	3.07	4.71	.0197	20.2	1.16	.735
0.107	3.30	0.035	1.70	0.08	0.191	0.07
-0.99						
27-Nov-94	9.70	5.08	.0084	5.7	0.19	.120
0.082	0.75	<0.005	0.28	<0.06	0.031	0.03
-0.39						
04-Dec-94	4.59	4.67	.0216	11.2	0.49	.427
0.201	0.57	<0.005	0.25	<0.06	0.035	<0.02
-1.06						
11-Dec-94	8.67	5.24	.0058	4.3	0.18	.130
0.035	0.56	<0.005	0.20	<0.06	0.026	<0.02
-0.15						
18-Dec-94	7.88	4.45	.0358	19.5	1.30	1.195
0.243	1.05	0.041	0.42	<0.06	0.055	0.02
-1.75						
25-Dec-94	8.98	5.00	.0101	5.4	0.33	.300
0.058	0.39	<0.005	0.12	<0.06	0.015	<0.02
-0.50						

Newfoundland Environment Precipitation Monitoring Network
(NEPMoN)
Site: Bay D'Espoir Year: 1995

Rain Collection Statistics

Sample Id No	Start Date	End Date	Effic. (%)	flg	Coll. Type	No. of Gauge Days	Sample Volume (ml)	Sample Prec Type	Depth (mm)	flg	Gauge Depth (mm)	flg
4301	01-Jan-95	08-Jan-95	94.6		SG	7	5490.3	S	85.5		90.4	
4302	08-Jan-95	15-Jan-95	75.0		SG	7	1192.0	S	18.6		24.8	
4303	15-Jan-95	22-Jan-95	54.1		SG	7	1589.0	S	24.8		45.8	
4304	22-Jan-95	29-Jan-95	8.9		SG	7	176.0	S	2.7		30.2	
4305	29-Jan-95	05-Feb-95	31.9		SG	7	190.0	S	3.0		9.4	
	05-Feb-95	12-Feb-95	0.0	I2	SG	7	0.0	S	0.0	I2	19.8	
4306	12-Feb-95	19-Feb-95	245.5		SG	7	1736.5	S	27.0		11.0	
4307	19-Feb-95	26-Feb-95	53.4		SG	7	2106.6	S	32.8		61.4	
4308	26-Feb-95	05-Mar-95	50.0		SG	7	895.2	S	13.9		27.8	
4309	05-Mar-95	12-Mar-95	74.8		SG	7	1300.1	S	20.2		27.0	
	12-Mar-95	19-Mar-95	0.0	I2	SG	7	0.0	S	0.0	I2	5.0	
4310	19-Mar-95	26-Mar-95	123.7		SG	7	4587.0	S	71.4		57.7	
4311	26-Mar-95	02-Apr-95	1.5		SG	7	10.2	S	0.2		13.6	
4312	02-Apr-95	09-Apr-95	29.7		SG	7	241.5	S	3.8		12.8	
4313	09-Apr-95	16-Apr-95	79.8		SG	7	584.3	S	9.1		11.4	
4314	16-Apr-95	23-Apr-95				7	2232.8		34.8		39.4	

			88.3			SG	S			
4315	23-Apr-95	30-Apr-95		7	424.3	6.6	11.2			
			58.9			SG	S			
	30-Apr-95	07-May-95		7	0.0	0.0	0.0	V1		
			I1			SG	S			
4316	07-May-95	14-May-95		7	336.7	5.2	5.2			
			100.0			RG	R			
4317	14-May-95	21-May-95		7	358.8	5.6	6.5			
			86.2			RG	R			
4318	21-May-95	28-May-95		7	386.2	6.0	6.7			
			89.6			RG	R			
	28-May-95	04-Jun-95		7	1435.8	22.4	31.4			
			71.3			RG	R			
4320	04-Jun-95	11-Jun-95		7	2534.0	39.5	40.5			
			97.5			RG	R			
4321	11-Jun-95	18-Jun-95		7	2905.1	45.2	45.2			
			100.0			RG	R			
4322	18-Jun-95	25-Jun-95		7	88.6	1.4	1.5			
			93.3			RG	R			
4323	25-Jun-95	02-Jul-95		7	219.3	3.4	4.9			
			69.4			RG	R			
4324	02-Jul-95	09-Jul-95		7	1069.9	16.7	16.2			
			103.1			RG	R			
4325	09-Jul-95	16-Jul-95		7	1068.4	16.6	18.1			
			91.7			RG	R			
4326	16-Jul-95	23-Jul-95		7	3088.9	48.1	46.2			
			104.1			RG	R			
4327	23-Jul-95	30-Jul-95		7	4233.0	65.9	63.8			
			103.3			RG	R			
4328	30-Jul-95	06-Aug-95		7	495.1	7.7	8.4			
			91.7			RG	R			
	06-Aug-95	13-Aug-95		7	0.0	0.0	0.0	V1		
			I1			RG	R			
4329	13-Aug-95	20-Aug-95		7	2939.3	45.8	46.3			
			98.9			RG	R			
4330	20-Aug-95	27-Aug-95		7	1620.9	25.2	27.2			
			92.6			RG	R			
4331	27-Aug-95	03-Sep-95		7	2234.7	34.8	24.6			
			141.5			RG	R			
4332	03-Sep-95	10-Sep-95		7	356.3	5.5	6.2			
			88.7			RG	R			
4333	10-Sep-95	17-Sep-95		7	5778.7	90.0	84.4			

			106.6		RG	R		
4334	17-Sep-95	24-Sep-95		7	2343.8		36.5	36.3
			100.6		RG	R		
4335	24-Sep-95	01-Oct-95		7	2007.4		31.3	30.4
			103.0		RG	R		
4336	01-Oct-95	08-Oct-95		7	1276.5		19.9	22.1
			90.0		RG	R		
4337	08-Oct-95	15-Oct-95		7	1930.0		30.1	34.8
			86.5		RG	R		
4338	15-Oct-95	22-Oct-95		7	1167.8		18.2	18.8
			96.8		RG	R		
4339	22-Oct-95	29-Oct-95		7	2244.0		35.0	36.4
			96.2		RG	R		
4340	29-Oct-95	05-Nov-95		7	3350.4		52.2	53.6
			97.4		RG	R		
4341	05-Nov-95	12-Nov-95		7	745.9		11.6	11.0
			105.5		SG	S		
4342	12-Nov-95	19-Nov-95		7	2064.3		32.2	32.2
			100.0		SG	S		
4343	19-Nov-95	26-Nov-95		7	4509.1		70.2	75.4
			93.1		SG	S		
4344	26-Nov-95	03-Dec-95		7	3465.9		54.0	69.4
			77.8		SG	S		
4345	03-Dec-95	10-Dec-95		7	1217.3		19.0	30.8
			61.7		SG	S		
4346	10-Dec-95	17-Dec-95		7	1709.0		26.6	38.6
			68.9		SG	S		
4347	17-Dec-95	24-Dec-95		7	1043.0		16.2	26.4
			61.4		SG	S		
4348	24-Dec-95	31-Dec-95		7	155.2		2.4	3.3
			72.7		SG	S		

Newfoundland Environment Precipitation Monitoring Network (NEPMoN)
Site: Bay D'Espoir Year: 1995
Ion Concentrations

Start Date	Ion Bal.	flg	H pH	flg	Cond.	flg	SO4	flg	XSO4	flg	NNO3	flg	Cl	flg	NNH4	flg	Na	flg	Ca	flg	Mg	flg	K	flg	Alk CaCO3	flg
			(mg/l)		umhos		(mg/l)		(mg/l)		(mg/l)		(mg/l)		(mg/l)		(mg/l)		(mg/l)		(mg/l)		(mg/l)		(mg/l)	
01-Jan-95	2.82		5.23		10.7		0.44		.165		0.031		2.09		<0.005		1.1		<0.06		0.122		0.04		-0.21	
08-Jan-95	8.13		4.73		9.3		0.45		.410		0.169		0.48		0.008		0.16		<0.06		0.022		<0.02		-0.97	
15-Jan-95	8.72		5.11		4.4		0.3		.267		0.022		0.43		<0.005		0.13		<0.06		0.017		<0.02		-0.32	
22-Jan-95	1.24		4.7		23.7		1.07		.520		0.096		4.18		<0.005		2.2		0.1		0.25		0.08		-1.07	
29-Jan-95		I1	4.21		17.1		1.75		1.275		0.551		3.95		0.123		1.9			I1	0.241		0.08		-3.08	
05-Feb-95		I2		I2		I2		I2		I2		I2		I2		I2		I2		I2		I2		I2		I2
12-Feb-95	7.02		5.14		5.5		0.36		.272	V3	0.034		0.69		0.009		0.28		<0.06		0.042		0.02		-0.38	
19-Feb-95	0.92		4.47		30.6	Q3	1.90	Q3	1.338		0.192		4.09		0.073		2.25		0.09		0.268	Q3	0.08		-2.01	
26-Feb-95	-1.18		5.06		4.3		0.40		.390		0.033		0.067		<0.005		0.04		<0.06		0.006		<0.02		-0.44	
05-Mar-95	0.99		4.86		23.3		1.07		.470		0.088		4.35		<0.005		2.40		0.11		0.269		0.09		-0.82	
12-Mar-95		I2		I2		I2		I2		I2		I2		I2		I2		I2		I2		I2		I2		I2
19-Mar-95	2.87		4.83		9.8		0.73		.645		0.077		0.719		0.043		0.34		<0.06		0.049		0.02		-0.91	
26-Mar-95		I1		I1		I1		I1	1.00		.734	V4	0.074		1.91		I1		I1		I1		I1		I1	
02-Apr-95	3.68		4.40		24.3		2.10		1.870	V3	0.113		1.52		0.077		0.72		<0.06		0.110		0.03		-2.20	
09-Apr-95	-3.14		4.56		13.9		1.20		1.182		0.133		0.14													

0.104 0.07 <0.06 0.014 <0.02 -1.60
16-Apr-95 1.92 4.94 .0116 6.2 0.50 .464 V3
0.057 0.22 0.019 0.09 <0.06 0.017 <0.02
-0.74
23-Apr-95 -14.93 5.18 .0067 3.2 0.13 .120
0.045 0.075 <0.005 0.04 <0.06 0.007 <0.02
-0.47
30-Apr-95 I2 I2 I2 I2 I2 I2
I2 I2 I2 I2 I2 I2 I2
I2
07-May-95 -16.69 5.14 .0073 3.6 0.09 .081 V3
0.053 0.062 <0.005 0.02 <0.06 0.004 <0.02
-0.43
14-May-95 -4.53 4.89 .0130 6.5 0.40 .372
0.077 0.19 <0.005 0.11 <0.06 0.014 0.02
-0.79
21-May-95 -3.91 4.33 .0471 22.4 1.73 1.692
0.276 0.25 0.152 0.15 <0.06 0.024 <0.02
-2.55
28-May-95 I2 I2 I2 I2 I2 I2
I2 I2 I2 I2 I2 I2 I2
I2
04-Jun-95 1.65 4.77 .0171 13.5 0.83 .667
0.105 1.22 0.049 0.65 <0.06 0.076 0.03
-1.11
11-Jun-95 1.30 4.94 .0116 6.0 0.39 .373 V3
0.078 0.13 0.024 0.03 <0.06 0.008 <0.02
-0.72
18-Jun-95 I1 I1 I1 I1 2.64 2.589 V4
0.744 0.36 0.681 I1 I1 I1 0.26
25-Jun-95 -5.45 4.43 .0374 17.2 1.43 1.407
0.204 0.17 0.141 0.09 <0.06 0.017 0.03
-2.02
02-Jul-95 -2.87 4.43 .0374 18.2 0.97 .957 V3
0.320 0.12 0.082 0.09 <0.06 0.006 <0.02
-2.11
09-Jul-95 -0.77 4.50 .0319 18.5 1.29 1.222
0.247 0.59 0.168 0.27 0.06 0.036 0.03
-1.69
16-Jul-95 -2.40 4.85 .0142 7.5 0.55 .537
0.074 0.14 0.043 0.05 <0.06 0.007 <0.02
-0.79

23-Jul-95 -2.58 4.66 .0221 10.8 0.70 .695 V3
0.145 0.05 0.049 <0.02 <0.06 0.002 <0.02
-1.23
30-Jul-95 -2.87 4.63 .0236 12.8 0.82 .784 V3
0.183 0.24 0.087 0.11 0.06 0.017 <0.02
-1.30
06-Aug-95 I2 I2 I2 I2 I2 I2
I2 I2 I2 I2 I2 I2 I2
I2
13-Aug-95 -29.94 5.28 .0053 2.6 0.08 .077
0.019 0.04 <0.005 <0.02 <0.06 <0.002 <0.02
-0.27
20-Aug-95 1.45 4.97 .0108 11.9 0.59 .387
0.081 1.61 0.030 0.81 0.09 0.098 0.04
-0.58
27-Aug-95 -8.06 5.04 .0092 5.1 0.23 .212
0.063 0.16 0.023 0.07 <0.06 0.008 <0.02
-0.55
03-Sep-95 0.65 4.62 .0242 13.4 1.02 .905
0.155 0.91 0.083 0.46 <0.06 0.058 0.04
-1.44
10-Sep-95 -0.51 4.82 .0153 7.0 0.57 .532
0.085 0.33 0.038 0.15 <0.06 0.017 <0.02
-0.99
17-Sep-95 -7.66 5.20 .0064 3.5 0.18 .145
0.022 0.30 <0.005 0.14 <0.06 0.018 0.02
-0.55
24-Sep-95 -2.40 4.95 .0113 5.8 0.42 .390
0.036 0.27 <0.005 0.12 <0.06 0.015 0.02
-0.82
01-Oct-95 -4.47 5.27 .0054 3.0 0.15 .122
0.021 0.26 <0.005 0.11 <0.06 0.012 <0.02
-0.45
08-Oct-95 1.45 4.96 .0111 5.7 0.39 .355
0.060 0.31 0.007 0.14 <0.06 0.015 <0.02
-0.83
15-Oct-95 3.72 4.77 .0171 33.8 1.98 1.131
0.185 6.38 0.147 3.40 0.14 0.341 0.28
-1.08
22-Oct-95 5.41 4.88 .0133 8.1 0.64 .587
0.092 0.46 0.046 0.21 <0.06 0.026 <0.02
-0.90

29-Oct-95	3.83	5.20	.0064	8.5	0.52	.382	0.084	1.13	0.012	0.55	<0.06	0.062	0.29 Q3	-0.41
05-Nov-95	3.97	4.83	.0149	12.6	0.61	.352	0.088	2.11	<0.005	1.03	<0.06	0.121	0.05	-0.99
12-Nov-95	1.72	5.17	.0068	5.01	0.27	.180	0.015	0.78	<0.005	0.36	<0.06	0.041	<0.02	-0.66
19-Nov-95	-3.33	4.96	.0111	5.46	0.35	.302	0.043	0.42	0.012	0.19	<0.06	0.023	<0.02	-0.85
26-Nov-95	0.43	4.56	.0278	19.56	1.22	.857	0.147	2.65	0.024	1.45	0.08	0.144	0.06	-1.76
03-Dec-95	1.41	4.43	.0374	I1	2.26	1.348	0.156	6.63	0.034	3.65	0.13	0.361	0.15	-2.17
10-Dec-95	-9.00	5.37	.0043	3.48	0.10	.035	<0.008	0.50	<0.005	0.26	<0.06	0.027	<0.02	-0.42
17-Dec-95	-6.76	5.24	.0058	4.06	0.17	.107	0.016	0.48	<0.005	0.25	<0.06	0.028	<0.02	-0.46
24-Dec-95	-38.76	5.49	.0033	I1	0.10	.085 V3	<0.008	0.09	<0.005	0.10	<0.06	0.007	0.05	-0.19

Newfoundland Environment Precipitation Monitoring Network
(NEPMoN)
Site: Cormack Year: 1994

Rain Collection Statistics

Sample Id No	Start Date	End Date	Effic. (%) flg	Coll. Gauge Days	No. of Gauge Type	Sample Volume (ml)	Sample Prec Type	Sample Depth (mm) flg	Gauge Depth (mm) flg
9201	29-Dec-93	05-Jan-94	17.0 SG	7		496.0	M	6.2	36.4
9202	05-Jan-94	12-Jan-94	32.1 SG	7		1417.0	M	17.7	55.2
9203	12-Jan-94	19-Jan-94	67.1 SG	7		2297.2	M	28.6	42.6
9204	19-Jan-94	26-Jan-94	24.1 SG	7		728.2	S	9.1	37.8
9205	26-Jan-94	02-Feb-94	22.4 SG	7		479.1	M	6.0	26.8
9206	02-Feb-94	09-Feb-94	5.1 SG	7		106.4	S	1.3	25.6
9207	09-Feb-94	16-Feb-94	3.8 SG	7		73.9	M	0.9	23.8
9208	16-Feb-94	23-Feb-94	75.3 SG	7		909.5	M	11.3	15.0
9209	23-Feb-94	02-Mar-94	5.6 SG	7		65.1	S	0.8	14.4
9210	02-Mar-94	09-Mar-94	50.3 SG	7		1408.1	M	17.6	35.0
9211	09-Mar-94	16-Mar-94	82.7 SG	7		5071.3	M	63.2	76.4
9212	16-Mar-94	23-Mar-94	86.1 SG	7		1090.2	M	13.6	15.8
9213	23-Mar-94	30-Mar-94	25.6 SG	7		631.6	M	7.9	30.8
9214	30-Mar-94	06-Apr-94	98.0 SG	7		1932.4	M	24.1	24.6
9215	06-Apr-94	13-Apr-94	71.9 SG	7		4556.6	M	56.8	79.0
9216	13-Apr-94	20-Apr-94		7		2350.9		29.3	28.4

			103.2	RG	R			
9217	20-Apr-94	27-Apr-94		7	599.7	7.5		8.6
			87.2	RG	M			
9218	27-Apr-94	04-May-94		7	1605.9	20.0		24.4
			82.0	SG	M			
9219	04-May-94	11-May-94		7	3328.4	41.5		45.8
			90.6	RG	M			
9220	11-May-94	18-May-94		7	2138.6	26.7		28.8
			92.7	RG	R			
9221	18-May-94	25-May-94		7	367.5	4.6		5.8
			79.3	RG	M			
9222	25-May-94	01-Jun-94		7	4895.2	61.0		64.0
			95.3	RG	R			
9223	01-Jun-94	08-Jun-94		7	4152.9	51.8		51.2
			101.2	SG	M			
9224	08-Jun-94	15-Jun-94		7	3255.7	40.6		41.0
			99.0	RG	R			
9225	15-Jun-94	22-Jun-94		7	213.6	2.7		4.6
			58.7	RG	R			
9226	22-Jun-94	29-Jun-94		7	3470.9	43.3		46.0
			94.1	RG	R			
9227	29-Jun-94	06-Jul-94		7	1261.2	15.7		17.2
			91.3	RG	R			
9228	06-Jul-94	13-Jul-94		7	4735.7	59.0		57.6
			102.4	RG	R			
9229	13-Jul-94	20-Jul-94		7	929.0	11.6		13.4
			86.6	RG	R			
9230	20-Jul-94	27-Jul-94		7	2586.9	32.3		34.8
			92.8	RG	R			
9231	27-Jul-94	03-Aug-94		7	2494.0	31.1		33.6
			92.6	RG	R			
9232	03-Aug-94	10-Aug-94		7	2444.5	30.5		32.8
			93.0	RG	R			
9233	10-Aug-94	17-Aug-94		7	182.3	2.3		4.6
			50.0	RG	R			
9234	17-Aug-94	24-Aug-94		7	670.0	8.4		9.8
			85.7	RG	R			
9235	24-Aug-94	31-Aug-94		7	1517.5	18.9		21.2
			89.2	RG	R			
9236	31-Aug-94	07-Sep-94		7	2158.2	26.9		29.4
			91.5	RG	R			
9237	07-Sep-94	14-Sep-94		7	4771.8	59.5		64.0

			93.0	RG		R		
9238	14-Sep-94	21-Sep-94		7	656.6	8.2		10.8
			75.9	RG		R		
9239	21-Sep-94	28-Sep-94		7	18.0	0.2		2.0
			10.0	RG		R		
9240	28-Sep-94	05-Oct-94		7	5057.1	63.1		65.4
			96.5	RG		R		
9241	05-Oct-94	12-Oct-94		7	1278.9	15.9		18.6
			85.5	RG		R		
9242	12-Oct-94	19-Oct-94		7	658.5	8.2		9.4
			87.2	RG		M		
9243	19-Oct-94	26-Oct-94		7	922.1	11.5		14.2
			81.0	RG		R		
9244	26-Oct-94	02-Nov-94		7	2014.0	25.1		27.4
			91.6	RG		R		
9245	02-Nov-94	09-Nov-94		7	4234.7	52.8		58.2
			90.7	RG		M		
9246	09-Nov-94	16-Nov-94		7	763.0	9.5		9.2
			103.3	SG		M		
9247	16-Nov-94	23-Nov-94		7	2950.2	36.8		36.6
			100.5	SG		M		
9248	23-Nov-94	30-Nov-94		7	1790.1	22.3		42.2
			52.8	SG		M		
9249	30-Nov-94	07-Dec-94		7	818.8	10.2		42.4
			24.1	SG		S		
9250	07-Dec-94	14-Dec-94		7	2618.7	32.7		66.8
			49.0	SG		M		
9251	14-Dec-94	21-Dec-94		7	177.4	2.2		7.2
			30.6	SG		S		
9252	21-Dec-94	28-Dec-94		7	191.8	2.4		3.8
			63.2	SG		S		

Newfoundland Environment Precipitation Monitoring Network (NEPMoN)
Site: Cormack Year: 1994
Ion Concentrations

Start Date	Ion Bal.	flg	H pH	flg	Cond.	flg	Alk CaCO3	flg	SO4	flg	XSO4	flg	NNO3	flg	Cl	flg	NNH4	flg	Na	flg	Ca	flg	Mg	flg	K	flg
			(mg/l)		umhos		(mg/l)		(mg/l)		(mg/l)		(mg/l)		(mg/l)		(mg/l)		(mg/l)		(mg/l)		(mg/l)		(mg/l)	
29-Dec-93		I8		I8		I8		I8		I8		I8		I8		I8		I8		I8		I8		I8		I8
05-Jan-94		I8		I8		I8		I8		I8		I8		I8		I8		I8		I8		I8		I8		I8
12-Jan-94		I8		I8		I8		I8		I8		I8		I8		I8		I8		I8		I8		I8		I8
19-Jan-94	0.37		4.49		.0326		27.5		0.88		.380		0.246		3.96		0.012		2.00		0.08		0.246		0.08	
26-Jan-94	-5.22		4.38		.0420		17.9		0.89		.855		0.286		0.29		0.016		0.14		<0.06		0.020		<0.02	
02-Feb-94	-3.64		4.36		.0440		18.0		0.51		.440		0.367		0.79		0.015		0.28		<0.06		0.038		0.08	
09-Feb-94	-2.13		4.92		.0121			I1	0.35		.222	V2	0.087		1.01		<0.005		0.51		<0.06		0.084		0.04	
16-Feb-94	-8.04		4.18		.0666		23.2		2.03		2.002	V3	0.354		0.19		0.192		0.07		<0.06		0.013		<0.02	
23-Feb-94		I1		I1		I1		I1	0.34		.200	V2	0.035		1.13		0.049		0.56			I1		I1		I1
02-Mar-94	-5.53		4.30		.0505		19.5		1.75		1.712		0.182		0.28		0.049		0.15		<0.06		0.026		<0.02	
09-Mar-94	-1.14		4.91		.0124		5.3		0.37		.338	V3	0.068		0.25		0.012		0.09		<0.06		0.015		<0.02	
16-Mar-94	-2.17		5.16		.0070		3.4		0.24		.212	V3	0.028		0.21		0.016		0.06		<0.06		0.013		<0.02	
23-Mar-94	-3.07		4.45		.0358		14.4		1.02		.994	V3	0.250		0.13		0.077		0.04		<0.06		0.012		<0.02	
30-Mar-94	-4.29		4.49		.0326		15.0		1.37		1.337		0.222		0.30		0.160		0.13		0.11		0.029		<0.02	
06-Apr-94	-4.89		4.35		.0450		18.4		1.67	Q3	1.630	Q3	0.246	Q3	0.35											

0.132 Q3	0.16	0.10 Q3	0.028	<0.02	-2.07	
13-Apr-94	-9.38	4.80	.0160	6.7	0.64	.617
0.088	0.14	0.047	0.09	0.07	0.019	<0.02
-0.68						
20-Apr-94	-4.48	4.26	.0554	24.4	2.58	2.570 V2
0.269	0.12	0.255	0.04	0.13	0.022	<0.02
-2.57						
27-Apr-94	-2.76	4.64	.0231	11.4	1.31	1.297 V2
0.154	0.15	0.124	0.05	0.16	0.027	0.03
-1.09						
04-May-94	-1.45	5.09	.0082	4.1	0.37	.351 V3
0.037	0.15	0.037	0.04	<0.06	0.009	<0.02
-0.23						
11-May-94	-5.66	4.15	.0714	30.8	2.89	2.862 V3
0.348	0.16	0.349	0.04	<0.06	0.013	<0.02
-3.13						
18-May-94	-7.14	4.93	.0118	6.6	0.48	.450 V2
0.049	0.27	0.029	0.12	0.06	0.022	0.02
-0.33						
25-May-94	-5.65	4.32	.0482	21.0	2.25 Q3	2.229 Q3
0.200	0.12	0.266 Q3	0.03	0.06	0.010	<0.02
-2.16						
01-Jun-94	-0.47	4.55	.0284	12.5	1.17	1.153 V3
0.159	0.12	0.106	0.03	<0.06	0.008	<0.02
-1.26						
08-Jun-94	-1.02	4.71	.0197	9.8	0.90	.870
0.108	0.28	0.097	0.12	<0.06	0.017	0.02
-0.82						
15-Jun-94	I7	I7	I7	I7	I7	I7
I7	I7	I7	I7	I7	I7	I7
I7						
22-Jun-94	0.52	4.91	.0124	6.2	0.52	.502
0.083	0.14	0.030	0.07	<0.06	0.012	0.02
-0.44						
29-Jun-94	-3.02	4.42	.0383	16.9	1.33	1.294 V3
0.251	0.21	0.121	0.09	<0.06	0.017	0.05
-1.69						
06-Jul-94	-2.72	4.33	.0471	19.6	1.63	1.617 Q3
0.237	0.10	0.089	0.03	<0.06	0.006	<0.02
-2.14						
13-Jul-94	-5.88	4.34	.0461	19.9	1.82	1.807 V2
0.253	0.02	0.179	0.05	<0.06	0.011	0.02

-2.05							
20-Jul-94	-3.87	4.26	.0554	23.3	2.22	2.203	V3
0.260	0.11	0.196	0.04	<0.06	0.008	0.02	
-2.38							
27-Jul-94	-6.88	4.45	.0358	14.2	1.26	1.245	
0.180	0.14	0.093	0.06	0.07	0.008	0.02	
-1.45							
03-Aug-94	-4.86	4.63	.0236	9.8	0.72	.713	V3
0.130	0.08	0.041	0.02	<0.06	0.003	<0.02	
-1.00							
10-Aug-94	-7.27	4.13	.0747	33.4	2.57	2.442	
0.305	1.04	0.173	0.51	0.11	0.071	0.04	
-3.27							
17-Aug-94	-9.65	3.78	.1673	64.7	6.20	6.131	V3
0.433	0.47	0.400	0.19	0.08	0.033	0.03	
-7.59							
24-Aug-94	-0.25	4.56	.0278	18.3	1.42	1.227	
0.164	1.52	0.179	0.77	<0.06	0.097	0.05	
-1.22							
31-Aug-94	-8.46	5.34	.0046	2.8	0.13	.107	
0.010	0.22	<0.005	0.09	<0.06	0.012	<0.02	
-0.03							
07-Sep-94	-6.66	4.45	.0358	15.0	1.09	1.067	V3
0.209	0.17	0.108	0.06	<0.06	0.011	<0.02	
-1.57							
14-Sep-94	3.82	4.23	.0594	30.8	3.43	3.363	V3
0.255	0.66	0.362	0.21	0.06	0.032	0.03	
-3.11							
21-Sep-94	I1	5.34	.0046	I1	1.03	.882	V4
0.119	1.06	I1	I1	<0.06	I1	I1	
-0.10							
28-Sep-94	-1.36	5.24	.0058	2.9	0.13	.107	
0.028	0.17	<0.005	0.09	<0.06	0.012	0.02	
0.30							
05-Oct-94	-11.81	4.88	.0133	6.4	0.44	.427	V2
0.061	0.03	0.005	0.05	<0.06	0.009	<0.02	
-0.63							
12-Oct-94	I7	I7	I7	I7	I7	I7	
I7	I7	I7	I7	I7	I7	I7	
I7							
19-Oct-94	-2.74	5.23	.0059	4.1	0.18	.140	
0.036	0.33	<0.005	0.16	<0.06	0.021	<0.02	

-0.21
26-Oct-94 -10.81 4.99 .0103 4.3 0.34 .332 V2
0.062 0.03 0.023 0.03 <0.06 0.005 <0.02
-0.46
02-Nov-94 4.08 4.62 .0242 12.3 0.98 .865 V3
0.138 0.84 0.046 0.36 <0.06 0.055 0.03
-1.32
09-Nov-94 -2.81 4.58 .0265 49.4 <0.02 <0.02 V1
0.121 9.66 0.054 5.50 0.23 0.138 0.21
-1.34
16-Nov-94 -3.46 4.96 .0111 20.4 <0.02 <0.02 V1
0.073 4.15 0.021 2.10 0.10 0.245 0.09
-0.59
23-Nov-94 0.76 4.91 .0124 18.7 0.76 .285
0.102 3.49 0.010 1.90 0.08 0.219 0.08
-0.66
30-Nov-94 -13.75 5.09 .0082 4.7 0.18 .135
0.065 0.23 <0.005 0.18 <0.06 0.021 <0.02
-0.44
07-Dec-94 1.30 5.10 .0080 12.5 0.58 .255
0.043 2.36 <0.005 1.30 <0.06 0.151 0.04
-0.45
14-Dec-94 2.09 4.71 .0197 23.3 1.40 .800
0.129 4.48 0.026 2.40 0.13 0.285 0.09
-0.95
21-Dec-94 3.73 4.44 .0366 21.3 1.37 1.257
0.389 0.99 0.181 0.45 0.07 0.062 0.03
-1.93

Newfoundland Environment Precipitation Monitoring Network
(NEPMoN)
Site: Cormack Year: 1995

Rain Collection Statistics

Sample Id No	Start Date	End Date	Effic. (%) flg	Coll. Gauge Days	No. of Gauge Type	Sample Volume (ml)	Sample Prec Type	Sample Depth (mm) flg	Gauge Depth (mm) flg
9301	28-Dec-94	04-Jan-95	29.2 SG	7		836.6 S	10.4	35.6	
9302	04-Jan-95	11-Jan-95	73.7 SG	7		3321.5 M	41.4	56.2	
9303	11-Jan-95	18-Jan-95	37.9 SG	7		2991.8 M	37.3	98.4	
9304	18-Jan-95	25-Jan-95	7.3 SG	7		173.9 M	2.2	29.6	
9305	25-Jan-95	01-Feb-95	21.9 SG	7		126.6 S	1.6	7.2	
9306	01-Feb-95	08-Feb-95	45.7 SG	7		564.9 S	7.0	15.4	
9307	08-Feb-95	15-Feb-95	21.1 SG	7		413.1 S	5.2	24.4	
9308	15-Feb-95	22-Feb-95	61.1 SG	7		1727.3 S	21.5	35.2	
9309	22-Feb-95	01-Mar-95	75.0 SG	7		1442.5 M	18.0	24.0	
9310	01-Mar-95	08-Mar-95	41.7 SG	7		688.3 M	8.6	20.6	
9311	08-Mar-95	15-Mar-95	82.2 SG	7		2440.1 M	30.4	37.0	
9312	15-Mar-95	22-Mar-95	36.5 SG	7		868.3 M	10.8	29.6	
9313	22-Mar-95	29-Mar-95	38.2 SG	7		1501.2 M	18.7	49.0	
9314	29-Mar-95	05-Apr-95	7.2 SG	7		18.5 S	0.2	3.2	
9315	05-Apr-95	12-Apr-95	55.4 SG	7		1405.6 S	17.5	31.6	
9316	12-Apr-95	19-Apr-95		7		1698.6	21.2	22.0	

			96.4	SG		R			
9317	19-Apr-95	26-Apr-95		7	380.5	4.7		48.8	
			9.7	SG		M			
9318	26-Apr-95	03-May-95		7	72.3	0.9		1.0	
			90.1	RG		M			
9319	03-May-95	10-May-95		7	47.7	0.6		1.0	
			59.5	RG		M			
9320	10-May-95	17-May-95		7	33.5	0.4		0.8	
			52.1	RG		M			
9321	17-May-95	24-May-95		7	1377.8	17.2		19.8	
			86.9	RG		M			
9322	24-May-95	31-May-95		7	1937.3	24.2		27.0	
			89.6	RG		M			
9323	31-May-95	07-Jun-95		7	579.9	7.2		8.4	
			86.1	RG		M			
9324	07-Jun-95	14-Jun-95		7	8112.2	101.1		116.2	
			87.0	RG		R			
9325	14-Jun-95	21-Jun-95		7	658.8	8.2		9.8	
			83.8	RG		R			
9326	21-Jun-95	28-Jun-95		7	3024.0	37.7		38.8	
			97.2	RG		R			
9327	28-Jun-95	05-Jul-95		7	1145.5	14.3		17.2	
			83.1	RG		M			
9328	05-Jul-95	12-Jul-95		7	259.9	3.2		4.2	
			77.1	RG		R			
9329	12-Jul-95	19-Jul-95		7	2646.9	33.0		31.2	
			105.8	RG		M			
9330	19-Jul-95	26-Jul-95		7	4342.4	54.1		55.4	
			97.7	RG		R			
9331	26-Jul-95	02-Aug-95		7	1027.8	12.8		15.0	
			85.3	RG		M			
9332	02-Aug-95	09-Aug-95		7	308.4	3.8		5.0	
			76.8	RG		M			
9333	09-Aug-95	16-Aug-95		7	4235.7	52.8		55.8	
			94.6	RG		R			
9334	16-Aug-95	23-Aug-95		7			I2	17.2	
			I2	RG		M			
9335	23-Aug-95	30-Aug-95		7	6647.1	82.9		87.0	
			95.3	RG		R			
9336	30-Aug-95	06-Sep-95		7	405.2	5.1		7.4	
			68.2	RG		M			
	06-Sep-95	13-Sep-95		7			I1	15.2	

				I1	RG		M		
9337	13-Sep-95	20-Sep-95			7	3389.2	52.8		55.8
			94.6		RG		M		
9338	20-Sep-95	27-Sep-95			7	629.3	9.8		11.4
			86.0		RG		M		
9339	27-Sep-95	04-Oct-95			7	1020.8	15.9		17.2
			92.4		RG		M		
9340	04-Oct-95	11-Oct-95			7	1888.3	29.4		28.2
			104.3		RG		M		
9341	11-Oct-95	18-Oct-95			7	2258.2	35.2		37.0
			95.1		RG		M		
9342	18-Oct-95	25-Oct-95			7	1305.9	20.3		22.2
			91.6		RG		M		
9343	25-Oct-95	01-Nov-95			7	2337.4	36.4		37.0
			98.4		RG		M		
9344	01-Nov-95	08-Nov-95			7	2629.7	41.0		47.4
			86.4		SG		M		
9345	08-Nov-95	15-Nov-95			7	436.6	6.8		9.8
			69.4		SG		M		
9346	15-Nov-95	22-Nov-95			7	1185.8	18.5		23.0
			80.3		SG		M		
9347	22-Nov-95	29-Nov-95			7	6804.1	106.0		118.4
			89.5		SG		M		
9348	29-Nov-95	06-Dec-95			7	458.1	7.1		35.6
			20.1		SG		S		
9349	06-Dec-95	13-Dec-95			7	900.7	14.0		28.6
			49.1		SG		M		
9350	13-Dec-95	20-Dec-95			7	639.5	10.0		18.2
			54.7		SG		M		
9351	20-Dec-95	27-Dec-95			7	1303.1	20.3		24.2
			83.9		SG		M		
9352	27-Dec-95	03-Jan-96			7	220.7	3.4		14.8
			23.2		SG		M		

Newfoundland Environment Precipitation Monitoring Network (NEPMoN)
Site: Cormack Year: 1995
Ion Concentrations

Start Date	Ion Bal.	flg	Na (mg/l)	flg	Ca (mg/l)	flg	H pH	flg	Mg (mg/l)	flg	Cond. K umhos	flg	Alk CaCO3 (mg/l)	flg	SO4 (mg/l)	flg	XSO4 (mg/l)	flg	NNO3 (mg/l)	flg	Cl (mg/l)	flg	NNH4 (mg/l)	flg
28-Dec-94	-5.50		5.00		.0101		10.3		0.42		.237		0.073		1.17		<0.005		0.73		<0.06		0.1		0.03		-0.55					
04-Jan-95	1.51		5.06		.0088		5.5		0.16		.107		0.071		0.5		<0.005		0.21		<0.06		0.025		<0.02		-0.45					
11-Jan-95	0.09		4.94		.0116		5.8		0.31		.257		0.076		0.47		0.007		0.21		<0.06		0.027		<0.02		-0.56					
18-Jan-95	-3.95		5.11		.0078		4.00		0.11		.082		0.063		0.28		<0.005		0.11		<0.06		0.011		0.03		-0.37					
25-Jan-95		I1		I1		I1		I1	0.25		.127		0.046		1.07		<0.005		0.49		<0.06		0.063		0.03							
01-Feb-95	0.60		4.68		.0211		10.5		0.43		.387		0.188		0.37		0.008		0.17		<0.06		0.022		<0.02		-1.18					
08-Feb-95	4.50		4.53		.0297		16.7		0.46		.362		0.323		0.92		0.012		0.39		<0.06		0.051		0.02		-1.63					
15-Feb-95	1.79		4.86		.0139		8.3		0.41		.375		0.141		0.29		0.038		0.14		<0.06		0.018		<0.02		-0.83					
22-Feb-95	-0.81		4.88		.0133		7.1		0.62		.595		0.062		0.21		0.046		0.10		<0.06		0.013		<0.02		-0.72					
01-Mar-95	3.31		4.75		.0179		9.4		0.56		.547		0.136		0.17		0.032		0.05		<0.06		0.006		<0.02		-1.00					
08-Mar-95	3.39		4.56		.0278		16.7		1.24		1.167		0.207		0.61		0.100		0.29		0.06		0.039		0.02		-1.48					
15-Mar-95	-0.57		4.86		.0139		8.2		0.70		.677		0.102		0.17		0.086		0.09		<0.06		0.007		0.04		-0.71					
22-Mar-95	1.83		4.78		.0167		7.8		0.53		.517		0.122		0.16		0.032		0.05		<0.06		0.007		<0.02		-1.09					
29-Mar-95		I1		I1		I1		I1	0.87		.583	V4	0.133		2.06		0.017		I1		I1		I1		I1							
05-Apr-95	0.66		4.90		.0127		6.8		0.55		.527		0.071		0.18	

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0.029       0.09      <0.06      0.012      <0.02      -0.70
12-Apr-95 -17.10       5.28      .0053        2.9       0.18       .173 V3
0.021       0.05      0.018       0.02      <0.06      0.003      <0.02
-0.37
19-Apr-95  -8.58       5.24      .0058        2.9       0.18       .171 V3
0.036       0.07      0.016       0.02      <0.06      0.004      <0.02
-0.46
26-Apr-95        I1         I1         I1         I1    0.88       .721 V3
0.090       1.16      0.091                  I1    0.06      0.076       0.03
03-May-95        I1         I1         I1         I1    0.19       .138 V4
0.047       0.37      0.009                  I1         I1         I1         I1
10-May-95        I1         I1         I1         I1    0.70       .509 V4
0.028       1.37      0.011                  I1         I1         I1         I1
17-May-95   1.34       4.46      .0350       19.1       1.48      1.472 V2
0.306       0.11      0.190       0.03       0.06      0.015       0.02
-2.09
24-May-95   1.79       4.90      .0127        6.1       0.58       .575 V3
0.050       0.06      0.025      <0.02      <0.06      0.002      <0.02
-0.88
31-May-95  -2.70       4.63      .0236       14.7       1.42      1.410 V2
0.254       0.12      0.285       0.04       0.12      0.023       0.02
-1.45
07-Jun-95  -3.95       5.29      .0052        3.0       0.16       .153 V3
0.046       0.06      0.020      <0.02      <0.06      0.003      <0.02
-0.39
14-Jun-95  -2.87       4.83      .0149        9.5       0.78       .760 V2
0.155       0.21      0.153       0.08       0.06      0.021       0.05
-0.96
21-Jun-95 -19.33       4.77      .0171        9.1       0.51       .505 V2
0.110       0.05      0.128       0.02      <0.06      0.005       0.02
-1.05
28-Jun-95  -2.10       4.77      .0171        9.5       0.62       .595
0.124       0.22      0.069       0.10      <0.06      0.014      <0.02
-1.17
05-Jul-95   0.66       4.81      .0156       10.5       0.78       .745
0.187       0.30      0.097       0.14       0.10      0.040       0.03
-0.94
12-Jul-95  -9.04       4.86      .0139        7.8       0.62       .610
0.088       0.09      0.118       0.04      <0.06      0.004      <0.02
-0.76
19-Jul-95  -2.94       4.77      .0171        8.9       0.66       .655 V3
0.118       0.06      0.080      <0.02      <0.06      0.002       0.02
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-0.89
26-Jul-95 -0.24 4.65 .0226 11.7 0.85 .814 V3
0.185 0.25 0.112 0.10 <0.06 0.017 0.02
-1.30
02-Aug-95 2.44 4.70 .0201 14.2 1.03 .907
0.109 0.99 0.023 0.49 0.09 0.073 0.04
-1.16
09-Aug-95 -31.97 5.49 .0033 2.0 0.06 .057 V2
<0.008 0.06 <0.005 <0.02 <0.06 0.008 <0.02
-0.10
16-Aug-95 -15.18 4.92 .0121 8.1 0.69 .662 V2
0.092 0.23 0.202 0.11 0.06 0.018 0.06
-0.64
23-Aug-95 -14.14 5.22 .0061 3.3 0.19 .177
0.010 0.12 <0.005 0.05 <0.06 0.007 <0.02
-0.46
30-Aug-95 0.61 4.60 .0253 13.9 1.12 1.063 V3
0.155 0.34 0.106 0.15 <0.06 0.027 0.02
-1.60
06-Sep-95 I2 I2 I2 I2 I2 I2
I2 I2 I2 I2 I2 I2 I2
I2
13-Sep-95 I8 I8 I8 I8 I8 I8
I8 I8 I8 I8 I8 I8 I8
I8
20-Sep-95 I8 I8 I8 I8 I8 I8
I8 I8 I8 I8 I8 I8 I8
I8
27-Sep-95 -3.67 4.99 .0103 6.0 0.40 .342
0.038 0.46 0.024 0.23 <0.06 0.026 <0.02
-0.73
04-Oct-95 -18.11 5.13 .0075 3.6 0.17 .157
0.040 0.08 0.009 0.05 <0.06 0.006 <0.02
-0.52
11-Oct-95 4.32 4.86 .0139 15.0 0.84 .515
0.063 2.64 0.036 1.30 0.06 0.140 0.04
-0.82
18-Oct-95 -5.08 4.91 .0124 6.4 0.50 .477
0.073 0.15 0.040 0.09 <0.06 0.014 <0.02
-0.77
25-Oct-95 2.58 4.77 .0171 10.0 0.81 .685
0.082 1.02 0.051 0.50 <0.06 0.058 <0.02

-1.04							
01-Nov-95	0.06	5.20	.0064	8.9	0.40	.157	
0.021	1.81	0.008	0.97	<0.06	0.112	0.04	
-0.59							
08-Nov-95	2.56	4.82	.0153	12.1	0.79	.605	
0.076	1.51	0.018	0.74	<0.06	0.095	0.13	
-1.12							
15-Nov-95	-7.67	5.13	.0075	3.5	0.22	.195	
0.035	0.21	0.015	0.10	<0.06	0.007	<0.02	
-0.63							
22-Nov-95	-0.18	4.88	.0133	6.3	0.48	.422	
0.079	0.47	0.028	0.23	<0.06	0.025	<0.02	
-1.13							
29-Nov-95	1.39	5.08	.0084	5.7	0.38	.275	
0.031	0.84	<0.005	0.42	<0.06	0.050	0.02	
-0.77							
06-Dec-95	4.75	4.96	.0111	16.1	0.79	.390	
0.092	3.15	0.027	1.60	<0.06	0.197	0.06	
-0.91							
13-Dec-95	5.73	4.97	.0108	18.0	1.15	.688	
0.090	3.53	0.040	1.85	<0.06	0.225	0.07	
-0.91							
20-Dec-95	-41.11	5.39	.0041	1.5	<0.02	.005	V2
0.018	0.05	<0.005	0.02	<0.06	<0.002	<0.02	
-0.60							
27-Dec-95	6.25	4.91	.0124	31.0	1.68	.781	
0.011	7.51	0.015	3.60	0.16	0.449	0.14	
-1.06							

Newfoundland Environment Precipitation Monitoring Network
(NEPMoN)
Site: Cormack Year: 1996

Rain Collection Statistics

Sample Id No	Start Date	End Date	Effic. (%) flg	Coll. Gauge Days	No. of Gauge Type	Sample Volume (ml)	Sample Prec Type	Sample Depth (mm) flg	Gauge Depth (mm) flg
9401	03-Jan-96	10-Jan-96	42.5	7	SG	218.7	S	3.4	8.0
9402	10-Jan-96	17-Jan-96	63.9	7	SG	2043.3	M	31.8	49.8
9403	17-Jan-96	24-Jan-96	97.2	7	SG	1585.1	M	24.7	25.4
9404	24-Jan-96	31-Jan-96	87.0	7	SG	1674.6	M	26.1	30.0
9405	31-Jan-96	07-Feb-96	30.5	7	SG	252.1	M	3.9	12.8
9406	07-Feb-96	14-Feb-96	43.8	7	SG	1600.3	M	24.9	56.8
9407	14-Feb-96	21-Feb-96	52.4	7	SG	986.7	M	15.4	29.4
9408	21-Feb-96	28-Feb-96	96.3	7	SG	2335.6	M	36.4	37.8
9409	28-Feb-96	06-Mar-96	26.7	7	SG	691.5	S	10.8	40.4
9410	06-Mar-96	13-Mar-96	14.9	7	SG	161.3	S	2.5	16.8
9411	13-Mar-96	20-Mar-96	94.7	7	SG	230.2	M	3.6	3.8
9412	20-Mar-96	27-Mar-96	87.3	7	SG	1636.3	M	25.5	29.2
9413	27-Mar-96	03-Apr-96	38.2	7	SG	85.3	M	1.3	3.4
9414	03-Apr-96	10-Apr-96	39.8	7	SG	700.8	M	10.9	27.4
9415	10-Apr-96	17-Apr-96	24.1	7	SG	268.7	M	4.2	17.4
9416	17-Apr-96	24-Apr-96		7		424.9		6.6	6.6

			100.0		SG		R			
9417	24-Apr-96	01-May-96			7	905.5	14.1		14.6	
			96.6		SG		R			
9418	01-May-96	08-May-96			7	2033.1	31.7		33.0	
			96.1		SG		M			
9419	08-May-96	15-May-96			7	803.1	12.5		22.0	
			56.8		SG		M			
9420	15-May-96	22-May-96			7	3293.5	51.3		58.0	
			88.4		SG		M			
9421	22-May-96	29-May-96			7	950.7	14.8		17.4	
			85.1		RG		M			
9422	29-May-96	05-Jun-96			7	3487.8	54.3		55.2	
			98.4		RG		R			
9423	05-Jun-96	12-Jun-96			7	865.0	13.5		14.4	
			93.8		RG		M			
9424	12-Jun-96	19-Jun-96			7	583.4	9.1		11.6	
			78.4		RG		M			
	19-Jun-96	26-Jun-96			7			I1		
				I1	RG		M			
9425	26-Jun-96	03-Jul-96			7	1426.9	22.2		17.8	
			124.7		RG		R			
9426	03-Jul-96	10-Jul-96			7	3905.7	60.8		60.4	
			100.7		RG		R			
9427	10-Jul-96	17-Jul-96			7	5507.6	85.8		86.4	
			99.3		RG		M			
9428	17-Jul-96	24-Jul-96			7	1835.5	28.6		30.0	
			95.3		RG		R			
9429	24-Jul-96	31-Jul-96			7	943.7	14.7		15.2	
			96.7		RG		M			
9430	31-Jul-96	07-Aug-96			7	7.7	0.1		1.4	
			7.1		RG		D			
9431	07-Aug-96	14-Aug-96			7	974.3	15.2		15.0	
			101.3		RG		R			
9432	14-Aug-96	21-Aug-96			7	918.4	14.3		16.8	
			85.1		RG		M			
9433	21-Aug-96	28-Aug-96			7	361.5	5.6		7.6	
			73.7		RG		M			
9434	28-Aug-96	04-Sep-96			7	861.7	13.4		15.2	
			88.2		RG		M			
9435	04-Sep-96	11-Sep-96			7	1811.5	28.2		29.4	
			95.9		RG		M			
9436	11-Sep-96	18-Sep-96			7	140.6	2.2		4.8	

			45.8	RG		M			
9437	18-Sep-96	25-Sep-96		7	3526.9	54.9		59.0	
			93.1	RG		R			
9438	25-Sep-96	02-Oct-96		7	1587.4	24.7		26.2	
			94.3	RG		M			
9439	02-Oct-96	09-Oct-96		7	316.8	4.9		7.4	
			66.2	RG		M			
9440	09-Oct-96	16-Oct-96		7	3013.8	46.9		52.8	
			88.8	RG		M			
9441	16-Oct-96	23-Oct-96		7	701.3	10.9		13.6	
			80.1	RG		M			
9442	23-Oct-96	30-Oct-96		7	599.8	9.3		13.0	
			71.5	RG		M			
9443	30-Oct-96	06-Nov-96		7	1773.1	27.6		42.2	
			65.4	SG		M			
9444	06-Nov-96	13-Nov-96		7	678.2	10.6		11.2	
			94.6	SG		M			
9445	13-Nov-96	20-Nov-96		7	370.7	5.8		7.4	
			78.4	SG		M			
9446	20-Nov-96	27-Nov-96		7	2820.3	43.9		58.6	
			74.9	SG		M			
9447	27-Nov-96	04-Dec-96		7	234.8	3.7		3.8	
			97.4	SG		M			
	04-Dec-96	11-Dec-96		7			I1		
			I1	SG		M			
9448	11-Dec-96	18-Dec-96		7	1497.4	23.3		26.6	
			87.6	SG		M			
9449	18-Dec-96	25-Dec-96		7	1768.8	27.6		40.6	
			68.0	SG		M			
9450	25-Dec-96	01-Jan-97		7	1520.0	23.7		70.2	
			33.8	SG		M			

Newfoundland Environment Precipitation Monitoring Network (NEPMoN)
Site: Cormack Year: 1996
Ion Concentrations

Start Date	Ion Bal.	flg	H pH	flg	Cond.	flg	Alk CaCO3	flg	SO4	flg	XSO4	flg	NNO3	flg	Cl	flg	NNH4	flg	Na	flg	Ca	flg	Mg	flg	K	flg
			(mg/l)		umhos		(mg/l)		(mg/l)		(mg/l)		(mg/l)		(mg/l)		(mg/l)		(mg/l)		(mg/l)		(mg/l)		(mg/l)	
03-Jan-96	1.54		5.12		.0076		7.80		0.36		.167		0.05		1.50		<0.005		0.77		<0.06		0.10		0.03	
10-Jan-96	3.65		5.03		.0094		6.60		0.35		.257		0.06		0.83		0.010		0.37		<0.06		0.05		0.03	
17-Jan-96	0.17		4.82		.0153		7.90		0.58		.522		0.08		0.49		0.030		0.23		<0.06		0.03		<0.02	
24-Jan-96	-2.06		5.26		.0055		3.70		0.18		.127		0.02		0.47		0.005		0.21		<0.06		0.03		<0.02	
31-Jan-96	11.00		4.64		.0231		21.20		0.61		.322		0.39		2.47		0.016		1.15		<0.06		0.14		0.05	
07-Feb-96	-3.81		4.62		.0242		10.00		0.93		.922	V2	0.10		0.09		0.059		0.03		<0.06		<0.002		<0.02	
14-Feb-96	1.84		4.66		.0221		11.10		0.81		.737		0.11		0.62		0.024		0.29		<0.06		0.03		0.02	
21-Feb-96	-12.06		5.32		.0048		2.20		0.08		.067	V2	0.02		0.14		<0.005		0.05		<0.06		<0.002		<0.02	
28-Feb-96	1.57		5.00		.0101		7.90		0.44		.315		0.05		0.98		0.006		0.50		<0.06		0.06		0.02	
06-Mar-96	-0.08		4.81		.0156		9.60		0.74		.602		0.05		1.02		0.009		0.55		<0.06		0.07		0.02	
13-Mar-96	-0.57		4.42		.0383		18.60		1.10		1.032		0.30		0.52		0.076		0.27		<0.06		0.03		0.02	
20-Mar-96	-1.38		4.46		.0350		15.30		1.00		.980		0.23		0.21		0.051		0.08		<0.06		0.01		<0.02	
27-Mar-96		I1		I1		I1		I1	0.88		.505		0.15		2.83		0.043		1.50		0.18		0.20		0.10	
03-Apr-96	-4.49		5.16		.0070		4.20		0.23		.195		0.04		0.30		0.017		0.14		<0.06		0.02		<0.02	
10-Apr-96	-0.51		4.53		.0297		21.20		1.01		.737		0.24		2.10											

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0.069       1.09       0.08       0.14       0.04      -1.71
17-Apr-96   0.02       4.26      .0554      29.60       2.38      2.260
 0.46       0.92      0.248       0.48       0.16       0.07       0.04
-2.92
24-Apr-96  -0.72       4.79      .0163      10.10       1.00       .958 V3
 0.17       0.30      0.196       0.13       0.08       0.02       0.02
-1.02
01-May-96  -1.88       4.34      .0461      22.50       1.74      1.698 V3
 0.35       0.23      0.206       0.08       0.09       0.02      <0.02
-2.67
08-May-96  -0.63       4.73      .0188      11.30       0.90       .830
 0.14       0.56      0.105       0.28       0.06       0.04       0.02
-1.34
15-May-96 -10.56       5.16      .0070       3.50       0.23       .222
 0.05       0.07      0.038       0.03      <0.06     <0.002      <0.02
-0.61
22-May-96 -18.49       4.99      .0103       4.50       0.25       .242
 0.04       0.07      0.017       0.03      <0.06     <0.002      <0.02
-0.85
29-May-96 -14.50       5.10      .0080       4.20       0.24       .230
 0.06       0.09      0.050       0.04      <0.06       0.01      <0.02
-0.59
05-Jun-96  -9.75       4.75      .0179       8.20       0.52       .512 V2
 0.10       0.08      0.041       0.03      <0.06       0.01      <0.02
-1.10
12-Jun-96        I7         I7         I7         I7         I7         I7
      I7         I7         I7         I7         I7         I7         I7
      I7
19-Jun-96        I2         I2         I2         I2         I2         I2
      I2         I2         I2         I2         I2         I2         I2
      I2
26-Jun-96  -9.77       4.91      .0124       5.80       0.33       .322 V2
 0.08       0.08      0.019       0.03      <0.06       0.01       0.03
-0.85
03-Jul-96  -4.63       4.88      .0133       6.60       0.49            I1
 0.09       0.10      0.052       0.05      <0.06       0.00       0.03
-0.91
10-Jul-96 -14.53       5.09      .0082       3.60       0.23       .227
 0.04       0.04      0.019      <0.02      <0.06     <0.002      <0.02
-0.77
17-Jul-96  -1.92       4.56      .0278      13.60       1.05      1.015
 0.17       0.32      0.104       0.14      <0.06       0.02       0.02
```

-1.65
24-Jul-96 -14.99 4.90 .0127 5.40 0.18 .177
 0.11 <0.02 0.017 <0.02 <0.06 <0.002 <0.02
-0.80
31-Jul-96 I1 I1 I1 I1 0.52 I1
 0.31 I1 I1 I1 I1 I1 I1
07-Aug-96 -15.73 5.00 .0101 4.60 0.33 I1
 0.04 0.04 0.032 0.02 <0.06 0.00 <0.02
-0.74
14-Aug-96 -15.38 5.24 .0058 I1 0.24 .212
 0.03 0.18 0.046 0.11 <0.06 0.01 0.02
-0.41
21-Aug-96 -7.43 4.50 .0319 13.30 1.05 1.029 V3
 0.14 0.15 0.078 0.06 0.02 <0.02 <0.02
-1.64
28-Aug-96 -14.07 4.92 .0121 7.40 0.42 .337
 0.04 0.57 0.012 0.33 0.07 0.07 <0.02
-0.48
04-Sep-96 6.59 5.58 .0027 3.90 0.20 .190 V2
 0.06 0.10 0.055 0.04 <0.02 <0.02 <0.02
-0.45
11-Sep-96 -32.37 5.11 .0078 5.80 0.28 .242
 0.02 0.24 0.032 0.15 0.18 0.02 <0.02
-0.50
18-Sep-96 -4.01 5.23 .0059 7.90 0.35 .100
 0.03 1.78 0.010 1.00 0.05 0.15 0.03
 0.10
25-Sep-96 -8.79 5.22 .0061 7.20 0.22 .065
 0.03 1.05 <0.005 0.62 0.04 0.09 0.03
-0.21
02-Oct-96 -6.67 4.80 .0160 14.90 0.67 .415
 0.07 1.73 0.005 1.02 0.07 0.15 0.04
-0.73
09-Oct-96 -5.55 4.81 .0156 8.10 0.59 .555
 0.07 0.26 0.054 0.14 0.02 <0.02 <0.02
-0.85
16-Oct-96 -8.82 5.38 .0042 5.70 0.12 . I6
 0.01 0.92 <0.005 0.52 0.02 0.08 <0.02
-0.18
23-Oct-96 -4.25 4.68 .0211 10.80 0.70 .652
 0.12 0.37 0.070 0.19 <0.02 0.02 <0.02
-1.24

30-Oct-96	-4.30	5.05	.0090	14.20	0.53	.160	
0.05	2.60	<0.005	1.48	0.06	0.22	0.05	
-0.49							
06-Nov-96	-3.98	4.72	.0192	12.10	0.58	.445	
0.12	0.94	0.014	0.54	0.02	0.07	0.03	
-0.81							
13-Nov-96	-6.76	4.97	.0108	7.70	0.25	.140	
0.07	0.75	0.005	0.44	<0.02	0.06	<0.02	
-0.39							
20-Nov-96	-6.52	5.28	.0053	4.50	0.11	.037	
0.03	0.53	<0.005	0.29	<0.02	0.04	<0.02	
-0.54							
27-Nov-96	-4.28	5.19	.0065	3.90	0.18	.147	
0.04	0.23	0.008	0.13	<0.02	<0.02	<0.02	
-0.92							
04-Dec-96	I2	I2	I2	I2	I2	I2	
I2	I2	I2	I2	I2	I2	I2	
I2							
11-Dec-96	-10.36	4.92	.0121	6.10	0.37	.349	V3
0.05	'0.16	<0.005	0.13	<0.02	<0.02	<0.02	
-0.70							
18-Dec-96	I6	I6	I6	I6	I6	I6	
I6	I6	I6	I6	I6	I6	I6	
I6							
25-Dec-96	I6	I6	I6	I6	I6	I6	
I6	I6	I6	I6	I6	I6	I6	
I6							

Newfoundland Environment Precipitation Monitoring Network
(NEPMoN)
Site: Cormack Year: 1997

Rain Collection Statistics

Sample Id No	Start Date	End Date	Effic. (%) flg	Coll. Gauge Days	No. of Gauge Type	Sample Volume (ml)	Sample Prec Type	Sample Depth (mm)	flg	Gauge Depth (mm)	flg
9501	01-Jan-97	08-Jan-97	43.0	7	SG	237.4	S	3.7		8.6	
9502	08-Jan-97	15-Jan-97	63.4	7	SG	698.3	M	10.9		17.2	
9503	15-Jan-97	22-Jan-97	46.4	7	SG	753.4	M	11.7		25.2	
9504	22-Jan-97	29-Jan-97	88.3	7	SG	3773.0	M	58.8		66.6	
9505	29-Jan-97	05-Feb-97	42.0	7	SG	569.2	S	8.9		21.2	
9506	05-Feb-97	12-Feb-97	42.5	7	SG	911.0	S	14.2		33.4	
9507	12-Feb-97	19-Feb-97	47.1	7	SG	416.2	S	6.5		13.8	
9508	19-Feb-97	26-Feb-97	27.0	7	SG	488.0	S	7.6		28.2	
9509	26-Feb-97	05-Mar-97	96.8	7	SG	1542.9	M	24.0		24.8	
9510	05-Mar-97	12-Mar-97	18.9	7	SG	220.5	S	3.4		18.0	
9511	12-Mar-97	19-Mar-97	40.1	7	SG	393.9	S	6.1		15.2	
9512	19-Mar-97	26-Mar-97	52.0	7	SG	170.3	S	2.6		5.0	
9513	26-Mar-97	02-Apr-97	47.8	7	SG	2455.8	M	38.2		80.0	
9514	02-Apr-97	09-Apr-97	8.1	7	SG	259.1	M	4.0		49.2	
9515	09-Apr-97	16-Apr-97	78.2	7	SG	1546.3	M	24.1		30.8	
9516	16-Apr-97	23-Apr-97		7		537.7		8.4		7.0	

			120.0	SG		M		
9517	23-Apr-97	30-Apr-97		7	201.5	3.1		7.2
			43.1	SG		S		
9518	30-Apr-97	07-May-97		7	325.8	5.1		4.0
			127.5	SG		R		
9519	07-May-97	14-May-97		7	2028.9	31.6		36.0
			87.8	SG		R		
9520	14-May-97	21-May-97		7	2436.9	38.0		41.0
			92.7	RG		R		
9521	21-May-97	28-May-97		7	320.8	5.0		11.4
			43.9	RG		M		
9522	28-May-97	04-Jun-97		7	286.4	4.5		5.6
			80.4	RG		R		
9523	04-Jun-97	11-Jun-97		7	39.8	0.6		2.2
			27.3	RG		R		
9524	11-Jun-97	18-Jun-97		7	1426.6	22.2		23.6
			94.1	RG		R		
9525	18-Jun-97	25-Jun-97		7	4061.5	63.3		63.6
			99.5	RG		R		
9526	25-Jun-97	02-Jul-97		7	996.4	15.5		16.4
			94.5	RG		R		
9527	02-Jul-97	09-Jul-97		7	187.8	2.9		4.2
			69.0	RG		R		
9528	09-Jul-97	16-Jul-97		7	3450.7	53.7		55.0
			97.6	RG		R		
9529	16-Jul-97	23-Jul-97		7	4913.1	76.5		74.4
			102.8	RG		R		
9530	23-Jul-97	30-Jul-97		7	4230.0	65.9		65.4
			100.8	RG		R		
9531	30-Jul-97	06-Aug-97		7	2377.9	37.0		38.8
			95.4	RG		R		
9532	06-Aug-97	13-Aug-97		7	653.0	10.2		11.8
			86.4	RG		R		
9533	13-Aug-97	20-Aug-97		7	1525.1	23.8		26.4
			90.2	RG		R		
9534	20-Aug-97	27-Aug-97		7	2624.7	40.9		42.4
			96.5	RG		R		
9535	27-Aug-97	03-Sep-97		7	1151.9	17.9		22.0
			81.4	RG		R		
9536	03-Sep-97	10-Sep-97		7	2062.4	32.1		33.0
			97.3	RG		R		
9537	10-Sep-97	17-Sep-97		7	415.1	6.5		9.8

			66.3	RG	R			
9538	17-Sep-97	24-Sep-97		7	2730.8	42.5		43.6
			97.5	RG	R			
9539	24-Sep-97	01-Oct-97		7	1916.2	29.8		31.6
			94.3	RG	R			
9540	01-Oct-97	08-Oct-97		7	1966.8	30.6		32.4
			94.4	RG	R			
9541	08-Oct-97	15-Oct-97		7	434.9	6.8		8.8
			77.3	RG	R			
9542	15-Oct-97	22-Oct-97		7	5.9	0.1		2.2
			4.5	RG	R			
9543	22-Oct-97	29-Oct-97		7	568.7	8.9		38.6
			23.1	RG	M			
9544	29-Oct-97	05-Nov-97		7	1029.3	16.0		32.8
			48.8	SG	R			
9545	05-Nov-97	12-Nov-97		7	1488.2	23.2		28.6
			81.1	SG	M			
9546	12-Nov-97	19-Nov-97		7	1074.6	16.7		22.0
			75.9	SG	M			
9547	19-Nov-97	26-Nov-97		7	186.2	2.9		3.6
			80.6	SG	S			
9548	26-Nov-97	03-Dec-97		7	1718.8	26.8		31.8
			84.3	SG	M			
9549	03-Dec-97	10-Dec-97		7	223.1	3.5		11.6
			30.2	SG	M			
9550	10-Dec-97	17-Dec-97		7	183.7	2.9		4.4
			65.9	SG	S			
9551	17-Dec-97	24-Dec-97		7	136.9	2.1		4.4
			47.7	SG	M			
9552	24-Dec-97	31-Dec-97		7	1300.4	20.3		30.0
			67.7	SG	M			

Newfoundland Environment Precipitation Monitoring Network (NEPMoN)
Site: Cormack Year: 1997
Ion Concentrations

Start Date	Ion Bal.	flg	H pH	flg	Cond.	flg	SO4	XSO4	NNO3	Cl	NNH4	Na	Ca	Mg	K	Alk CaCO3	flg	flg	flg	flg	flg	flg	flg	flg	flg
					umhos		(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)										
01-Jan-97	0.38		4.91		13.6		0.82	.542	0.070	1.96	0.015	1.11	<0.07	0.15	0.04	-1.08									
08-Jan-97	-2.65		4.66		16.9		0.64	.370	0.215	1.81	0.013	1.08	<0.07	0.14	0.04	-1.32									
15-Jan-97	-8.66		4.96		7.3		0.28	.192	0.075	0.60	<0.005	0.35	<0.07	0.06	<0.03	-0.69									
22-Jan-97	-1.94		4.67		12.3		0.64	.525	0.156	0.90	0.024	0.46	<0.07	0.08	<0.03	-1.26									
29-Jan-97	I6		I6		I6		I6	I6	I6	I6	I6	I6	I6	I6	I6	I6									
05-Feb-97	-13.74		5.21		6.4		0.30	.177	0.023	0.82	<0.005	0.49	0.08	0.10	0.04	-0.43									
12-Feb-97	1.79		4.75		14.3		0.58	.375	0.165	1.66	0.021	0.82	0.08	0.10	0.04	-1.15									
19-Feb-97	-9.73		4.83		8.6		0.51	.450	0.102	0.44	0.031	0.24	0.07	0.05	0.07	-0.84									
26-Feb-97	-3.54		4.70		9.5		0.57	.560	V2	0.147	0.18	0.019	0.04	0.08	<0.04	0.03	-1.44								
05-Mar-97	-24.08		5.14		3.8		0.25	.232	0.025	0.12	0.016	0.07	0.07	<0.04	<0.03	-0.27									
12-Mar-97	-17.56		5.05		5.5		0.37	.332	0.031	0.27	0.022	0.15	0.07	0.05	<0.03	-0.56									
19-Mar-97	-12.43		4.81		7.7		0.41	.367	0.088	0.32	<0.005	0.17	0.07	0.04	0.03	-1.20									
26-Mar-97	-16.62		5.10		5.1		0.34	.290	0.040	0.33	0.016	0.20	0.08	0.05	0.04	-0.66									
02-Apr-97	-13.50		4.77		8.8		0.75	.740	0.113	0.07	0.072	0.04	0.11	0.04	0.04	-0.80									
09-Apr-97	-19.90		4.88		6.7		0.44	.422	0.085	0.13															

```
0.020       0.07       0.11       0.05       0.04      -0.81
16-Apr-97 -49.45       5.28      .0053        2.8       0.13       .117
0.012       0.10     <0.005       0.05       0.09       0.07       0.04
-0.29
23-Apr-97 -14.86       5.02      .0096        6.7       0.32       .242
0.080       0.52      0.028       0.31       0.11       0.06       0.04
-0.76
30-Apr-97   3.00       4.15      .0714       40.7       3.88      3.807
0.709       0.54      0.640       0.29      <0.07       0.06       0.09
-3.48
07-May-97  -8.98       4.55      .0284       13.8       1.08      1.047
0.175       0.25      0.089       0.13       0.10       0.05       0.04
-1.84
14-May-97 -10.75       4.65      .0226       10.8       0.88       .860
0.093       0.18      0.047       0.08       0.08       0.04       0.03
-1.25
21-May-97 -19.34       4.86      .0139        7.0       0.54       .530 V2
0.038       0.11      0.016       0.04       0.09       0.04       0.03
-0.88
28-May-97  -9.71       4.44      .0366       17.4       1.14      1.105
0.232       0.29       0.12       0.14       0.08      <0.04       0.09
-1.95
04-Jun-97        I7         I7         I7         I1         I7         I7
      I7         I7         I7         I7         I7         I7         I7
      I7
11-Jun-97  -8.90       4.57      .0271       15.0       1.43      1.410 V2
0.254       0.10       0.33       0.08       0.06      <0.04       0.08
-1.78
18-Jun-97 -40.49       5.14      .0073        3.5       0.22       .215 V2
0.038       0.02       0.07      <0.04      <0.07      <0.04       0.08
-0.32
25-Jun-97 -29.24       4.91      .0124        5.2       0.34       .330
0.062       0.08      0.010       0.04      <0.07       0.08       0.08
-0.70
02-Jul-97 -10.92       4.52      .0304       15.7       1.10      1.072
0.241       0.26      0.092       0.11       0.14       0.10       0.09
-1.61
09-Jul-97 -17.53       4.74      .0183        8.4       0.75       .745 V2
0.095       0.06      0.037      <0.04       0.08       0.08       0.08
-1.05
16-Jul-97 -23.89       4.77      .0171        8.3       0.64       .635 V2
0.076       0.02      0.045      <0.04      <0.07       0.08       0.08 Q3
```

-0.98
23-Jul-97 -10.22 4.50 .0319 14.3 1.17 1.165 V2
0.129 0.06 0.075 <0.04 <0.07 <0.04 0.08
-1.57
30-Jul-97 -23.78 4.82 .0153 7.0 0.46 .455 V2
0.067 0.05 0.024 <0.04 <0.07 0.07 <0.03
-0.86
06-Aug-97 -2.33 4.93 .0118 6.5 0.85 .812
0.043 0.29 0.012 0.15 <0.07 0.09 0.08
-0.67
13-Aug-97 I6 I6 I6 I6 I6 I6
I6 I6 I6 I6 I6 I6 I6
I6
20-Aug-97 10.95 4.90 .0127 5.7 1.02 1.005 V2
0.043 0.03 0.017 0.06 <0.07 <0.04 <0.03
-1.01
27-Aug-97 I6 I6 I6 I6 I6 I6
I6 I6 I6 I6 I6 I6 I6
I6
03-Sep-97 I6 I6 I6 I6 I6 I6
I6 I6 I6 I6 I6 I6 I6
I6
10-Sep-97 7.50 4.51 .0311 19.6 2.61 2.475
0.174 1.07 0.169 0.54 <0.07 0.16 0.08
-1.71
17-Sep-97 3.06 4.71 .0197 11.5 1.90 1.790
0.047 0.82 0.033 0.44 0.14 0.15 0.07
-1.12
24-Sep-97 -14.93 5.16 .0070 4.5 0.53 .477
<0.008 0.38 0.050 0.21 0.08 0.05 0.08
-0.51
01-Oct-97 I6 I6 I6 I6 I6 I6
I6 I6 I6 I6 I6 I6 I6
I6
08-Oct-97 7.12 4.03 .0941 42.5 5.66 5.615
0.368 0.37 0.192 0.18 0.15 0.12 0.07
-4.68
15-Oct-97 I1 I1 I1 I1 I1 I1
I1 I1 <0.005 I1 I1 I1 I1
22-Oct-97 3.94 4.76 .0175 12.7 1.56 1.390
0.091 1.33 0.010 0.68 0.14 0.17 0.08
-1.00

29-Oct-97	-20.90	5.12	.0076	4.2	0.25	.205	
0.051	0.36	0.06	0.18	0.07	0.04	0.10	
-0.53							
05-Nov-97	-26.81	5.03	.0094	4.5	0.23	.197	
0.062	0.23	<0.005	0.13	0.09	0.07	0.07	
-0.58							
12-Nov-97	-6.25	5.27	.0054	24.0	0.91	.061	
0.011	5.60	<0.005	3.40	0.13	0.46	0.14	
-0.35							
19-Nov-97	-6.94	4.37	.0430	20.6	1.07	.900	
0.330	1.23	0.036	0.68	0.10	0.13	0.08	
-2.11							
26-Nov-97	-30.44	5.16	.0070	2.6	0.12	.100	
0.009	0.16	<0.005	0.08	<0.07	<0.04	<0.03	
-0.37							
03-Dec-97	-5.21	4.61	.0247	15.7	0.70	.510	
0.202	1.35	<0.005	0.76	0.09	0.12	0.09	
-1.27							
10-Dec-97	-0.69	4.06	.0878	44.1	2.52	2.205	
0.69	2.41	0.114	1.26	0.11	0.17	0.10	
-4.29							
17-Dec-97	-0.62	4.12	.0765	49.9	2.53	1.855	
0.66	4.97	0.109	2.70	0.18	0.35	0.16	
-3.78							
24-Dec-97	-10.19	4.75	.0179	10.7	0.55	.442	
0.111	0.77	<0.005	0.43	0.08	0.10	0.06	
-0.99							

Newfoundland Environment Precipitation Monitoring Network
(NEPMoN)
Site: Cormack Year: 1998

Rain Collection Statistics

Sample Id No	Start Date	End Date	Effic. (%) flg	Coll. Gauge Type	No. of Gauge Days	Sample Volume (ml) Type	Sample Depth (mm) flg	Gauge Depth (mm) flg
9601	31-Dec-97	07-Jan-98	64.2	SG	7	933.3 M	14.5	22.6
9602	07-Jan-98	14-Jan-98	75.0	SG	7	384.5 M	6.0	8.0
9603	14-Jan-98	21-Jan-98	34.7	SG	7	436.8 S	6.8	19.6
9604	21-Jan-98	28-Jan-98	18.4	SG	7	635.6 M	9.9	53.8
9605	28-Jan-98	04-Feb-98	73.0	SG	7	1058.8 M	16.5	22.6
9606	04-Feb-98	11-Feb-98	12.5	SG	7	3.8 M	0.1	0.8
9607	11-Feb-98	18-Feb-98	58.5	SG	7	246.0 M	3.8	6.5
9608	18-Feb-98	25-Feb-98	96.6	SG	7	734.2 M	11.4	11.8
9609	25-Feb-98	04-Mar-98	50.2	SG	7	1692.7 M	26.4	52.6
9610	04-Mar-98	11-Mar-98	67.9	SG	7	1439.0 M	22.4	33.0
9611	11-Mar-98	18-Mar-98	32.0	SG	7	421.3 S	6.6	20.6
9612	18-Mar-98	25-Mar-98	5.7	SG	7	110.1 M	1.7	29.6
9613	25-Mar-98	01-Apr-98	97.5	SG	7	1513.1 M	23.6	24.2
9614	01-Apr-98	08-Apr-98	30.0	SG	7	575.6 M	9.0	30.0
9615	08-Apr-98	15-Apr-98	62.9	SG	7	2339.5 M	36.4	57.9
9616	15-Apr-98	22-Apr-98			7	1429.2	22.3	27.0

			82.6	SG		M			
9617	22-Apr-98	29-Apr-98			7	1397.8	21.8		23.6
			92.4	SG		M			
9618	29-Apr-98	06-May-98			7	2663.8	41.5		41.4
			100.2	SG		R			
9619	06-May-98	13-May-98			7	399.6	6.2		7.4
			83.8	RG		R			
9620	13-May-98	20-May-98			7	254.8	4.0		5.0
			80.0	RG		R			
9621	20-May-98	27-May-98			7	3616.5	56.3		56.0
			100.5	RG		R			
9622	27-May-98	03-Jun-98			7	1287.7	20.0		24.6
			81.3	RG		R			
9623	03-Jun-98	10-Jun-98			7	1052.7	16.4		19.2
			85.4	RG		R			
	10-Jun-98	17-Jun-98			7			I1	
				I1	RG				
9624	17-Jun-98	24-Jun-98			7	3453.8	53.8		53.2
			101.1	RG		R			
9625	24-Jun-98	01-Jul-98			7	1630.2	25.4		25.6
			99.2	RG		R			
9626	01-Jul-98	08-Jul-98			7	1344.6	20.9		18.4
			113.6	RG		R			
9627	08-Jul-98	15-Jul-98			7	2206.6	34.4		37.2
			92.4	RG		R			
9628	15-Jul-98	22-Jul-98			7	666.2	10.4		11.8
			87.9	RG		R			
9629	22-Jul-98	29-Jul-98			7	976.9	15.2		17.2
			88.5	RG		R			
9630	29-Jul-98	05-Aug-98			7	527.9	8.2		11.0
			74.8	RG		R			
9631	05-Aug-98	12-Aug-98			7	2182.6	34.0		35.8
			95.0	RG		R			
9632	12-Aug-98	19-Aug-98			7	5253.4	81.8		87.2
			93.8	RG		R			
9633	19-Aug-98	26-Aug-98			7	2912.0	45.4		47.8
			94.9	RG		R			
9634	26-Aug-98	02-Sep-98			7	2014.4	31.4		35.4
			88.6	RG		R			
9635	02-Sep-98	09-Sep-98			7	5074.0	79.0		81.6
			96.9	RG		R			
9636	09-Sep-98	16-Sep-98			7	1727.9	26.9		29.2

			92.2	RG	R			
9637	16-Sep-98	23-Sep-98		7	4024.9	62.7		64.8
			96.7	RG	R			
9638	23-Sep-98	30-Sep-98		7	2152.4	33.5		34.8
			96.3	RG	R			
9639	30-Sep-98	07-Oct-98		7	2384.3	37.1		41.4
			89.7	RG	R			
9640	07-Oct-98	14-Oct-98		7	82.7	1.3		3.6
			35.8	RG	R			
9641	14-Oct-98	21-Oct-98		7	2197.4	34.2		38.4
			89.1	RG	R			
9642	21-Oct-98	28-Oct-98		7	1123.3	17.5		19.8
			88.4	SG	M			
9643	28-Oct-98	04-Nov-98		7	1762.0	27.4		34.0
			80.7	RG	R			
9644	04-Nov-98	11-Nov-98		7	277.1	4.3		6.6
			65.4	SG	M			
9645	11-Nov-98	18-Nov-98		7	1611.9	25.1		60.6
			41.4	SG	M			
9646	18-Nov-98	25-Nov-98		7	525.8	8.2		30.6
			26.8	SG	M			
9647	25-Nov-98	02-Dec-98		7	1059.7	16.5		35.6
			46.4	SG	M			
9648	02-Dec-98	09-Dec-98		7	1418.8	22.1		35.6
			62.1	SG	M			
9649	09-Dec-98	16-Dec-98		7	387.3	6.0		9.4
			64.2	SG	M			
9650	16-Dec-98	23-Dec-98		7	1580.7	24.6		70.6
			34.9	SG	M			
9651	23-Dec-98	30-Dec-98		7	907.7	14.1		47.0
			30.1	SG	M			
9652	30-Dec-98	06-Jan-99		7	141.9	2.2		26.2
			8.4	SG	M			

Newfoundland Environment Precipitation Monitoring Network (NEPMoN)
Site: Cormack Year: 1998
Ion Concentrations

Start Date	Ion Bal.	flg	H pH	flg	Cond.	flg	Alk CaCO3	flg	SO4	flg	XSO4	flg	NNO3	flg	Cl	flg	NNH4	flg	Na	flg	Ca	flg	Mg	flg	K	flg
					umhos		(mg/l)		(mg/l)		(mg/l)		(mg/l)		(mg/l)		(mg/l)		(mg/l)		(mg/l)		(mg/l)		(mg/l)	
31-Dec-97	-4.64		4.51		32.6		1.52		.781		0.205		5.01		0.025		2.96		0.17		0.39		0.15		-1.68	
07-Jan-98	-2.63		4.29		29.6		1.22		.927		0.420		2.12		0.026		1.17		0.07		0.15		0.06		-2.63	
14-Jan-98	-5.56		5.08		9.8		0.50		.272		0.035		1.60		<0.005		0.91		0.08		0.14		0.05		-0.45	
21-Jan-98		I6		I6		I6		I6		I6		I6		I6		I6		I6		I6		I6		I6		I6
28-Jan-98		I1	5.25		4.3			I1		I1	0.023		0.51		<0.005		0.26		0.08		0.07		<0.03		-0.35	
04-Feb-98		I1		I1		I1		I1		I1		I1		I1		I1		I1		I1		I1		I1		I1
11-Feb-98	-4.51		4.49		16.3		1.10		1.032		0.201		0.48		0.049		0.27		0.07		0.05		<0.03		-1.73	
18-Feb-98	-25.50		5.01		3.9		0.25		.235		0.034		0.11		<0.005		0.06		0.07		<0.04		<0.03		-0.58	
25-Feb-98	-8.57		5.38		6.0		0.39		.252		0.031		0.95		0.007		0.55		0.12		0.10		0.05		-0.20	
04-Mar-98	-19.62		5.27		3.4		0.13		.097		0.031		0.27		<0.005		0.13		<0.07		0.06		0.03		-0.35	
11-Mar-98	-3.59		4.79		14.4		0.66		.365		0.108		2.00		0.007		1.18		<0.07		0.15		0.06		-1.49	
18-Mar-98	-2.90		4.35		31.5		1.85		1.298		0.259		3.67		0.040		2.21		0.10		0.23		0.10		-2.81	
25-Mar-98	-2.26		4.18		25.6		2.53		2.497		0.270		0.24		0.087		0.13		<0.07		<0.04		0.04		-2.9	
01-Apr-98	-28.36		4.98		4.3		0.22		.172	V2	0.046		0.19		<0.01		0.19		<0.07		0.03		<0.03		-0.9	
08-Apr-98	1.40		5.02		5.9		0.22		.195	V2	0.042		0.08													

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<0.01       0.10       0.06       0.02      <0.03        1.0 Q3
15-Apr-98 -19.80       4.89      .0130        5.8       0.53       .492 V2
0.076       0.16      <0.01       0.15       0.09       0.03       0.18
 -0.8
22-Apr-98 -17.52        4.8      .0160        5.9       0.42       .410 V2
0.072       0.12       0.04       0.04      <0.07      <0.04       0.03
 -0.8
29-Apr-98 -16.96       4.93      .0118        5.2       0.45       .440 V2
0.075       0.12       0.07       0.04       0.10      <0.04      <0.03
 -1.0
06-May-98  -6.20       4.68      .0211        8.9       0.66       .632
0.126       0.24       0.05       0.11      <0.07      <0.04       0.03
 -1.1
13-May-98  -9.72       3.98      .1055       42.3       4.18      4.125 V2
 0.52       0.31       0.29       0.22       0.30       0.10       0.13
 -5.2
20-May-98 -32.89       5.82      .0015        2.7       0.27       .265 V2
0.041       0.08       0.18 Q3   <0.04       0.07      <0.04       0.04
-0.01
27-May-98  -6.39       4.43      .0374       17.3       1.68      1.665 V2
0.284       0.17       0.33       0.06      <0.07      <0.04       0.06
 -1.3
03-Jun-98 -16.88       4.84      .0146        6.4       0.46       .430
0.080       0.26       0.07       0.12      <0.07       0.05       0.05
 -0.9
10-Jun-98         I2         I2         I2         I2         I2         I2
      I2         I2         I2         I2         I2         I2         I2
      I2
17-Jun-98 -17.43       4.45      .0358       13.9       1.05      1.035
0.168       0.12       0.07       0.06       0.10       0.05       0.03
 -1.4
24-Jun-98         I7         I7         I7         I7         I7         I7
      I7         I7         I7         I7         I7         I7         I7
      I7
01-Jul-98         I6         I6         I6         I6         I6         I6
      I6         I6         I6         I6         I6         I6         I6
      I6
08-Jul-98         I6         I6         I6         I6         I6         I6
      I6         I6         I6         I6         I6         I6         I6
      I6
15-Jul-98 -22.49       4.87      .0136        5.4       0.30       .295 V2
0.063       0.05      <0.03      <0.04      <0.07      <0.04      <0.03
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 -0.8
22-Jul-98 -11.41      4.19      .0651       26.6       2.22      2.195 V2
0.317       0.24      0.22       0.10       0.12       0.05      <0.03
 -2.8
29-Jul-98 -10.76      4.15      .0714       28.8       2.21      2.137
0.303       0.60      0.13       0.29       0.11       0.07       0.04
 -3.2
05-Aug-98 -13.63      4.52      .0304       12.1       0.82       .790
0.139       0.25      0.05       0.12      <0.07       0.04       0.03
 -1.4
12-Aug-98 -22.22      4.86      .0139        5.0       0.31       .305 V2
0.052       0.08     <0.03      <0.04      <0.07      <0.04      <0.03
 -0.6
19-Aug-98 -19.48      4.85      .0142        6.4       0.44       .427 V2
0.079       0.14      0.04       0.05       0.10       0.04      <0.03
 -1.0
26-Aug-98 -26.28      4.95      .0113        5.2       0.34       .307
0.047       0.22     <0.03       0.13       0.12       0.04       0.05
 -1.0
02-Sep-98 -24.53      4.96      .0111        4.8       0.40       .382
0.046       0.12     <0.03       0.07       0.12 Q3    0.04      <0.03
 -0.9
09-Sep-98 -18.03      5.84      .0015        4.3       0.62       .590
0.042       0.22      0.28       0.12      <0.07      <0.04       0.07
 -0.1
16-Sep-98  -6.11      4.82      .0153       12.4       1.70 Q3   1.585 Q3
0.151       0.90      0.31 Q3    0.46       0.16 Q3    0.14       0.16 Q3
 -1.2
23-Sep-98 -25.63      5.27      .0054        2.3       0.23       .225 V2
0.012       0.07      0.04      <0.04      <0.07      <0.04      <0.03
 -0.6
30-Sep-98        I6        I6         I6         I6         I6         I6
      I6         I6        I6         I6         I6         I6         I6
      I6
07-Oct-98        I1        I1         I1    24.4       1.83      1.565
0.233       2.05      0.29       1.06       0.15       0.18       0.12
      I1
14-Oct-98  -8.86      5.04      .0092        4.7       0.50       .467
0.040       0.24      0.07       0.13      <0.07      <0.04       0.03
 -0.5
21-Oct-98        I7        I7         I7         I7         I7         I7
      I7         I7        I7         I7         I7         I7         I7
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      I7
28-Oct-98 -48.39       5.36      .0044        2.3       0.20       .175
<0.008       0.15       0.06       0.10       0.10       0.08      <0.03
  -0.4
04-Nov-98 -24.60       5.75      .0018        4.4       0.33       .287
0.074        0.30       0.26       0.17       0.09       0.03       0.04
  0.1
11-Nov-98 -10.14       5.43      .0037        8.7       0.50       .267
0.046        1.61       0.16 Q3    0.93       0.07       0.15       0.04
 -0.2
18-Nov-98 -11.16       4.58      .0265       14.9       0.88       .755
0.219        0.97       0.16       0.50       0.15       0.10       0.06
 -1.5
25-Nov-98  -9.35       4.52      .0304       18.5       1.00       .772
0.198        1.57       0.12       0.91       0.09       0.13       0.08
 -1.8
02-Dec-98        I6         I6         I6         I6         I6         I6
      I6         I6         I6         I6         I6         I6         I6
      I6
09-Dec-98  -6.91       4.69      .0206       21.3       1.03       .460
0.176        3.90       0.14       2.28       0.16       0.31       0.09
 -1.6
16-Dec-98  -5.47       4.91      .0124       17.0       0.78       .273
0.053        3.53 Q3   <0.03       2.03 Q3    0.14 Q3    0.27 Q3    0.10 Q3
 -0.8
23-Dec-98  -6.43       4.43      .0374       27.4       1.17       .643
0.313 Q3     3.68       0.14       2.11       0.15 Q3    0.27       0.10
 -2.2
30-Dec-98 -11.78       5.27      .0054        7.4       0.45       .247
0.026        1.29       0.06       0.81       0.08       0.08       0.19
 -0.8
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Newfoundland Environment Precipitation Monitoring Network
(NEPMoN)
Site: Gros Morne Year: 1994

Rain Collection Statistics

Sample Id No	Start Date	End Date	Effic. (%) flg	Coll. Gauge Days	No. of Gauge Type	Sample Volume (ml)	Sample Prec Type	Sample Depth (mm) flg	Gauge Depth (mm) flg
12201	16-Dec-93	02-Feb-94	76.9	48	SG	155.8	S	202.7	
12202	02-Feb-94	10-Feb-94	203.2	8	SG	2035.0	M	31.7	15.6
12203	10-Feb-94	17-Feb-94	342.7	7	SG	1650.0	S	25.7	7.5
12204	17-Feb-94	24-Feb-94	152.3	7	SG	1703.0	S	26.5	17.4
12205	24-Feb-94	04-Mar-94	400.0	8	SG	2335.0	S	36.4	9.1
12206	04-Mar-94	23-Mar-94	106.9	19	SG	6675.0	S	103.4	96.7
12207	23-Mar-94	29-Mar-94	380.9	6	SG	1660.0	M	25.9	6.8
12208	29-Mar-94	11-Apr-94	111.6	13	SG	9995.0	S	155.7	139.5
12209	11-Apr-94	21-Apr-94	183.2	10	SG	2445.0	M	38.1	20.8
12210	21-Apr-94	27-Apr-94	2100.0	6	SG	1755.0	R	27.3	1.3
12211	27-Apr-94	11-May-94	135.1	14	SG	5020.0	R	78.2	57.9
12212	11-May-94	26-May-94	156.2	15	SG	2745.0	R	42.8	27.4
12213	26-May-94	02-Jun-94	125.3	7	RG	5695.0	R	88.7	70.8
12214	02-Jun-94	09-Jun-94	111.5	7	RG	2361.0	R	36.8	33.0
12215	09-Jun-94	15-Jun-94	132.8	6	RG	4239.0	R	66.0	49.7
12216	15-Jun-94	21-Jun-94		6		1525.0		23.8	5.3

			449.1	RG	R		
12217	21-Jun-94	05-Jul-94	14	2805.0	43.7	24.0	
			182.1	RG	R		
12218	05-Jul-94	19-Jul-94	14	4150.0	64.6	52.9	
			122.1	RG	R		
12219	19-Jul-94	27-Jul-94	8	4040.0	62.9	42.3	
			148.7	RG	R		
12220	27-Jul-94	04-Aug-94	8	5650.0	88.0	51.0	
			172.5	RG	R		
12221	04-Aug-94	17-Aug-94	13	2215.0	34.5	17.2	
			200.6	RG	R		
12222	17-Aug-94	26-Aug-94	9	1840.0	28.7	11.8	
			243.2	RG	R		
12223	26-Aug-94	09-Sep-94	14	4010.0	62.5	30.9	
			202.3	RG	R		
12224	09-Sep-94	18-Sep-94	9	2285.0	35.6	14.6	
			243.8	RG	R		
12225	18-Sep-94	29-Sep-94	11	1850.0	28.8	6.8	
			423.5	RG	R		
12226	29-Sep-94	07-Oct-94	8	3420.0	53.3	30.6	
			174.2	RG	R		
12227	07-Oct-94	20-Oct-94	13	4720.0	73.5	58.9	
			124.8	RG	R		
12228	20-Oct-94	03-Nov-94	14	3740.0	58.3	27.2	
			214.3	RG	R		
12229	03-Nov-94	15-Nov-94	12	7260.0	113.1	100.3	
			112.8	RG	R		
12230	15-Nov-94	26-Nov-94	11	5260.0	81.9	77.8	
			105.3	SG	R		
12231	26-Nov-94	06-Dec-94	10	1531.0	23.8	21.0	
			113.3	SG	R		
12232	06-Dec-94	15-Dec-94	9	1954.0	30.4	23.0	
			132.2	SG	M		
12233	15-Dec-94	29-Dec-94	14	2150.0	33.5	13.5	
			248.1	SG	M		
12234	29-Dec-94	04-Jan-95	6	2810.0	43.8	27.8	
			157.6	SG	M		

Newfoundland Environment Precipitation Monitoring Network (NEPMoN)
Site: Gros Morne Year: 1994
Ion Concentrations

Start Date	Ion Bal.	flg	H pH	flg	Cond.	flg	SO4	flg	XSO4	flg	NNO3	flg	Cl	flg	Alk CaCO3	flg	NNH4	flg	Na	flg	Ca	flg	Mg	flg	K	flg
					umhos		(mg/l)		(mg/l)		(mg/l)		(mg/l)		(mg/l)		(mg/l)		(mg/l)		(mg/l)		(mg/l)		(mg/l)	
16-Dec-93		I8		I8		I8		I8		I8		I8		I8		I8		I8		I8		I8		I8		I8
02-Feb-94		I7		I7		I7		I7		I7		I7		I7		I7		I7		I7		I7		I7		I7
10-Feb-94	1.93		5.16		.0070		92.2		2.29			I6	0.140		22.0		0.030		11.5		1.79		0.600		0.18	
17-Feb-94	-4.76		4.18		.0666		28.0		2.18		2.140	V3	0.384		0.36		0.233		0.12		<0.06		0.019		<0.02	
24-Feb-94	1.57		5.21		.0062		36.8		1.06			I6	<0.008		8.88		0.017		4.60		0.32		0.451		0.15	
04-Mar-94	3.39		4.83		.0149		7.7		0.66		.614	V3	0.089		0.35		0.062		0.12		<0.06		0.022		<0.02	
23-Mar-94	0.07		4.49		.0326		17.0		1.30		1.267	V2	0.250		0.35		0.099		0.13		0.13		0.035		<0.02	
29-Mar-94	-1.33		4.44		.0366		15.4		1.60	Q3	1.543	Q3	0.293	Q3	0.34		0.244	Q3	0.10		0.10		0.027		<0.02	
11-Apr-94	-1.31		4.55		.0284		13.6		1.36		1.335	V2	0.160		0.26		0.100		0.10		0.11		0.029		0.03	
21-Apr-94	0.69		4.71		.0197		12.4		0.67		.552		0.147		0.85		0.011		0.47		<0.06		0.061		0.02	
27-Apr-94	-1.99		4.78		.0167		9.7		0.93		.885		0.110		0.36		0.098		0.18		0.09		0.033		<0.02	
11-May-94	-2.80		4.60		.0253		11.7		1.00		.957		0.169		0.326		0.111		0.17		<0.06		0.025		0.02	
26-May-94	-6.44		4.32		.0482		21.4		2.30		2.275	Q3	0.202		0.212		0.280	Q3	0.10		0.07		0.021		<0.02	
02-Jun-94	-1.01		4.76		.0175		9.2		0.90		.872		0.105		0.20		0.101		0.11		<0.06		0.017		<0.02	

09-Jun-94	-5.31	4.73	.0188	9.5	0.92	.892 V2	0.104	0.13
0.084	0.11	0.05	0.018	<0.02	-0.84			
15-Jun-94	-4.81	4.35	.0450	23.7	2.60	2.550	0.345	0.36
0.370	0.20	0.18	0.052	0.19	-2.05			
21-Jun-94	-2.19	4.26	.0554	25.3	2.08	2.017	0.369	0.55
0.139	0.25	0.15	0.048	0.07	-2.50			
05-Jul-94	-2.21	4.37	.0430	19.0	1.63	1.575 V3	0.207	0.35
0.101	0.16	<0.06	0.026	0.03	-1.95			
19-Jul-94	-3.93	4.13	.0747	31.7	3.19	3.152 V3	0.284	0.24
0.268	0.10	<0.06	0.018	0.02	-3.38			
27-Jul-94	-5.73	4.37	.0430	18.5	1.54	1.498 V3	0.196	0.31
0.133	0.13	<0.06	0.020	0.02	-1.85			
04-Aug-94	-3.56	4.15	.0714	32.1	2.90	2.810	0.278	0.70
0.196	0.36	<0.06	0.050	0.05	-3.27			
17-Aug-94	-1.38	4.11	.0782	49.1	3.98	3.380	0.299	4.53
0.233	2.40	0.17	0.331	0.16	-3.58			
26-Aug-94	-0.60	4.62	.0242	20.3	1.61	1.247	0.121	2.70
0.132	1.45	0.12	0.188	0.07	-1.17			
09-Sep-94	-0.96	4.48	.0334	17.2	2.03	1.967 V3	0.168	0.413
0.272	0.17	0.06	0.030	0.07	-1.67			
18-Sep-94	6.10	4.98	.0106	17.1	0.89	.490	0.066	3.48
0.025	1.60	0.13	0.201	0.10	-0.50			
29-Sep-94	-1.03	5.22	.0061	4.1	0.22	.182	0.031	0.34
0.005	0.15	<0.06	0.022	0.02	-0.32			
07-Oct-94	-0.55	5.05	.0090	29.1	1.19	.241	0.042	6.85
0.005	3.80	0.16	0.447	0.16	-0.46			
20-Oct-94	3.90	4.76	.0175	10.7	0.65	.560 V3	0.155	0.65
0.040	0.28	0.06	0.043	0.03	-0.89			
03-Nov-94	2.39	4.78	.0167	26.8	1.32	.658	0.082	5.06
0.027	2.65	0.12	0.307	0.11	-0.98			
15-Nov-94	2.15	4.95	.0113	28.2	1.14	.366	0.085	5.89
0.011	3.10	0.14	0.371	0.13	-0.64			
26-Nov-94	1.24	5.04	.0092	38.6	1.47	.259	0.092	8.88
<0.005	4.85	0.29	0.508	0.16	-0.55			
06-Dec-94	1.66	5.03	.0094	38.7	1.45	.226	0.089	9.06

<0.005	4.90	0.29	0.499	0.17	-0.50			
15-Dec-94	1.54	4.65	.0226	38.9	2.10	1.163	0.203	6.86
0.137	3.75	0.19	0.434	0.14	-1.37			
29-Dec-94	1.45	5.24	.0058	31.2	1.66	.736	0.076	6.88
<0.005	3.70	0.42	0.440	0.13	-0.19			

Newfoundland Environment Precipitation Monitoring Network
(NEPMoN)
Site: Gros Morne Year: 1995

Rain Collection Statistics

Sample Id No	Start Date	End Date	Effic. (%) flg	Coll. Gauge Type	No. of Gauge Days	Sample Volume (ml)	Sample Prec Type	Sample Depth (mm)	flg	Gauge Depth (mm)	flg
12301	04-Jan-95	14-Jan-95	65.2	SG	10	3124.0	S	48.7		74.7	
12302	14-Jan-95	25-Jan-95	85.8	SG	11	4384.0	S	68.3		79.6	
12303	25-Jan-95	01-Feb-95	123.1	SG	7	824.0	S	12.8		10.4	
12304	01-Feb-95	07-Feb-95	168.5	SG	6	994.0	S	15.5		9.2	
12305	07-Feb-95	14-Feb-95	1.2	SG	7	14.0	S	0.2		16.2	
12306	14-Feb-95	21-Feb-95	10.6	SG	7	197.0	M	3.1		29.2	
12307	21-Feb-95	28-Feb-95		I1 SG	7		S		I1	14.7	
12308	28-Feb-95	09-Mar-95	97.4	SG	9	3149.0	M	49.0		50.3	
12309	09-Mar-95	21-Mar-95	54.6	SG	12	1224.0	M	19.1		35.0	
12310	21-Mar-95	28-Mar-95	2.4	SG	7	79.0	M	1.2		50.5	
12311	28-Mar-95	07-Apr-95	228.8	SG	10	869.0	M	13.5		5.9	
12312	07-Apr-95	15-Apr-95	112.1	SG	8	714.0	M	11.1		9.9	
12313	15-Apr-95	24-Apr-95	72.4	SG	9	1919.0	M	29.9		41.3	
12314	24-Apr-95	05-May-95	93.9	SG	11	1184.0	M	18.4		19.6	
12315	05-May-95	16-May-95		I1 RG	11		R		I1	0.2	
12316	16-May-95	24-May-95			8	684.0		10.7		9.0	

			118.9		RG		R			
12317	24-May-95	03-Jun-95		10	744.0	11.6		16.0		
			72.5		RG		R			
12318	03-Jun-95	10-Jun-95		7	7224.0	112.5		107.3		
			104.8		RG		R			
12319	10-Jun-95	15-Jun-95		5	1674.0	26.1		24.8		
			105.2		RG		R			
12320	15-Jun-95	22-Jun-95		7	484.0	7.5		18.8		
			39.9		RG		R			
12321	22-Jun-95	29-Jun-95		7	1774.0	27.6		37.9		
			72.8		RG		R			
12322	29-Jun-95	08-Jul-95		9	929.0	14.5		13.0		
			111.5		RG		R			
12323	08-Jul-95	15-Jul-95		7	874.0	13.6		29.0		
			46.9		RG		R			
12324	15-Jul-95	22-Jul-95		7	734.0	11.4		12.3		
			92.7		RG		R			
12325	22-Jul-95	29-Jul-95		7					I1	22.7
				I1	RG		R			
12326	29-Jul-95	05-Aug-95		7	1078.0	16.8		12.0		
			140.0		RG		R			
12327	05-Aug-95	12-Aug-95		7	224.0	3.5		2.4		
			145.8		RG		R			
12328	12-Aug-95	19-Aug-95		7	1214.0	18.9		22.4		
			84.4		RG		R			
12329	19-Aug-95	26-Aug-95		7	5144.0	80.1		86.1		
			93.0		RG		R			
12330	26-Aug-95	02-Sep-95		7	574.0	8.9		6.3		
			141.3		RG		R			
12331	02-Sep-95	10-Sep-95		8	1094.0	17.0		14.7		
			115.6		RG		R			
12332	10-Sep-95	17-Sep-95		7					I1	49.8
				I1	RG		R			
12333	17-Sep-95	24-Sep-95		7	1289.0	20.1		19.2		
			104.7		RG		R			
12334	24-Sep-95	03-Oct-95		9	1523.0	23.7		20.5		
			115.6		RG		R			
12335	03-Oct-95	10-Oct-95		7	1854.0	28.9		29.1		
			99.3		RG		R			
12336	10-Oct-95	17-Oct-95		7	2219.0	34.6		34.2		
			101.2		RG		R			
12337	17-Oct-95	24-Oct-95		7	864.0	13.4		13.7		

			97.8		RG		R			
12338	24-Oct-95	31-Oct-95			7	2019.0	31.4		33.4	
			94.0		RG		R			
12339	31-Oct-95	07-Nov-95			7	1499.0	23.3		32.5	
			71.7		RG		R			
12340	07-Nov-95	14-Nov-95			7	2169.0	33.8		15.7	
			215.3		RG		R			
12341	14-Nov-95	22-Nov-95			8	939.0	14.6		15.5	
			94.2		SG		M			
12342	22-Nov-95	29-Nov-95			7	5875.0	91.5		68.5	
			133.6		SG		M			
12343	29-Nov-95	05-Dec-95			6	469.0	7.3		4.6	
			158.7		SG		S			
12344	05-Dec-95	12-Dec-95			7	2854.0	44.4		27.0	
			164.4		SG		S			
12345	12-Dec-95	20-Dec-95			8	2279.0	35.5		37.3	
			95.2		SG		M			
12346	20-Dec-95	27-Dec-95			7			I1	1.3	
				I1	SG		M			
12347	27-Dec-95	03-Jan-96			7			I1	4.5	
				I1	SG		M			

Newfoundland Environment Precipitation Monitoring Network (NEPMoN)
Site: Gros Morne Year: 1995
Ion Concentrations

Start Date	Ion Bal.	flg	H pH	flg	Cond.	flg	Alk CaCO3	flg	SO4	flg	XSO4	flg	NNO3	flg	Cl	flg	NNH4	flg	Na	flg	Ca	flg	Mg	flg	K	flg
			(mg/l)		(mg/l)		umhos		(mg/l)		(mg/l)		(mg/l)		(mg/l)		(mg/l)		(mg/l)		(mg/l)		(mg/l)		(mg/l)	
04-Jan-95	4.35		4.97		.0108		15.1		0.55		.250		0.099		2.35		<0.005		1.20		0.08		0.117		0.04	
									-0.56																	
14-Jan-95	5.03		4.97		.0108		15.0		0.57		.270		0.104		2.38		<0.005		1.20		0.09		0.119		0.03	
									-0.68																	
25-Jan-95	2.76		4.83		.0149		56.8		2.06		.187		0.167		13.5		0.014		7.50		0.55		0.454		0.21	
									-0.88																	
01-Feb-95	0.96		4.84		.0146		56.0		2.02		.172		0.158		12.8		0.015		7.40		0.54		0.447		0.21	
									-0.96																	
07-Feb-95	3.50		4.73		.0188		19.5		1.09		.765		0.155		2.53		0.057		1.30		0.10		0.152		0.05	
									-1.16																	
14-Feb-95	4.69		4.73		.0188		19.9		1.10		.762		0.163		2.65		0.046		1.35		0.10		0.153		0.05	
									-1.04																	
21-Feb-95	3.13		4.73		.0188		19.4		1.14		.790		0.165		2.57		0.049		1.40		0.09		0.154		0.05	
									-1.19																	
28-Feb-95	4.43		4.52		.0304		17.6		1.33		1.272		0.236		0.54		0.103		0.23		0.08		0.032		0.02	
									-1.69																	
09-Mar-95	3.47		5.11		.0078		13.0		0.84		.580		0.089		2.09		0.031		1.04		0.17		0.149		0.05	
									-0.47																	
21-Mar-95	3.49		5.19		.0065		8.2		0.83		.752		0.118		0.67		0.042		0.31		0.25		0.072		<0.02	
									-0.38																	
28-Mar-95	2.67		5.19		.0065		8.1		0.84		.762		0.116		0.67		0.042		0.31		0.26		0.075		<0.02	
									-0.38																	
07-Apr-95	-0.06		5.17		.0068		4.9		0.44		.412		0.043		0.23		0.024		0.11		0.06		0.024		0.02	
									-0.39																	
15-Apr-95	7.30		5.15		.0071		5.2		0.45		.425	V2	0.045		0.24		0.023		0.10		<0.06		0.023		<0.02	
									-0.50																	
24-Apr-95	1.70		5.22		.0061		8.4		0.41		.252		0.024		1.27		<0.005		0.63		0.06		0.087		0.03	
									-0.33																	

05-May-95	I1	I1	I1	I1	25.5	25.33 V4	<0.008	1.16	<0.005 I1
I1	I1	I1							
16-May-95	1.68	4.24	.0580	31.9	2.88	2.825	0.373	0.52	0.286
0.22	0.11	0.050	0.03	-3.31					
24-May-95	5.09	4.82	.0153	7.3	0.64	.635 V2	0.074	0.09	<0.005
0.02	<0.06	0.011	0.02	-0.96					
03-Jun-95	-1.11	5.14	.0073	4.5	0.27	.244 V3	0.066	0.20	0.033
0.08	<0.06	0.012	0.03	-0.48					
10-Jun-95	1.59	5.14	.0073	4.4	0.28	.254 V3	0.068	0.19	0.028
0.07	<0.06	0.012	0.03	-0.41					
15-Jun-95	-4.49	4.69	.0206	14.3	0.85	.745	0.140	0.94	0.156
0.42	0.06	0.057	0.07	-1.14					
22-Jun-95	-4.39	4.70	.0201	14.3	0.85	.745	0.139	0.92	0.150
0.42	0.06	0.058	0.07	-1.20					
29-Jun-95	-0.45	4.83	.0149	8.3	0.49	.460 V3	0.083	0.19	0.006
0.07	<0.06	0.014	0.03	-0.90					
08-Jul-95	1.76	4.85	.0142	9.7	0.60	.512 V3	0.101	0.58	0.016
0.26	0.06	0.042	0.07	-0.89					
15-Jul-95	1.96	4.85	.0142	9.8	0.60	.512 V3	0.102	0.58	0.015
0.26	0.06	0.042	0.07	-0.85					
22-Jul-95	-2.40	5.15	.0071	13.2	1.89	1.816 V3	0.268	0.48	0.733 Q3
0.20	<0.06	0.035	0.12	-0.33					
29-Jul-95	-3.24	5.29	.0052	12.6	1.87	1.796 V3	0.269	0.46	0.755
0.21	<0.06	0.035	0.13	-0.09					
05-Aug-95	I1	4.57	.0271	16.8	1.12	.972	0.099	1.17	I1 0.59
<0.06	0.072	0.05	-1.60						
12-Aug-95	-3.77	4.82	.0153	6.8	0.40	.367	0.083	0.31	0.012
0.13	<0.06	0.017	<0.02	-0.98					
19-Aug-95	-15.73	4.97	.0108	5.6	0.48	.461 V3	0.062	0.12	0.127
0.05	<0.06	0.009	<0.02	-0.63					
26-Aug-95	-3.97	5.08	.0084	4.8	0.24	.202	0.038	0.35	0.010
0.15	<0.06	0.021	<0.02	-0.57					
02-Sep-95	3.27	4.43	.0374	22.8	1.83	1.597	0.177	1.97	0.128
0.93	0.07	0.104	0.03	-2.09					
10-Sep-95	1.97	4.35	.0450	23.1	2.11	1.962	0.219	1.25	

0.185	0.59	<0.06	0.062	0.04	-2.52			
17-Sep-95	3.98	4.90	.0127	7.5	0.40	.322	0.058	0.75
<0.005	0.31	<0.06	0.037	<0.02	-0.84			
24-Sep-95	4.30	4.91	.0124	40.0	1.84	.591	0.059	10.0
0.032	5.00	0.19	0.625	0.19	-0.90			
03-Oct-95	1.04	5.10	.0080	4.7	0.27	.237	0.047	0.35
<0.005	0.13	<0.06	0.017	0.07	-0.53			
10-Oct-95	3.81	4.93	.0118	15.0	0.73	.405	0.062	2.63
<0.005	1.30	0.06	0.138	0.16	-0.72			
17-Oct-95	2.73	5.41	.0039	16.3	0.76	.298	0.028	3.70
<0.005	1.85	0.11	0.200	0.36	-0.17			
24-Oct-95	3.77	4.73	.0188	17.4	1.05	.687	0.088	2.90
0.037	1.45	0.06	0.159	0.06	-1.13			
31-Oct-95	-0.56	5.17	.0068	21.5	1.05	.306	0.027	5.33
<0.005	2.98	0.10	0.336	0.27	-0.73			
07-Nov-95	3.29	4.57	.0271	33.7	2.08	1.193	0.162	6.82
0.061	3.55	0.13	0.428	0.16	-1.83			
14-Nov-95	-0.48	5.13	.0075	6.8	0.47	.327	<0.008	1.14
<0.005	0.57	<0.06	0.069	0.12	-0.67			
22-Nov-95	2.50	4.60	.0253	24.2	1.39	.903	0.199	3.66
0.056	1.95	0.06	0.240	0.10	-1.63			
29-Nov-95	1.28	6.30 Q3	.0005	64.3	2.80	.652	0.100	16.64
0.056	8.60	1.28	0.990	0.32	1.11 Q3			
05-Dec-95	5.67	4.75	.0179	75.8	2.93	.283	0.218	20.78
0.028	10.6	0.61	0.885	0.29	-1.33			
12-Dec-95	4.09	4.82	.0153	49.3	2.44	.817	0.070	12.80
0.024	6.50	0.23	0.810	0.25	-1.14			
20-Dec-95	-2.85	5.92	.0012	75.6	3.87	.724	0.056	21.41
0.046	12.6	0.88	1.480	0.45	0.08			
27-Dec-95	0.82	5.63	.0024	88.4	4.12	.924	0.055	22.74
0.049	12.8	0.28	1.585	0.48	-0.26			

Newfoundland Environment Precipitation Monitoring Network
(NEPMoN)
Site: Hope Brook Year: 1994

Rain Collection Statistics

Sample Id No	Start Date	End Date	Coll. Effic. (%) flg	No. of Gauge Days	Sample Volume (ml)	Sample Depth (mm)	flg	Gauge Depth (mm)	flg
				Type	Type				
10201	05-Jan-94	12-Jan-94		7	1100.0	17.1		25.7	
			66.5	SG	M				
10202	12-Jan-94	19-Jan-94		7	1350.0	21.0		30.3	
			69.3	SG	M				
10203	19-Jan-94	26-Jan-94		7	1250.0	19.5		20.2	
			96.5	SG	S				
10204	26-Jan-94	02-Feb-94		7	0.0	0.0		29.6	
			0.0	SG	M				
10205	02-Feb-94	09-Feb-94		7			I1	28.0	
			I1	SG	S				
10206	09-Feb-94	16-Feb-94		7			I1	36.0	
			I1	SG	S				
10207	16-Feb-94	23-Feb-94		7			I1	6.3	
			I1	SG	M				
	23-Feb-94	02-Mar-94		7			I1	6.6	
			I1	SG	S				
10208	02-Mar-94	08-Mar-94		6	2200.0	32.3		53.2	
			60.7	SG	M				
10209	08-Mar-94	15-Mar-94		7	4600.0	71.7		78.1	
			91.8	SG	M				
10210	15-Mar-94	22-Mar-94		7	2750.0	42.8		57.8	
			74.0	RG	R				
10211	22-Mar-94	29-Mar-94		7	1000.0	15.6		22.9	
			68.1	SG	M				
10212	29-Mar-94	05-Apr-94		7	4300.0	67.0		57.2	
			117.1	SG	M				
10213	05-Apr-94	12-Apr-94		7		171.3		141.0	
			121.5	RG	R				
10214	12-Apr-94	19-Apr-94		7	6150.0	95.8		98.2	
			97.6	RG	R				
10215	19-Apr-94	26-Apr-94		7	950.0	14.8		15.8	

			93.7	RG	R				
10216	26-Apr-94	03-May-94		7	1500.0	23.4		23.8	
			98.3	RG	R				
10217	03-May-94	10-May-94		7	7050.0	109.8		105.0	
			104.6	RG	R				
10218	10-May-94	17-May-94		7	2200.0	34.3		34.8	
			98.6	RG	R				
10219	17-May-94	24-May-94		7	260.0	4.1		4.0	
			101.3	RG	R				
10220	24-May-94	08-Jun-94		15		167.6		90.8	
			184.6	RG	R				
10221	08-Jun-94	14-Jun-94		6	2200.0	34.3		13.6	
			252.2	RG	R				
10222	14-Jun-94	21-Jun-94		7	2900.0	45.2		66.0	
			68.5	RG	R				
10223	21-Jun-94	28-Jun-94		7	2500.0	38.9		39.2	
			99.2	RG	R				
10224	28-Jun-94	05-Jul-94		7	2700.0	42.1		42.0	
			100.2	RG	R				
10225	05-Jul-94	12-Jul-94		7	5300.0	82.6		79.6	
			103.8	RG	R				
	12-Jul-94	19-Jul-94		7			I1	7.2	
			I1	RG	R				
10226	19-Jul-94	26-Jul-94		7	4400.0	68.5		61.8	
			110.8	RG	R				
10227	26-Jul-94	02-Aug-94		7	800.0	12.5		11.4	
			109.6	RG	R				
10228	02-Aug-94	09-Aug-94		7	3300.0	51.4		37.7	
			136.3	RG	R				
10229	09-Aug-94	16-Aug-94		7	200.0	3.1		10.0	
			31.2	RG	R				
10230	16-Aug-94	23-Aug-94		7	150.0	2.3		2.2	
			106.4	RG	R				
10231	23-Aug-94	30-Aug-94		7	700.0	10.9		8.7	
			125.3	RG	R				
10232	30-Aug-94	06-Sep-94		7	650.0	10.1		10.2	
			99.0	RG	R				
10233	06-Sep-94	13-Sep-94		7	6200.0	96.6		76.0	
			127.1	RG	R				
10234	13-Sep-94	20-Sep-94		7	1000.0	15.6		17.5	
			89.1	RG	R				
	20-Sep-94	27-Sep-94		7	0.0	0.0		0.0	V1

			I1				
10235	27-Sep-94	04-Oct-94		7	1450.0	22.6	61.4
		36.8	RG		R		
10236	04-Oct-94	11-Oct-94		7	900.0	14.0	10.2
		137.3	RG		R		
10237	11-Oct-94	19-Oct-94		8	500.0	7.8	17.4
		44.8	RG		R		
10238	19-Oct-94	25-Oct-94		6	2350.0	36.6	29.6
		123.6	RG		R		
10239	25-Oct-94	01-Nov-94		7	600.0	9.3	12.6
		74.1	RG		R		
10240	01-Nov-94	09-Nov-94		8	6500.0	101.2	88.0
		115.0	RG		R		
10241	09-Nov-94	15-Nov-94		6	400.0	6.2	2.9
		214.8	RG		R		
10242	15-Nov-94	22-Nov-94		7	1150.0	17.9	20.3
		88.2	RG		R		
10243	22-Nov-94	29-Nov-94		7	2700.0	42.1	44.8
		94.0	SG		M		
10244	29-Nov-94	06-Dec-94		7	1450.0	22.6	23.2
		97.4	SG		M		
10245	06-Dec-94	13-Dec-94		7	2250.0	35.0	75.2
		46.5	SG		M		
10246	13-Dec-94	20-Dec-94		7	300.0	4.7	5.0
		93.4	RG		R		
10247	20-Dec-94	27-Dec-94		7	300.0	4.7	8.3
		56.3	SG		M		
10248	27-Dec-94	03-Jan-95		7	300.0	4.7	18.3
		25.5	SG		S		

Newfoundland Environment Precipitation Monitoring Network (NEPMoN)
Site: Hope Brook Year: 1994
Ion Concentrations

Start Date	Ion Bal.	flg	H pH	flg	Cond. (mg/l)	flg	SO4 umhos	flg	Alk CaCO3 (mg/l)	flg	XSO4 (mg/l)	flg	NNO3 (mg/l)	flg	Cl (mg/l)	flg	NNH4 (mg/l)	flg	Na (mg/l)	flg	Ca (mg/l)	flg	Mg (mg/l)	flg	K (mg/l)	flg
05-Jan-94	1.76		4.57		.0271		24.3		1.94		1.565		0.294		2.79		0.066		1.50		0.30		0.219		0.21	
12-Jan-94	-2.93		4.62		.0242		80.0		3.28		.733		0.158		17.2	Q3	0.044		10.2	Q3	0.37		1.22	Q3	0.36	
19-Jan-94		I1	4.33		.0471			I1	2.22		1.279	V4	0.740		6.76			I1		I1		I1		I1	0.18	
	-2.47			I6		I6		I6		I6		I6		I6		I6		I6		I6		I6		I6		I6
26-Jan-94		I6		I6		I6		I6		I6		I6		I6		I6		I6		I6		I6		I6		I6
02-Feb-94	-1.18		4.14		.0730		32.5		2.26		2.030		0.618		1.74		0.103		0.92		0.20		0.146		0.07	
09-Feb-94		I1		I1		I1		I1	1.54		1.251	V4	0.478		2.07			I1		I1		I1		I1	0.11	
16-Feb-94	-1.25		3.85		.1424		72.6		6.54		6.390	V2	1.30		0.84		0.81		0.60		0.44		0.117		0.09	
23-Feb-94		I2		I2		I2		I2		I2		I2		I2		I2		I2		I2		I2		I2		I2
02-Mar-94	4.90		4.77		.0171		16.9		0.85		.562		0.123		2.48		0.031		1.15		0.09		0.148		0.06	
08-Mar-94	-1.55		4.68		.0211		13.3		1.02		.845		0.096		1.18		0.040		0.70		<0.06		0.080		0.04	
15-Mar-94	-2.74		4.86		.0139		7.7		0.64		.582		0.068		0.41		0.044		0.23		<0.06		0.033		0.01	
22-Mar-94	-3.02		4.28		.0529		25.3		2.30		2.252	V2	0.382		0.20		0.227		0.19		0.12		0.029		0.02	
29-Mar-94	1.84		4.29		.0517		32.8		3.04		2.770		0.257		2.21		0.366		1.08		<0.06		0.141		0.05	
05-Apr-94	-0.49		4.71		.0197		13.8		1.09		.937		0.102		1.05		0.073		0.61		<0.06		0.081		0.03	

12-Apr-94	2.88	4.95	.0113	6.8	0.62	.559	V3
0.041	0.44	0.039	0.19	<0.06	0.029	0.02	
-0.66							
19-Apr-94	-2.16	4.18	.0666	29.7	2.99	2.927	
0.371	0.38	0.250	0.25	0.09	0.046	0.03	
-3.30							
26-Apr-94	-1.28	4.38	.0420	19.9	1.65	1.615	
0.266	0.22	0.132	0.14	<0.06	0.026	<0.02	
-2.15							
03-May-94	1.68	4.88	.0133	9.4	0.77	.650	
0.070	0.92	0.055	0.48	<0.06	0.066	0.02	
-0.68							
10-May-94	1.49	4.65	.0226	15.8	1.16	.977	
0.136	1.38	0.090	0.73	<0.06	0.095	0.03	
-1.25							
17-May-94	-4.37	4.52	.0304	18.8	2.56	2.482	
0.417	0.55	0.46	0.31	0.42	0.101	0.07	
-1.53							
24-May-94	-0.67	4.57	.0271	13.6	1.43	1.377	V3
0.136	0.34	0.160	0.14	0.06	0.025	<0.02	
-1.15							
08-Jun-94	2.25	4.67	.0216	23.8	1.56	1.085	
0.178	3.65	0.069	1.90	0.18	0.260	0.09	
-0.87							
14-Jun-94	I8	I8	I8	I8	I8	I8	
I8	I8	I8	I8	I8	I8	I8	
I8							
21-Jun-94	I8	I8	I8	I8	I8	I8	
I8	I8	I8	I8	I8	I8	I8	
I8							
28-Jun-94	I8	I8	I8	I8	I8	I8	
I8	I8	I8	I8	I8	I8	I8	
I8							
05-Jul-94	I8	I8	I8	I8	I8	I8	
I8	I8	I8	I8	I8	I8	I8	
I8							
12-Jul-94	I2	I2	I2	I2	I2	I2	
I2	I2	I2	I2	I2	I2	I2	
I2							
19-Jul-94	-3.01	4.57	.0271	13.1	1.17	1.155	
0.153	0.17	0.150	0.06	<0.06	0.007	<0.02	
-1.32							

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26-Jul-94  -1.86       4.04       .0919       42.0       3.95      3.824 V3
0.347       0.76      0.245       0.32       0.10      0.060       0.03
-4.54
02-Aug-94        I6         I6         I6         I6         I6         I6
      I6         I6         I6         I6         I6         I6         I6
      I6
09-Aug-94  -1.08       4.32       .0482       23.8       2.17      2.101 V3
0.220       0.51      0.197       0.19       0.07      0.033       0.02
-2.43
16-Aug-94  -4.67       3.92       .1212       51.5       4.32      4.110
0.561       1.57      0.243       0.84       0.14      0.106       0.06
-7.73
23-Aug-94  -6.00       3.59       .2591      109.9       11.5      11.21
0.892       2.05      1.090       1.15       0.15      0.147       0.10
  N/A
30-Aug-94  -3.74       5.16       .0070        5.7       0.20       .122
0.069       0.60      0.035       0.31      <0.06      0.038       0.02
-0.18
06-Sep-94  -1.10       4.63       .0236       12.7       0.80       .717
0.171       0.64      0.067       0.33      <0.06      0.041       0.02
-1.06
13-Sep-94  -1.48       4.30       .0505       35.5       2.90      2.438
0.268       3.19      0.259       1.85       0.12      0.203       0.11
-2.28
20-Sep-94        I2         I2         I2         I2         I2         I2
      I2         I2         I2         I2         I2         I2         I2
      I2
27-Sep-94   1.55       5.06       .0088       10.9       0.55       .305
0.044       1.81      0.008       0.98      <0.06      0.112       0.04
-0.26
04-Oct-94  -0.22       4.58       .0265       22.3       1.65      1.287
0.178       2.59      0.140       1.45       0.11      0.164       0.09
-1.20
11-Oct-94  -3.03       5.32       .0048        5.1       0.23       .137
0.019       0.67     <0.005       0.37      <0.06      0.043       0.02
-0.01
19-Oct-94  -0.16       4.94       .0116        7.6       0.51       .420
0.071       0.63      0.011       0.36      <0.06      0.041       0.03
-0.48
25-Oct-94  -1.85       4.28       .0529       24.5       2.51      2.470
0.298       0.23      0.174       0.16       0.13      0.029       0.09
-2.26
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01-Nov-94	1.29	4.51	.0311	27.3	1.57	1.083
0.196	3.66	0.076	1.95	0.09	0.227	0.07
-1.37						
09-Nov-94	0.73	4.64	.0231	39.5	3.16	2.286
0.183	6.37	0.481	3.50	0.16	0.410	0.14
-1.01						
15-Nov-94	1.59	4.72	.0192	37.9	2.31	1.311
0.095	7.43	0.097	4.0	0.24	0.488	0.16
-1.02						
22-Nov-94	-1.09	4.67	.0216	50.5	2.78	1.257
0.242	10.4 Q3	0.073	6.1 Q3	0.31	0.770 Q3	0.23
-1.09						
29-Nov-94	1.07	4.56	.0278	19.0	1.35	1.075
0.247	1.81	0.037	1.10	0.08	0.139	0.05
-1.39						
06-Dec-94	0.05	5.75	.0018	19.4	1.22	.695
0.103	3.92	0.036	2.10	0.48 Q3	0.281	0.09
0.19						
13-Dec-94	-1.96	6.23 Q3	.0006	48.1	2.43	.819
0.057	11.4	0.043	6.45	0.80	0.820	0.27
0.70						
20-Dec-94	0.30	4.43	.0374	30.1	2.17	1.807
0.545	2.53	0.361	1.45	0.21	0.185	0.11
-1.9						
27-Dec-94	1.48	5.59	.0026	27.8	1.42	.571
0.129	6.50	0.041	3.40	0.41	0.461	0.15
-0.02						

Newfoundland Environment Precipitation Monitoring Network
(NEPMoN)
Site: Hope Brook Year: 1995

Rain Collection Statistics

Sample Id No	Start Date	End Date	Coll. Effic. (%) flg	No. of Gauge Days	Sample Volume (ml) Gauge Type	Sample Depth (mm) flg	Gauge Depth (mm) flg
10301	03-Jan-95	10-Jan-95		7	3100.0	48.3	47.8
		101.0			M		
10302	10-Jan-95	17-Jan-95		7	1450.0	22.6	23.9
		94.6			S		
10303	17-Jan-95	25-Jan-95		8	1300.0	20.2	40.9
		49.4			S		
10304	25-Jan-95	31-Jan-95		6	150.0	2.3	4.0
		57.5			S		
10305	31-Jan-95	09-Feb-95		9	1550.0	24.1	41.7
		57.8			S		
10306	09-Feb-95	15-Feb-95		6	1550.0	24.1	26.5 Q9
		90.9	Q7		S		
10307	15-Feb-95	21-Feb-95		6	1400.0	21.8	22.4
		97.3			S		
10308	21-Feb-95	28-Feb-95		7	1550.0	24.1	71.4
		33.8			M		
10309	28-Feb-95	08-Mar-95		8	250.0	3.9	16.2
		24.1			M		
10310	08-Mar-95	14-Mar-95		6	1150.0	17.9	7.0 Q9
		255.7	Q7		M		
10311	14-Mar-95	22-Mar-95		8	1900.0	29.6	20.8
		142.3			M		
10312	22-Mar-95	28-Mar-95		6	850.0	13.2	20.2
		65.3			R		
10313	28-Mar-95	04-Apr-95		7	0.0	0.0	2.4
		0.0			R		
10314	04-Apr-95	11-Apr-95		7	1100.0	17.1	29.1
		58.8			S		
10315	11-Apr-95	25-Apr-95		14	2700.0	42.1	13.2 Q9
		318.9	Q7		R		
	25-Apr-95	02-May-95		7	0.0	0.0	0.2

					0.0			
10316	02-May-95	09-May-95		7	100.0	1.6		1.0
					160.0	R		
10317	09-May-95	17-May-95		8	0.0	0.0		0.8
					0.0	R		
10318	17-May-95	23-May-95		6	450.0	7.0		0.3
					2333.3	R		
10319	23-May-95	31-May-95		8	1650.0	25.7		26.0
					98.8	R		
10320	31-May-95	06-Jun-95		6	450.0	7.0		4.8
					145.8	R		
10321	06-Jun-95	13-Jun-95		7	7200.0	112.0		35.2
					318.2	R		
10322	13-Jun-95	20-Jun-95		7	2100.0	32.7		30.5
					107.2	R		
10323	20-Jun-95	27-Jun-95		7	150.0	2.3		3.6
					63.9	R		
10324	27-Jun-95	06-Jul-95		9	3050.0	47.5		39.6
					119.9	R		
10325	06-Jul-95	11-Jul-95		5	350.0	5.4		5.8
					93.1	R		
10326	11-Jul-95	18-Jul-95		7	350.0	5.4		5.6
					96.4	R		
10327	18-Jul-95	25-Jul-95		7	5600.0	87.2		90.4
					96.5	R		
10328	25-Jul-95	02-Aug-95		8	1100.0	17.1		36.2
					47.2	R		
	02-Aug-95	08-Aug-95		6	0.0	0.0		0.5
					0.0			
10329	08-Aug-95	15-Aug-95		7	450.0	7.0		5.6
					125.0			
10330	15-Aug-95	23-Aug-95		8			I1	37.0
			I1					
10331	23-Aug-95	29-Aug-95		6			I1	37.4
			I1					
10332	29-Aug-95	05-Sep-95		7			I1	7.7
			I1					
10333	05-Sep-95	14-Sep-95		9	7000.0	109.0		34.0
					320.6	R		
10334	14-Sep-95	19-Sep-95		5			I1	103.0
			I1			R		
10335	19-Sep-95	26-Sep-95		7	700.0	10.9		15.0

			72.7		R		
10336	26-Sep-95	03-Oct-95		7	1450.0	22.6	15.0
			150.7		R		
	03-Oct-95	10-Oct-95		7	4900.0	76.3	28.6
			266.8				
10337	10-Oct-95	17-Oct-95		7	5220.0	81.3	58.0
			140.2		R		
10338	17-Oct-95	24-Oct-95		7	1950.0	30.4	57.2
			53.1		R		
10339	24-Oct-95	31-Oct-95		7	1950.0	30.4	13.1
			232.1		R		
10340	31-Oct-95	07-Nov-95		7	8600.0	134.0	91.0
			147.3		R		
10341	07-Nov-95	14-Nov-95		7	750.0	11.7	17.8
			65.7				
10342	14-Nov-95	21-Nov-95		7	4800.0	74.8	61.4
			121.8				
10343	21-Nov-95	28-Nov-95		7	7300.0	113.7	121.8
			93.3				
10344	28-Nov-95	05-Dec-95		7	1450.0	22.6	33.1
			68.3		S		
10345	05-Dec-95	12-Dec-95		7	2600.0	40.5	41.5
			97.6		M		
10346	12-Dec-95	19-Dec-95		7	250.0	3.9	13.7
			28.5		M		
10347	19-Dec-95	26-Dec-95		7	900.0	14.0	11.8
			118.6		M		
10348	26-Dec-95	02-Jan-96		7	0.0	0.0	1.3
			0.0		S		

Newfoundland Environment Precipitation Monitoring Network (NEPMoN)
Site: Hope Brook Year: 1995
Ion Concentrations

Start Date	Ion Bal.	flg	H pH	flg	Cond.	flg	Alk CaCO3	flg	SO4	flg	XSO4	flg	NNO3	flg	Cl	flg	NNH4	flg	Na	flg	Ca	flg	Mg	flg	K	flg
			(mg/l)		(mg/l)		umhos		(mg/l)		(mg/l)		(mg/l)		(mg/l)		(mg/l)		(mg/l)		(mg/l)		(mg/l)		(mg/l)	
03-Jan-95	0.93		4.73		.0188		51.6		2.64		1.167		0.183		10.9	Q3	0.089		5.9	Q3	0.36		0.77	Q3	0.22	
									-1.06																	
10-Jan-95	3.99		4.61		.0247		22.4		1.52		1.170		0.239		2.65		0.03		1.4		0.18		0.19		0.07	
									-1.24																	
17-Jan-95	-7.42		6.19	Q3	.0007		6		0.57		.470		0.031		0.72		<0.005		0.4		0.44		0.058		0.02	
									0.48																	
25-Jan-95	3.67		5.34		.0046		17.7		1.06		.610		0.083		3.65		0.054		1.8		0.22		0.248		0.14	
									-0.16																	
31-Jan-95	0.36		5.74		.0018		32.5		3.08		.907		0.157		16.1	Q3	0.126		8.7	Q3	0.71	Q3	1.11	Q3	0.43	Q3
									0.14																	
09-Feb-95		I7		I7		I7		I7		I7		I7		I7		I7		I7		I7		I7		I7		I7
15-Feb-95	1.38		4.57		.0271		35.8		2.38		1.606		0.195		5.61		0.192		3.10		0.15		0.351		0.15	
									-1.55																	
21-Feb-95	0.63		5.04		.0092		19.9		1.80		1.375		0.131		3.00		0.131		1.70		0.39	Q3	0.193		0.08	
									-0.59																	
28-Feb-95	-0.63		5.05		.0090		15.3		1.44		1.090		0.141		2.38		0.054		1.40		0.35		0.137		0.24	
									-0.54																	
08-Mar-95	3.84		4.79		.0163		12.4		0.96		.830		0.068		1.16		0.053		0.52		0.07		0.075		0.04	
									-1.02																	
14-Mar-95	3.21		4.46		.0350		22.0		1.84		1.643	V3	0.179		1.39		0.144		0.62		0.08		0.094		0.04	
									-1.95																	
22-Mar-95	2.43		4.89		.0130		7.6		0.49		.439	V3	0.117		0.34		0.019		0.14		0.08		0.024		0.02	
									-0.80																	
28-Mar-95		I1		I1		I1		I1	1.50		1.241	V4	0.153		1.86											
04-Apr-95	0.89		4.80		.0160		11.2		0.87		.772		0.097		0.80		0.077		0.39		0.07		0.054		0.02	
									-0.93																	

11-Apr-95	1.94	4.76	.0175	11.4	0.84	.742		0.088	0.82
0.035	0.39	0.06	0.058	0.02	-1.02				
25-Apr-95	I2	I2	I2	I2	I2	I2	I2	I2	I2
I2	I2	I2	I2	I2	I2				
02-May-95	I1	5.33	.0047	I1	0.28	.254	V4	0.065	0.18
I1	I1	I1	I1	I1	-0.24				
09-May-95	I1	4.88	.0133	I1	0.60	.470	V4	0.122	0.93
I1	I1	I1	I1	I1	-0.75				
17-May-95	-2.83	4.45	.0358	17.2	1.49	1.444	V3	0.198	0.30
0.130	0.13	0.07	0.022	0.04	-1.90				
23-May-95	-1.12	4.49	.0326	16.3	1.37	1.321	V3	0.214	0.32
0.126	0.15	0.08	0.023	<0.02	-1.77				
31-May-95	3.13	4.51	.0311	23.5	2.48	2.435		0.548	0.31
0.396	0.18	0.38	0.060	0.10	-1.79				
06-Jun-95	2.60	4.88	.0133	9.6	0.68	.587		0.075	0.73
0.042	0.37	<0.06	0.046	0.02	-0.89				
13-Jun-95	0.70	4.76	.0175	9.5	0.79	.772		0.145	0.14
0.077	0.07	0.06	0.014	<0.02	-1.14				
20-Jun-95	-0.75	4.90	.0127	24.0	2.52	2.325		0.766	1.53
0.430	0.78	0.80	0.263	0.54	-0.52				
27-Jun-95	-0.76	4.63	.0236	11.4	0.79	.773	V3	0.152	0.09
0.050	0.02	<0.06	0.008	<0.02	-1.44				
06-Jul-95	7.06	4.81	.0156	24.0	2.45	2.063		0.143	3.31
0.110	1.55	0.49	0.209	0.07	-0.94				
11-Jul-95	1.30	4.25	.0567	38.6	3.30	3.122	V2	0.617	1.42
0.406	0.71	0.45	0.107	0.06	-3.18				
18-Jul-95	2.18	4.62	.0242	13.3	1.04	1.002		0.133	0.35
0.075	0.15	<0.06	0.020	<0.02	-1.33				
25-Jul-95	3.88	4.76	.0175	13.6	1.10	.987		0.115	0.92
0.085	0.45	0.09	0.058	0.02	-1.04				
02-Aug-95	I2	I2	I2	I2	I2	I2	I2	I2	I2
I2	I2	I2	I2	I2	I2				
08-Aug-95	0.25	5.06	.0088	6.3	0.26	.217		0.100	0.36
0.041	0.17	<0.06	0.022	<0.02	-0.37				
15-Aug-95	3.76	4.68	.0211	18.3	1.35	1.142		0.173	1.62

0.103 0.83 0.09 0.122 0.04 -1.21
23-Aug-95 3.62 4.99 .0103 8.7 0.62 .512 0.061 0.88
0.042 0.43 <0.06 0.057 0.04 -0.70
29-Aug-95 3.70 4.64 .0231 16.5 1.10 .950 0.233 1.17
0.140 0.60 <0.06 0.074 0.03 -1.31
05-Sep-95 0.00 4.36 .0440 24.6 1.99 1.842 0.244 1.21
0.177 0.59 0.08 0.073 0.04 -2.56
14-Sep-95 -1.68 4.74 .0183 12.1 0.92 .802 0.082 0.93
0.086 0.47 0.06 0.054 0.03 -1.19
19-Sep-95 1.73 4.80 .0160 12.6 1.03 .870 0.129 1.33
0.148 0.64 0.08 0.080 0.04 -1.07
26-Sep-95 0.35 4.96 .0111 13.1 0.93 .712 0.136 1.61
0.085 0.87 0.16 0.110 0.08 -0.77
03-Oct-95 I2 I2 I2 I2 I2 I2 I2 I2
I2 I2 I2 I2 I2 I2
10-Oct-95 2.52 4.62 .0242 20.6 1.58 1.280 0.151 2.31
0.133 1.20 0.11 0.134 0.05 -1.54
17-Oct-95 3.00 4.75 .0179 11.5 0.91 .777 0.126 1.03
0.057 0.53 0.07 0.061 <0.02 -1.10
24-Oct-95 -0.50 4.32 .0482 38.3 2.65 1.963 0.384 4.62
0.242 2.75 0.14 0.255 0.09 -2.64
31-Oct-95 2.17 5.07 .0086 7.26 0.40 .247 0.037 1.22
0.009 .61 <0.06 0.070 0.02 -0.61
07-Nov-95 3.15 4.77 .0171 25.1 1.44 .790 0.161 4.99
0.073 2.60 0.14 0.316 0.11 -1.15
14-Nov-95 4.65 5.19 .0065 5.08 0.35 .247 0.022 0.87
<0.005 .41 <0.06 0.048 0.02 -0.63
21-Nov-95 5.08 4.93 .0118 11.55 0.66 .400 0.059 2.15
0.018 1.04 <0.06 0.124 0.04 -0.84
28-Nov-95 5.32 4.23 .0594 42.0 3.19 2.528 0.526 4.96
0.059 2.65 0.23 0.317 0.13 -3.37
05-Dec-95 I1 4.64 .0231 75.7 Q3 3.89 1.068 0.318 I1
.035 11.3 Q3 0.42 1.20 Q3 0.43 Q3 -1.38
12-Dec-95 -6.44 6.09 Q3 .0008 I1 2.39 1.166 0.338 7.81
0.251 4.90 0.73 0.765 0.49 0.80

19-Dec-95	-12.13	5.45	.0036	2.20	0.09	.077	0.033	0.10
<0.005	0.05	<0.06	0.007	0.04	-0.37			
26-Dec-95	I1	I1	I1	I1	I1	I1	I1	I1
I1	I1	I1	I1	I1				

Newfoundland Environment Precipitation Monitoring Network
(NEPMoN)
Site: Loch Leven Year: 1995

Rain Collection Statistics

Sample Id No	Start Date	End Date	Coll. Effic. (%) flg	No. of Gauge Days	Gauge Type	Sample Volume (ml)	Sample Prec Type	Depth (mm)	flg	Gauge Depth (mm)	flg
6101	28-Dec-94	04-Jan-95	7.5	7	SG	200.0	S	3.1		41.4	
	04-Jan-95	11-Jan-95	0.0	7		0.0		0.0		81.0	
	11-Jan-95	18-Jan-95	I1	7					I1	87.6	
	18-Jan-95	25-Jan-95	I1	7					I1	25.0	
	25-Jan-95	01-Feb-95	I1	7					I1		
6102	01-Feb-95	08-Feb-95	191.4	7	SG	3000.0	S	46.7		24.4	
6103	08-Feb-95	15-Feb-95	133.3	7	SG	1000.0	S	15.6		11.7	
6104	15-Feb-95	22-Feb-95	53.1	7	SG	1000.0	S	15.6		29.4	
6105	22-Feb-95	02-Mar-95	54.4	8	SG	1000.0	S	15.6		28.7	
6106	02-Mar-95	09-Mar-95	251.6	7	SG	2000.0	S	31.2		12.4	
6107	09-Mar-95	16-Mar-95	780.0	7	SG	1000.0	S	15.6		2.0	
6108	16-Mar-95	21-Mar-95	780.0	5	SG	1000.0	S	15.6		2.0	
6109	21-Mar-95	29-Mar-95	1112.5	8	SG	4000.0	S	62.3		5.6	
6110	29-Mar-95	05-Apr-95	61.4	7	SG	1000.0	S	15.6		25.4	
6111	05-Apr-95	12-Apr-95	205.3	7	RG	2000.0	R	31.2		15.2	
6112	12-Apr-95	19-Apr-95		7		3000.0		46.7		19.1	

			244.5		RG		R		
6113	19-Apr-95	25-Apr-95		6	2000.0	31.2		8.1	
			385.2		RG		R		
6114	25-Apr-95	03-May-95		8	1000.0	15.6		22.4	
			69.6		RG		R		
	03-May-95	11-May-95		8	0.0	0.0			
			0.0						
	11-May-95	18-May-95		7	0.0	0.0			
			0.0						
6115	18-May-95	25-May-95		7	3000.0	46.7			
				I1	RG		R		
6116	25-May-95	31-May-95		6	3000.0	46.7		4.6	
			1015.2		RG		R		
6117	31-May-95	08-Jun-95		8	4000.0	62.3		13.7	
			454.7		RG		R		
6118	08-Jun-95	14-Jun-95		6	4000.0	62.3		11.9	
			523.5		RG		R		
6119	14-Jun-95	22-Jun-95		8	3000.0	46.7		82.8	
			56.4		RG		R		
	22-Jun-95	05-Jul-95		13				I1	54.4
				I1					
6120	05-Jul-95	13-Jul-95		8	175.0	2.7		5.1	
			52.9		RG		R		
6121	13-Jul-95	20-Jul-95		7	255.0	4.0		7.6	
			52.6		RG		R		
6122	20-Jul-95	26-Jul-95		6	4495.0	70.0		69.6	
			100.6		RG		R		
6123	26-Jul-95	03-Aug-95		8	1915.0	29.8		34.5	
			86.4		RG		R		
6124	03-Aug-95	10-Aug-95		7	105.0	1.6		5.1	
			31.4		RG		R		
6125	10-Aug-95	17-Aug-95		7	745.0	11.6		10.2	
			113.7		RG		R		
6126	17-Aug-95	24-Aug-95		7	235.0	3.7		7.1	
			52.1		RG		R		
6127	24-Aug-95	31-Aug-95		7	3540.0	55.1		46.7	
			118.0		RG		R		
6128	31-Aug-95	07-Sep-95		7	535.0	8.3		5.1	
			162.7		RG		R		
6129	07-Sep-95	14-Sep-95		7	1240.0	19.3		22.9	
			84.3		RG		R		
6130	14-Sep-95	21-Sep-95		7	1430.0	22.3		22.9	

			97.4		RG		R			
6131	21-Sep-95	28-Sep-95			7	885.0	13.8	5.1		
			270.6		RG		R			
6132	28-Sep-95	05-Oct-95			7	1830.0	28.5	30.5		
			93.4		RG		R			
6133	05-Oct-95	12-Oct-95			7	2590.0	10.3	10.3	Q1	
			100.0	I8	RG		R			
6134	12-Oct-95	19-Oct-95			7	2255.0	35.1	35.1	Q1	
			100.0	I8	RG		R			
6135	19-Oct-95	26-Oct-95			7	750.0	11.7	11.7	Q1	
			100.0	I8	RG		R			
6136	26-Oct-95	02-Nov-95			7	500.0	7.8	7.8	Q1	
			100.0	I8	RG		R			
6137	02-Nov-95	08-Nov-95			6	1705.0	26.6	26.6	Q1	
			100.0	I8	RG		R			
6138	08-Nov-95	16-Nov-95			8	2190.0	34.1	27.4		
			124.5		RG		R			
6139	16-Nov-95	23-Nov-95			7	1340.0	20.9	11.9		
			175.6		RG		R			
6140	23-Nov-95	30-Nov-95			7	3870.0	60.3	62.2		
			96.9		RG		R			
6141	30-Nov-95	07-Dec-95			7	1290.0	20.1	20.3		
			99.0		RG		M			
6142	07-Dec-95	16-Dec-95			9	3770.0	58.7	61.2		
			95.9		RG		M			
6143	16-Dec-95	21-Dec-95			5	1020.0	15.9	20.6		
			77.2		RG		M			
6144	21-Dec-95	29-Dec-95			8	1855.0	28.9	16.8		
			172.0		RG		M			

Newfoundland Environment Precipitation Monitoring Network (NEPMoN)
Site: Loch Leven Year: 1995
Ion Concentrations

Start Date	Ion Bal.	flg	Ca	flg	H pH	flg	Mg (mg/l)	flg	Cond. umhos	flg	K (mg/l)	flg	Alk CaCO3 (mg/l)	flg	SO4 (mg/l)	flg	XSO4 (mg/l)	flg	NNO3 (mg/l)	flg	Cl (mg/l)	flg	NNH4 (mg/l)	flg
28-Dec-94		I1	4.55		.0284				I1		2.46	Q3			.912	V2			0.181		11.5	Q3		
0.027	6.2	Q3		I1		I1		I1		I1	-1.21													
04-Jan-95		I2		I2		I2		I2		I2		I2		I2		I2		I2		I2		I2		I2
11-Jan-95		I2		I2		I2		I2		I2		I2		I2		I2		I2		I2		I2		I2
18-Jan-95		I2		I2		I2		I2		I2		I2		I2		I2		I2		I2		I2		I2
25-Jan-95		I2		I2		I2		I2		I2		I2		I2		I2		I2		I2		I2		I2
01-Feb-95		I1	4.5		.0319				I1		1.75				.801	V2			0.211		7.31			
0.005	3.8			I1		I1		I1		I1	-1.4													
08-Feb-95	2.52		4.46		.0350		34.5				1.31				.710				0.367		4.65			
0.032	2.40		0.11		0.318		0.10				-2.08													
15-Feb-95		I8		I8		I8		I8		I8		I8		I8		I8		I8		I8		I8		I8
22-Feb-95		I8		I8		I8		I8		I8		I8		I8		I8		I8		I8		I8		I8
02-Mar-95		I8		I8		I8		I8		I8		I8		I8		I8		I8		I8		I8		I8
09-Mar-95		I8		I8		I8		I8		I8		I8		I8		I8		I8		I8		I8		I8
16-Mar-95		I8		I8		I8		I8		I8		I8		I8		I8		I8		I8		I8		I8
21-Mar-95	1.88		4.25		.0567		32.4				2.45				2.312				0.474		1.08			
0.276	0.55		0.09		0.072		0.03				-3.18													
29-Mar-95	0.82		4.70		.0201		20.6				0.89				.515				0.204		2.87			
0.039	1.50		0.12		0.184		0.12				-1.29													
05-Apr-95	-0.69		5.11		.0078		15.8				0.99				.603				0.048		2.71			

<0.005 1.55 0.14 0.203 0.11 -0.46
12-Apr-95 -0.60 4.73 .0188 22.4 1.18 .743 0.113 3.07
<0.005 1.75 0.13 0.203 0.10 -1.15
19-Apr-95 1.92 4.50 .0319 17.9 1.63 1.535 0.097 0.65
0.033 0.38 <0.06 0.051 0.03 -1.84
25-Apr-95 1.89 4.74 .0183 11.4 0.90 .832 0.128 0.50
0.027 0.27 0.09 0.040 0.03 -1.13
03-May-95 I2 I2 I2 I2 I2 I2 I2 I2
I2 I2 I2 I2 I2 I2
11-May-95 I2 I2 I2 I2 I2 I2 I2 I2
I2 I2 I2 I2 I2 I2
18-May-95 0.18 4.72 .0192 31.4 1.56 .811 0.131 5.53
0.014 3.00 0.23 0.386 0.13 -1.20
25-May-95 -0.13 4.11 .0782 46.4 4.07 3.795 0.438 1.98
0.285 1.10 0.22 0.151 0.12 -4.16
31-May-95 -4.99 5.19 .0065 5.1 0.39 .360 0.073 0.23
0.043 0.12 0.08 0.026 0.04 -0.47
08-Jun-95 -8.60 6.04 Q3 .0009 8.3 1.12 1.095 0.171 0.21
0.389 0.10 0.18 0.062 0.32 0.51
14-Jun-95 I7 I7 I7 I7 I7 I7 I7 I7
I7 I7 I7 I7 I7 I7
22-Jun-95 I2 I2 I2 I2 I2 I2 I2 I2
I2 I2 I2 I2 I2 I2
05-Jul-95 -9.51 5.52 .0030 9.8 1.16 1.085 0.158 0.58
0.334 0.30 0.12 0.067 0.44 -0.01
13-Jul-95 2.52 4.82 .0153 9.1 0.53 .450 0.101 0.65
<0.005 0.32 <0.06 0.043 0.02 -0.80
20-Jul-95 0.58 4.98 .0106 17.6 0.96 .573 0.187 2.74
0.113 1.55 0.11 0.149 0.22 -0.54
26-Jul-95 0.23 4.56 .0278 15.1 1.26 1.235 0.172 0.24
0.144 0.10 <0.06 0.014 <0.02 -1.62
03-Aug-95 I7 I7 I7 I7 I7 I7 I7 I7
I7 I7 I7 I7 I7 I7
10-Aug-95 I1 I1 I1 I1 1.25 .815 V4 0.140 3.12
<0.005 I1 I1 I1 I1
17-Aug-95 2.90 4.69 .0206 13.6 0.94 .847 0.169 0.68

0.039	0.37	0.07	0.041	0.07	-1.18				
24-Aug-95	-1.79	4.62	.0242	35.5	1.59	.778	0.156	6.06	
0.187	3.25	0.17	0.373	0.20	-1.34				
31-Aug-95	2.49	5.18	.0067	7.5	0.30	.167	0.031	1.08	
<0.005	0.53	<0.06	0.063	0.02	-0.40				
07-Sep-95	3.45	4.93	.0118	22.0	1.09	.528	0.062	4.46	
0.021	2.25	0.15	0.265	0.09	-0.74				
14-Sep-95	-1.16	4.24	.0580	29.1	2.43	2.210	0.316	1.56	
0.181	0.88	0.07	0.087	0.02	-3.16				
21-Sep-95	-0.42	4.79	.0163	11.5	1.13	1.037	0.134	0.74	
0.226	0.37	<0.06	0.042	0.04	-0.99				
28-Sep-95	I7	I7	I7	I1	I7	I7	I7	I7	I7
I7	I7	I7	I7	I7	I7				
05-Oct-95	-1.48	6.51 Q3	.0003	33.3	1.25	.276	0.028	7.55	
0.68	3.90	0.16	0.431	0.22	1.88 Q3				
12-Oct-95	I8	I8	I8	I8	I8	I8	I8	I8	I8
I8	I8	I8	I8	I8	I8				
19-Oct-95	2.88	4.68	.0211	26.1	1.67	1.095	0.227	4.43	
0.123	2.30	0.27	0.247	0.10	-1.33				
26-Oct-95	-4.51	4.82	.0153	6.8	0.47	.427	0.111	0.30	
0.031	0.17	<0.06	0.023	0.02	-0.91				
02-Nov-95	I8	I8	I8	I8	I8	I8	I8	I8	I8
I8	I8	I8	I8	I8	I8				
08-Nov-95	2.86	4.89	.0130	13.1	0.68	.405	0.053	2.22	
0.010	1.10	<0.06	0.141	0.06	-1.16				
16-Nov-95	1.32	4.73	.0188	14.7	0.83	.567	0.079	2.02	
0.010	1.05	<0.06	0.125	0.04	-1.34				
23-Nov-95	4.77	4.90	.0127	16.7	0.72	.345	0.086	3.09	
0.019	1.50	<0.06	0.197	0.06	-1.09				
30-Nov-95	4.25	4.78	.0167	22.7	1.24	.715	0.099	4.04	
0.022	2.10	<0.06	0.262	0.09	-1.20				
07-Dec-95	2.72	5.02	.0096	16.7	0.76	.310	0.067	3.43	
0.009	1.80	<0.06	0.223	0.11	-0.84				
16-Dec-95	3.37	5.15	.0071	25.1	1.17	.396	0.011	6.02	
0.015	3.10	0.09	0.385	0.12	-0.77				
21-Dec-95	0.94	5.30	.0051	15.5	0.58	.068	0.015	3.79	

<0.005	2.05	<0.06	0.242	0.08	-0.72

Newfoundland Environment Precipitation Monitoring Network
(NEPMoN)
Site: Loch Leven Year: 1998

Rain Collection Statistics

Sample Id No	Start Date	End Date	Effic. (%) flg	Coll. Gauge Type	No. of Gauge Days	Sample Volume (ml) Type	Sample Depth (mm) flg	Gauge Depth (mm) flg
6301	03-Jun-98	10-Jun-98	100.3	RG	7	805.0 R	12.5	12.5 Q1
	10-Jun-98	17-Jun-98		I1 RG	7		I1	V1
6302	17-Jun-98	24-Jun-98	99.9	RG	7	385.0 R	6.0	6.0 Q1
6303	24-Jun-98	01-Jul-98	100.0	RG	7	2420.0 R	37.7	37.7 Q1
6304	01-Jul-98	08-Jul-98	99.8	RG	7	910.0 R	14.2	14.2 Q1
6305	08-Jul-98	15-Jul-98	100.0	RG	7	3280.0 R	51.1	51.1 Q1
6306	15-Jul-98	22-Jul-98	100.5	RG	7	600.0 R	9.3	9.3 Q1
6307	22-Jul-98	29-Jul-98	100.2	RG	7	1550.0 R	24.1	24.1 Q1
6308	29-Jul-98	04-Aug-98	99.3	RG	6	325.0 R	5.1	5.1 Q1
	04-Aug-98	12-Aug-98		I1 RG	8		I1	V1
6309	12-Aug-98	19-Aug-98	100.0	RG	7	5545.0 R	86.4	86.4 Q1
6310	19-Aug-98	26-Aug-98	99.9	RG	7	1975.0 R	30.8	30.8 Q1
6311	26-Aug-98	02-Sep-98	182.5	RG	7	1230.0 R	19.2	10.5
6312	02-Sep-98	09-Sep-98	91.0	RG	7	2990.0 R	46.6	51.2
6313	09-Sep-98	16-Sep-98	105.8	RG	7	2295.0 R	35.7	33.8
6314	16-Sep-98	23-Sep-98			7	3080.0	48.0	47.8

			100.4		RG		R			
6315	23-Sep-98	30-Sep-98		7	2240.0	34.9		27.5		
			126.9		RG		R			
6316	30-Sep-98	07-Oct-98		7	1475.0	23.0		17.8		
			129.1		RG		R			
6317	07-Oct-98	14-Oct-98		7	650.0	10.1		7.0		
			144.6		RG		R			
6318	14-Oct-98	21-Oct-98		7	1655.0	25.8		20.0		
			128.9		RG		R			
6319	21-Oct-98	04-Nov-98		14	850.0	13.2		31.0		
			42.7		RG		R			
6320	04-Nov-98	11-Nov-98		7	1300.0	20.2		10.3		
			196.6		RG		S			
6321	11-Nov-98	18-Nov-98		7	2355.0	36.7		36.7		Q1
			100.0		RG		S			
6322	18-Nov-98	26-Nov-98		8	430.0	6.7		6.7		Q1
			100.0		RG		R			
	26-Nov-98	02-Dec-98		6	360.0	5.6		5.6		Q1
			100.1		RG		M			
	02-Dec-98	09-Dec-98		7					I1	Q1
				I1	RG		M			
6323	09-Dec-98	16-Dec-98		7	395.0	6.2		5.0		
			123.1		RG		M			
6324	16-Dec-98	23-Dec-98		7	4210.0	65.6		60.8		
			107.9		RG		M			
6325	23-Dec-98	30-Dec-98		7	410.0	6.4		4.5		
			141.9		RG		M			
6326	30-Dec-98	06-Jan-99		7	310.0	4.8		18.3		
			26.4		RG		M			

Newfoundland Environment Precipitation Monitoring Network (NEPMoN)
Site: Loch Leven Year: 1998
Ion Concentrations

Start Date	Ion Bal.	flg	H pH	flg	Cond. (mg/l)	flg	SO4 umhos	flg	Alk CaCO3 (mg/l)	flg	XSO4 (mg/l)	flg	NNO3 (mg/l)	flg	Cl (mg/l)	flg	NNH4 (mg/l)	flg	Na (mg/l)	flg	Ca (mg/l)	flg	Mg (mg/l)	flg	K (mg/l)	flg
03-Jun-98	-9.10		4.93		.0118		10.70		0.60		.352		0.05		1.70		0.06		0.99		0.10		0.13		0.08	
10-Jun-98		I2		I2		I2		I2		I2		I2		I2		I2		I2		I2		I2		I2		I2
17-Jun-98	-6.36		3.84		.1457		57.20		5.05		4.975		1.02		0.59		0.61		0.30		0.21		0.08		0.11	
24-Jun-98	-31.28		4.88		.0133		4.90		0.29		.277		0.07		0.09		0.04		0.05		0.09		0.05		0.04	
01-Jul-98	-26.76		4.77		.0171		6.60		0.35		.340		0.09		0.08		0.04		0.04		<0.07		0.04		0.04	
08-Jul-98	-18.49		4.96		.0111		5.70		0.32		.257		0.05		0.44		0.04		0.25		<0.07		0.06		0.06	
15-Jul-98	-7.91		4.26		.0554		21.00		1.87		1.860	V2	0.41		0.15		0.25		0.04		0.10		0.04		0.08	
22-Jul-98		I6		I6		I6		I6		I6		I6		I6		I6		I6		I6		I6		I6		I6
29-Jul-98	-11.58		4.48		.0334		13.90		0.90		.815		0.10		0.68		0.06		0.34		<0.07		<0.04		0.05	
04-Aug-98		I2		I2		I2		I2		I2		I2		I2		I2		I2		I2		I2		I2		I2
12-Aug-98	-16.60		4.70		.0201		8.30		0.57		.510		0.08		0.44		0.05		0.24		<0.07		0.06		0.05	
19-Aug-98	-11.81		4.28		.0529		19.80		1.85		1.830		0.23		0.18		0.22		0.08		<0.07		<0.04		0.04	
26-Aug-98	-21.35		4.69		.0206		7.30		0.61		.597		0.06		0.09		0.04		0.05		<0.07		<0.04		0.05	
02-Sep-98	-8.33		4.57		.0271		14.10		0.92		.757		0.12		1.20		0.10		0.65		<0.07		0.09		0.05	

09-Sep-98 -4.29 5.02 .0096 34.00 1.53 .326 0.05 8.50
<0.03 4.82 0.35 Q3 0.68 0.24 -0.80
16-Sep-98 -9.45 4.10 .0801 34.70 3.07 Q3 2.955 Q3 0.31 Q3 0.80
0.23 0.46 0.14 0.09 0.04 -4.10
23-Sep-98 -11.58 5.29 .0052 14.10 0.85 .507 0.10 2.38
0.25 1.37 0.22 0.23 0.14 -0.50
30-Sep-98 -5.06 4.39 .0411 104.00 5.36 1.939 0.27 22.80 Q3
0.36 13.70 Q3 0.65 Q3 1.80 Q3 0.53 -2.40
07-Oct-98 -15.57 4.61 .0247 12.00 0.70 .615 0.15 0.58
0.05 0.34 0.13 0.08 0.04 -1.30
14-Oct-98 -6.43 4.55 .0284 18.50 1.28 .982 0.14 2.15
0.11 1.19 0.18 0.15 0.06 -1.70
21-Oct-98 -3.64 4.63 .0236 22.20 1.24 .753 0.11 3.54
0.10 1.95 0.14 0.23 0.09 -1.50
04-Nov-98 -3.47 4.64 .0231 22.00 1.27 .775 0.12 3.55
0.11 1.98 0.14 0.23 0.08 -1.60
11-Nov-98 -8.22 5.01 .0099 21.30 0.79 .120 0.01 4.60
<0.03 2.68 0.24 0.38 0.10 -0.90
18-Nov-98 -4.31 4.64 .0231 20.50 1.03 .625 0.17 2.94
0.10 1.62 0.16 0.20 0.08 -1.50
26-Nov-98 I2 I2 I2 I2 I2 I2 I2 I2 I2
I2 I2 I2 I2 I2 I2
02-Dec-98 I2 I2 I2 I2 I2 I2 I2 I2 I2
I2 I2 I2 I2 I2 I2
09-Dec-98 -2.33 4.26 .0554 103.00 4.51 1.539 0.73 20.80
0.41 11.90 0.64 1.50 0.41 -3.20
16-Dec-98 -5.95 4.57 .0271 28.30 1.47 .733 0.13 5.10
0.11 2.95 0.23 Q3 0.36 0.11 -1.70
23-Dec-98 I1 I1 I1 I1 3.14 .793 0.17 18.40
I1 9.40 0.46 1.33 0.31 I1
30-Dec-98 I1 I1 I1 I1 3.89 1.068 0.20 21.10
0.40 11.30 0.59 1.37 0.40 I1

Newfoundland Environment Precipitation Monitoring Network
(NEPMoN)
Site: Salmonier Year: 1994

Rain Collection Statistics

Sample Id No	Start Date	End Date	Effic. (%) flg	Coll. Gauge Days	No. of Gauge Type	Sample Volume (ml)	Sample Prec Type	Sample Depth (mm)	flg	Gauge Depth (mm)	flg
14201	13-Jan-94	20-Jan-94	173.1	7	SG	3880.0	M	60.4		34.9	
14202	20-Jan-94	02-Feb-94	72.2	13	SG	2930.0	M	45.6		63.2	
14203	02-Feb-94	09-Feb-94	95.9	7	SG	1055.0	S	16.4		17.1	
14204	09-Feb-94	23-Feb-94	21.2	14	SG	760.0	S	11.8		55.6	
14205	23-Feb-94	02-Mar-94	54.1	7	SG	760.0	S	11.8		21.8	
14206	02-Mar-94	08-Mar-94	89.9	6	RG	2290.0	R	35.7		39.7	
14207	08-Mar-94	16-Mar-94	98.9	8	SG	8884.0	M	138.4		140.0	
14208	16-Mar-94	23-Mar-94	102.7	7	RG	1235.0	R	19.2		18.7	
14209	23-Mar-94	30-Mar-94	223.1	7	SG	4470.0	M	69.6		31.2	
14210	30-Mar-94	07-Apr-94	194.6	8	RG	1150.0	R	17.9		9.2	
14211	07-Apr-94	13-Apr-94	99.0	6	RG	3710.0	R	57.8		58.4	
14212	13-Apr-94	20-Apr-94	181.2	7	RG	2910.0	R	45.3		25.0	
14213	20-Apr-94	06-May-94	123.6	16	RG	3840.0	R	59.8		48.4	
14214	06-May-94	18-May-94	70.1	12	RG	3365.0	R	52.4		74.8	
14215	18-May-94	25-May-94	96.7	7	RG	185.0	R	2.9		3.0	
14216	25-May-94	08-Jun-94		14		5990.0		93.3		99.9	

			93.4		RG	R			
14217	08-Jun-94	15-Jun-94		7	60.0	0.9	0.1	V1	
			930.0	I7	RG	R			
14218	15-Jun-94	29-Jun-94		14	1630.0	25.4	21.8		
			116.5		RG	R			
14219	29-Jun-94	13-Jul-94		14	1335.0	20.8	26.0		
			80.0		RG	R			
14220	13-Jul-94	20-Jul-94		7	1945.0	30.3	30.0		
			101.0		RG	R			
14221	20-Jul-94	27-Jul-94		7	2510.0	39.1	43.8		
			89.3		RG	R			
14222	27-Jul-94	03-Aug-94		7	75.0	1.2	0.0	V1	
				I7	RG	R			
14223	03-Aug-94	10-Aug-94		7	6190.0	96.4	89.4		
			107.8		RG	R			
14224	10-Aug-94	17-Aug-94		7	130.0	2.0	7.4		
			27.0		RG	R			
14225	17-Aug-94	24-Aug-94		7	670.0	10.4	17.0		
			61.2		RG	R			
14226	24-Aug-94	14-Sep-94		21	5345.0	83.3	75.4		
			110.5		RG	R			
14227	14-Sep-94	21-Sep-94		7	2025.0	31.5	34.0		
			92.6		RG	R			
14228	21-Sep-94	14-Oct-94		23	6715.0	104.6	116.1		
			90.1		RG	R			
14229	14-Oct-94	20-Oct-94		6	1440.0	22.4	23.8		
			94.1		RG	R			
14230	20-Oct-94	27-Oct-94		7	1535.0	23.9	17.0		
			140.6		RG	R			
14231	27-Oct-94	17-Nov-94		21	6495.0	101.2	103.2		
			98.1		SG	M			
14232	17-Nov-94	23-Nov-94		6	1005.0	15.7	17.4		
			90.2		RG	R			
14233	23-Nov-94	30-Nov-94		7	2450.0	38.2	30.7		
			124.4		SG	M			
14234	30-Nov-94	07-Dec-94		7	2135.0	33.3	33.3	Q1	
			100.0		SG	S			
14235	07-Dec-94	14-Dec-94		7	3110.0	48.4	48.4	Q1	
			100.0		RG	R			
14236	14-Dec-94	04-Jan-95		21	5835.0	90.9	90.9	Q1	
			100.0		SG	M			

Newfoundland Environment Precipitation Monitoring Network (NEPMoN)
Site: Salmonier Year: 1994
Ion Concentrations

Start Date	Ion Bal.	flg	H pH	flg	Cond.	flg	Alk SO4 CaCO3	flg	XSO4	flg	NNO3	flg	Cl	flg	NNH4	flg	Na	flg	Ca	flg	Mg	flg	K	flg
			(mg/l)		(mg/l)		umhos		(mg/l)		(mg/l)		(mg/l)		(mg/l)		(mg/l)		(mg/l)		(mg/l)		(mg/l)	
13-Jan-94	6.53		5.04		.0092		12.6		0.59		.332		0.054		2.23		0.016		1.03		<0.06		0.143		0.04	
20-Jan-94	1.77		5.16		.0070		9.4		0.47		.252		0.034		1.68		0.018		0.87		<0.06		0.112		0.03	
02-Feb-94	0.14		4.62		.0242		37.7		1.71		.761		0.167		7.05		0.078		3.80		0.17		0.471		0.14	
09-Feb-94	-1.59		4.35		.0450		23.3		1.51		1.407		0.329	Q3	0.88		0.186		0.41		<0.06		0.055		0.02	
23-Feb-94	1.99		4.89		.0130		17.8		0.97		.595		0.090		2.87		0.055		1.50		0.08		0.192		0.06	
02-Mar-94	2.37		4.92		.0121		11.1		0.62		.420		0.079		1.61		0.032		0.80		0.03		0.117		0.03	
08-Mar-94	2.12		5.06		.0088		10.1		0.60		.410		0.041		1.57		0.037		0.76		0.06	Q3	0.110		0.03	
16-Mar-94	-1.99		4.89		.0130		9.5		0.69		.554	V3	0.050		0.90		0.065		0.43		0.06		0.065		0.02	
23-Mar-94	-1.11		5.14		.0073		3.5		0.30		.281	V3	0.032		0.18		0.028		0.05		<0.06		0.009		<0.02	
30-Mar-94	0.75		4.68		.0211		10.0		0.63		.562		0.174		0.61		0.062		0.27		<0.06		0.040		<0.02	
07-Apr-94	3.67		5.19		.0065		6.1		0.37		.285		0.032		0.72		0.018		0.34		<0.06		0.047		<0.02	
13-Apr-94	3.55		4.83		.0149		7.5		0.75		.712	V3	0.069		0.27		0.060		0.09		<0.06		0.018		<0.02	
20-Apr-94	0.49		4.42		.0383		17.8		1.53		1.477	V3	0.219		0.38		0.130		0.15		<0.06		0.025		<0.02	
06-May-94	0.44		4.91		.0124		8.0		0.60		.507		0.070		0.79		0.028		0.37		0.09		0.052		<0.02	

18-May-94	-3.26	4.31	.0494	34.8	2.78	2.442	0.374	2.50
0.320	1.35	0.34	0.188	0.10	-2.24			
25-May-94	0.75	4.50	.0319	16.6	1.39 Q3	1.304 Q3	0.181 Q3	0.60
0.138	0.26	<0.06	0.041	<0.02	-1.36			
08-Jun-94	I1	3.92	.1212	I1	3.17	2.992	0.891	1.35
0.180	0.71	I1	0.098	I1	-5.42			
15-Jun-94	-0.94	4.71	.0197	12.3	1.01	.892	0.151	0.9
0.1	0.47	0.09	0.069	0.04	-1.02			
29-Jun-94	-3.28	4.48	.0334	17.5	1.41	1.320 V2	0.170	0.74
0.122	0.36	0.08	0.056	0.02	-1.77			
13-Jul-94	-0.98	4.61	.0247	12.1	1.09	1.072	0.123	0.18
0.103	0.07	<0.06	0.007	<0.02	-1.29			
20-Jul-94	0.56	4.59	.0259	11.6	0.93	.920 V2	0.133	0.17
0.056	0.04	<0.06	<0.002	<0.02	-1.27			
27-Jul-94	I1	4.29	.0517	I1	1.49	1.305 V2	0.138	1.42
0.031	0.74	I1	I1	I1	-2.10			
03-Aug-94	-12.37	5.16	.0070	3.36	0.13	.109 V3	0.037	0.15
<0.005	0.06	<0.06	0.010	<0.02	-0.23			
10-Aug-94	I1	3.85	.1424	I1	10.5	8.852 V2	0.939	12.3
0.669	6.60	1.22 Q3	I1	I1	-6.63			
17-Aug-94	0.17	4.42	.0383	18.7	1.39	1.275	0.175	1.01
0.059	0.46	<0.06	0.063	0.03	-1.61			
24-Aug-94	-0.53	4.80	.0160	8.58	0.66	.597	0.074	0.55
0.045	0.25	<0.06	0.036	0.02	-0.64			
14-Sep-94	-0.84	4.18	.0666	33.6	3.01	2.760	0.229	2.16
0.235	1.00	0.07	0.136	0.05	-2.75			
21-Sep-94	I8	I8	I8	I8	I8	I8	I8	I8
I8	I8	I8	I8	I8	I8			
14-Oct-94	2.06	5.12	.0076	10.8	0.52	.270	0.020	1.98
0.017	1.00	<0.06	0.125	0.05	-0.20			
20-Oct-94	-4.52	4.71	.0197	9.11	0.66	.617	0.092	0.38
0.048	0.17	<0.06	0.023	<0.02	-0.79			
27-Oct-94	7.69	4.81	.0156	13.9	0.74	.512	0.076	2.15
0.024	0.91	<0.06	0.128	0.04	-0.58			
17-Nov-94	5.37	5.59	.0026	10.3	0.48	.230	0.029	2.16

0.108	1.00	<0.06	0.131	0.04	0.17				
23-Nov-94	0.62	5.45	.0036	6.39	0.34	.217	0.043	1.03	
0.094	0.49	<0.06	0.066	0.02	0.03				
30-Nov-94	1.55	4.74	.0183	10.8	0.54	.420	0.149	1.07	
0.052	0.48	<0.06	0.069	0.02	-0.78				
07-Dec-94	I8	I8	I8	I8	I8	I8	I8	I8	I8
I8	I8	I8	I8	I8	I8				
14-Dec-94	4.03	4.84	.0146	11.9	0.77	.590	0.055	1.50	
0.013	0.72	<0.06	0.103	0.03	-0.65				

Newfoundland Environment Precipitation Monitoring Network
(NEPMoN)
Site: Salmonier Year: 1995

Rain Collection Statistics

Sample Id No	Start Date	End Date	Effic. (%) flg	Coll. Gauge Days Type	No. of Sample Volume (ml) Type	Sample Depth (mm) flg	Gauge Depth (mm) flg
14301	04-Jan-95	11-Jan-95	155.6 Q7	7	4997.0	77.8	50.0 Q9
14302	11-Jan-95	19-Jan-95	95.9 Q7	8	3137.0	48.9	51.0 Q9
14303	19-Jan-95	25-Jan-95	I7	6	1447.0	22.5	0.0 V1
14304	25-Jan-95	08-Feb-95	108.5 Q7	14	1962.0	30.6	28.2 Q9
14305	08-Feb-95	16-Feb-95	100.0 I8	8	437.0	6.8	6.8 Q1
14306	16-Feb-95	08-Mar-95	100.0 I8	20	4752.0	74.0	74.0 Q1
14307	08-Mar-95	16-Mar-95	100.0 I8	8	2132.0	33.1	33.1 Q1
14308	16-Mar-95	23-Mar-95	100.0 I8	7	1807.0	28.1	28.1 Q1
14309	23-Mar-95	30-Mar-95	100.0 I8	7	2367.0	36.9	36.9 Q1
14310	30-Mar-95	05-Apr-95	100.0 I8	6	582.0	9.1	9.1 Q1
14311	05-Apr-95	12-Apr-95	100.0 I8	7	1067.0	16.6	16.6 Q1
14312	12-Apr-95	19-Apr-95	100.0 I8	7	782.0	12.2	12.2 Q1
14313	19-Apr-95	03-May-95	100.0 I8	14	4142.0	64.5	64.5 Q1
14315	03-May-95	13-Jun-95	100.0 I8	41	4007.0	62.4	62.4 Q1
14316	13-Jun-95	19-Jun-95	113.5 Q7	6	1242.0	19.3	17.0 Q9
14317	19-Jun-95	26-Jun-95		7	365.0	5.7	8.2

		69.5							
14318	26-Jun-95	03-Jul-95	7	1735.0	27.0		8.5		
		317.6							
14319	03-Jul-95	10-Jul-95	7	65.0	1.0		1.2		
		83.3							
14320	10-Jul-95	17-Jul-95	7	945.0	14.7		13.6		
		108.1							
	17-Jul-95	24-Jul-95	7			I1	54.7	Q9	
		I1							
	24-Jul-95	08-Aug-95	15			I1	23.4	Q9	
		I1							
14321	08-Aug-95	16-Aug-95	8	1062.0	16.5		10.4		
		158.7							
14322	16-Aug-95	22-Aug-95	6	845.0	13.2		11.5		
		114.8		R					
14323	22-Aug-95	29-Aug-95	7	2060.0	32.1		36.0	Q9	
		89.2 Q7		R					
14324	29-Aug-95	05-Sep-95	7	1955.0	30.4		31.6	Q9	
		96.2 Q7		R					
14325	05-Sep-95	12-Sep-95	7	4315.0	67.2		63.7		
		105.5		R					
14326	12-Sep-95	19-Sep-95	7	2090.0	32.6		27.6		
		118.1		R					
14327	19-Sep-95	26-Sep-95	7	340.0	5.3		5.0		
		106.0		R					
14328	26-Sep-95	03-Oct-95	7	900.0	14.0		16.6	Q9	
		84.3 Q7		R					
14329	03-Oct-95	10-Oct-95	7	2410.0	37.5		36.4		
		103.0		R					
14330	10-Oct-95	17-Oct-95	7	950.0	14.8		12.4		
		119.4		R					
14331	17-Oct-95	24-Oct-95	7	575.0	9.0		10.0		
		90.0		R					
14332	24-Oct-95	31-Oct-95	7	3085.0	48.1		43.8	Q9	
		109.8 Q7		R					
14333	31-Oct-95	07-Nov-95	7	1360.0	21.2		10.0	Q9	
		212.0 Q7		R					
14334	07-Nov-95	15-Nov-95	8	1100.0	17.1		12.4		
		137.9		R					
14335	15-Nov-95	21-Nov-95	6	480.0	7.5		23.8	Q9	
		31.5 Q7		R					
14336	21-Nov-95	28-Nov-95	7	6325.0	98.5		35.9	Q9	

		274.4	Q7		R			
14337	28-Nov-95	05-Dec-95		7	1240.0	19.3	42.0	Q9
		46.0	Q7		R			
14338	05-Dec-95	12-Dec-95		7	5575.0	86.8	89.8	
		96.7			R			
14339	12-Dec-95	02-Jan-96		21	3010.0	46.9	46.9	Q9
		100.0	Q7					

Newfoundland Environment Precipitation Monitoring Network (NEPMoN)
Site: Salmonier Year: 1995
Ion Concentrations

Start Date	Ion Bal.	flg	H pH	flg	Cond.	flg	Alk SO4 CaCO3	flg	XSO4	flg	NNO3	flg	Cl	flg	NNH4	flg	Na	flg	Ca	flg	Mg	flg	K	flg
	(mg/l)		(mg/l)		(mg/l)		umhos		(mg/l)		(mg/l)		(mg/l)		(mg/l)		(mg/l)		(mg/l)		(mg/l)		(mg/l)	
04-Jan-95	1.92		5.22		.0061		16.4		0.63		.180		0.049		3.49									
0.034	1.8		0.08		0.221		0.07		-0.16															
11-Jan-95	-0.01		4.85		.0142		7.85		0.59		.520		0.044		0.62									
0.022	0.28		<0.06		0.04		<0.02		-0.56															
19-Jan-95	-0.78		5.22		.0061		5.51		0.18		.095		0.044		0.75									
0.024	0.34		<0.06		0.048		0.02		-0.11															
25-Jan-95	2.74		4.8		.0160		12.6		0.668		.470		0.085		1.63									
0.015	0.79		<0.06		0.108		0.03		-0.66															
08-Feb-95	-0.33		4.76		.0175		149		6.03		1.086		0.22		35.7	Q3								
0.257	19.8	Q3	0.8		2.44	Q3	0.71		-0.62															
16-Feb-95	1.63		4.66		.0221		14.6		1.07		.910		0.103		1.18									
0.028	0.64		<0.06		0.084		0.03		-1.21															
08-Mar-95	2.93		4.97		.0108		10.0		0.56		.392		0.027		1.39									
<0.005	0.67		<0.06		0.091		0.03		-0.63															
16-Mar-95	-1.02		4.85		.0142		15.5		0.91		.610		0.081		2.17									
0.069	1.20		0.06		0.148		0.05		-0.84															
23-Mar-95	2.60		4.79		.0163		14.2		0.86		.647		0.074		1.73									
0.042	0.85		<0.06		0.117		0.04		-0.96															
30-Mar-95	-0.20		4.91		.0124		8.8		0.72		.609	V3	0.047		0.71									
0.050	0.34		0.06		0.053		0.02		-0.73															
05-Apr-95	-1.49		4.42		.0383		27.0		2.16		1.860		0.199		2.23									
0.243	1.20		0.09		0.151		0.05		-2.02															
12-Apr-95	1.93		4.99		.0103		6.3		0.39		.327	V3	0.075		0.42									
0.023	0.19		<0.06		0.030		<0.02		-0.62															
19-Apr-95	-9.10		6.82	Q3	.0002		11.6		0.53		.385		0.018		1.21									
0.682	Q3	0.58		<0.06		0.078		0.02		2.23	Q3													
03-May-95	3.70		4.47		.0342		18.9		1.64		1.557		0.186		0.71									
0.118	0.33		<0.06		0.045		0.03		-1.92															

13-Jun-95	4.90	4.84	.0146	9.7	0.80	.722	0.078	0.66	0.053	0.31	<0.06	0.040	0.02	-0.78
19-Jun-95	-4.97	4.52	.0304	16.4	1.27	1.250	0.242	0.14	0.170	0.08	0.08	0.019	0.05	-1.73
26-Jun-95	2.51	4.92	.0121	7.2	0.37	.332	0.108	0.34	0.028	0.15	<0.06	0.018	<0.02	-0.73
03-Jul-95	I1	I1	I1	I1	1.89	1.309 V4	0.276	4.17	0.113	I1	I1	I1	I1	
10-Jul-95	-7.85	5.37	.0043	16.6	2.43	2.355	0.326	0.69	1.18	0.30	<0.06	0.060	0.19	0.31
17-Jul-95	I2	I2	I2	I2	I2	I2	I2	I2	I2	I2	I2	I2	I2	I2
24-Jul-95	I2	I2	I2	I2	I2	I2	I2	I2	I2	I2	I2	I2	I2	I2
08-Aug-95	0.45	5.27	.0054	5.3	0.33	.256 V3	0.051	0.49	0.026	0.23	0.07	0.035	0.02	-0.25
16-Aug-95	0.72	4.89	.0130	7.3	0.57	.544 V3	0.089	0.19	0.058	0.08	<0.06	0.012	<0.02	-0.80
22-Aug-95	-2.07	4.71	.0197	11.9	0.89	.787	0.057	0.82	0.053	0.41	<0.06	0.052	0.03	-1.22
29-Aug-95	-1.83	4.95	.0113	6.8	0.47	.412	0.056	0.47	0.034	0.23	<0.06	0.029	0.02	-0.79
05-Sep-95	-5.75	5.12	.0076	4.0	0.18	.160	0.041	0.20	<0.005	0.08	<0.06	0.010	<0.02	-0.63
12-Sep-95	-3.03	5.06	.0088	6.0	0.38	.305	0.029	0.57	0.017	0.30	<0.06	0.036	<0.02	-0.67
19-Sep-95	-1.61	4.99	.0103	I1	0.46	.265	0.055	1.45	0.020	0.78	<0.06	0.095	0.05	-0.72
26-Sep-95	-2.27	4.96	.0111	9.2	0.53	.380	0.060	1.08	0.036	0.60	<0.06	0.073	0.03	-0.77
03-Oct-95	2.40	4.85	.0142	10.5	0.61	.455	0.076	1.23	0.023	0.62	<0.06	0.068	0.02	-1.00
10-Oct-95	2.95	4.78	.0167	24.7	1.42	.833	0.143	4.47	0.073	2.35	0.15	0.246	0.18	-1.02
17-Oct-95	1.09	4.89	.0130	I1	0.62	.402	0.085	1.56						

0.024	0.87	<0.06	0.084	0.03	-0.89				
24-Oct-95	-1.42	4.76	.0175	9.3	0.70	.615	0.063	0.67	
0.034	0.34	<0.06	0.033	<0.02	-1.39				
31-Oct-95	-0.58	5.19	.0065	8.8	0.36	.122	0.015	1.71	
0.006	0.95	<0.06	0.085	0.03	-0.60				
07-Nov-95	-4.58	4.68	.0211	8.72	0.58	.542	0.110	0.31	
0.012	.15	<0.06	0.017	<0.02	-1.33				
15-Nov-95	I7	I7	I7	I7	I7	I7	I7	I7	I7
I7	I7	I7	I7	I7	I7				
21-Nov-95	1.56	5.03	.0094	12.6	0.54	.202	0.054	2.55	
0.013	1.35	<0.06	0.153	0.05	-0.87				
28-Nov-95	1.26	4.38	.0420	I1	2.52	1.845	0.294	4.95	
0.123	2.70	0.21 Q3	0.320	0.12	-2.35				
05-Dec-95	1.41	5.15	.0071	6.07	0.31	.190	0.032	0.97	
0.005	.48	<0.06	0.058	0.02	-0.63				
12-Dec-95	3.82	5.01	.0099	9.50	0.62	.427	0.056	1.48	
<0.005	.77	<0.06	0.108	0.02	-0.78				

Newfoundland Environment Precipitation Monitoring Network
(NEPMoN)
Site: Terra Nova - B Year: 1994

Rain Collection Statistics

Sample Id No	Start Date	End Date	Effic. (%) flg	Coll. Gauge Type	No. of Gauge Days	Sample Volume (ml)	Sample Prec Type	Sample Depth (mm) flg	Gauge Depth (mm) flg
15201	03-Jan-94	10-Jan-94	69.4	SG	7	1105.0	M	17.2	24.8
15202	10-Jan-94	17-Jan-94	64.4	SG	7	1035.0	M	16.1	25.0
15203	17-Jan-94	24-Jan-94	111.6	SG	7	1235.0	M	19.2	17.2
15204	24-Jan-94	31-Jan-94	74.3	SG	7	1430.0	M	22.3	30.0
15205	31-Jan-94	07-Feb-94	28.3	SG	7	345.0	S	5.4	19.0
15206	07-Feb-94	14-Feb-94	15.0	SG	7	250.0	S	3.9	26.0
15207	14-Feb-94	21-Feb-94	55.1	SG	7	1240.0	S	19.3	35.0
15208	21-Feb-94	28-Feb-94	101.5	SG	7	845.0	S	13.2	13.0
15209	28-Feb-94	07-Mar-94	68.7	SG	7	3375.0	M	52.6	76.6
15210	07-Mar-94	14-Mar-94	80.0	SG	7	1795.0	M	28.0	35.0
15211	14-Mar-94	21-Mar-94	105.6	SG	7	1575.0	M	24.5	23.2
15212	21-Mar-94	28-Mar-94	82.3	SG	7	1915.0	M	29.8	36.2
15213	28-Mar-94	04-Apr-94	61.0	SG	7	470.0	S	7.3	12.0
15214	04-Apr-94	11-Apr-94	118.8	RG	7	1100.0	R	17.1	14.4
	11-Apr-94	18-Apr-94	110.1	RG	7	580.0	R	9.0	8.2
15216	18-Apr-94	25-Apr-94			7	1125.0		17.5	16.5

			106.1	RG	R				
15217	25-Apr-94	02-May-94		7	1395.0	21.7		23.2	
			93.5	SG	M				
15218	02-May-94	09-May-94		7	4455.0	69.4		73.9	
			93.9	RG	R				
15219	09-May-94	16-May-94		7	1125.0	17.5		14.2	
			123.2	RG	R				
15220	16-May-94	23-May-94		7	185.0	2.9		8.8	
			32.7	RG	R				
15221	23-May-94	30-May-94		7	570.0	8.9		7.4	
			120.0	RG	R				
15222	30-May-94	06-Jun-94		7	2275.0	35.4		31.8	
			111.3	RG	R				
15223	06-Jun-94	13-Jun-94		7	930.0	14.5		15.7	
			92.4	RG	R				
15224	13-Jun-94	20-Jun-94		7	875.0	13.6		4.2	
			323.8	RG	R				
15225	20-Jun-94	27-Jun-94		7	1900.0	29.6		56.6	
			52.3	RG	R				
	27-Jun-94	04-Jul-94		7	930.0	14.5		11.2	
			129.5	RG	R				
15226	04-Jul-94	11-Jul-94		7	810.0	12.6		9.5	
			132.6	RG	R				
15227	11-Jul-94	18-Jul-94		7	475.0	7.4		22.0	
			33.6	RG	R				
15228	18-Jul-94	25-Jul-94		7	1100.0	17.1		24.0	
			71.3	RG	R				
15229	25-Jul-94	01-Aug-94		7	3950.0	61.5		37.8	
			162.7	RG	R				
15230	01-Aug-94	08-Aug-94		7	270.0	4.2		8.0	
			52.6	RG	R				
15231	08-Aug-94	15-Aug-94		7	4055.0	63.2		53.0	
			119.2	RG	R				
15232	15-Aug-94	22-Aug-94		7	15.0	0.2		0.1	V1
			234.0 I7	RG	R				
	22-Aug-94	29-Aug-94		7	0.0	0.0		5.0	
			0.0						
15233	29-Aug-94	05-Sep-94		7	985.0	15.3		8.3	
			184.3	RG	R				
15234	05-Sep-94	12-Sep-94		7	2320.0	36.1		35.4	
			102.0	RG	R				
15235	12-Sep-94	19-Sep-94		7	1700.0	26.5		33.8	

			78.4	RG	R			
15236	19-Sep-94	26-Sep-94		7	1345.0	21.0	9.8	
			214.3	RG	R			
15237	26-Sep-94	03-Oct-94		7	2025.0	31.5	30.0	
			105.0	RG	R			
15238	03-Oct-94	10-Oct-94		7	470.0	7.3	7.1	
			103.1	RG	R			
15239	10-Oct-94	17-Oct-94		7	3975.0	61.9	59.4	
			104.2	RG	R			
15240	17-Oct-94	24-Oct-94		7	1565.0	24.4	24.5	
			99.6	RG	R			
15241	24-Oct-94	31-Oct-94		7	540.0	8.4	6.5	
			129.4	RG	R			
15242	31-Oct-94	07-Nov-94		7	3755.0	58.5	59.0	
			99.2	RG	R			
15243	07-Nov-94	14-Nov-94		7	375.0	5.8	7.0	
			83.4	SG	M			
15244	14-Nov-94	21-Nov-94		7	420.0	6.5	1.9	
			344.2	RG	R			
15245	21-Nov-94	28-Nov-94		7	215.0	3.4	7.1	
			47.2	SG	M			
15246	28-Nov-94	05-Dec-94		7	435.0	6.8	12.3	
			55.1	SG	S			
15247	05-Dec-94	12-Dec-94		7	495.0	7.7	63.5	
			12.1	SG	M			
	12-Dec-94	19-Dec-94		7	0.0	0.0	0.1	V1
			0.0					
15248	19-Dec-94	26-Dec-94		7	2260.0	35.2	33.7	
			104.5	SG	M			
15249	26-Dec-94	02-Jan-95		7	425.0	6.6	7.0	
			94.6	SG	S			

Newfoundland Environment Precipitation Monitoring Network (NEPMoN)
Site: Terra Nova - B Year: 1994
Ion Concentrations

Start Date	Ion Bal.	flg	H pH	flg	Cond. (mg/l)	flg	SO4 umhos	flg	Alk CaCO3 (mg/l)	flg	XSO4 (mg/l)	flg	NNO3 (mg/l)	flg	Cl (mg/l)	flg	NNH4 (mg/l)	flg	Na (mg/l)	flg	Ca (mg/l)	flg	Mg (mg/l)	flg	K (mg/l)	flg
03-Jan-94	2.15		5.05		.0090		11.5		0.57		.320		0.044		1.92		0.010		1.00		<0.06		0.129		0.04	
10-Jan-94	2.49		4.86		.0139		6.5		0.43		.395		0.069		0.38		0.005		0.14		<0.06		0.017		<0.02	
17-Jan-94	1.63		5.00		.0101		9.5		0.66		.515		0.030		1.23		0.031		0.58		0.08		0.079		0.04	
24-Jan-94	-0.62		5.20		.0064		3.9		0.31		.270		0.013		0.34		<0.005		0.16		<0.06		0.021		0.02	
31-Jan-94	2.58		4.50		.0319		14.4		0.51		.441	V3	0.315		0.64		0.041		0.22		<0.06		0.033		<0.02	
07-Feb-94	0.42		4.82		.0153		9.2		0.45		.362		0.257		0.73		0.095		0.35		0.07		0.023		0.21	Q3
14-Feb-94	11.48		5.21		.0062		4.0		0.51		.470		0.016		0.34		0.006		0.16		<0.06		0.020		<0.02	
21-Feb-94	-1.87		5.10		.0080		17.9		0.62		.120		<0.008		4.15		<0.005		2.00		0.38	Q3	0.278		0.05	
28-Feb-94	-3.50		4.46		.0350		15.4	Q3	1.15	Q3	1.105	Q3	0.192	Q3	0.42		0.096	Q3	0.18		<0.06		0.024		<0.02	
07-Mar-94	-6.44		5.21		.0062		3.4		0.23		.202		<0.008		0.26		<0.005		0.11		<0.06		0.015		<0.02	
14-Mar-94	-4.06		5.25		.0057		3.1		0.17		.128	V3	<0.008		0.35		<0.005		0.13		<0.06		0.020		<0.02	
21-Mar-94	-8.01		4.96		.0111		3.8		0.38		.369	V3	0.044		0.10		0.026		0.03		<0.06		0.005		<0.02	
28-Mar-94	0.47		4.48		.0334		12.9		0.49		.448	V3	0.289		0.50		0.039		0.12		<0.06		0.020		<0.02	
04-Apr-94	4.75		5.06		.0088		4.7		0.35		.310	V3	0.041		0.43		0.043		0.12		<0.06		0.019		<0.02	
11-Apr-94		I2		I2		I2		I2		I2		I2		I2		I2										

I2	I2	I2	I2	I2	I2			
18-Apr-94	I1	5.10	.0080	3.1	0.28	.277	0.037	I1
0.034	<0.02	<0.06	0.004	<0.02	-0.33			
25-Apr-94	4.12	4.83	.0149	8.6	0.72	.660	0.055	0.60
.038	0.24	<0.06	0.034	0.03	-0.55			
02-May-94	4.37	4.84	.0146	6.4	0.58	.529 V3	0.059	0.50
.044	0.15	<0.06	0.024	<0.02	-0.75			
09-May-94	2.87	4.56	.0278	15.4	1.02	.895	0.183	1.14
0.082	0.50	<0.06	0.068	0.02	-1.31			
16-May-94	0.48	5.07	.0086	8.5	0.50	.367	0.022	1.04
0.021	0.53	<0.06	0.068	0.03	-0.38			
23-May-94	2.71	4.18	.0666	29.2	3.17	3.122	0.384	0.37
0.243	0.19	<0.06	0.035	0.09	-3.15			
30-May-94	-8.24	4.78	.0167	7.4	0.65	.640	0.064	0.08
0.041	0.04	<0.06	0.009	0.02	-0.83			
06-Jun-94	6.64	5.23	.0059	4.7	0.28	.230	0.041	0.48
0.018	0.20	<0.06	0.023	<0.02	-0.23			
13-Jun-94	1.92	4.63	.0236	11.7	1.14	1.100 V3	0.142	0.34
0.144	0.11	<0.06	0.019	<0.02	-1.13			
20-Jun-94	0.39	4.51	.0311	14.4	1.23 Q3	1.192 Q3	0.207 Q3	0.27
0.128 Q3	0.10	<0.06	0.018	<0.02	-1.42			
27-Jun-94	I8	I8	I8	I8	I8	I8	I8	I8
I8	I8	I8	I8	I8	I8			
04-Jul-94	1.03	4.32	.0482	20.7	2.21	2.177	0.151	0.34
0.116	0.13	<0.06	0.018	<0.02	-2.21			
11-Jul-94	-4.90	5.18	.0067	3.7	0.34	.330	0.057	0.14
0.086	0.04	<0.06	0.005	<0.02	-0.14			
18-Jul-94	-4.83	4.41	.0392	15.9	1.40	1.395 V2	0.176	0.12
0.113	0.02	<0.06	<0.002	<0.02	-1.77			
25-Jul-94	-4.27	4.10	.0801	31.5 Q3	2.81 Q3	2.777 Q3	0.285 Q3	0.41
0.141 Q3	0.13	<0.06	0.016	0.02	-3.63			
01-Aug-94	0.38	4.94	.0116	5.8	0.45	.422	0.044	0.32
0.032	0.11	<0.06	0.013	<0.02	-0.50			
08-Aug-94	-0.17	4.94	.0116	5.9	0.45	.420	0.045	0.33
0.033	0.12	<0.06	0.014	<0.02	-0.46			
15-Aug-94	I1	I1	I1	I1	I1	I1	I1	I1

```
   I1         I1          I1  0.014           I1
22-Aug-94        I2          I2          I2          I2          I2          I2          I2          I2
   I2          I2          I2          I2          I2          I2
29-Aug-94  -2.32        4.58       .0265       11.8        0.84        .810       0.176       0.35
0.100       0.12       <0.06       0.014       0.02       -1.14
05-Sep-94   3.07        5.11       .0078        3.4        0.23        .222 V2    0.033       0.19
0.012       0.03       <0.06      <0.002       <0.02      -0.33
12-Sep-94   0.64        4.89       .0130        6.7        0.53        .505       0.081       0.28
0.062       0.10       <0.06       0.012       <0.02      -0.49
19-Sep-94   3.49        4.83       .0149        7.7        0.66        .627       0.099       0.37
0.074       0.13       <0.06       0.017       0.02       -0.63
26-Sep-94  -3.08        5.28       .0053        3.9        0.20        .145       0.008       0.47
<0.005       0.22       <0.06       0.029       <0.02       -0.09
03-Oct-94 -31.21        5.25       .0057        2.5        0.10        .092       0.014       0.06
<0.005       0.03       <0.06       0.003       <0.02       -0.07
10-Oct-94  -0.21        5.68       .0021       12.5        0.54        .215      <0.008       2.71 Q3
<0.005       1.30 Q3     0.20  Q3   0.163 Q3     0.31 Q3     0.18
17-Oct-94   3.31        5.11       .0078        8.5        0.41        .240       0.025       1.40
<0.005       0.68       <0.06       0.083       0.03       -0.28
24-Oct-94   0.08        4.98       .0106        7.3        0.44        .347       0.034       0.78
<0.005       0.37       <0.06       0.055       0.03       -0.64
31-Oct-94  -0.99        4.29       .0517       23.9 Q3     1.71 Q3    1.702 Q3    0.308 Q3    0.081
0.085 Q3    0.03       <0.06       0.008       <0.02      -2.80
07-Nov-94   4.45        4.71       .0197       14.4        0.74        .567       0.120       1.47
<0.005       0.69       <0.06       0.093       0.04       -1.21
14-Nov-94   7.52        4.72       .0192       12.9        0.69        .580       0.166       1.04
0.037       0.44       <0.06       0.060       0.02       -1.07
21-Nov-94  -0.33        5.14       .0073        4.8        0.20        .149 V3    0.054       0.38
0.013       0.16       <0.06       0.024       <0.02      -0.43
28-Nov-94   4.87        5.15       .0071        6.3        0.36        .295       0.081       0.61
0.059       0.26       <0.06       0.037       0.02       -0.46
05-Dec-94   3.86        4.90       .0127        8.2        0.27        .188 V3    0.130       0.64
0.023       0.26       <0.06       0.039       <0.02      -0.81
12-Dec-94        I2          I2          I2          I2          I2          I2          I2          I2
   I2          I2          I2          I2          I2          I2
19-Dec-94  -0.66        4.91       .0124       18.6        0.68        .193       0.089       3.45 Q3
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<0.005	1.95 Q3	0.07	0.201 Q3	0.08	-0.71					
26-Dec-94	-4.77	5.35	.0045	4.3	0.12	.070	0.020	0.45	0.016	0.20
<0.06	0.027	<0.02	-0.22							

Newfoundland Environment Precipitation Monitoring Network
(NEPMoN)
Site: Terra Nova - B Year: 1995

Rain Collection Statistics

Sample Id No	Start Date	End Date	Effic. (%) flg	Coll. Gauge Type	No. of Gauge Days	Sample Volume (ml) Type	Sample Depth (mm)	flg	Gauge Depth (mm)	flg
15301	02-Jan-95	09-Jan-95	101.1		7	1155.0 M	18.0		17.8	
15302	09-Jan-95	16-Jan-95	74.6		7	3275.0 M	51.0		68.4	
15303	16-Jan-95	23-Jan-95	58.5		7	1820.0 M	28.3		48.4	
15304	23-Jan-95	30-Jan-95	100.0	I8	7	830.0 S	12.9		12.9	Q1
15305	30-Jan-95	06-Feb-95	100.0	I8	7	550.0 S	8.6		8.6	Q1
15306	06-Feb-95	13-Feb-95	100.0	I8	7	475.0 S	7.4		7.4	Q1
15307	13-Feb-95	20-Feb-95	100.0	I8	7	940.0 R	14.6		14.6	Q1
15308	20-Feb-95	27-Feb-95	100.0	I8	7	2800.0 M	43.6		43.6	Q1
15309	27-Feb-95	06-Mar-95	154.9		7	815.0 M	12.7		8.2	
15310	06-Mar-95	13-Mar-95	39.1		7	320.0 M	5.0		12.8	
15311	13-Mar-95	20-Mar-95	108.3		7	920.0 M	14.3		13.2	
15312	20-Mar-95	27-Mar-95	26.0		7	480.0 R	7.5		28.8	
15313	27-Mar-95	03-Apr-95	18.2		7	385.0 S	6.0		33.0	
15314	03-Apr-95	10-Apr-95	100.0	I8	7	820.0 S	12.8		12.8	Q1
15315	10-Apr-95	17-Apr-95	100.0	I8	7	383.0 R	6.0		6.0	Q1
15316	17-Apr-95	24-Apr-95			7	420.0	6.5		6.5	Q1

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                    100.0 I8          R
15317  24-Apr-95  01-May-95       7  675.0   10.5      10.5 Q1
                    100.0 I8          M
       01-May-95  08-May-95       7    0.0    0.0       2.0
                      0.0
15318  08-May-95  15-May-95       7 1040.0   16.2       9.2
                    176.1             R
15319  15-May-95  22-May-95       7  920.0   14.3       5.8
                    246.6             R
15320  22-May-95  29-May-95       7  680.0   10.6      12.5
                     84.8             R
15321  29-May-95  05-Jun-95       7  675.0   10.5       9.5
                    110.5             R
15322  05-Jun-95  12-Jun-95       7  805.0   12.5       3.5
                    357.1             R
15323  12-Jun-95  19-Jun-95       7 1325.0   20.6      25.5
                     80.8             R
15324  19-Jun-95  26-Jun-95       7 2135.0   33.3       1.5
                   2220.0              R
15325  26-Jun-95  03-Jul-95       7 1920.0   29.9       7.2
                    415.3             R
15326  03-Jul-95  10-Jul-95       7  300.0    4.7      25.8
                     18.2             R
15327  10-Jul-95  17-Jul-95       7 3220.0   50.2      18.0
                    278.9             R
       17-Jul-95  24-Jul-95       7              I1   44.0
                          I1
15328  24-Jul-95  31-Jul-95       7  415.0    6.5      22.5
                     28.9             R
15329  31-Jul-95  07-Aug-95       7   45.0    0.7       6.3
                     11.1             R
15330  07-Aug-95  14-Aug-95       7  420.0    6.5      38.7
                     16.8             R
15331  14-Aug-95  21-Aug-95       7 2135.0   33.3       1.5
                   2220.0              R
15332  21-Aug-95  28-Aug-95       7 1580.0   24.6      28.5
                     86.3             R
15333  28-Aug-95  04-Sep-95       7 1365.0   21.3      27.5
                     77.5             R
15334  04-Sep-95  11-Sep-95       7  690.0   10.7      91.0
                     11.8             R
15335  11-Sep-95  18-Sep-95       7 3140.0   48.9      12.3
```

			397.6		R		
	18-Sep-95	25-Sep-95	0.4	7	20.0 R	0.3	72.2
15336	25-Sep-95	02-Oct-95	55.6	7	575.0 R	9.0	16.2
15337	02-Oct-95	10-Oct-95	494.8	8	7370.0 M	114.8	23.2
15338	10-Oct-95	16-Oct-95	300.0	6	540.0 R	8.4	2.8
15339	16-Oct-95	23-Oct-95	72.0	7	430.0 R	6.7	9.3
15340	23-Oct-95	30-Oct-95	335.0	7	1290.0 R	20.1	6.0
15341	30-Oct-95	06-Nov-95	20.7	7	410.0 M	6.4	30.9
15342	06-Nov-95	13-Nov-95	7100.0	7	910.0 M	14.2	0.2
15343	13-Nov-95	20-Nov-95	87.4	7	1030.0 M	16.0	18.3
15344	20-Nov-95	27-Nov-95	71.6	7	1635.0 M	25.5	35.6
15345	27-Nov-95	04-Dec-95	100.3	7	2265.0 M	35.3	35.2
15346	04-Dec-95	11-Dec-95	121.7	7	2445.0 M	38.1	31.3
15347	11-Dec-95	18-Dec-95	239.0	7	905.0 M	14.1	5.9
15348	18-Dec-95	25-Dec-95	44.0	7	1385.0 M	21.6	49.1
15349	25-Dec-95	01-Jan-96	175.9	7	1965.0 M	30.6	17.4

Newfoundland Environment Precipitation Monitoring Network (NEPMoN)
Site: Terra Nova - B Year: 1995
Ion Concentrations

Start Date	Ion Bal.	flg	Na (mg/l)	flg	Ca (mg/l)	flg	H pH	flg	Mg (mg/l)	flg	K (mg/l)	flg	Cond. umhos	flg	Alk CaCO3 (mg/l)	flg	SO4 (mg/l)	flg	XSO4 (mg/l)	flg	NNO3 (mg/l)	flg	Cl (mg/l)	flg	NNH4 (mg/l)	flg
02-Jan-95	3.59		5.33		.0047		4.9		0.21		.137		0.019		0.68		0.013		0.29		<0.06		0.039		<0.02		-0.32	
09-Jan-95	-3.58		5.24		.0058		4.2		0.11		.062		0.026		0.45		<0.005		0.19		<0.06		0.026		<0.02		-0.35	
16-Jan-95	-2.41		5.24		.0058		4.4		0.11		.051	V3	0.028		0.45		<0.005		0.18		<0.06		0.028		<0.02		-0.36	
23-Jan-95	0.98		5.13		.0075		5.2		0.21		.155	V3	0.054		0.41		0.016		0.16		<0.06		0.026		<0.02		-0.41	
30-Jan-95	6.79		4.74		.0183		13.7		0.76		.597		0.115		1.49		0.012		0.65		<0.06		0.095		0.04		-1.06	
06-Feb-95	7.91		4.84		.0146		11.8		0.60		.460		0.112		1.32		0.027		0.56		<0.06		0.076		0.03		-0.89	
13-Feb-95	-2.16		5.21		.0062		6.2		0.26		.172		0.042		0.72		0.010		0.35		0.06		0.047		0.04		-0.32	
20-Feb-95	1.76		5.18		.0067		6.5		0.26		.175		0.042		0.74		0.008		0.34		<0.06		0.046		0.04		-0.34	
27-Feb-95	2.83		5.22		.0061		6.2		0.37		.300		0.053		0.61		0.020		0.28		0.07		0.036		0.04		-0.37	
06-Mar-95	3.12		5.22		.0061		5.7		0.38		.310		0.051		0.60		0.015		0.28		0.07		0.036		0.04		-0.39	
13-Mar-95	2.49		5.22		.0061		5.9		0.37		.300		0.050		0.60		0.016		0.28		0.07		0.036		0.04		-0.37	
20-Mar-95	3.83		4.93		.0118		12.0		0.71		.452		0.06		2.17		0.028		1.03		0.07		0.134		0.05		-0.81	
27-Mar-95	-8.84		4.58		.0265			I1	2.26	Q3	2.205	Q3	0.449	Q3	0.35		0.636	Q3	0.22		0.28		0.059		0.24	Q3	-1.52	
03-Apr-95	-1.72		4.49		.0326		15.1		1.28		1.252		0.218		0.20		0.127		0.11		<0.06		0.019		<0.02		-1.88	
10-Apr-95	0.37		4.92		.0121		9.3		0.62		.490		0.055		0.99													

0.034 0.52 <0.06 0.065 0.02 -0.77
17-Apr-95 I1 I1 I1 I1 2.27 2.215 V2
0.449 0.39 0.603 0.22 I1 I1 I1
24-Apr-95 -1.63 4.98 .0106 7.9 0.46 .350
0.047 0.82 <0.005 0.44 <0.06 0.057 0.05
-0.79
01-May-95 I2 I2 I2 I2 I2 I2
I2 I2 I2 I2 I2 I2 I2
I2
08-May-95 3.34 4.96 .0111 12.4 0.50 .245
0.067 2.06 <0.005 1.02 <0.06 0.128 0.04
-0.85
15-May-95 3.20 4.92 .0121 13.4 0.71 .452
0.062 2.14 0.026 1.03 0.07 0.139 0.04
-0.83
22-May-95 0.66 5.04 .0092 7.1 0.46 .347
0.046 0.84 0.006 0.45 <0.06 0.057 0.03
-0.72
29-May-95 2.37 4.93 .0118 13.0 0.73 .465
0.061 2.10 0.022 1.06 0.07 0.136 0.04
-0.83
05-Jun-95 -0.35 4.93 .0118 12.9 0.71 .440
0.059 2.02 0.029 1.08 0.07 0.136 0.04
-0.80
12-Jun-95 1.25 4.92 .0121 9.2 0.62 .490
0.053 1.01 0.029 0.52 <0.06 0.065 0.02
-0.88
19-Jun-95 -2.27 4.83 .0149 7.4 0.52 .497
0.090 0.21 0.031 0.09 <0.06 0.013 0.03
-1.05
26-Jun-95 0.16 4.51 .0311 15.9 1.26 1.235
0.214 0.22 0.126 0.10 <0.06 0.019 <0.02
-1.93
03-Jul-95 I1 I1 I1 I1 1.29 1.262
0.217 0.22 0.128 0.11 <0.06 0.020 0.03
10-Jul-95 0.28 4.92 .0121 9.6 0.62 .487
0.054 1.00 0.032 0.53 <0.06 0.065 0.02
-0.88
17-Jul-95 I2 I2 I2 I2 I2 I2
I2 I2 I2 I2 I2 I2 I2
I2
24-Jul-95 -4.14 4.83 .0149 7.4 0.52 .497

0.089 0.20 0.035 0.09 <0.06 0.013 0.04
-1.07
31-Jul-95 I1 I1 I1 I1 0.72 .452 V2
0.055 2.34 0.033 1.07 I1 I1 0.06
07-Aug-95 0.83 4.92 .0121 8.9 0.61 .485
0.052 1.00 0.035 0.50 <0.06 0.065 0.03
-0.83
14-Aug-95 -2.15 4.82 .0153 7.2 0.52 .492 V3
0.088 0.23 0.034 0.08 <0.06 0.013 0.04
-1.08
21-Aug-95 -1.69 4.45 .0358 17.2 1.31 1.275
0.211 0.28 0.092 0.14 <0.06 0.019 0.03
-2.17
28-Aug-95 -2.60 4.44 .0366 17.4 1.31 1.275
0.212 0.29 0.099 0.14 <0.06 0.019 0.03
-2.13
04-Sep-95 -2.45 4.45 .0358 17.7 Q3 1.30 Q3 1.265 Q3
0.210 Q3 0.28 0.099 Q3 0.14 <0.06 0.019 0.03
-2.20
11-Sep-95 0.32 5.00 .0101 7.8 0.47 .360
0.046 0.84 <0.005 0.44 <0.06 0.057 0.04
-0.69
18-Sep-95 I2 I2 I2 I2 I2 I2
I2 I2 I2 I2 I2 I2 I2
I2
25-Sep-95 I1 I6 I6 I1 I6 I6
I6 I6 I6 I6 I6 I1 I6
I6
02-Oct-95 -2.69 5.26 .0055 5.0 0.20 .102
0.021 0.76 <0.005 0.39 <0.06 0.048 0.02
-0.49
10-Oct-95 1.57 4.51 .0311 37.4 2.26 1.386
0.200 6.48 0.127 3.50 0.21 0.371 0.13
-1.89
16-Oct-95 -3.41 4.92 .0121 5.5 0.43 .402
0.043 0.24 0.008 0.11 <0.06 0.012 <0.02
-0.91
23-Oct-95 -1.80 4.79 .0163 8.7 0.60 .522
0.089 0.59 0.039 0.31 <0.06 0.031 <0.02
-1.07
30-Oct-95 -0.06 4.93 .0118 6.7 0.43 .337
0.041 0.75 <0.005 0.37 <0.06 0.037 0.02

-0.85							
06-Nov-95	-0.22	4.95	.0113	6.9		0.41	.317
0.038	0.75	<0.005	0.37	<0.06		0.037	0.02
-0.85							
13-Nov-95	1.48	4.94	.0116	8.92		0.50	.330
0.040	1.35	0.005	.68	<0.06		0.078	0.02
-0.89							
20-Nov-95	4.06	4.95	.0113	8.89		0.50	.340
0.041	1.36	<0.005	.64	<0.06		0.078	0.02
-0.88							
27-Nov-95	3.87	4.91	.0124	8.75		0.51	.362
0.059	1.26	0.010	.59	<0.06		0.072	0.02
-0.94							
04-Dec-95	2.64	5.04	.0092	5.50		0.32	.232
0.048	0.79	0.015	.35	<0.06		0.043	<0.02
-0.77							
11-Dec-95	4.88	4.86	.0139		I1	0.93	.405
0.101	4.28	0.015	2.10	0.09		0.250	0.09
-1.00							
18-Dec-95	2.00	5.28	.0053	4.75		0.20	.092
0.028	0.91	0.007	.43	<0.06		0.047	0.03
-0.45							
25-Dec-95	1.49	5.30	.0051	4.85		0.20	.090
0.029	0.91	0.006	.44	<0.06		0.047	0.04
-0.52							

Newfoundland Environment Precipitation Monitoring Network
(NEPMoN)
Site: Terra Nova - B Year: 1996

Rain Collection Statistics

Sample Id No	Start Date	End Date	Effic. (%)	flg	Coll. Type	No. of Gauge Days	Sample Volume (ml)	Sample Prec Type	Depth (mm)	flg	Gauge Depth (mm)	flg
15401	01-Jan-96	08-Jan-96	100.0		RG	7	270.0	S	4.2		4.2	Q1
15402	08-Jan-96	15-Jan-96	100.0		RG	7	900.0	M	14.0		14.0	Q1
15403	15-Jan-96	22-Jan-96	100.0		RG	7	780.0	R	12.1		12.1	Q1
15404	22-Jan-96	29-Jan-96	100.0		RG	7	375.0	R	5.8		5.8	Q1
15405	29-Jan-96	05-Feb-96	100.0		RG	7	225.0	S	3.5		3.5	Q1
15406	05-Feb-96	12-Feb-96	100.0		RG	7	810.0	M	12.6		12.6	Q1
15407	12-Feb-96	19-Feb-96	100.0		RG	7	705.0	M	11.0		11.0	Q1
15408	19-Feb-96	26-Feb-96	100.0		RG	7	75.0	R	1.2		1.2	
15409	26-Feb-96	04-Mar-96	100.0		RG	7	430.0	M	6.7		6.7	Q1
15410	04-Mar-96	11-Mar-96	100.0		RG	7	330.0	S	5.1		5.1	Q1
15411	11-Mar-96	18-Mar-96	100.0		RG	7	55.0	M	0.9		0.9	
15412	18-Mar-96	25-Mar-96	100.0		RG	7	1810.0	M	28.2		28.2	Q1
15413	25-Mar-96	01-Apr-96		I1	RG	7						V1
15414	01-Apr-96	08-Apr-96	100.0		RG	7	550.0	M	8.6		8.6	Q1
15415	08-Apr-96	15-Apr-96	100.0		RG	7	685.0	R	10.7		10.7	Q1
	15-Apr-96	22-Apr-96				7						V1

			I1	RG					
	22-Apr-96	29-Apr-96		7	115.0	1.8		1.8	
		100.0		RG	R				
	29-Apr-96	06-May-96		7	1805.0	28.1		28.1	
		100.0		RG	R				
15416	06-May-96	13-May-96		7	510.0	7.9		7.9	Q1
		100.0		RG	R				
15417	13-May-96	20-May-96		7	680.0	10.6		10.6	Q1
		100.0		RG	R				
15418	20-May-96	27-May-96		7	1000.0	15.6		15.6	Q1
		100.0		RG	R				
15419	27-May-96	03-Jun-96		7	1810.0	28.2		28.2	Q1
		100.0		RG	R				
15420	03-Jun-96	10-Jun-96		7	500.0	7.8		7.8	Q1
		100.0		RG	R				
15421	10-Jun-96	17-Jun-96		7	1920.0	29.9		29.9	Q1
		100.0		RG	R				
15422	17-Jun-96	24-Jun-96		7	690.0	10.7		10.7	Q1
		100.0		RG	R				
15423	24-Jun-96	01-Jul-96		7	1795.0	28.0		28.0	Q1
		100.0		RG	R				
15424	01-Jul-96	08-Jul-96		7	1875.0	29.2		29.2	Q1
		100.0		RG	R				
15425	08-Jul-96	15-Jul-96		7	1020.0	15.9		15.9	Q1
		100.0		RG	R				
15426	15-Jul-96	22-Jul-96		7	505.0	7.9		7.9	Q1
		100.0		RG	R				
	22-Jul-96	29-Jul-96		7					V1
			I1	RG					
15427	29-Jul-96	05-Aug-96		7	700.0	10.9		10.9	Q1
		100.0		RG	R				
15428	05-Aug-96	12-Aug-96		7	430.0	6.7		6.7	Q1
		100.0		RG	R				
15429	12-Aug-96	19-Aug-96		7	920.0	14.3		14.3	Q1
		100.0		RG	R				
15430	19-Aug-96	26-Aug-96		7	1135.0	17.7		17.7	Q1
		100.0		RG	R				
15431	26-Aug-96	02-Sep-96		7	795.0	12.4		12.4	Q1
		100.0		RG	R				
15432	02-Sep-96	09-Sep-96		7	220.0	3.4		3.4	Q1
		100.0		RG	R				
15433	09-Sep-96	16-Sep-96		7	570.0	8.9		8.9	Q1

			100.0		RG	R				
15434	16-Sep-96	23-Sep-96		7	300.0		4.7		4.7	Q1
			100.0		RG	R				
15435	23-Sep-96	30-Sep-96		7	1830.0		28.5		28.5	Q1
			100.0		RG	R				
15436	30-Sep-96	07-Oct-96		7	435.0		6.8		6.8	Q1
			100.0		RG	M				
15437	07-Oct-96	14-Oct-96		7	515.0		8.0		8.0	Q1
			100.0		RG	R				
15438	14-Oct-96	21-Oct-96		7	805.0		12.5		12.5	Q1
			100.0		RG	M				
15439	21-Oct-96	28-Oct-96		7	675.0		10.5		10.5	Q1
			100.0		RG	R				
15440	28-Oct-96	04-Nov-96		7	1815.0		28.3		28.3	Q1
			100.0		RG	M				
15441	04-Nov-96	11-Nov-96		7	35.0		0.5		0.5	Q1
			100.0		RG	R				
15442	11-Nov-96	18-Nov-96		7	875.0		13.6		13.6	Q1
			100.0		RG	M				
15443	18-Nov-96	25-Nov-96		7	1490.0		23.2		23.2	Q1
			100.0		RG	R				
15444	25-Nov-96	02-Dec-96		7	805.0		12.5		12.5	Q1
			100.0		RG	M				
15445	02-Dec-96	09-Dec-96		7	520.0		8.1		8.1	Q1
			100.0		RG	M				
15446	09-Dec-96	16-Dec-96		7	2810.0		43.8		43.8	Q1
			100.0		RG	M				
15447	16-Dec-96	23-Dec-96		7	245.0		3.8		3.8	Q1
			100.0		RG	S				
15448	23-Dec-96	30-Dec-96		7	430.0		6.7		6.7	Q1
			100.0		RG	M				

Newfoundland Environment Precipitation Monitoring Network (NEPMoN)
Site: Terra Nova - B Year: 1996
Ion Concentrations

Start Date	Ion Bal.	flg	Ca	flg	H pH	flg	Mg	flg	Cond. K	flg	Alk CaCO3	flg	SO4	flg	XSO4	flg	NNO3	flg	Cl	flg	NNH4	flg
	Na																					
	(mg/l)		(mg/l)		(mg/l)		(mg/l)		umhos (mg/l)		(mg/l)		(mg/l)		(mg/l)		(mg/l)		(mg/l)		(mg/l)	
01-Jan-96	2.24		5.46		.0035				I1		0.30		.137		0.015		1.27					
0.017	.65		<0.06		0.064		0.06				-0.29											
08-Jan-96	1.93		5.44		.0037		5.76				0.30		.137		0.014		1.26					
0.017	.65		<0.06		0.061		0.06				-0.33											
15-Jan-96	-4.63		5.20		.0064		4.9				0.15		.080		0.025		0.59					
0.006	0.28		<0.06		0.033		0.02				-0.58											
22-Jan-96		I7		I7		I7		I1				I7		I7		I7		I7				
	I7		I7		I7		I7				.	I7										
29-Jan-96	-0.39		4.85		.0142				I1		0.46		.355		0.093		0.83					
0.021	0.42		<0.06		0.049		0.02				-0.94											
05-Feb-96	2.89		4.80		.0160		11.1				0.71		.545		0.079		1.40					
0.037	0.66		<0.06		0.086		0.03				-1.13											
12-Feb-96	0.87		4.87		.0136		7.9				0.41		.320		0.086		0.78					
0.019	0.36		<0.06		0.046		<0.02				-1.10											
19-Feb-96		I1		I1		I1		I1				I1		I1		I1		I1				
	I1		I1		I1		I1															
26-Feb-96	2.28		4.60		.0253		14.4				1.28		1.167		0.109		0.97					
0.107	0.45		<0.06		0.057		0.02				-1.45											
04-Mar-96	1.80		4.86		.0139				I1		0.46		.357		0.097		0.85					
0.018	0.41		<0.06		0.050		0.02				-1.05											
11-Mar-96		I1		I1		I1		I1				I1		I1		I1		I1				
	I1		I1		I1		I1															
18-Mar-96	3.79		4.80		.0160		11.4				0.71		.542		0.081		1.43					
0.032	0.67		<0.06		0.084		0.03				-1.12											
25-Mar-96		I1		I1		I1		I1				I1		I1		I1		I1				
	I1		I1		I1		I1															
01-Apr-96	1.73		4.85		.0142		8.5				0.45		.350		0.093		0.87					
0.019	0.40		<0.06		0.052		0.02				-0.97											
08-Apr-96	1.34		4.85		.0142		8.5				0.46		.357		0.094		0.87					

```
0.021       0.41       <0.06       0.052       0.02       -1.11
15-Apr-96         I2          I2          I2          I2          I2          I2
      I2          I2          I2          I2          I2          I2          I2
    . I2
22-Apr-96         I2          I2          I2          I2          I2          I2
      I2          I2          I2          I2          I2          I2          I2
    . I2
29-Apr-96         I2          I2          I2          I2          I2          I2
      I2          I2          I2          I2          I2          I2          I2
    . I2
06-May-96 -14.82       4.89       .0130            I1    0.32       .302
0.057       0.14       0.032       0.07       <0.02       <0.02       <0.02
-0.76
13-May-96 -10.03       4.93       .0118        4.3       0.32       .299 V3
0.032       0.15      <0.005       0.06       <0.02       <0.02       <0.02
-0.95
20-May-96 -10.82       4.88       .0133        4.7       0.30       .279 V3
0.055       0.14      <0.005       0.06       <0.02       <0.02       <0.02
-1.12
27-May-96 -13.40       4.90       .0127        4.8       0.32       .305
0.054       0.12       0.020       0.06       <0.02       <0.02       <0.02
-0.90
03-Jun-96 -14.23       4.99       .0103        3.7       0.32       .302
0.056       0.12       0.005       0.07        0.08       <0.02       <0.02
-0.74
10-Jun-96 -12.82       4.98       .0106        3.9       0.32       .299 V3
0.008       0.15      <0.005       0.06       <0.02       <0.02       <0.02
-0.82
17-Jun-96  -9.21       4.86       .0139        5.0       0.32       .299 V3
0.059       0.15      <0.005       0.06       <0.02       <0.02       <0.02
-0.94
24-Jun-96 -18.88       5.04       .0092        3.3       0.13       .122 V2
0.039       0.10      <0.005       0.03       <0.02       <0.02       <0.02
-0.82
01-Jul-96 -36.89       5.29       .0052        1.8       0.04       .037 V2
<0.008       0.08      <0.005       <0.02       <0.02       <0.02       <0.02
 -0.46
08-Jul-96  -3.38       4.98       .0106        4.5       0.36       .342
0.046       0.17       0.022       0.07       <0.02       <0.02       <0.02
-0.88
15-Jul-96  -6.44       4.55       .0284        9.9       0.76       .735
0.122       0.22       0.012       0.10       <0.02       <0.02       <0.02
```

-1.62
22-Jul-96 I2 I2 I2 I2 I2 I2
I2 I2 I2 I2 I2 I2 I2
. I2
29-Jul-96 -6.76 4.53 .0297 5.2 0.78 .757
0.120 0.21 <0.005 0.09 <0.02 <0.02 <0.02
-1.76
05-Aug-96 -4.74 4.53 .0297 10.4 0.79 .767
0.127 0.23 <0.005 0.09 <0.02 <0.02 <0.02
-1.67
12-Aug-96 -7.95 4.52 .0304 10.6 0.79 .767
0.119 0.20 <0.005 0.09 <0.02 <0.02 <0.02
-1.61
19-Aug-96 -7.90 4.75 .0179 6.7 0.35 .329 V3
0.134 0.11 0.038 0.03 <0.02 <0.02 <0.02
-1.19
26-Aug-96 -7.11 4.85 .0142 5.7 0.40 .382
0.071 0.13 0.013 0.07 <0.02 <0.02 <0.02
-0.87
02-Sep-96 -2.53 5.00 .0101 18.9 0.81 .238
<0.008 4.27 <0.005 2.29 0.10 0.33 0.11
-0.20
09-Sep-96 -7.84 5.03 .0094 5.4 0.17 .065
0.039 0.79 <0.005 0.42 <0.02 0.06 <0.02
-1.03
16-Sep-96 -7.56 5.02 .0096 5.9 0.19 .085
0.038 0.79 <0.005 0.42 <0.02 0.06 <0.02
-0.58
23-Sep-96 -8.27 5.03 .0094 6.0 0.18 .070
0.039 0.80 <0.005 0.44 <0.02 0.06 <0.02
-0.65
30-Sep-96 -6.66 4.89 .0130 6.6 0.37 .290 V2
0.054 0.61 0.006 0.32 <0.02 0.05 0.04
-1.23
07-Oct-96 -8.10 4.89 .0130 6.4 0.36 .282
0.053 0.60 0.007 0.31 0.04 0.04 0.04
-0.70
14-Oct-96 -7.99 4.87 .0136 6.8 0.41 .335
0.054 0.58 0.008 0.30 0.03 0.05 0.04
-1.08
21-Oct-96 -3.19 4.68 .0211 11.3 0.72 .575
0.080 1.05 <0.005 0.58 <0.02 0.08 <0.02

-1.29
28-Oct-96 -4.09 4.67 .0216 11.2 0.69 .545
0.081 1.07 <0.005 0.58 0.02 0.08 <0.02
-1.41
04-Nov-96 -10.35 5.07 .0086 3.8 0.18 .132 V2
0.029 0.38 0.005 0.19 <0.02 0.03 <0.02
-0.51
11-Nov-96 -13.67 5.03 .0094 4.2 0.17 .117
0.029 0.39 <0.005 0.21 <0.02 0.03 <0.02
-0.83
18-Nov-96 -24.48 5.25 .0057 2.4 0.03 .007
0.017 0.20 0.017 0.09 <0.02 <0.02 <0.02
-0.50
25-Nov-96 0.17 4.60 .0253 20.1 1.30 .933
0.152 2.81 0.129 1.47 0.07 0.17 0.04
-1.66
02-Dec-96 -4.86 5.24 .0058 6.2 0.55 .412
0.051 0.96 0.121 0.55 <0.02 0.09 <0.02
-0.19
09-Dec-96 I7 I7 I7 I7 I7 I7
I7 I7 I7 I7 I7 I7 I7
. I7
16-Dec-96 -0.91 4.59 .0259 19.3 1.29 .903
0.147 2.94 0.130 1.55 0.08 0.18 0.05
-1.52
23-Dec-96 -4.14 4.76 .0175 12.5 0.78 .555
0.099 1.63 0.098 0.90 0.05 0.10 0.04
-1.19

Newfoundland Environment Precipitation Monitoring Network
(NEPMoN)
Site: Terra Nova - B Year: 1997

Rain Collection Statistics

Sample Id No	Start Date	End Date	Effic. (%) flg	Coll. Gauge Days Type	No. of Gauge Days	Sample Volume (ml) Type	Sample Depth (mm) flg	Gauge Depth (mm) flg
15501	30-Dec-96	06-Jan-97	43.0		7	105.0 S	1.6	3.8
15502	06-Jan-97	13-Jan-97	101.6	RG	7	1735.0 S	27.0	26.6
	13-Jan-97	20-Jan-97		I1 RG	7	S	I1	24.2
15503	20-Jan-97	27-Jan-97	82.8	RG	7	1335.0 M	20.8	25.1
15504	27-Jan-97	03-Feb-97	4.8	RG	7	70.0 S	1.1	22.6
15505	03-Feb-97	10-Feb-97	207.1	RG	7	1675.0 S	26.1	12.6
15506	10-Feb-97	17-Feb-97	745.4	RG	7	1005.0 M	15.7	2.1
15507	17-Feb-97	24-Feb-97	44.5	RG	7	665.0 M	10.4	23.3
15508	24-Feb-97	03-Mar-97	214.6	RG	7	565.0 M	8.8	4.1
15509	03-Mar-97	10-Mar-97	53.2	RG	7	485.0 S	7.6	14.2
15510	10-Mar-97	17-Mar-97	247.4	RG	7	270.0 S	4.2	1.7
15511	17-Mar-97	24-Mar-97	87.9	RG	7	1670.0 S	26.0	29.6
15512	24-Mar-97	31-Mar-97	36.8	RG	7	550.0 M	8.6	23.3
15513	31-Mar-97	07-Apr-97	77.0	RG	7	1780.0 M	27.7	36.0
15514	07-Apr-97	14-Apr-97	69.1	RG	7	945.0 M	14.7	21.3
15515	14-Apr-97	21-Apr-97			7	665.0	10.4	28.7

			36.1	RG		M		
15516	21-Apr-97	28-Apr-97		7	290.0	4.5		12.6
			35.9	RG		M		
15517	28-Apr-97	05-May-97		7	550.0	8.6		28.5
			30.1	RG		M		
15518	05-May-97	12-May-97		7	670.0	10.4		22.7
			46.0	RG		R		
15519	12-May-97	19-May-97		7	1730.0	26.9		33.3
			80.9	RG		R		
15520	19-May-97	26-May-97		7	780.0	12.1		30.5
			39.8	RG		M		
	26-May-97	02-Jun-97		7				21.7
				RG		M		
15521	02-Jun-97	09-Jun-97		7	520.0	8.1		17.3
			46.8	RG		R		
15522	09-Jun-97	16-Jun-97		7	2380.0	37.1		21.0
			176.5	RG		R		
15523	16-Jun-97	23-Jun-97		7	180.0	2.8		7.9
			35.5	RG		R		
15524	23-Jun-97	30-Jun-97		7	775.0	12.1		5.0
			241.4	RG		R		
15525	30-Jun-97	07-Jul-97		7	1545.0	24.1		15.6
			154.3	RG		R		
15526	07-Jul-97	14-Jul-97		7	860.0	13.4		7.8
			171.7	RG		R		
	14-Jul-97	21-Jul-97		7				11.7
				RG				
	21-Jul-97	28-Jul-97		7				1.0
				RG				
15527	28-Jul-97	04-Aug-97		7	485.0	7.6		25.0
			30.2	RG		R		
15528	04-Aug-97	11-Aug-97		7	1605.0	25.0		19.5
			128.2	RG		R		
15529	11-Aug-97	18-Aug-97		7	760.0	11.8		12.5
			94.7	RG		R		
15530	18-Aug-97	25-Aug-97		7	470.0	7.3		2.7
			271.1	RG		R		
15531	25-Aug-97	01-Sep-97		7	1085.0	16.9		26.7
			63.3	RG		R		
15532	01-Sep-97	08-Sep-97		7	295.0	4.6		43.6
			10.5	RG		R		
15533	08-Sep-97	15-Sep-97		7	885.0	13.8		9.0

			153.2	RG		R		
15534	15-Sep-97	22-Sep-97		7	1875.0	29.2		4.9
			596.0	RG		R		
15535	22-Sep-97	29-Sep-97		7	550.0	8.6		14.0
			61.2	RG		R		
15536	29-Sep-97	06-Oct-97		7	1430.0	22.3		30.0
			74.2	RG		R		
15537	06-Oct-97	13-Oct-97		7	1770.0	27.6		1.7
			1621.8	RG		R		
15538	13-Oct-97	20-Oct-97		7	480.0	7.5		14.6
			51.2	RG		R		
15539	20-Oct-97	27-Oct-97		7	545.0	8.5		2.5
			339.6	RG		R		
15540	27-Oct-97	03-Nov-97		7	905.0	14.1		40.9
			34.5	RG		M		
15541	03-Nov-97	10-Nov-97		7	540.0	8.4		27.4
			30.7	RG		M		
15542	10-Nov-97	17-Nov-97		7	545.0	8.5		18.6
			45.6	RG		M		
15543	17-Nov-97	24-Nov-97		7	935.0	14.6		19.6
			74.3	RG		M		
15544	24-Nov-97	01-Dec-97		7	1670.0	26.0		81.6
			31.9	RG		M		
15545	01-Dec-97	08-Dec-97		7	1825.0	28.4		38.5
			73.8	RG		M		
15546	08-Dec-97	15-Dec-97		7	175.0	2.7		12.8
			21.3	RG		M		
	15-Dec-97	22-Dec-97		7				0.9
				RG				
15547	22-Dec-97	29-Dec-97		7	1025.0	16.0		26.4
			60.5	RG		M		

Newfoundland Environment Precipitation Monitoring Network (NEPMoN)
Site: Terra Nova - B Year: 1997
Ion Concentrations

Start Date	Ion Bal.	flg	H pH	flg	Cond. (mg/l)	flg	SO4 umhos	flg	Alk CaCO3 (mg/l)	flg	XSO4 (mg/l)	flg	NNO3 (mg/l)	flg	Cl (mg/l)	flg	NNH4 (mg/l)	flg	Na (mg/l)	flg	Ca (mg/l)	flg	Mg (mg/l)	flg	K (mg/l)	flg
30-Dec-96	-2.93		4.94		.0116		I1		0.67		.487		0.088		1.39		0.103		0.73		0.07		0.09		0.06	
06-Jan-97	-3.57		5.10		.0080		7.4		0.37		.225		0.050		1.05		0.008		0.58		<0.07		0.09		0.04	
13-Jan-97	I2		I2		I2		I2		I2		I2		I2		I2		I2		I2		I2		I2		I2	
20-Jan-97	-4.79		4.81		.0156		8.9		0.34		.265		0.142		0.58		0.010		0.30		<0.07		0.06		0.04	
27-Jan-97	-5.83		5.06		.0088		I1		0.32		.175		0.047		1.05		0.006		0.58		<0.07		0.09		0.04	
03-Feb-97	-6.24		4.83		.0149		7.2		0.39		.360		0.115		0.26		0.014		0.12		<0.07		0.04		0.03	
10-Feb-97	-7.47		4.84		.0146		7.0		0.38		.350		0.114		0.26		0.012		0.12		<0.07		0.05		0.03	
17-Feb-97	-6.27		4.84		.0146		7.4		0.39		.360		0.116		0.27		0.013		0.12		<0.07		0.05		0.03	
24-Feb-97	-3.63		5.32		.0048		5.9		0.40		.295		0.106		0.64		0.046		0.42		0.07		0.05		0.10	
03-Mar-97	-2.24		4.57		.0271		I1		1.29		.883		0.210		2.72		0.012		1.63		0.10		0.21		0.12	
10-Mar-97	I1		I1		I1		I1		I1		I1		I1		I1		0.022		5.5		0.40		0.85		0.58	
17-Mar-97	-17.47		5.06		.0088		7.0		0.33		.212		0.040		0.84		<0.005		0.47		0.11		0.13		0.08	
24-Mar-97	I7		I7		I7		I1		I7		I7		I7		I7		I7		I7		I7		I7		I7	
31-Mar-97	-20.39		5.06		.0088		6.8		0.33		.207		0.038		0.80		0.005		0.49		0.11		0.13		0.08	

07-Apr-97 -20.12 5.06 .0088 7.0 0.34 .215
0.036 0.81 <0.005 0.50 0.11 0.13 0.08
-0.44
14-Apr-97 I5 I5 I5 I5 I5 I5
I5 I5 I5 I5 I5 I5 I5
I5
21-Apr-97 -20.26 5.06 .0088 I1 0.33 .205
0.039 0.83 <0.005 0.50 0.13 0.13 0.08
-0.42
28-Apr-97 -28.63 5.09 .0082 I1 0.31 .257
0.027 0.32 0.06 0.21 0.09 0.04 0.08
-0.47
05-May-97 -19.16 5.09 .0082 I1 0.31 .262
0.028 0.39 <0.005 0.19 0.07 0.10 <0.03
-0.70
12-May-97 -7.92 5.08 .0084 6.4 0.34 .237
0.039 0.81 <0.005 0.41 <0.07 0.12 <0.03
-0.48
19-May-97 -30.33 5.05 .0090 4.0 0.30 .277
0.027 0.18 <0.005 0.09 0.08 0.09 <0.03
-0.44
26-May-97 I2 I2 I2 I2 I2 I2
I2 I2 I2 I2 I2 I2 I2
I2
02-Jun-97 -6.49 4.92 .0121 9.1 0.67 .550
0.040 0.86 0.048 0.48 <0.07 0.09 0.05
-0.96
09-Jun-97 1.90 4.15 .0714 34.3 Q3 2.81 2.787 V2
0.54 Q3 0.29 0.235 0.09 0.10 0.04 0.06
-4.09
16-Jun-97 I1 I1 I1 I1 0.77 .737 V2
0.08 0.08 0.39 0.13 I1 I1 0.39
I1
23-Jun-97 I1 4.70 .0201 9.0 0.74 .656 V3
0.122 0.13 0.063 I1 <0.07 0.04 0.03
-1.56
30-Jun-97 -3.36 4.26 .0554 25.0 2.31 2.295 V2
0.304 0.22 0.190 0.06 0.07 0.05 0.10
-3.36
07-Jul-97 -0.33 4.29 .0517 24.6 2.32 2.302 V2
0.312 0.18 0.169 0.07 <0.07 0.06 0.12
-5.04

```
14-Jul-97        I2         I2         I2         I2         I2         I2
      I2         I2         I2         I2         I2         I2         I2
      I2
21-Jul-97        I2         I2         I2         I2         I2         I2
      I2         I2         I2         I2         I2         I2         I2
      I2
28-Jul-97 -10.42       4.73      .0188       9.0       0.72       .702
0.128       0.15       0.11       0.07     <0.07     <0.04       0.08
-1.05
04-Aug-97  -1.36       4.56      .0278       12.1       0.93       .925 V2
0.155       0.15      0.048      <0.04     <0.07     <0.04      <0.03
-2.12
11-Aug-97  -2.76       4.44      .0366       15.7       1.51      1.500 V2
0.205       0.11      0.142       0.04     <0.07     <0.04      <0.03
-2.42
18-Aug-97  -9.48       4.67      .0216       10.6       0.95       .832
0.154       0.79      0.098       0.47       0.08       0.11       0.09
-1.56
25-Aug-97  -7.53       4.67      .0216            I1    0.94       .820
0.158       0.81      0.068       0.48       0.09       0.11       0.07
-1.74
01-Sep-97        I1    4.70      .0201            I1    1.28      1.115 V4
0.084       1.18      0.042            I1         I1         I1         I1
-1.41
08-Sep-97  -1.24       4.26      .0554       35.6       2.92      2.455
0.284       3.32      0.239       1.86       0.10       0.22       0.12
-3.32
15-Sep-97  -3.59       4.26      .0554       23.5       2.29      2.272 V2
0.311       0.20      0.184       0.07     <0.07       0.06       0.13
-3.32
22-Sep-97        I1    4.65      .0226            I1         I1         I1
      I1         I1         I1         I1         I1         I1         I1
-1.52
29-Sep-97  -6.85       4.67      .0216       12.6       0.94       .817
0.158       0.82      0.073       0.49       0.08       0.10       0.07
-1.68
06-Oct-97        I7         I7         I7         I7         I7         I7
      I7         I7         I7         I7         I7         I7         I7
      I7
13-Oct-97  -5.29       5.09      .0082       14.3       0.60       .185
0.017       3.06     <0.005       1.66       0.14       0.26       0.09
-0.96
```

20-Oct-97 -21.82 5.06 .0088 5.3 0.33 .255
0.032 0.54 <0.005 0.30 0.12 0.11 0.04
-0.85
27-Oct-97 -28.61 5.12 .0076 3.9 0.22 .172
0.034 0.30 <0.005 0.19 0.09 0.08 0.03
-0.92
03-Nov-97 5.62 5.89 .0013 8.7 0.49 .367
0.097 0.91 0.008 0.49 0.10 0.11 0.04
-1.23
10-Nov-97 -7.81 4.90 .0127 8.6 0.49 .367
0.104 0.93 0.007 0.49 0.12 0.12 0.04
-1.13
17-Nov-97 -24.52 5.11 .0078 3.9 0.23 .187
0.034 0.32 <0.005 0.17 0.09 0.08 <0.03
-0.88
24-Nov-97 -21.89 5.17 .0068 4.1 0.24 .192
0.035 0.34 <0.005 0.19 0.09 0.08 <0.03
-0.77
01-Dec-97 -16.56 5.26 .0055 5.5 0.24 .132
0.018 0.78 0.007 0.43 0.10 0.11 0.03
-0.76
08-Dec-97 -10.41 4.85 .0142 8.5 0.47 .350
0.092 0.88 0.013 0.48 0.10 0.11 0.03
-1.18
15-Dec-97 I2 I2 I2 I2 I2 I2
I2 I2 I2 I2 I2 I2 I2
I2
22-Dec-97 -3.43 4.96 .0111 10.7 0.60 .372
0.090 1.70 0.016 0.91 0.11 0.16 0.05
-0.99

Newfoundland Environment Precipitation Monitoring Network
(NEPMoN)
Site: Terra Nova - B Year: 1998

Rain Collection Statistics

Sample Id No	Start Date	End Date	Effic. (%) flg	Coll. Gauge Type	No. of Gauge Days	Sample Volume (ml)	Sample Prec Type	Sample Depth (mm)	flg	Gauge Depth (mm)	flg
15601	29-Dec-97	05-Jan-98	40.9	RG	7	525.0	R	8.2		20.0	
15602	05-Jan-98	12-Jan-98		I7 RG	7	780.0	M	12.1			V1
15603	12-Jan-98	19-Jan-98	99.3	RG	7	650.0	M	10.1		10.2	
15604	19-Jan-98	26-Jan-98	39.2	RG	7	915.0	M	14.3		36.4	
15605	26-Jan-98	02-Feb-98	669.0	RG	7	1675.0	M	26.1		3.9	
15606	02-Feb-98	09-Feb-98	623.1	RG	7	1040.0	M	16.2		2.6	
	09-Feb-98	16-Feb-98		RG	7					1.0	
	16-Feb-98	23-Feb-98		RG	7					17.5	
15607	23-Feb-98	02-Mar-98	82.7	RG	7	1120.0	R	17.4		21.1	
15608	02-Mar-98	09-Mar-98	12.3	RG	7	535.0	M	8.3		67.7	
15609	09-Mar-98	16-Mar-98	69.6	RG	7	505.0	M	7.9		11.3	
15610	16-Mar-98	23-Mar-98	43.7	RG	7	575.0	M	9.0		20.5	
15611	23-Mar-98	30-Mar-98	191.9	RG	7	505.0	R	7.9		4.1	
15612	30-Mar-98	06-Apr-98	90.9	RG	7	2545.0	M	39.6		43.6	
15613	06-Apr-98	13-Apr-98	91.8	RG	7	3635.0	M	56.6		61.7	
15614	13-Apr-98	20-Apr-98			7	4395.0		68.5		59.5	

			115.1	RG		M			
15615	20-Apr-98	27-Apr-98		7	2350.0	36.6	43.0		
			85.1	RG		M			
15616	27-Apr-98	04-May-98		7	700.0	10.9	21.2		
			51.4	RG		M			
15617	04-May-98	11-May-98		7	560.0	8.7	5.1		
			171.0	RG		R			
15618	11-May-98	18-May-98		7	650.0	10.1	36.0		
			28.1	RG		M			
15619	18-May-98	25-May-98		7	1805.0	28.1	1.3		
			2162.7	RG		M			
15620	25-May-98	01-Jun-98		7	1070.0	16.7	21.8		
			76.5	RG		R			
15621	01-Jun-98	08-Jun-98		7	200.0	3.1	21.3		
			14.6	RG		R			
15622	08-Jun-98	15-Jun-98		7	305.0	4.8	0.9		
			527.9	RG		R			
	15-Jun-98	22-Jun-98		7			5.5		
				RG		R			
	22-Jun-98	29-Jun-98		7			0.2		
				RG					
15623	29-Jun-98	06-Jul-98		7	1460.0	22.7	30.2		
			75.3	RG		R			
15624	06-Jul-98	13-Jul-98		7	1265.0	19.7	12.0		
			164.2	RG		R			
15625	13-Jul-98	20-Jul-98		7	440.0	6.9	10.9		
			62.9	RG		R			
15626	20-Jul-98	27-Jul-98		7	170.0	2.6	4.0		
			66.2	RG		R			
	27-Jul-98	03-Aug-98		7			0.5		
				RG					
	03-Aug-98	10-Aug-98		7					V1
				I1	RG				
15627	10-Aug-98	17-Aug-98		7	530.0	8.3	25.3		
			32.6	RG		R			
15628	17-Aug-98	24-Aug-98		7	705.0	11.0	12.2		
			90.0	RG		R			
15629	24-Aug-98	31-Aug-98		7	1685.0	26.2	20.1		
			130.6	RG		R			
15630	31-Aug-98	07-Sep-98		7	2905.0	45.2	40.3		
			112.3	RG		R			
15631	07-Sep-98	14-Sep-98		7	1915.0	29.8	24.2		

			123.3	RG	R			
15632	14-Sep-98	21-Sep-98		7	1390.0	21.7		15.5
			139.7	RG	R			
15633	21-Sep-98	28-Sep-98		7	1765.0	27.5		18.4
			149.4	RG	R			
15634	28-Sep-98	05-Oct-98		7	1940.0	30.2		31.8
			95.0	RG	R			
15635	05-Oct-98	12-Oct-98		7	950.0	14.8		14.2
			104.2	RG	R			
15636	12-Oct-98	19-Oct-98		7	2875.0	44.8		52.0
			86.1	RG	R			
15637	19-Oct-98	26-Oct-98		7	600.0	9.3		7.8
			119.8	RG	R			
15638	26-Oct-98	02-Nov-98		7	1760.0	27.4		51.9
			52.8	RG	R			
15639	02-Nov-98	09-Nov-98		7	1550.0	24.1		11.3
			213.7	RG	M			
15640	09-Nov-98	16-Nov-98		7	3335.0	51.9		26.1
			199.0	RG	M			
15641	16-Nov-98	23-Nov-98		7	925.0	14.4		16.2
			88.9	RG	M			
15642	23-Nov-98	30-Nov-98		7	1330.0	20.7		10.0
			207.2	RG	M			
15643	30-Nov-98	07-Dec-98		7	805.0	12.5		10.7
			117.2	RG	M			
15644	07-Dec-98	14-Dec-98		7	260.0	4.0		6.5
			62.3	RG	M			
15645	14-Dec-98	21-Dec-98		7	1160.0	18.1		23.3
			77.5	RG	M			
15646	21-Dec-98	28-Dec-98		7	495.0	7.7		17.6
			43.8	RG	M			
15647	28-Dec-98	04-Jan-99		7	670.0	10.4		15.8
			66.1	RG	M			

Newfoundland Environment Precipitation Monitoring Network (NEPMoN)
Site: Terra Nova - B Year: 1998
Ion Concentrations

Start Date	Ion Bal.	flg	H pH	flg	Cond.	flg	SO4	XSO4	NNO3	Cl	NNH4	Na	Ca	Mg	K	Alk CaCO3	flg	flg	flg	flg	flg	flg	flg	flg	flg
					umhos		(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)										
29-Dec-97	-3.14		5.61		.0025		13.6	0.95	.585	0.084	2.67														
0.047	1.46		0.36		0.21		0.12	-0.52																	
05-Jan-98	-9.32		4.85		.0142		8.9	0.47	.352	0.090	0.88														
0.009	0.47		0.09		0.10		0.06	-1.20																	
12-Jan-98	-1.83		4.79		.0163		22.5	1.10	.503	0.084	4.39														
0.018	2.39		0.14		0.33		0.11	-1.31																	
19-Jan-98	-7.97		4.85		.0142		8.6	0.47	.352	0.091	0.91														
0.017	0.47		0.09		0.09		0.06	-1.19																	
26-Jan-98	-25.20		5.13		.0075		4.2	0.21	.167	0.035	0.29														
<0.005	0.17		0.08		0.06		0.05	-0.83																	
02-Feb-98	-8.13		4.86		.0139		9.0	0.48	.362	0.093	0.90														
0.017	0.47		0.09		0.10		0.05	-1.20																	
09-Feb-98		I2		I2		I2		I2		I2		I2		I2		I2		I2		I2		I2		I2	
	I2		I2		I2		I2																		
16-Feb-98		I2		I2		I2		I2		I2		I2		I2		I2		I2		I2		I2		I2	
	I2		I2		I2		I2																		
23-Feb-98	-10.30		4.86		.0139		8.6	0.47	.347	0.091	0.85														
0.017	0.49		0.09		0.09		0.05	-1.28																	
02-Mar-98	-9.10		4.88		.0133		8.8	0.52	.390	0.094	0.86														
0.013	0.52		0.09		0.09		0.06	-1.09																	
09-Mar-98	-5.17		4.83		.0149		11.1	0.70	.540	0.084	1.16														
0.031	0.64		0.09		0.10		0.06	-1.31																	
16-Mar-98	-15.34		5.12		.0076		5.8	0.31	.207	0.028	0.73														
0.010	0.41		0.09		0.09		0.06	-0.82																	
23-Mar-98		I6		I6		I6		I6		I6		I6		I6		I6		I6		I6		I6		I6	
	I6		I6		I6		I6																		
30-Mar-98	-18.31		4.83		.0149		7.1	0.44	.360	0.049	0.48														
<0.01	0.32		<0.07		0.04		0.15	-0.6																	
06-Apr-98	-26.38		5.07		.0086		4.1	0.24	.207	0.033	0.25														

```
<0.03       0.13       0.10       0.05      <0.03       -0.4
13-Apr-98 -12.53       4.78      .0167        8.3       0.54       .457      0.091       0.62
0.04        0.33       0.10       0.07       0.03       -1.0
20-Apr-98 -13.67       4.70      .0201        9.2       0.62       .555      0.106       0.50
0.05        0.26       0.10       0.06       0.03       -0.8
27-Apr-98 -11.28       4.63      .0236       11.3       0.80       .700      0.097       0.72
0.05        0.40       0.09       0.07      <0.03       -1.2
04-May-98 -11.17       4.64      .0231       11.1       0.79       .692      0.100       0.73
0.06        0.39       0.10       0.07      <0.03       -1.5
11-May-98 -11.67       4.63      .0236       11.1       0.79       .687      0.099       0.75
0.04        0.41       0.10       0.08       0.03       -1.3
18-May-98 -15.51       4.76      .0175        7.1       0.44       .405      0.111       0.31
0.04        0.14       0.09       0.05      <0.03       -0.9
25-May-98  -9.69       4.79      .0163        8.0       0.56       .477      0.093       0.66
0.05        0.33       0.10       0.06       0.03       -0.8
01-Jun-98 -17.78       4.67      .0216       10.1       0.51       .482      0.102       0.23
0.03        0.11      <0.07       0.05       0.03       -1.0
08-Jun-98 -15.41       4.75      .0179        8.3       0.75       .675      0.075       0.54
0.07        0.30       0.10       0.07       0.11       -1.2
15-Jun-98        I2         I2         I2         I2         I2         I2         I2         I2
   I2         I2         I2         I2         I2         I2
22-Jun-98        I2         I2         I2         I2         I2         I2         I2         I2
   I2         I2         I2         I2         I2         I2
29-Jun-98 -13.32       4.71      .0197        8.2       0.64       .590      0.098       0.39
0.04        0.20       0.08       0.05       0.07       -0.6
06-Jul-98 -22.77       4.59      .0259        9.9       0.58       .560      0.134       0.15
0.05        0.08       0.07       0.05       0.03       -0.6
13-Jul-98 -17.53       4.78      .0167        8.5       0.74       .665      0.075       0.53
0.11        0.30       0.08       0.08       0.11       -0.6
```

20-Jul-98	-7.48	3.96	.1105	41.4	3.55	3.537 V2	0.54	0.17		
0.28	0.05	<0.07	<0.04	0.04	-5.1					
27-Jul-98	I2	I2	I2	I2	I2	I2	I2	I2	I2	I2
I2	I2	I2	I2	I2	I2					
03-Aug-98	I2	I2	I2	I2	I2	I2	I2	I2	I2	I2
I2	I2	I2	I2	I2	I2					
10-Aug-98	I6	I6	I6	I6	I6	I6	I6	I6	I6	I6
I6	I6	I6	I6	I6	I6					
17-Aug-98	-22.25	4.69	.0206	8.2	0.52	.492	0.103	0.21		
0.05	0.11	0.08	0.05	0.04	-0.6					
24-Aug-98	-23.54	4.74	.0183	7.2	0.58	.547	0.064	0.24		
0.06	0.13	0.08	0.06	0.03	-0.7					
31-Aug-98	I6	I6	I6	I6	I6	I6	I6	I6	I6	I6
I6	I6	I6	I6	I6	I6					
07-Sep-98	-49.88	5.02	.0096	4.0	0.22	.202 V2	0.029	<0.02		
<0.03	0.07	<0.07	0.06	<0.03	-0.9					
14-Sep-98	-46.29	5.22	.0061	3.4	0.15	.107	<0.008	0.30		
0.03	0.17	0.18	0.09	<0.03	-0.5					
21-Sep-98	-13.99	4.69	.0206	8.0	0.65	.635	0.088	0.11		
0.05	0.06	<0.07	<0.04	<0.03	-1.2					
28-Sep-98	-7.50	4.78	.0167	10.3	0.65	.482	0.048	1.21		
0.06	0.67	<0.07	0.08	0.04	-1.0					
05-Oct-98	-5.30	4.89	.0130	17.6	0.83	.288	0.040	3.82		
<0.03	2.17	0.22	0.25	0.09	-1.1					
12-Oct-98	-43.90	5.30	.0051	2.0	0.05	.035	0.008	0.13		
0.03	0.06	<0.07	<0.04	<0.03	-0.6					
19-Oct-98	I6	I6	I6	I6	I6	I6	I6	I6	I6	I6
I6	I6	I6	I6	I6	I6					
26-Oct-98	-17.36	5.08	.0084	4.7	0.21	.130	0.022	0.51		

```
0.04       0.32      <0.07      <0.04      <0.03       -0.6
02-Nov-98        I7         I7         I7         I7         I7         I7         I7         I7
   I7         I7         I7         I7         I7         I7
09-Nov-98 -24.21       5.07      .0086        4.6       0.22       .147      0.029       0.52
0.03       0.29       0.07       0.09       0.03       -0.7
16-Nov-98 -40.76       5.25      .0057        2.6       0.12       .087     <0.008       0.25
<0.03       0.13       0.09       0.07       0.03       -0.5
23-Nov-98  -5.60       4.96      .0111       10.1       0.45       .220      0.079       1.62
0.06       0.92      <0.07       0.12       0.04       -0.9
30-Nov-98        I7         I7         I7         I7         I7         I7         I7         I7
   I7         I7         I7         I7         I7         I7
07-Dec-98        I7         I7         I7         I7         I7         I7         I7         I7
   I7         I7         I7         I7         I7         I7
14-Dec-98        I7         I7         I7         I7         I7         I7         I7         I7
   I7         I7         I7         I7         I7         I7
21-Dec-98 -16.42       4.94      .0116        5.9       0.22       .152      0.077       0.52
0.03       0.27      <0.07       0.08       0.03       -0.9
28-Dec-98 -35.02       5.19      .0065        3.5       0.17       .127     <0.008       0.29
<0.03       0.17       0.07       0.07       0.03       -0.6
```

Newfoundland Environment Precipitation Monitoring Network (NEPMoN)
Site: Bay D'Espoir

Start: 02-Jan-94 Days: 364
Deposition & Summary Table End: 01-Jan-95 Weeks: 52

	Sample Depth	Gauge Depth	Ionbal	pH	H	Cond.	SO4	XSO4	NNO3	Cl	NNH4	Na	Ca	Mg	K	Alk
Total Sample Periods	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51
Trace Precipitation Periods	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non-Trace Precipitation Periods	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51
# of Valid Samples	50	51	48	50	50	46	49	48	49	49	50	49	48	49	50	50
% of Valid Samples	98%	100%	94%	98%	98%	90%	96%	94%	96%	96%	98%	96%	94%	96%	98%	98%
Mean	26.42	32.54	-2.13	4.67	0.0313	15.42	1.19	1.06	0.18	1.12	0.073	0.59	0.06	0.073	0.02	0.00
Standard Deviation	22.37	24.16	4.70	0.37	0.0319	13.96	1.30	1.23	0.18	2.18	0.107	1.21	0.06	0.147	0.02	0.00
Minimum	1.36	2.60	-10.28	3.82	0.0055	2.70	0.13	0.07	0.02	0.02	0.003	0.02	0.03	0.001	0.00	0.00
Maximum	95.00	100.50	9.70	5.26	0.1526	63.80	6.39	6.31	0.87	15.00	0.452	8.20	0.32	0.998	0.12	0.00
Precipitation Weighted Conc. (mg/l)				4.77	0.0237	13.21	0.94									

```
0.79    0.14    1.17   0.055    0.62    0.05   0.075    0.02    0.00
Total Gauge Depth (mm)                      1659.7    1659.7  1659.7  1659.7  1659.7  1659.7
1659.7  1659.7  1659.7  1659.7  1659.7  1659.7  1659.7  1659.7  1659.7
Deposition (kg / Ha / Period)                                              0.3929           15.53
13.04    2.27   19.41   0.914   10.23    0.89   1.248    0.35    0.00
Deposition (365 Day, kg / Ha / Yr)                                         0.3940           15.58
13.07    2.27   19.46   0.916   10.26    0.90   1.252    0.36    0.00


Coll. Effic. - Period          81.5%        % VSL - Period       98.0%        % PCL - Period
100.0%        % TP - Period      98.9%        % VSMP - Period    96.2%
Coll. Effic. - Winter          59.9%        % VSL - Qtr. 1      100.0%        % PCL - Qtr. 1
100.0%        % TP - Qtr. 1     100.0%        % VSMP - Qtr. 1   100.0%
Coll. Effic. - Spring          87.1%        % VSL - Qtr. 2      100.0%        % PCL - Qtr. 2
100.0%        % TP - Qtr. 2      95.8%        % VSMP - Qtr. 2    92.3%
Coll. Effic. - Summer          92.3%        % VSL - Qtr. 3       91.7%        % PCL - Qtr. 3
100.0%        % TP - Qtr. 3     100.0%        % VSMP - Qtr. 3   100.0%
Coll. Effic. - Autumn          93.5%        % VSL - Qtr. 4      100.0%        % PCL - Qtr. 4
100.0%        % TP - Qtr. 4     100.0%        % VSMP - Qtr. 4   100.0%
Coll. Effic. - Level             1          % VSL - Level          1          % PCL - Level
1         % TP - Level           1         % VSMP - Level        1

Sea Salt Correction            16.1%
Sea Salt Corr. - Level           1
                                                                          Data Completeness Level
1         Overall Data Quality Lev      1
```

Newfoundland Environment Precipitation Monitoring Network (NEPMoN)
Site: Bay D'Espoir

Start: 01-Jan-95 Days: 364
Deposition & Summary Table End: 31-Dec-95 Weeks: 52

	Sample Depth	Gauge Depth	Ionbal	pH	H	Cond.	SO4	XSO4	NNO3	Cl	NNH4	Na	Ca	Mg	K	Alk
Total Sample Periods	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52
Trace Precipitation Periods	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Non-Trace Precipitation Periods	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
# of Valid Samples	49	52	44	45	45	43	47	47	47	47	46	45	44	45	46	47
% of Valid Samples	94%	100%	85%	87%	87%	83%	90%	90%	90%	90%	88%	87%	85%	87%	88%	90%
Mean	24.90	28.88	-2.43	4.87	0.0176	11.21	0.79	0.64	0.12	1.15	0.053	0.59	0.04	0.068	0.04	0.00
Standard Deviation	22.66	22.12	8.72	0.31	0.0130	7.79	0.64	0.54	0.13	1.62	0.105	0.89	0.03	0.094	0.07	0.00
Minimum	0.00	0.00	-38.76	4.21	0.0033	2.60	0.08	0.04	0.00	0.04	0.003	0.01	0.03	0.001	0.01	0.00
Maximum	90.00	90.40	8.72	5.49	0.0622	33.80	2.64	2.59	0.74	6.63	0.681	3.65	0.14	0.361	0.29	0.00
Precipitation Weighted Conc. (mg/l)				4.90	0.0153	10.51	0.69									

```
0.53    0.09    1.22   0.030    0.63    0.04   0.071    0.04    0.00
Total Gauge Depth (mm)                      1501.5    1501.5  1501.5  1501.5  1501.5  1501.5
1501.5  1501.5  1501.5  1501.5  1501.5  1501.5  1501.5  1501.5  1501.5
Deposition (kg / Ha / Period)                                              0.2300           10.32
7.93    1.33   18.29   0.447    9.43    0.65   1.064    0.62    0.00
Deposition (365 Day, kg / Ha / Yr)                                         0.2306           10.35
7.96    1.33   18.34   0.448    9.46    0.65   1.067    0.62    0.00


Coll. Effic. - Period          88.0%        % VSL - Period      100.0%        % PCL - Period
100.0%        % TP - Period      96.3%        % VSMP - Period    88.7%
Coll. Effic. - Winter          68.1%        % VSL - Qtr. 1      100.0%        % PCL - Qtr. 1
100.0%        % TP - Qtr. 1      94.1%        % VSMP - Qtr. 1    84.6%
Coll. Effic. - Spring          85.1%        % VSL - Qtr. 2      100.0%        % PCL - Qtr. 2
100.0%        % TP - Qtr. 2      85.5%        % VSMP - Qtr. 2    84.6%
Coll. Effic. - Summer         102.2%        % VSL - Qtr. 3      100.0%        % PCL - Qtr. 3
100.0%        % TP - Qtr. 3     100.0%        % VSMP - Qtr. 3    92.3%
Coll. Effic. - Autumn          95.2%        % VSL - Qtr. 4      100.0%        % PCL - Qtr. 4
100.0%        % TP - Qtr. 4     100.0%        % VSMP - Qtr. 4   100.0%
Coll. Effic. - Level             1          % VSL - Level          1          % PCL - Level
1         % TP - Level           1         % VSMP - Level        1

Sea Salt Correction            23.1%
Sea Salt Corr. - Level           1
                                                                          Data Completeness Level
1         Overall Data Quality Lev      1
```

Newfoundland Environment Precipitation Monitoring Network (NEPMoN)
Site: Cormack

Start: 29-Dec-93 Days: 364
Deposition & Summary Table End: 28-Dec-94 Weeks: 52

	Sample Depth	Gauge Depth	Ionbal	pH	H	Cond.	SO4	XSO4	NNO3	Cl	NNH4	Na	Ca	Mg	K	Alk
Total Sample Periods	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52
Trace Precipitation Periods	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non-Trace Precipitation Periods	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52
# of Valid Samples	52	52	45	46	46	44	47	47	47	47	46	46	46	45	45	47
% of Valid Samples	100%	100%	87%	88%	88%	85%	90%	90%	90%	90%	88%	88%	88%	87%	87%	90%
Mean	22.91	31.16	-3.73	4.50	0.0321	16.93	1.19	1.11	0.17	0.92	0.095	0.47	0.06	0.049	0.03	0.01
Standard Deviation	18.98	20.10	4.03	0.36	0.0278	12.03	1.09	1.10	0.11	1.70	0.102	0.95	0.04	0.070	0.04	0.04
Minimum	0.20	2.00	-13.75	3.78	0.0046	2.80	0.01	0.01	0.01	0.02	0.003	0.02	0.03	0.003	0.01	0.00
Maximum	63.20	79.00	4.08	5.34	0.1673	64.70	6.20	6.13	0.43	9.66	0.400	5.50	0.23	0.285	0.21	0.30
Precipitation Weighted Conc. (mg/l)				4.55	0.0283	14.33	1.04									

```
0.96    0.15    0.74   0.080    0.37    0.05   0.045    0.02    0.01
Total Gauge Depth (mm)                      1620.4     1620.4  1620.4  1620.4  1620.4  1620.4
1620.4  1620.4  1620.4  1620.4  1620.4  1620.4  1620.4  1620.4  1620.4
Deposition (kg / Ha / Period)                                              0.4585           16.77
15.54    2.47   12.02   1.296    6.02    0.78   0.735    0.40    0.22
Deposition (365 Day, kg / Ha / Yr)                                         0.4598           16.82
15.58    2.48   12.05   1.299    6.04    0.78   0.737    0.40    0.22


Coll. Effic. - Period          76.6%        % VSL - Period       100.0%        % PCL - Period
100.0%        % TP - Period      90.9%        % VSMP - Period    88.7%
Coll. Effic. - Winter          30.2%        % VSL - Qtr. 1       100.0%        % PCL - Qtr. 1
100.0%        % TP - Qtr. 1      76.9%        % VSMP - Qtr. 1    84.6%
Coll. Effic. - Spring          80.0%        % VSL - Qtr. 2       100.0%        % PCL - Qtr. 2
100.0%        % TP - Qtr. 2      99.0%        % VSMP - Qtr. 2    92.3%
Coll. Effic. - Summer          94.9%        % VSL - Qtr. 3       100.0%        % PCL - Qtr. 3
100.0%        % TP - Qtr. 3     100.0%        % VSMP - Qtr. 3   100.0%
Coll. Effic. - Autumn          80.6%        % VSL - Qtr. 4       100.0%        % PCL - Qtr. 4
100.0%        % TP - Qtr. 4      87.7%        % VSMP - Qtr. 4    84.6%
Coll. Effic. - Level             3          % VSL - Level           1         % PCL - Level
1         % TP - Level           1         % VSMP - Level        1

Sea Salt Correction            7.3%
Sea Salt Corr. - Level           1
                                                                          Data Completeness Level
3         Overall Data Quality Lev      3
```

Newfoundland Environment Precipitation Monitoring Network (NEPMoN)
Site: Cormack

Start: 28-Dec-94 Days: 371
Deposition & Summary Table End: 03-Jan-96 Weeks: 53

	Sample Depth	Gauge Depth	Ionbal	pH	H	Cond.	SO4	XSO4	NNO3	Cl	NNH4	Na	Ca	Mg	K	Alk
Total Sample Periods	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53
Trace Precipitation Periods	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non-Trace Precipitation Periods	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53
# of Valid Samples	51	53	45	45	45	45	50	50	50	50	50	46	47	47	47	50
% of Valid Samples	96%	100%	85%	85%	85%	85%	94%	94%	94%	94%	94%	87%	89%	89%	89%	94%
Mean	22.42	30.75	-3.66	4.86	0.0140	9.30	0.60	0.50	0.10	0.77	0.050	0.35	0.04	0.046	0.03	0.00
Standard Deviation	23.63	26.19	9.51	0.23	0.0069	5.55	0.38	0.33	0.07	1.25	0.060	0.63	0.03	0.077	0.03	0.00
Minimum	0.23	0.80	-41.11	4.46	0.0033	1.50	0.01	0.01	0.00	0.05	0.003	0.01	0.03	0.001	0.01	0.00
Maximum	105.98	118.40	6.25	5.49	0.0350	31.00	1.68	1.47	0.32	7.51	0.285	3.60	0.16	0.449	0.14	0.00
Precipitation Weighted Conc. (mg/l)				4.92	0.0121	7.61	0.47									

```
0.40    0.08    0.58   0.037    0.28    0.03   0.035    0.02    0.00
Total Gauge Depth (mm)                      1630.0     1630.0  1630.0  1630.0  1630.0  1630.0
1630.0  1630.0  1630.0  1630.0  1630.0  1630.0  1630.0  1630.0  1630.0
Deposition (kg / Ha / Period)                                              0.1970            7.69
6.54    1.31    9.44   0.602    4.55    0.56   0.567    0.32    0.00
Deposition (365 Day, kg / Ha / Yr)                                         0.1938            7.57
6.43    1.29    9.29   0.593    4.48    0.55   0.558    0.31    0.00


Coll. Effic. - Period          70.6%        % VSL - Period       100.0%        % PCL - Period
100.0%        % TP - Period      94.9%        % VSMP - Period    92.6%
Coll. Effic. - Winter          46.7%        % VSL - Qtr. 1       100.0%        % PCL - Qtr. 1
100.0%        % TP - Qtr. 1     100.0%        % VSMP - Qtr. 1   100.0%
Coll. Effic. - Spring          54.3%        % VSL - Qtr. 2       100.0%        % PCL - Qtr. 2
100.0%        % TP - Qtr. 2     100.0%        % VSMP - Qtr. 2   100.0%
Coll. Effic. - Summer          92.3%        % VSL - Qtr. 3       100.0%        % PCL - Qtr. 3
100.0%        % TP - Qtr. 3      78.2%        % VSMP - Qtr. 3    76.9%
Coll. Effic. - Autumn          84.2%        % VSL - Qtr. 4       100.0%        % PCL - Qtr. 4
100.0%        % TP - Qtr. 4     100.0%        % VSMP - Qtr. 4   100.0%
Coll. Effic. - Level             2          % VSL - Level            1         % PCL - Level
1         % TP - Level           1         % VSMP - Level        1

Sea Salt Correction            15.0%
Sea Salt Corr. - Level           1
                                                                        Data Completeness Level
2         Overall Data Quality Lev      2
```

Newfoundland Environment Precipitation Monitoring Network (NEPMoN)
Site: Cormack

Start: 03-Jan-96 Days: 364
Deposition & Summary Table End: 01-Jan-97 Weeks: 52

	Sample Depth	Gauge Depth	Ionbal	pH	H	Cond.	SO4	XSO4	NNO3	Cl	NNH4	Na	Ca	Mg	K	Alk
Total Sample Periods	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52
Trace Precipitation Periods	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non-Trace Precipitation Periods	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52
# of Valid Samples	50	52	45	45	45	44	47	43	47	46	46	46	46	46	46	47
% of Valid Samples	96%	100%	87%	87%	87%	85%	90%	83%	90%	88%	88%	88%	88%	88%	88%	90%
Mean	20.84	27.08	-5.78	4.81	0.0156	9.42	0.56	0.49	0.11	0.65	0.043	0.34	0.04	0.049	0.02	0.02
Standard Deviation	17.88	20.08	7.43	0.29	0.0114	5.89	0.44	0.45	0.10	0.72	0.054	0.39	0.04	0.055	0.02	0.04
Minimum	0.10	1.40	-32.37	4.26	0.0027	2.20	0.08	0.04	0.01	0.01	0.003	0.01	0.01	0.001	0.01	0.00
Maximum	85.80	86.40	11.00	5.58	0.0554	29.60	2.38	2.26	0.46	2.83	0.248	1.50	0.18	0.220	0.10	0.10
Precipitation Weighted Conc. (mg/l)				4.87	0.0135	8.08	0.49									

```
0.42    0.08    0.55   0.038    0.29    0.04   0.039    0.02    0.00
Total Gauge Depth (mm)                      1353.8     1353.8  1353.8  1353.8  1353.8  1353.8
1353.8  1353.8  1353.8  1353.8  1353.8  1353.8  1353.8  1353.8  1353.8
Deposition (kg / Ha / Period)                                               0.1833            6.66
5.73    1.14    7.46   0.512    3.89    0.48   0.533    0.24    0.06
Deposition (365 Day, kg / Ha / Yr)                                          0.1838            6.68
5.75    1.14    7.48   0.514    3.90    0.48   0.534    0.24    0.07


Coll. Effic. - Period          79.7%        % VSL - Period       100.0%        % PCL - Period
100.0%        % TP - Period      91.0%        % VSMP - Period    88.7%
Coll. Effic. - Winter          63.3%        % VSL - Qtr. 1       100.0%        % PCL - Qtr. 1
100.0%        % TP - Qtr. 1     100.0%        % VSMP - Qtr. 1   100.0%
Coll. Effic. - Spring          76.5%        % VSL - Qtr. 2       100.0%        % PCL - Qtr. 2
100.0%        % TP - Qtr. 2      96.1%        % VSMP - Qtr. 2    84.6%
Coll. Effic. - Summer          97.9%        % VSL - Qtr. 3       100.0%        % PCL - Qtr. 3
100.0%        % TP - Qtr. 3     100.0%        % VSMP - Qtr. 3   100.0%
Coll. Effic. - Autumn          83.1%        % VSL - Qtr. 4       100.0%        % PCL - Qtr. 4
100.0%        % TP - Qtr. 4      68.1%        % VSMP - Qtr. 4    76.9%
Coll. Effic. - Level             1          % VSL - Level           1          % PCL - Level
1         % TP - Level           2         % VSMP - Level        1

Sea Salt Correction            14.0%
Sea Salt Corr. - Level           1
                                                                          Data Completeness Level
2         Overall Data Quality Lev      2
```

Newfoundland Environment Precipitation Monitoring Network (NEPMoN)
Site: Cormack

Start: 01-Jan-97 Days: 364
Deposition & Summary Table End: 31-Dec-97 Weeks: 52

	Sample Depth	Gauge Depth	Ionbal	pH	H	Cond.	SO4	XSO4	NNO3	Cl	NNH4	Na	Ca	Mg	K	Alk
Total Sample Periods	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52
Trace Precipitation Periods	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non-Trace Precipitation Periods	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52
# of Valid Samples	52	52	45	45	45	45	45	45	45	45	46	45	45	45	45	46
% of Valid Samples	100%	100%	87%	87%	87%	87%	87%	87%	87%	87%	88%	87%	87%	87%	87%	88%
Mean	19.66	26.25	-11.33	4.65	0.0226	12.94	0.98	0.87	0.15	0.75	0.059	0.41	0.08	0.088	0.06	ERR
Standard Deviation	18.71	19.58	12.35	0.31	0.0207	11.05	1.03	1.01	0.17	1.13	0.106	0.65	0.04	0.082	0.03	ERR
Minimum	0.10	2.20	-49.45	4.03	0.0053	2.60	0.12	0.06	0.00	0.02	0.003	0.02	0.04	0.020	0.02	ERR
Maximum	76.50	80.00	10.95	5.28	0.0941	49.90	5.66	5.62	0.71	5.60	0.640	3.40	0.18	0.460	0.16	ERR
Precipitation Weighted Conc. (mg/l)				4.77	0.0172	9.62	0.76									

```
0.69    0.09    0.50   0.044    0.28    0.07   0.073    0.06    0.00
Total Gauge Depth (mm)                      1364.8     1364.8  1364.8  1364.8  1364.8  1364.8
1364.8  1364.8  1364.8  1364.8  1364.8  1364.8  1364.8  1364.8  1364.8
Deposition (kg / Ha / Period)                                               0.2343           10.35
9.40    1.30    6.84   0.596    3.80    0.96   0.996    0.76    0.00
Deposition (365 Day, kg / Ha / Yr)                                          0.2349           10.38
9.43    1.30    6.86   0.597    3.81    0.97   0.999    0.76    0.00


Coll. Effic. - Period          74.0%        % VSL - Period       100.0%        % PCL - Period
100.0%        % TP - Period      89.9%        % VSMP - Period    86.8%
Coll. Effic. - Winter          62.0%        % VSL - Qtr. 1       100.0%        % PCL - Qtr. 1
100.0%        % TP - Qtr. 1      94.1%        % VSMP - Qtr. 1    92.3%
Coll. Effic. - Spring          56.1%        % VSL - Qtr. 2       100.0%        % PCL - Qtr. 2
100.0%        % TP - Qtr. 2      99.3%        % VSMP - Qtr. 2    92.3%
Coll. Effic. - Summer          98.1%        % VSL - Qtr. 3       100.0%        % PCL - Qtr. 3
100.0%        % TP - Qtr. 3      82.2%        % VSMP - Qtr. 3    76.9%
Coll. Effic. - Autumn          71.1%        % VSL - Qtr. 4       100.0%        % PCL - Qtr. 4
100.0%        % TP - Qtr. 4      87.1%        % VSMP - Qtr. 4    92.3%
Coll. Effic. - Level             2          % VSL - Level           1          % PCL - Level
1         % TP - Level           1          % VSMP - Level       1

Sea Salt Correction            9.2%
Sea Salt Corr. - Level           1
                                                                          Data Completeness Level
2         Overall Data Quality Lev      2
```

Newfoundland Environment Precipitation Monitoring Network (NEPMoN)
Site: Cormack

Start: 31-Dec-97 Days: 371
Deposition & Summary Table End: 06-Jan-99 Weeks: 53

	Sample Depth	Gauge Depth	Ionbal	pH	H	Cond.	SO4	XSO4	NNO3	Cl	NNH4	Na	Ca	Mg	K	Alk
Total Sample Periods	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53
Trace Precipitation Periods	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non-Trace Precipitation Periods	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53
# of Valid Samples	52	53	42	43	43	44	43	43	44	44	44	44	44	44	44	45
% of Valid Samples	98%	100%	79%	81%	81%	83%	81%	81%	83%	83%	83%	83%	83%	83%	83%	85%
Mean	22.84	31.70	-14.15	4.66	0.0223	12.73	0.90	0.76	0.13	0.93	0.090	0.53	0.09	0.088	0.06	0.55
Standard Deviation	18.56	19.86	9.96	0.44	0.0219	10.11	0.80	0.78	0.12	1.24	0.097	0.73	0.05	0.088	0.05	0.45
Minimum	0.10	0.80	-48.39	3.98	0.0015	2.30	0.13	0.10	0.00	0.05	0.003	0.02	0.04	0.020	0.02	0.10
Maximum	81.83	87.20	1.40	5.84	0.1055	42.30	4.18	4.13	0.52	5.01	0.330	2.96	0.30	0.390	0.19	1.00
Precipitation Weighted Conc. (mg/l)				4.76	0.0174	10.52	0.73									

```
0.60    0.10    0.89   0.080    0.51    0.09   0.086    0.05    0.04
Total Gauge Depth (mm)                      1648.2     1648.2  1648.2  1648.2  1648.2  1648.2
1648.2  1648.2  1648.2  1648.2  1648.2  1648.2  1648.2  1648.2  1648.2
Deposition (kg / Ha / Period)                                              0.2867           11.96
9.86    1.68   14.62   1.319    8.35    1.44   1.425    0.88    0.68
Deposition (365 Day, kg / Ha / Yr)                                         0.2821           11.77
9.70    1.65   14.39   1.298    8.21    1.41   1.402    0.87    0.67


Coll. Effic. - Period          72.0%        % VSL - Period       100.0%        % PCL - Period
100.0%        % TP - Period      85.9%        % VSMP - Period    83.3%
Coll. Effic. - Winter          44.5%        % VSL - Qtr. 1       100.0%        % PCL - Qtr. 1
100.0%        % TP - Qtr. 1      81.0%        % VSMP - Qtr. 1    91.7%
Coll. Effic. - Spring          71.5%        % VSL - Qtr. 2       100.0%        % PCL - Qtr. 2
100.0%        % TP - Qtr. 2      93.1%        % VSMP - Qtr. 2    84.6%
Coll. Effic. - Summer          93.1%        % VSL - Qtr. 3       100.0%        % PCL - Qtr. 3
100.0%        % TP - Qtr. 3      82.5%        % VSMP - Qtr. 3    78.6%
Coll. Effic. - Autumn          76.0%        % VSL - Qtr. 4       100.0%        % PCL - Qtr. 4
100.0%        % TP - Qtr. 4      87.4%        % VSMP - Qtr. 4    85.7%
Coll. Effic. - Level             2          % VSL - Level           1         % PCL - Level
1         % TP - Level           1          % VSMP - Level       1

Sea Salt Correction            17.6%
Sea Salt Corr. - Level           1
                                                                          Data Completeness Level
2         Overall Data Quality Lev      2
```

Newfoundland Environment Precipitation Monitoring Network (NEPMoN)
Site: Gros Morne

Start: 16-Dec-93 Days: 384
Deposition & Summary Table End: 04-Jan-95 Weeks: 55

					Sample Depth	Gauge Depth	Ionbal	pH	H	Cond.	SO4	XSO4	NNO3	Cl	NNH4	Na	Ca	Mg	K	Alk
Total Sample Periods					34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34
Trace Precipitation Periods					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non-Trace Precipitation Periods					34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34
# of Valid Samples					34	34	32	32	32	32	32	30	32	32	32	32	32	32	32	32
% of Valid Samples					100%	100%	94%	94%	94%	94%	94%	88%	94%	94%	94%	94%	94%	94%	94%	94%
Mean					56.58	40.97	-0.74	4.54	0.0289	24.53	1.59	1.28	0.17	3.09	0.112	1.62	0.17	0.169	0.07	0.00
Standard Deviation					34.51	41.76	2.95	0.34	0.0213	16.29	0.80	0.88	0.10	4.56	0.100	2.42	0.31	0.192	0.06	0.00
Minimum					23.80	1.30	-6.44	4.11	0.0058	4.10	0.22	0.18	0.00	0.13	0.003	0.10	0.03	0.017	0.01	0.00
Maximum					155.80	202.70	6.10	5.24	0.0782	92.20	3.98	3.38	0.38	22.00	0.370	11.50	1.79	0.600	0.19	0.00
Precipitation Weighted Conc. (mg/l)								4.56	0.0277	20.64	1.45									

```
1.17    0.16    2.31   0.114    1.21    0.11   0.142    0.06    0.00
Total Gauge Depth (mm)                      1393.1     1393.1  1393.1  1393.1  1393.1  1393.1
1393.1  1393.1  1393.1  1393.1  1393.1  1393.1  1393.1  1393.1  1393.1
Deposition (kg / Ha / Period)                                              0.3856           20.27
16.25    2.21   32.19   1.583   16.85    1.54   1.972    0.78    0.00
Deposition (365 Day, kg / Ha / Yr)                                         0.3665           19.27
15.45    2.10   30.59   1.505   16.01    1.47   1.875    0.75    0.00


Coll. Effic. - Period         147.8%        % VSL - Period        41.2%        % PCL - Period
100.0%        % TP - Period      84.3%        % VSMP - Period    91.4%
Coll. Effic. - Winter         199.7%        % VSL - Qtr. 1        71.4%        % PCL - Qtr. 1
100.0%        % TP - Qtr. 1      94.7%        % VSMP - Qtr. 1    85.7%
Coll. Effic. - Spring         133.0%        % VSL - Qtr. 2        55.6%        % PCL - Qtr. 2
100.0%        % TP - Qtr. 2     100.0%        % VSMP - Qtr. 2   100.0%
Coll. Effic. - Summer         160.8%        % VSL - Qtr. 3        33.3%        % PCL - Qtr. 3
100.0%        % TP - Qtr. 3     100.0%        % VSMP - Qtr. 3   100.0%
Coll. Effic. - Autumn         138.9%        % VSL - Qtr. 4        11.1%        % PCL - Qtr. 4
100.0%        % TP - Qtr. 4      63.3%        % VSMP - Qtr. 4    88.9%
Coll. Effic. - Level             1          % VSL - Level            4          % PCL - Level
1         % TP - Level           2         % VSMP - Level        1

Sea Salt Correction           19.8%
Sea Salt Corr. - Level           1
                                                                          Data Completeness Level
4         Overall Data Quality Lev      4
```

Newfoundland Environment Precipitation Monitoring Network (NEPMoN)
Site: Gros Morne

Start: 04-Jan-95 Days: 364
Deposition & Summary Table End: 03-Jan-96 Weeks: 52

	Sample Depth	Gauge Depth	Ionbal	pH	H	Cond.	SO4	XSO4	NNO3	Cl	NNH4	Na	Ca	Mg	K	Alk
Total Sample Periods	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47
Trace Precipitation Periods	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non-Trace Precipitation Periods	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47
# of Valid Samples	41	47	45	46	46	46	47	47	47	47	46	46	46	46	47	47
% of Valid Samples	87%	100%	96%	98%	98%	98%	100%	100%	100%	100%	98%	98%	98%	98%	100%	100%
Mean	26.20	27.41	1.30	4.83	0.0148	22.13	1.76	1.23	0.11	3.99	0.076	2.15	0.16	0.233	0.11	0.03
Standard Deviation	24.05	23.47	3.84	0.37	0.0111	20.99	3.62	3.59	0.08	6.04	0.153	3.36	0.24	0.363	0.12	0.16
Minimum	0.20	0.20	-15.73	4.24	0.0005	4.40	0.24	0.17	0.00	0.09	0.003	0.02	0.03	0.009	0.01	0.00
Maximum	112.50	107.30	7.30	6.30	0.0580	88.40	25.50	25.34	0.37	22.74	0.755	12.80	1.28	1.585	0.48	1.11
Precipitation Weighted Conc. (mg/l)				4.83	0.0149	16.99	0.99									

```
0.64    0.11    2.68   0.068    1.37    0.10   0.151    0.08    0.00
Total Gauge Depth (mm)                      1288.2     1288.2  1288.2  1288.2  1288.2  1288.2
1288.2  1288.2  1288.2  1288.2  1288.2  1288.2  1288.2  1288.2  1288.2
Deposition (kg / Ha / Period)                                               0.1919           12.75
8.30    1.45   34.57   0.872   17.71    1.30   1.944    0.97    0.05
Deposition (365 Day, kg / Ha / Yr)                                          0.1924           12.79
8.32    1.46   34.66   0.874   17.76    1.30   1.949    0.97    0.05


Coll. Effic. - Period          89.9%        % VSL - Period        74.5%        % PCL - Period
100.0%        % TP - Period     100.0%        % VSMP - Period    97.9%
Coll. Effic. - Winter          83.1%        % VSL - Qtr. 1        54.5%        % PCL - Qtr. 1
100.0%        % TP - Qtr. 1     100.0%        % VSMP - Qtr. 1   100.0%
Coll. Effic. - Spring          61.7%        % VSL - Qtr. 2        45.5%        % PCL - Qtr. 2
100.0%        % TP - Qtr. 2     100.0%        % VSMP - Qtr. 2   100.0%
Coll. Effic. - Summer          91.7%        % VSL - Qtr. 3        91.7%        % PCL - Qtr. 3
100.0%        % TP - Qtr. 3     100.0%        % VSMP - Qtr. 3   100.0%
Coll. Effic. - Autumn         112.6%        % VSL - Qtr. 4       100.0%        % PCL - Qtr. 4
100.0%        % TP - Qtr. 4     100.0%        % VSMP - Qtr. 4   100.0%
Coll. Effic. - Level             1          % VSL - Level            4         % PCL - Level
1         % TP - Level           1         % VSMP - Level        1

Sea Salt Correction            34.9%
Sea Salt Corr. - Level           2
                                                                          Data Completeness Level
4         Overall Data Quality Lev      4
```

Newfoundland Environment Precipitation Monitoring Network (NEPMoN)
Site: Hope Brook

Deposition & Summary Table

Start: 05-Jan-94 Days: 363
End: 03-Jan-95 Weeks: 52

	Sample Depth	Gauge Depth	Ionbal	pH	H	Cond.	SO4	XSO4	NNO3	Cl	NNH4	Na	Ca	Mg	K	Alk
Total Sample Periods	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51
Trace Precipitation Periods	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Non-Trace Precipitation Periods	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
# of Valid Samples	46	51	40	41	41	40	42	42	42	42	40	40	40	40	42	42
% of Valid Samples	90%	100%	78%	80%	80%	78%	82%	82%	82%	82%	78%	78%	78%	78%	82%	82%
Mean	38.08	36.58	-0.70	4.41	0.0396	28.03	2.15	1.76	0.27	2.77	0.173	1.49	0.16	0.192	0.08	0.02
Standard Deviation	40.32	31.83	2.25	0.49	0.0457	21.27	1.90	1.89	0.25	3.49	0.217	2.03	0.17	0.247	0.08	0.11
Minimum	0.00	0.00	-6.00	3.59	0.0006	5.10	0.20	0.12	0.02	0.17	0.003	0.06	0.03	0.007	0.01	0.00
Maximum	171.30	141.00	4.90	6.23	0.2591	109.90	11.50	11.21	1.30	17.20	1.090	10.20	0.80	1.220	0.36	0.70
Precipitation Weighted Conc. (mg/l)				4.59	0.0260	20.11	1.47									

```
1.16    0.18    2.24   0.101    1.20    0.11   0.153    0.06    0.01
Total Gauge Depth (mm)                      1865.6     1865.6  1865.6  1865.6  1865.6  1865.6
1865.6  1865.6  1865.6  1865.6  1865.6  1865.6  1865.6  1865.6  1865.6
Deposition (kg / Ha / Period)                                              0.4846           27.40
21.61    3.30   41.73   1.879   22.39    1.96   2.847    1.12    0.21
Deposition (365 Day, kg / Ha / Yr)                                         0.4873           27.55
21.73    3.32   41.96   1.890   22.51    1.97   2.863    1.13    0.21


Coll. Effic. - Period         100.3%        % VSL - Period        98.0%        % PCL - Period
100.0%        % TP - Period      83.5%        % VSMP - Period    80.8%
Coll. Effic. - Winter          58.3%        % VSL - Qtr. 1       100.0%        % PCL - Qtr. 1
100.0%        % TP - Qtr. 1      92.0%        % VSMP - Qtr. 1    84.6%
Coll. Effic. - Spring         108.7%        % VSL - Qtr. 2        91.7%        % PCL - Qtr. 2
100.0%        % TP - Qtr. 2      78.2%        % VSMP - Qtr. 2    75.0%
Coll. Effic. - Summer         120.2%        % VSL - Qtr. 3       100.0%        % PCL - Qtr. 3
100.0%        % TP - Qtr. 3      67.6%        % VSMP - Qtr. 3    69.2%
Coll. Effic. - Autumn          97.2%        % VSL - Qtr. 4       100.0%        % PCL - Qtr. 4
100.0%        % TP - Qtr. 4     100.0%        % VSMP - Qtr. 4   100.0%
Coll. Effic. - Level             1          % VSL - Level            1         % PCL - Level
1         % TP - Level           2         % VSMP - Level        2

Sea Salt Correction            21.1%
Sea Salt Corr. - Level           1
                                                                          Data Completeness Level
2         Overall Data Quality Lev      2
```

Newfoundland Environment Precipitation Monitoring Network (NEPMoN)
Site: Hope Brook

Deposition & Summary Table

Start: 03-Jan-95 Days: 364
End: 02-Jan-96 Weeks: 52

					Sample Depth	Gauge Depth	Ionbal	pH	H	Cond.	SO4	XSO4	NNO3	Cl	NNH4	Na	Ca	Mg	K	Alk
Total Sample Periods					51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51
Trace Precipitation Periods					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non-Trace Precipitation Periods					51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51
# of Valid Samples					47	51	42	45	45	42	46	46	46	45	43	43	43	43	43	47
% of Valid Samples					92%	100%	82%	88%	88%	82%	90%	90%	90%	88%	84%	84%	84%	84%	84%	92%
Mean					30.75	28.88	1.17	4.72	0.0192	19.34	1.43	1.07	0.18	2.25	0.108	1.48	0.19	0.188	0.10	0.03
Standard Deviation					34.17	27.75	3.47	0.41	0.0135	14.05	0.91	0.66	0.16	2.98	0.102	2.26	0.20	0.270	0.13	0.13
Minimum					0.00	0.20	-12.13	4.23	0.0007	0.01	0.09	0.08	0.02	0.09	0.003	0.02	0.03	0.007	0.01	0.00
Maximum					134.00	121.80	7.06	6.19	0.0594	75.70	3.89	3.12	0.77	16.10	0.430	11.30	0.80	1.200	0.54	0.80
Precipitation Weighted Conc. (mg/l)								4.75	0.0178	18.03	1.30									

```
0.91    0.14    2.35   0.076    1.54    0.15   0.187    0.08    0.03
Total Gauge Depth (mm)                      1473.0     1473.0  1473.0  1473.0  1473.0  1473.0
1473.0  1473.0  1473.0  1473.0  1473.0  1473.0  1473.0  1473.0  1473.0
Deposition (kg / Ha / Period)                                              0.2626           19.14
13.47    2.05   34.60   1.121   22.69    2.21   2.753    1.11    0.38
Deposition (365 Day, kg / Ha / Yr)                                         0.2633           19.20
13.50    2.06   34.70   1.124   22.76    2.21   2.760    1.12    0.38


Coll. Effic. - Period         109.2%        % VSL - Period         88.2%        % PCL - Period
100.0%        % TP - Period      96.2%        % VSMP - Period    90.4%
Coll. Effic. - Winter          67.1%        % VSL - Qtr. 1         92.3%        % PCL - Qtr. 1
100.0%        % TP - Qtr. 1      92.3%        % VSMP - Qtr. 1    92.3%
Coll. Effic. - Spring         128.3%        % VSL - Qtr. 2         83.3%        % PCL - Qtr. 2
100.0%        % TP - Qtr. 2      99.9%        % VSMP - Qtr. 2    91.7%
Coll. Effic. - Summer         125.4%        % VSL - Qtr. 3         76.9%        % PCL - Qtr. 3
100.0%        % TP - Qtr. 3      99.9%        % VSMP - Qtr. 3    92.3%
Coll. Effic. - Autumn         124.0%        % VSL - Qtr. 4        100.0%        % PCL - Qtr. 4
100.0%        % TP - Qtr. 4      94.8%        % VSMP - Qtr. 4    92.3%
Coll. Effic. - Level             1          % VSL - Level             1         % PCL - Level
1         % TP - Level           1         % VSMP - Level         1

Sea Salt Correction            29.7%
Sea Salt Corr. - Level            2
                                                                    Data Completeness Level
1         Overall Data Quality Lev      1
```

Newfoundland Environment Precipitation Monitoring Network (NEPMoN)
Site: Loch Leven

Start: 28-Dec-94 Days: 366
Deposition & Summary Table End: 29-Dec-95 Weeks: 52

	Sample Depth	Gauge Depth	Ionbal	pH	H	Cond.	SO4	XSO4	NNO3	Cl	NNH4	Na	Ca	Mg	K	Alk
Total Sample Periods	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51
Trace Precipitation Periods	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non-Trace Precipitation Periods	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51
# of Valid Samples	46	51	31	33	33	31	34	34	34	34	34	33	31	31	31	34
% of Valid Samples	90%	100%	61%	65%	65%	61%	67%	67%	67%	67%	67%	65%	61%	61%	61%	67%
Mean	26.11	25.39	0.34	4.87	0.0202	19.60	1.26	0.86	0.15	2.97	0.099	1.57	0.10	0.165	0.10	0.07
Standard Deviation	19.83	22.24	3.33	0.47	0.0167	9.90	0.72	0.71	0.11	2.55	0.147	1.37	0.07	0.122	0.09	0.33
Minimum	0.00	2.00	-9.51	4.11	0.0003	5.10	0.30	0.07	0.01	0.21	0.003	0.10	0.03	0.014	0.01	0.00
Maximum	70.00	87.60	4.77	6.51	0.0782	46.40	4.07	3.80	0.47	11.50	0.680	6.20	0.27	0.431	0.44	1.88
Precipitation Weighted Conc. (mg/l)				4.85	0.0184	19.49	1.19									

0.72 0.14 3.59 0.076 1.90 0.08 0.184 0.11 0.04

Total Gauge Depth (mm) 1193.1 1193.1 1193.1 1193.1 1193.1 1193.1 1193.1 1193.1 1193.1 1193.1 1193.1 1193.1

Deposition (kg / Ha / Period) 0.2194 14.19 8.53 1.63 42.87 0.909 22.69 1.01 2.189 1.29 0.44

Deposition (365 Day, kg / Ha / Yr) 0.2188 14.15 8.51 1.63 42.75 0.907 22.63 1.01 2.183 1.28 0.44

Coll. Effic. - Period	144.1%	% VSL - Period	92.2%	% PCL - Period	100.0%
% TP - Period	57.9%	% VSMP - Period	65.4%		
Coll. Effic. - Winter	95.9%	% VSL - Qtr. 1	92.3%	% PCL - Qtr. 1	100.0%
% TP - Qtr. 1	20.0%	% VSMP - Qtr. 1	30.8%		
Coll. Effic. - Spring	314.0%	% VSL - Qtr. 2	91.7%	% PCL - Qtr. 2	100.0%
% TP - Qtr. 2	40.9%	% VSMP - Qtr. 2	66.7%		
Coll. Effic. - Summer	125.1%	% VSL - Qtr. 3	100.0%	% PCL - Qtr. 3	100.0%
% TP - Qtr. 3	86.9%	% VSMP - Qtr. 3	84.6%		
Coll. Effic. - Autumn	108.9%	% VSL - Qtr. 4	84.6%	% PCL - Qtr. 4	100.0%
% TP - Qtr. 4	82.5%	% VSMP - Qtr. 4	84.6%		
Coll. Effic. - Level	1	% VSL - Level	1	% PCL - Level	1
% TP - Level	4	% VSMP - Level	4		

Sea Salt Correction	39.9%
Sea Salt Corr. - Level	2

Data Completeness Level

4 Overall Data Quality Lev 4

Newfoundland Environment Precipitation Monitoring Network (NEPMoN)
Site: Loch Leven

Start: 03-Jun-98 Days: 217
Deposition & Summary Table End: 06-Jan-99 Weeks: 31

	Sample Depth	Gauge Depth	Ionbal	pH	H	Cond.	SO4	XSO4	NNO3	Cl	NNH4	Na	Ca	Mg	K	Alk
Total Sample Periods	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
Trace Precipitation Periods	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Non-Trace Precipitation Periods	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28
# of Valid Samples	27	30	0	23	23	23	25	25	25	25	24	25	25	25	25	25
% of Valid Samples	90%	100%	0%	77%	77%	77%	83%	83%	83%	83%	80%	83%	83%	83%	83%	83%
Mean	25.40	24.88	-10.86	4.61	0.0330	26.27	1.74	1.05	0.20	4.92	0.157	2.75	0.20	0.370	0.13	0.10
Standard Deviation	20.32	20.25	7.48	0.32	0.0299	26.45	1.49	1.03	0.22	7.22	0.151	4.06	0.19	0.519	0.13	0.00
Minimum	4.83	4.50	-31.28	3.84	0.0052	4.90	0.29	0.12	0.01	0.08	0.015	0.04	0.04	0.020	0.04	0.10
Maximum	86.37	86.40	-2.33	5.29	0.1457	104.00	5.36	4.98	1.02	22.80	0.610	13.70	0.65	1.800	0.53	0.10
Precipitation Weighted Conc. (mg/l)				4.67	0.0277	21.01	1.38									

```
0.89    0.14    3.46   0.120    1.96    0.16   0.270    0.10    0.01
Total Gauge Depth (mm)                        671.7     671.7   671.7   671.7   671.7   671.7
671.7   671.7   671.7   671.7   671.7   671.7   671.7   671.7   671.7
Deposition (kg / Ha / Period)                                          0.1862            9.25
5.96    0.92   23.27   0.808   13.17    1.07   1.812    0.70    0.04
Deposition (365 Day, kg / Ha / Yr)                                     0.3133           15.56
10.03    1.55   39.14   1.358   22.16    1.79   3.047    1.17    0.07


Coll. Effic. - Period         102.2%        % VSL - Period       96.7%        % PCL - Period
100.0%        % TP - Period      95.6%        % VSMP - Period    80.6%
Coll. Effic. - Winter          93.6%        % VSL - Qtr. 1        ERR         % PCL - Qtr. 1
ERR         % TP - Qtr. 1       ERR         % VSMP - Qtr. 1     ERR
Coll. Effic. - Spring           ERR         % VSL - Qtr. 2      100.0%        % PCL - Qtr. 2
100.0%        % TP - Qtr. 2     100.0%        % VSMP - Qtr. 2    75.0%
Coll. Effic. - Summer         103.3%        % VSL - Qtr. 3      100.0%        % PCL - Qtr. 3
100.0%        % TP - Qtr. 3      94.1%        % VSMP - Qtr. 3    85.7%
Coll. Effic. - Autumn         103.8%        % VSL - Qtr. 4       91.7%        % PCL - Qtr. 4
100.0%        % TP - Qtr. 4      97.3%        % VSMP - Qtr. 4    83.3%
Coll. Effic. - Level            ERR         % VSL - Level         ERR         % PCL - Level
ERR         % TP - Level        ERR         % VSMP - Level      ERR

Sea Salt Correction            35.6%
Sea Salt Corr. - Level            2
                                                                        Data Completeness Level
ERR         Overall Data Quality Lev    ERR
```

Newfoundland Environment Precipitation Monitoring Network (NEPMoN)
Site: Salmonier

Start: 13-Jan-94 Days: 356
Deposition & Summary Table End: 04-Jan-95 Weeks: 51

	Sample Depth	Gauge Depth	Ionbal	pH	H	Cond.	SO4	XSO4	NNO3	Cl	NNH4	Na	Ca	Mg	K	Alk
Total Sample Periods	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36
Trace Precipitation Periods	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Non-Trace Precipitation Periods	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34
# of Valid Samples	36	36	31	34	34	31	34	34	34	34	34	34	32	32	31	34
% of Valid Samples	100%	100%	86%	94%	94%	86%	94%	94%	94%	94%	94%	94%	89%	89%	86%	94%
Mean	43.28	43.52	0.49	4.56	0.0277	13.77	1.30	1.10	0.16	1.65	0.095	0.82	0.09	0.088	0.03	0.01
Standard Deviation	34.06	34.37	3.58	0.39	0.0301	8.31	1.76	1.52	0.21	2.23	0.121	1.20	0.21	0.086	0.03	0.03
Minimum	0.93	0.00	-12.37	3.85	0.0026	3.36	0.13	0.11	0.02	0.15	0.003	0.04	0.03	0.001	0.01	0.00
Maximum	138.40	140.00	7.69	5.59	0.1424	37.70	10.50	8.85	0.94	12.30	0.669	6.60	1.22	0.471	0.14	0.17
Precipitation Weighted Conc. (mg/l)				4.73	0.0188	12.21	0.88									

0.73 0.10 1.23 0.064 0.59 0.05 0.077 0.02 0.00
Total Gauge Depth (mm) 1566.6 1566.6 1566.6 1566.6 1566.6 1566.6
1566.6 1566.6 1566.6 1566.6 1566.6 1566.6 1566.6 1566.6 1566.6
Deposition (kg / Ha / Period) 0.2950 13.77
11.42 1.61 19.29 0.997 9.18 0.77 1.205 0.39 0.04
Deposition (365 Day, kg / Ha / Yr) 0.3025 14.11
11.71 1.65 19.78 1.022 9.41 0.78 1.236 0.40 0.04

Coll. Effic. - Period 100.2% % VSL - Period 69.4% % PCL - Period
100.0% % TP - Period 89.5% % VSMP - Period 91.9%
Coll. Effic. - Winter 83.6% % VSL - Qtr. 1 80.0% % PCL - Qtr. 1
100.0% % TP - Qtr. 1 100.0% % VSMP - Qtr. 1 100.0%
Coll. Effic. - Spring 108.0% % VSL - Qtr. 2 44.4% % PCL - Qtr. 2
100.0% % TP - Qtr. 2 100.0% % VSMP - Qtr. 2 100.0%
Coll. Effic. - Summer 99.7% % VSL - Qtr. 3 77.8% % PCL - Qtr. 3
100.0% % TP - Qtr. 3 71.9% % VSMP - Qtr. 3 88.9%
Coll. Effic. - Autumn 102.6% % VSL - Qtr. 4 75.0% % PCL - Qtr. 4
100.0% % TP - Qtr. 4 86.7% % VSMP - Qtr. 4 87.5%
Coll. Effic. - Level 1 % VSL - Level 4 % PCL - Level
1 % TP - Level 1 % VSMP - Level 1

Sea Salt Correction 17.0%
Sea Salt Corr. - Level 1

Data Completeness Level
4 Overall Data Quality Lev 4

Newfoundland Environment Precipitation Monitoring Network (NEPMoN)
Site: Salmonier

Start: 04-Jan-95 Days: 363
Deposition & Summary Table End: 02-Jan-96 Weeks: 52

	Sample Depth	Gauge Depth	Ionbal	pH	H	Cond.	SO4	XSO4	NNO3	Cl	NNH4	Na	Ca	Mg	K	Alk
Total Sample Periods	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40
Trace Precipitation Periods	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Non-Trace Precipitation Periods	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39
# of Valid Samples	37	40	36	36	36	33	37	37	37	37	37	36	36	36	36	37
% of Valid Samples	93%	100%	90%	90%	90%	83%	93%	93%	93%	93%	93%	90%	90%	90%	90%	93%
Mean	31.82	29.13	-0.23	4.84	0.0146	10.91	0.97	0.66	0.10	2.30	0.100	1.20	0.07	0.147	0.06	0.07
Standard Deviation	24.56	21.63	3.19	0.39	0.0091	5.58	1.03	0.53	0.08	5.69	0.215	3.20	0.13	0.393	0.12	0.36
Minimum	1.00	0.00	-9.10	4.38	0.0002	0.15	0.18	0.10	0.02	0.14	0.003	0.08	0.03	0.010	0.01	0.00
Maximum	98.50	89.80	4.90	6.82	0.0420	27.00	6.03	2.36	0.33	35.70	1.180	19.80	0.80	2.440	0.71	2.23
Precipitation Weighted Conc. (mg/l)				4.83	0.0147	11.10	0.83									

```
0.62    0.08    1.58   0.095    0.82    0.05   0.102    0.04    0.14
Total Gauge Depth (mm)                      1165.3     1165.3  1165.3  1165.3  1165.3  1165.3
1165.3  1165.3  1165.3  1165.3  1165.3  1165.3  1165.3  1165.3  1165.3
Deposition (kg / Ha / Period)                                              0.1718            9.67
7.27    0.96   18.42   1.102    9.55    0.57   1.186    0.45    1.62
Deposition (365 Day, kg / Ha / Yr)                                         0.1727            9.72
7.31    0.97   18.52   1.108    9.61    0.57   1.193    0.45    1.63


Coll. Effic. - Period         113.0%        % VSL - Period        85.0%        % PCL - Period
100.0%        % TP - Period      91.3%        % VSMP - Period    90.2%
Coll. Effic. - Winter         113.7%        % VSL - Qtr. 1        80.0%        % PCL - Qtr. 1
100.0%        % TP - Qtr. 1     100.0%        % VSMP - Qtr. 1   100.0%
Coll. Effic. - Spring         100.0%        % VSL - Qtr. 2        71.4%        % PCL - Qtr. 2
100.0%        % TP - Qtr. 2     100.0%        % VSMP - Qtr. 2   100.0%
Coll. Effic. - Summer         115.9%        % VSL - Qtr. 3        91.7%        % PCL - Qtr. 3
100.0%        % TP - Qtr. 3      73.6%        % VSMP - Qtr. 3    83.3%
Coll. Effic. - Autumn         121.8%        % VSL - Qtr. 4        90.9%        % PCL - Qtr. 4
100.0%        % TP - Qtr. 4      93.5%        % VSMP - Qtr. 4    90.9%
Coll. Effic. - Level             1          % VSL - Level            1         % PCL - Level
1         % TP - Level           1         % VSMP - Level        1

Sea Salt Correction           24.8%
Sea Salt Corr. - Level           1
                                                                          Data Completeness Level
1         Overall Data Quality Lev      1
```

Newfoundland Environment Precipitation Monitoring Network (NEPMoN)
Site: Terra Nova - B

Deposition & Summary Table

Start: 03-Jan-94 Days: 364
End: 02-Jan-95 Weeks: 52

	Sample Depth	Gauge Depth	Ionbal	pH	H	Cond.	SO4	XSO4	NNO3	Cl	NNH4	Na	Ca	Mg	K	Alk
Total Sample Periods	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52
Trace Precipitation Periods	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Non-Trace Precipitation Periods	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
# of Valid Samples	52	52	46	47	47	47	47	47	47	46	47	47	47	48	47	48
% of Valid Samples	100%	100%	88%	90%	90%	90%	90%	90%	90%	88%	90%	90%	90%	92%	90%	92%
Mean	20.38	23.56	-0.18	4.75	0.0180	10.02	0.70	0.62	0.10	0.72	0.047	0.32	0.04	0.041	0.03	0.01
Standard Deviation	17.56	18.96	6.09	0.33	0.0164	6.71	0.63	0.65	0.10	0.83	0.050	0.43	0.06	0.053	0.05	0.05
Minimum	0.00	0.10	-31.21	4.10	0.0021	2.50	0.10	0.07	0.00	0.06	0.003	0.01	0.03	0.001	0.01	0.00
Maximum	69.40	76.60	11.48	5.68	0.0801	31.50	3.17	3.12	0.38	4.15	0.243	2.00	0.38	0.278	0.31	0.29

Precipitation Weighted Conc. (mg/l)	4.73	0.0190	10.36	0.72

```
0.64    0.10    0.70   0.047    0.31    0.04   0.040    0.04    0.01
Total Gauge Depth (mm)                      1224.9      1224.9  1224.9  1224.9  1224.9  1224.9
1224.9  1224.9  1224.9  1224.9  1224.9  1224.9  1224.9  1224.9  1224.9
Deposition (kg / Ha / Period)                                                0.2325            8.82
7.83    1.27    8.55   0.574    3.81    0.55   0.486    0.44    0.15
Deposition (365 Day, kg / Ha / Yr)                                           0.2331            8.85
7.86    1.28    8.57   0.576    3.82    0.55   0.487    0.44    0.15


Coll. Effic. - Period          86.3%        % VSL - Period        100.0%        % PCL - Period
100.0%        % TP - Period      98.0%        % VSMP - Period    90.6%
Coll. Effic. - Winter          59.0%        % VSL - Qtr. 1        100.0%        % PCL - Qtr. 1
100.0%        % TP - Qtr. 1     100.0%        % VSMP - Qtr. 1   100.0%
Coll. Effic. - Spring          94.4%        % VSL - Qtr. 2        100.0%        % PCL - Qtr. 2
100.0%        % TP - Qtr. 2      93.2%        % VSMP - Qtr. 2    84.6%
Coll. Effic. - Summer         100.0%        % VSL - Qtr. 3        100.0%        % PCL - Qtr. 3
100.0%        % TP - Qtr. 3      98.2%        % VSMP - Qtr. 3    92.3%
Coll. Effic. - Autumn         101.5%        % VSL - Qtr. 4        100.0%        % PCL - Qtr. 4
100.0%        % TP - Qtr. 4     100.0%        % VSMP - Qtr. 4    92.3%
Coll. Effic. - Level             1         % VSL - Level             1         % PCL - Level
1         % TP - Level           1         % VSMP - Level        1

Sea Salt Correction            11.2%
Sea Salt Corr. - Level           1
                                                                        Data Completeness Level
1         Overall Data Quality Lev      1
```

Newfoundland Environment Precipitation Monitoring Network (NEPMoN)
Site: Terra Nova - B

Start: 02-Jan-95 Days: 364
Deposition & Summary Table End: 01-Jan-96 Weeks: 52

	Sample Depth	Gauge Depth	Ionbal	pH	H	Cond.	SO4	XSO4	NNO3	Cl	NNH4	Na	Ca	Mg	K	Alk
Total Sample Periods	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52
Trace Precipitation Periods	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non-Trace Precipitation Periods	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52
# of Valid Samples	51	52	45	45	45	43	48	48	48	48	48	48	46	46	47	48
% of Valid Samples	98%	100%	87%	87%	87%	83%	92%	92%	92%	92%	92%	92%	88%	88%	90%	92%
Mean	19.26	21.15	0.53	4.86	0.0139	9.66	0.69	0.56	0.09	1.06	0.056	0.52	0.05	0.064	0.04	0.00
Standard Deviation	18.71	19.06	3.08	0.24	0.0088	5.72	0.52	0.50	0.09	1.10	0.123	0.57	0.05	0.064	0.04	0.00
Minimum	0.00	0.20	-8.84	4.44	0.0047	4.20	0.11	0.05	0.02	0.20	0.003	0.08	0.03	0.012	0.01	0.00
Maximum	114.80	91.00	7.91	5.33	0.0366	37.40	2.27	2.22	0.45	6.48	0.636	3.50	0.28	0.371	0.24	0.00

Precipitation Weighted Conc. (mg/l)	4.84	0.0146	9.12	0.65	

```
0.56    0.10    0.80   0.057    0.39    0.04   0.049    0.03    0.00
Total Gauge Depth (mm)                      1099.9      1099.9  1099.9  1099.9  1099.9  1099.9
1099.9  1099.9  1099.9  1099.9  1099.9  1099.9  1099.9  1099.9  1099.9
Deposition (kg / Ha / Period)                                              0.1607            7.18
6.11    1.06    8.80   0.626    4.24    0.48   0.543    0.38    0.00
Deposition (365 Day, kg / Ha / Yr)                                         0.1611            7.20
6.13    1.06    8.83   0.627    4.26    0.48   0.545    0.38    0.00


Coll. Effic. - Period         100.0%        % VSL - Period        100.0%        % PCL - Period
100.0%        % TP - Period      89.3%        % VSMP - Period    92.5%
Coll. Effic. - Winter          90.4%        % VSL - Qtr. 1        100.0%        % PCL - Qtr. 1
100.0%        % TP - Qtr. 1     100.0%        % VSMP - Qtr. 1   100.0%
Coll. Effic. - Spring          74.8%        % VSL - Qtr. 2        100.0%        % PCL - Qtr. 2
100.0%        % TP - Qtr. 2      98.2%        % VSMP - Qtr. 2    92.3%
Coll. Effic. - Summer         118.2%        % VSL - Qtr. 3        100.0%        % PCL - Qtr. 3
100.0%        % TP - Qtr. 3      71.3%        % VSMP - Qtr. 3    84.6%
Coll. Effic. - Autumn         112.5%        % VSL - Qtr. 4        100.0%        % PCL - Qtr. 4
100.0%        % TP - Qtr. 4     100.0%        % VSMP - Qtr. 4   100.0%
Coll. Effic. - Level             1          % VSL - Level             1         % PCL - Level
1         % TP - Level           1         % VSMP - Level        1

Sea Salt Correction            14.9%
Sea Salt Corr. - Level            1
                                                                        Data Completeness Level
1         Overall Data Quality Lev      1
```

Newfoundland Environment Precipitation Monitoring Network (NEPMoN)
Site: Terra Nova - B

Deposition & Summary Table

Start: 01-Jan-96 Days: 364
End: 30-Dec-96 Weeks: 52

	Sample Depth	Gauge Depth	Ionbal	pH	H	Cond.	SO4	XSO4	NNO3	Cl	NNH4	Na	Ca	Mg	K	Alk
Total Sample Periods	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52
Trace Precipitation Periods	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Non-Trace Precipitation Periods	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49
# of Valid Samples	52	52	43	43	43	39	43	43	43	43	43	43	43	43	43	46
% of Valid Samples	100%	100%	83%	83%	83%	75%	83%	83%	83%	83%	83%	83%	83%	83%	83%	88%
Mean	12.90	12.90	-6.65	4.84	0.0144	7.79	0.48	0.38	0.07	0.78	0.024	0.40	0.02	0.051	0.02	0.00
Standard Deviation	9.56	9.56	7.74	0.23	0.0071	4.47	0.31	0.26	0.04	0.84	0.036	0.45	0.02	0.058	0.02	0.00
Minimum	0.50	0.50	-36.89	4.52	0.0035	1.80	0.03	0.01	0.00	0.08	0.003	0.01	0.01	0.010	0.01	0.00
Maximum	43.80	43.80	3.79	5.46	0.0304	20.10	1.30	1.17	0.15	4.27	0.130	2.29	0.10	0.330	0.11	0.00
Precipitation Weighted Conc. (mg/l)				4.87	0.0138	6.92	0.42									

```
0.34    0.06    0.62   0.019    0.31    0.02   0.041    0.02    0.00
Total Gauge Depth (mm)                        632.0       632.0   632.0   632.0   632.0   632.0
632.0   632.0   632.0   632.0   632.0   632.0   632.0   632.0   632.0
Deposition (kg / Ha / Period)                                                0.0869           2.66
2.16    0.38    3.94   0.119    1.97    0.12   0.261    0.11    0.00
Deposition (365 Day, kg / Ha / Yr)                                           0.0871           2.67
2.17    0.38    3.95   0.119    1.98    0.12   0.262    0.11    0.00


Coll. Effic. - Period         100.0%        % VSL - Period        100.0%        % PCL - Period
100.0%        % TP - Period      87.4%        % VSMP - Period    86.8%
Coll. Effic. - Winter         100.0%        % VSL - Qtr. 1        100.0%        % PCL - Qtr. 1
100.0%        % TP - Qtr. 1      94.5%        % VSMP - Qtr. 1    92.3%
Coll. Effic. - Spring         100.0%        % VSL - Qtr. 2        100.0%        % PCL - Qtr. 2
100.0%        % TP - Qtr. 2      84.1%        % VSMP - Qtr. 2    76.9%
Coll. Effic. - Summer         100.0%        % VSL - Qtr. 3        100.0%        % PCL - Qtr. 3
100.0%        % TP - Qtr. 3     100.0%        % VSMP - Qtr. 3    92.9%
Coll. Effic. - Autumn         100.0%        % VSL - Qtr. 4        100.0%        % PCL - Qtr. 4
100.0%        % TP - Qtr. 4      74.5%        % VSMP - Qtr. 4    91.7%
Coll. Effic. - Level             1          % VSL - Level             1         % PCL - Level
1         % TP - Level           1         % VSMP - Level        1

Sea Salt Correction           18.8%
Sea Salt Corr. - Level           1
                                                                  Data Completeness Level
1         Overall Data Quality Lev      1
```

Newfoundland Environment Precipitation Monitoring Network (NEPMoN)
Site: Terra Nova - B

Deposition & Summary Table

Start: 30-Dec-96 Days: 364
End: 29-Dec-97 Weeks: 52

	Sample Depth	Gauge Depth	Ionbal	pH	H	Cond.	SO4	XSO4	NNO3	Cl	NNH4	Na	Ca	Mg	K	Alk
Total Sample Periods	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52
Trace Precipitation Periods	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non-Trace Precipitation Periods	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52
# of Valid Samples	51	52	39	42	42	33	42	42	42	42	43	41	41	41	42	44
% of Valid Samples	98%	100%	75%	81%	81%	63%	81%	81%	81%	81%	83%	79%	79%	79%	81%	85%
Mean	14.47	19.41	-10.09	4.73	0.0187	11.20	0.79	0.68	0.12	0.77	0.058	0.55	0.08	0.112	0.08	0.00
Standard Deviation	8.96	14.15	9.11	0.33	0.0162	8.10	0.71	0.71	0.11	0.73	0.083	0.89	0.06	0.128	0.10	0.00
Minimum	1.09	0.90	-30.33	4.15	0.0013	3.90	0.22	0.13	0.02	0.08	0.003	0.02	0.04	0.020	0.02	0.00
Maximum	37.07	81.60	5.62	5.89	0.0714	35.60	2.92	2.79	0.54	3.32	0.390	5.50	0.40	0.850	0.58	0.00
Precipitation Weighted Conc. (mg/l)				4.82	0.0153	9.25	0.64									

```
0.54    0.09    0.73   0.038    0.40    0.08   0.096    0.05    0.00
Total Gauge Depth (mm)                      1009.2      1009.2  1009.2  1009.2  1009.2  1009.2
1009.2  1009.2  1009.2  1009.2  1009.2  1009.2  1009.2  1009.2  1009.2
Deposition (kg / Ha / Period)                                               0.1545            6.50
5.49    0.94    7.35   0.387    4.06    0.80   0.970    0.53    0.00
Deposition (365 Day, kg / Ha / Yr)                                          0.1549            6.52
5.50    0.94    7.37   0.388    4.07    0.80   0.973    0.53    0.00


Coll. Effic. - Period          70.7%        % VSL - Period        100.0%        % PCL - Period
100.0%        % TP - Period      88.8%        % VSMP - Period    83.0%
Coll. Effic. - Winter          80.1%        % VSL - Qtr. 1        100.0%        % PCL - Qtr. 1
100.0%        % TP - Qtr. 1      80.6%        % VSMP - Qtr. 1    84.6%
Coll. Effic. - Spring          62.0%        % VSL - Qtr. 2        100.0%        % PCL - Qtr. 2
100.0%        % TP - Qtr. 2      81.1%        % VSMP - Qtr. 2    84.6%
Coll. Effic. - Summer         103.2%        % VSL - Qtr. 3        100.0%        % PCL - Qtr. 3
100.0%        % TP - Qtr. 3      93.9%        % VSMP - Qtr. 3    84.6%
Coll. Effic. - Autumn          54.1%        % VSL - Qtr. 4        100.0%        % PCL - Qtr. 4
100.0%        % TP - Qtr. 4      99.1%        % VSMP - Qtr. 4    84.6%
Coll. Effic. - Level             3          % VSL - Level             1         % PCL - Level
1         % TP - Level           1         % VSMP - Level        1

Sea Salt Correction            15.7%
Sea Salt Corr. - Level            1
                                                                        Data Completeness Level
3         Overall Data Quality Lev      3
```

Newfoundland Environment Precipitation Monitoring Network (NEPMoN)
Site: Terra Nova - B

Deposition & Summary Table

Start: 29-Dec-97 Days: 371
End: 04-Jan-99 Weeks: 53

	Sample Depth	Gauge Depth	Ionbal	pH	H	Cond.	SO4	XSO4	NNO3	Cl	NNH4	Na	Ca	Mg	K	Alk
Total Sample Periods	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53
Trace Precipitation Periods	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Non-Trace Precipitation Periods	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51
# of Valid Samples	53	53	39	39	39	39	39	39	39	39	39	39	39	39	39	39
% of Valid Samples	100%	100%	74%	74%	74%	74%	74%	74%	74%	74%	74%	74%	74%	74%	74%	74%
Mean	19.86	20.51	-17.23	4.78	0.0168	9.15	0.58	0.47	0.08	0.78	0.041	0.43	0.09	0.082	0.05	0.00
Standard Deviation	14.78	16.80	11.78	0.26	0.0163	6.50	0.54	0.53	0.08	0.91	0.044	0.50	0.06	0.059	0.03	0.00
Minimum	2.65	0.20	-49.88	3.96	0.0025	2.00	0.05	0.04	0.00	0.01	0.003	0.05	0.04	0.020	0.02	0.00
Maximum	68.46	67.70	-1.83	5.61	0.1105	41.40	3.55	3.54	0.54	4.39	0.280	2.39	0.36	0.330	0.15	0.00
Precipitation Weighted Conc. (mg/l)				4.85	0.0142	7.78	0.48									

0.38 0.07 0.68 0.033 0.38 0.08 0.072 0.04 0.00
Total Gauge Depth (mm) 1046.2 1046.2 1046.2 1046.2 1046.2 1046.2 1046.2 1046.2 1046.2
Deposition (kg / Ha / Period) 0.1487 5.00
4.00 0.70 7.13 0.349 3.98 0.88 0.757 0.46 0.00
Deposition (365 Day, kg / Ha / Yr) 0.1463 4.92
3.94 0.69 7.01 0.343 3.92 0.86 0.745 0.45 0.00

Coll. Effic. - Period 90.1% % VSL - Period 100.0% % PCL - Period
100.0% % TP - Period 85.3% % VSMP - Period 72.2%
Coll. Effic. - Winter 96.1% % VSL - Qtr. 1 100.0% % PCL - Qtr. 1
100.0% % TP - Qtr. 1 90.6% % VSMP - Qtr. 1 76.9%
Coll. Effic. - Spring 76.7% % VSL - Qtr. 2 100.0% % PCL - Qtr. 2
100.0% % TP - Qtr. 2 98.1% % VSMP - Qtr. 2 84.6%
Coll. Effic. - Summer 87.0% % VSL - Qtr. 3 100.0% % PCL - Qtr. 3
100.0% % TP - Qtr. 3 69.3% % VSMP - Qtr. 3 69.2%
Coll. Effic. - Autumn 108.8% % VSL - Qtr. 4 100.0% % PCL - Qtr. 4
100.0% % TP - Qtr. 4 79.0% % VSMP - Qtr. 4 64.3%
Coll. Effic. - Level 1 % VSL - Level 1 % PCL - Level
1 % TP - Level 2 % VSMP - Level 2

Sea Salt Correction 19.9%
Sea Salt Corr. - Level 1

Data Completeness Level
2 Overall Data Quality Lev 2

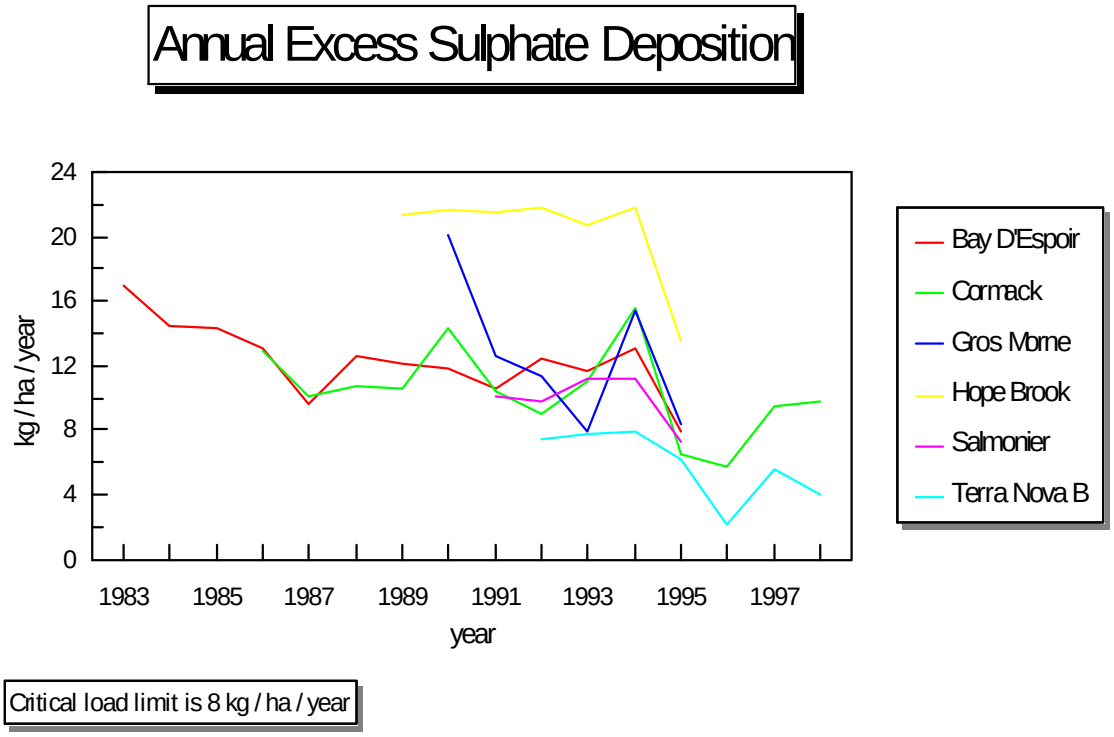
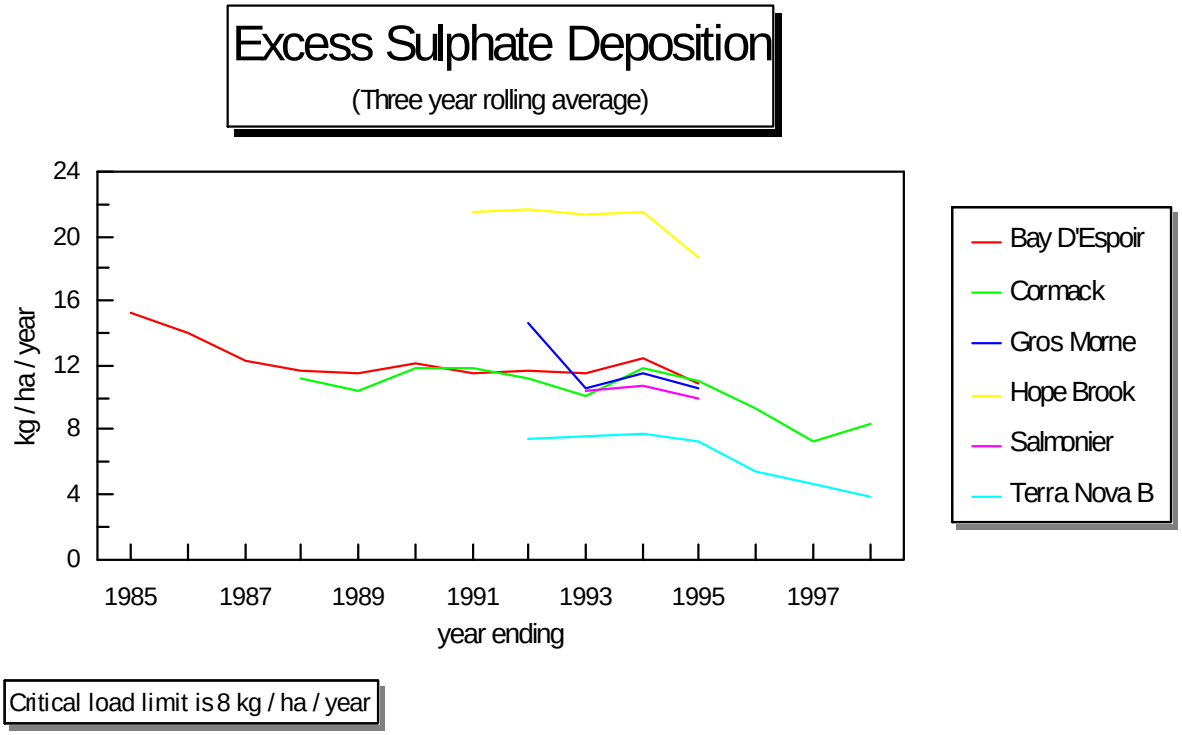


Figure 2



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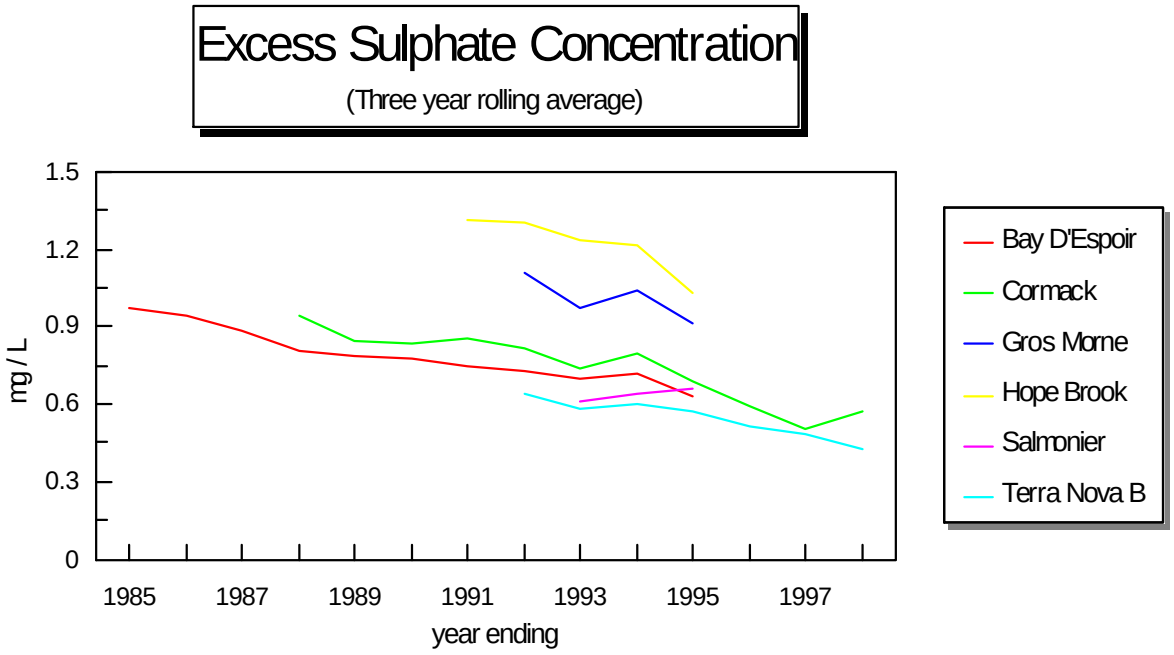

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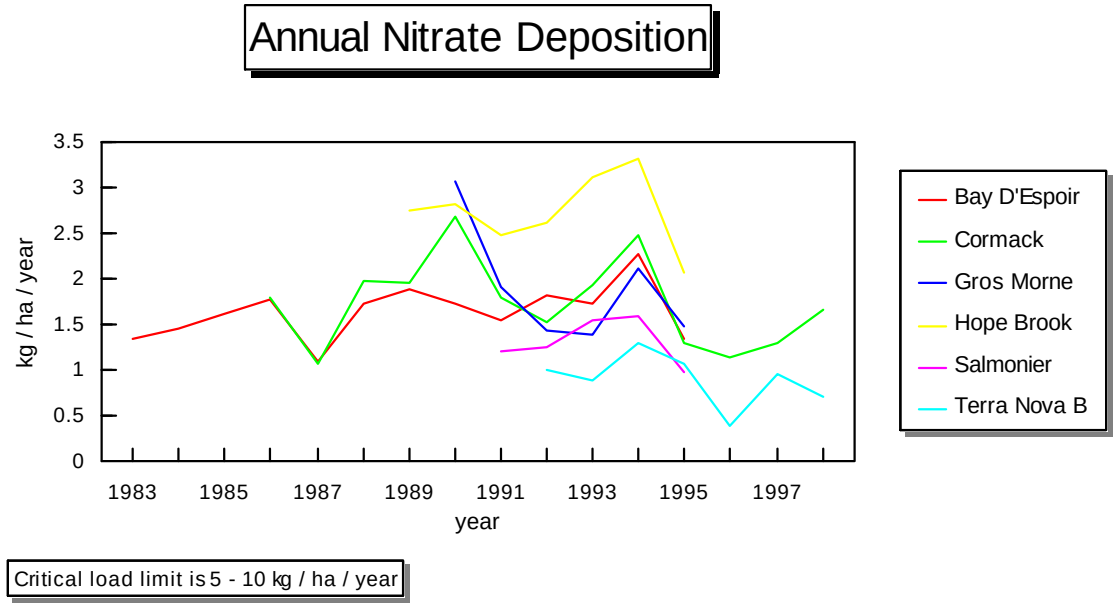

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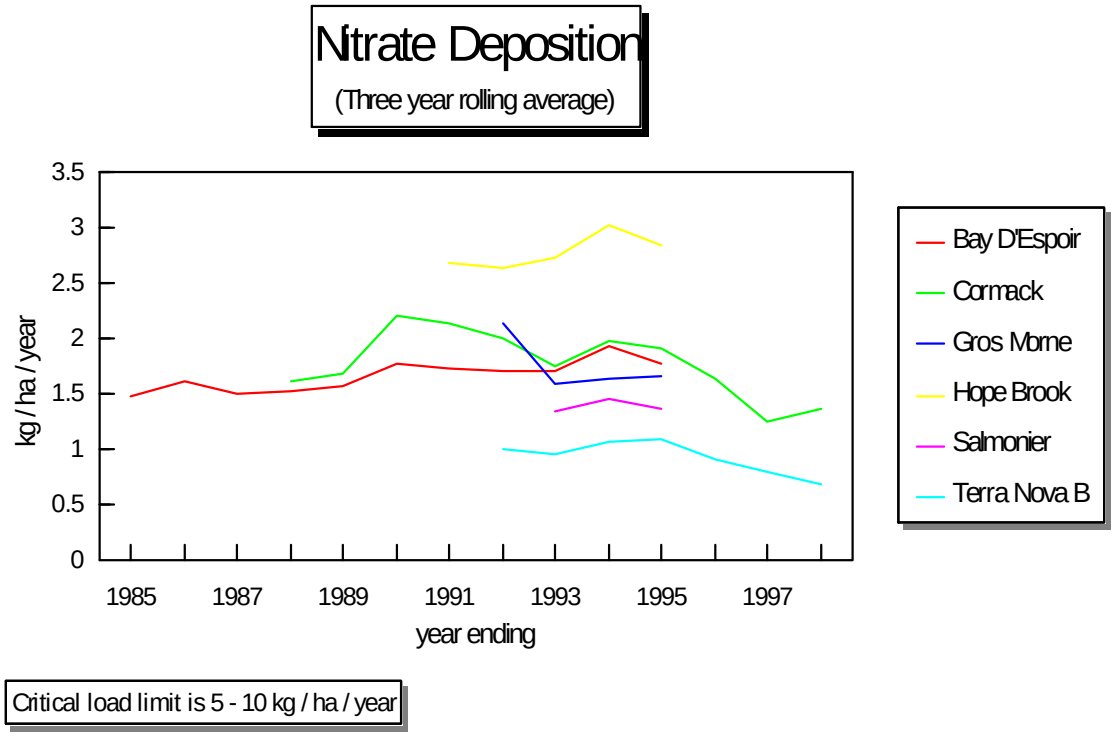

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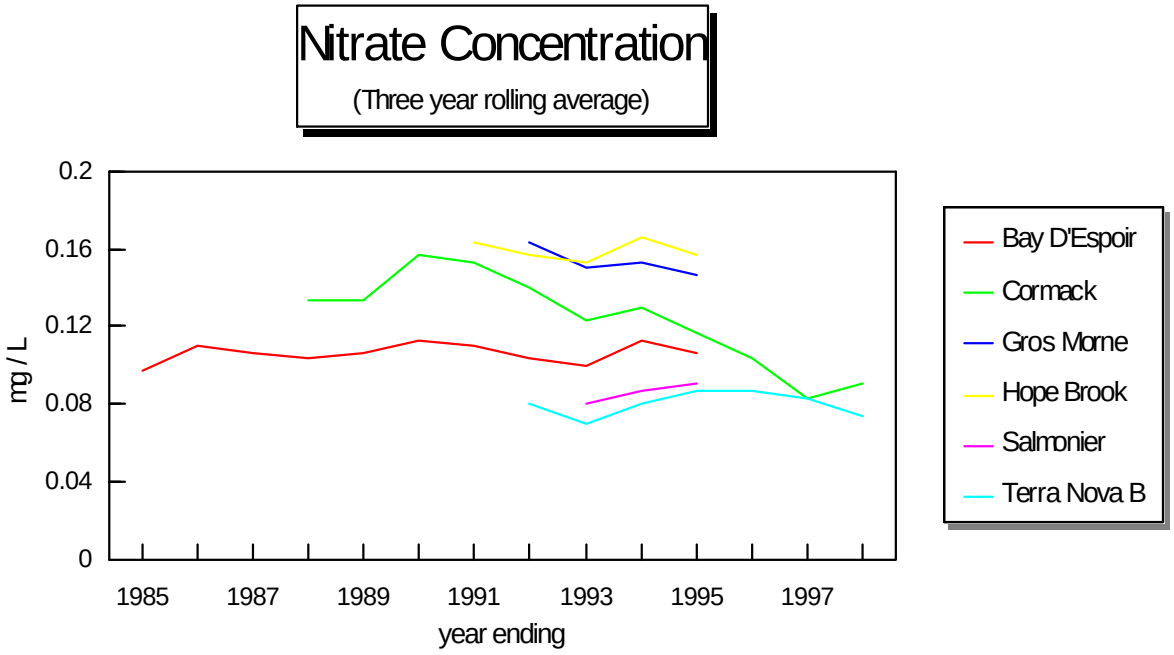


Figure 7

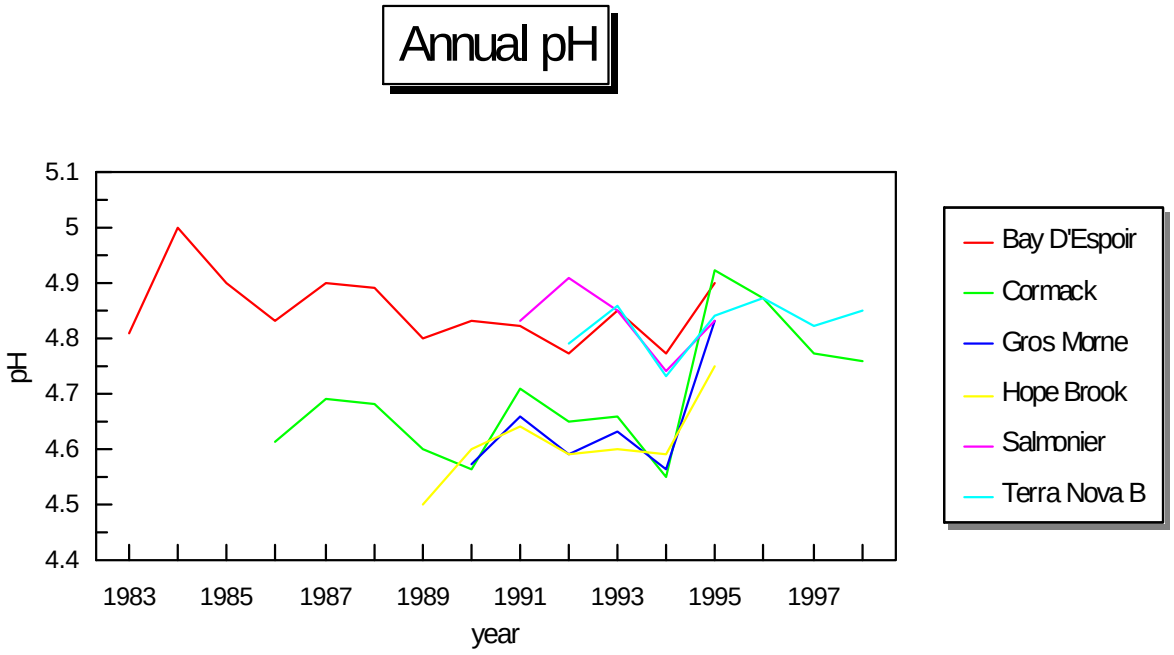
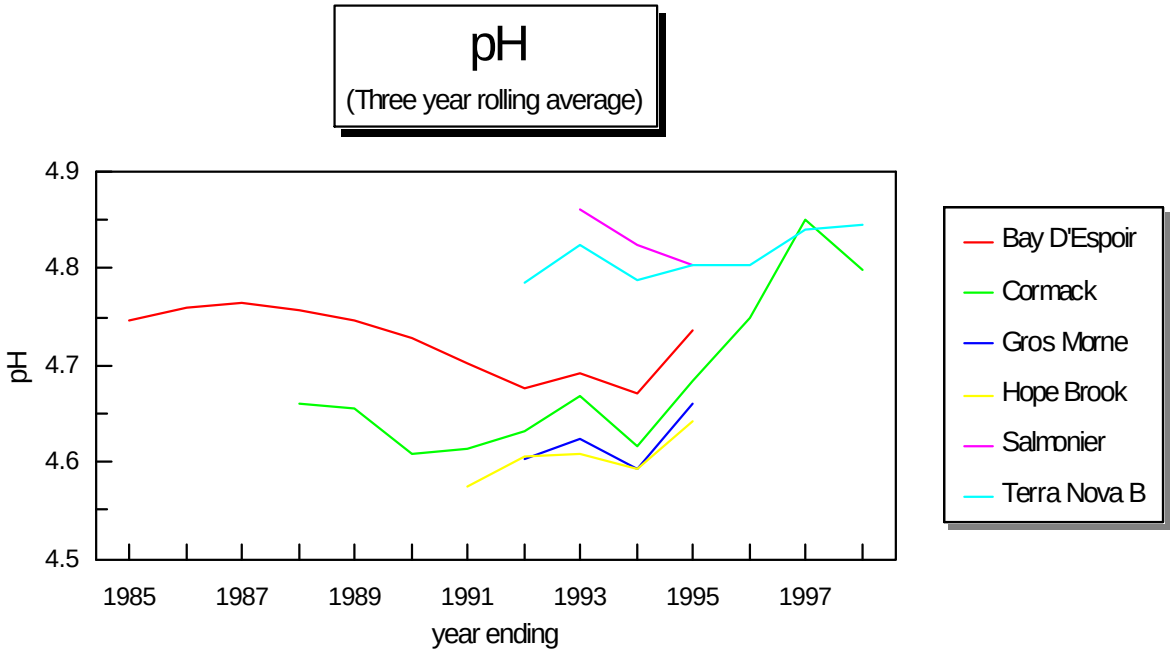


Figure 8



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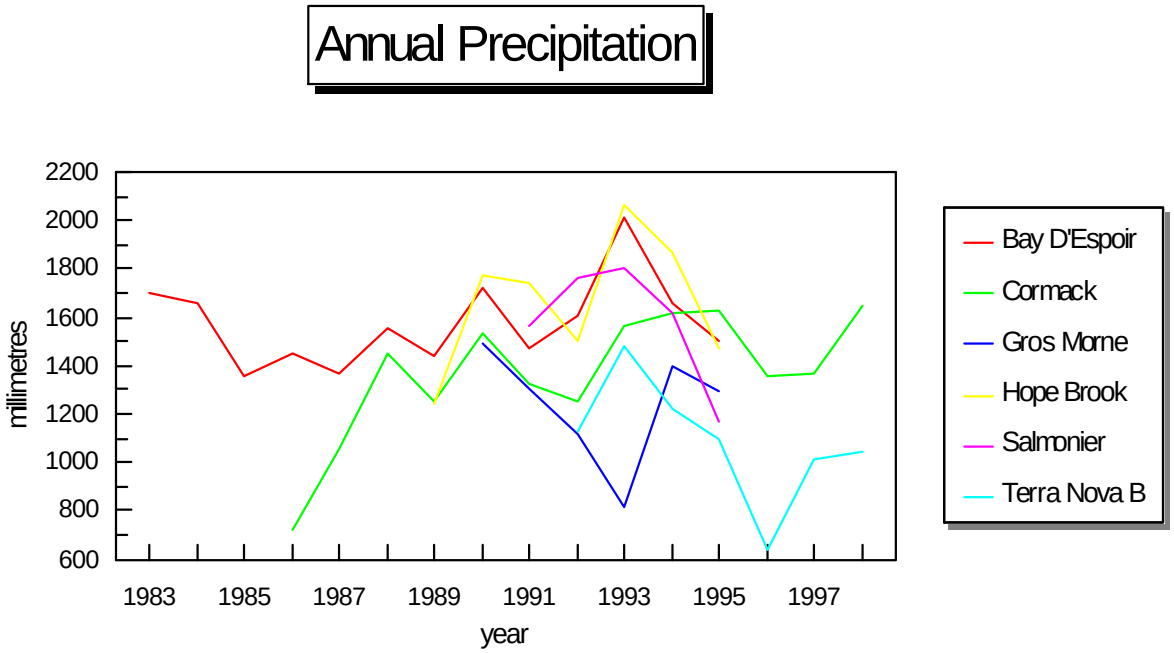
Annual Precipitation
2200
2000
1800
1600
1400
1200
1000
800
600
millimetres
1983
1985
1987
1989
1991
1993
1995
1997
year
Bay D'Espoir
Cormack
Gros Morne
Hope Brook
Salmonier
Terra Nova B

Figure 10

APPENDIX A

Acid Precipitation Collection Sites

Location:

Sites are located according to a set of criteria originally developed by the Canadian Air and Precipitation Monitoring Network (CAPMoN) (refer to Appendix B). Each site is rated as to how well it meets these criteria and is assigned a Site Representativeness Level which is used to assess the overall data quality level. Individual site characteristics are given below.

Equipment:

a) Precipitation Collectors

Precipitation samples are collected using an automated, wet-only precipitation collector. Three types of collectors were used in the years 1994 -1998 - the M.I.C Type A-M collector, the M.I.C. Type AU collector and its successor the M.I.C. Type AUC collector. The last Type A-M collector was replaced in 1995.

These collectors have four major components: (1) two heated sensor boards which detect the occurance of precipitation, (2) a bucket to collect the precipitation, (3) a moveable roof which uncovers the bucket when activated by the sensors during precipitation, and (4) a housing which contains the electronic control circuitry and motor. The principal difference between the two series of samplers is in the size of the bucket - an orifice area of 802 cm^2 for the Type A-M collector and 642 cm^2 for the Type AU collector. The Type AUC collector features improvements to the electronic circuitry, but is otherwise identical to the Type AU machine.

At each of the sites plastic bags are used to line the collection bucket. These bags are made of a 3 mil CIL virgin polyethylene inner film and a 0.48 mil CIL polyester outer film. The two films are laminated together using an alcohol primer.

b) Rain Gauges:

Five sites have a Type B rain gauge and a shielded nipher snow gauge located on site. Two sites have a Belfort rain gauge with a nipher style snow shield.

c) Balances

Balances are used at all sites. The balance is used to weigh the amount of precipitation collected, so that the volume can be calculated. Given the bucket orifice area, a sample depth can be calculated for comparison to the measured gauge depth.

d) Dustbuster

A dustbuster is used to aid in securely seating the bag in the bucket by removing the air trapped between the bag and bucket.

Protocol:

The sample collection and handling procedures are covered by the "Field Operators Manual - Newfoundland Environment Precipitation Monitoring Network - Revised 1995."

In brief, a sample is collected once a week between the hours of 07h00 and 09h00. Inside the sample handling area, a new sample bag is placed inside the spare bucket. The bucket is weighed and the mass recorded. A lid is placed on the bucket, and the covered bucket is taken to the collector where the fresh bucket is exchanged with the one on the collector. The bucket and sample are covered with the lid to protect the sample from contamination. The sample bucket is then taken back to the sample handling area where the bucket and sample are weighed and the mass recorded on the operator worksheet. A clean 250ml polyethylene bottle is filled from the sample and any excess discarded. The stoppered bottle is stored on site at 4°C until collected during a quarterly maintenance visit by a member of the department. Where the site is remote, the sample is mailed into the department (eg Burgeo). As well as collecting the sample, the operator is required to log daily observations of the occurrence of precipitation on the worksheet.

Individual Site Characteristics: Bay D'Espoir

Latitude: 47°59'32" N Longitude: 55°49'02" W
UTM (N): 5315900 m UTM (E): 588250 m
Elevation: 168 m
(Relocated 1km from original site: Sept 27/89)

Site Representative Rating: 1
Deviations from Siting Criteria:
2 - less than 40km to open seawater.

First Opened: 1983 02 Closed: 1996 05

Equipment:

Collector: Type A (1983 03) replaced by Type AU (1989 06)
Rain Gauge: Type B (1983)
Snow Gauge: Nipher (1983)
Bags: First used 1989 06
Balance: First used 1987 01
Dustbuster: First used 1989 06

Annual Data Completeness Measures

Year	%PCL	%TP	%VSL	%VSMP	%COLEFF	%SEASALT	Overall
1990	100	94.0	100	92.3	79.9	17	1
1991	100	99.7	100	94.3	71.1	10.0	1
1992	100	87.8	100	94.4	84.1	14.9	2
1993	100	91.3	100	86.8	91.5	20.8	1
1994	100	98.9	98.0	96.2	81.5	16.1	1
1995	100	96.3	100	88.7	88.0	23.1	1

Individual Site Characteristics: Burgeo

Latitude: 47°37'44" N Longitude: 57°27'54" W
UTM (N): 5274950 m UTM (E): 465055 m
Elevation: 10 m

Site Representative Rating: 1
Deviations from Siting Criteria:
2 - less than 40km to open seawater

First Opened: 1998 06 Closed:

Equipment:

Collector: Type AU (1998 06)
Rain Gauge:
Snow Gauge:
Bags: First used 1998 06
Balance: First used 1998 06
Dustbuster: First used 1998 06

Annual Data Completeness Measures

Year	%PCL	%TP	%VSL	%VSMP	%COLEFF	%SEASALT	Overall
1998	N/A	N/A	N/A	N/A	N/A	N/A	Part Yr

NB. Insufficient data were recorded in 1998 to evaluate the performance of the site.

Individual Site Characteristics: Cormack

Latitude: 49°19'02" N Longitude: 57°24'02" W
UTM (N): 5462570 m UTM (E): 470880 m
Elevation: 160 m

Site Representative Rating: 1
Deviations from Siting Criteria:
4 - collector 300m from a dirt road - traffic is light and site is sheltered by trees. Some agricultural activity - fertilizer is applied to the surrounding hay field twice a year.

First Opened: 1986 05 Closed:

Equipment:

Collector: Type AM (1984 08) replaced by Type AU (1995 09)
Rain Gauge: Type B (1984)
Snow Gauge: Nipher (1984)
Bags: First used 1984 08
Balance: First used 1984 08
Dustbuster: First used 1984 08

Annual Data Completeness Measures

Year	%PCL	%TP	%VSL	%VSMP	%COLEFF	%SEASALT	Overall
1990	100	100	100	92.3	74.2	13	1
1991	100	96.4	100	94.3	64.4	9.1	1
1992	100	90.3	100	92.5	60.2	15.5	4
1993	100	91.7	100	92.5	66.9	15.3	3
1994	100	90.9	100	88.7	76.6	7.3	3
1995	100	94.8	100	92.5	71.6	14.4	2
1996	100	91.0	100	88.7	79.7	14.0	2
1997	100	89.9	100	86.8	74.0	9.2	2
1998	100	85.9	100	83.3	72.0	17.6	2

Individual Site Characteristics: Gros Morne

Latitude: 49°34'56" N Longitude: 57°54'20" W
UTM (N): 5492350 mUTM (E): 434540 m
Elevation: 12 m
(Location moved 40m from original site 1990 07 17 - too close to trees; too close to building {representativeness rating 3})

Site Representative Rating: 2b
Deviations from Siting Criteria:
2 - less than 40km to open seawater.
3 - less than 5km from village of Rocky Harbour.
4 - collector 50m from a parking lot - sheltered by trees

First Opened: 1982 01 Closed: 1996 06

Equipment:

Collector: Type A (1982 01) replaced by Type AU (1990 07)
Rain Gauge: Type B (1982)
Snow Gauge: Nipher (1982)
Bags: First used 1990 07
Balance: First used 1992 12
Dustbuster: First used 1992 12

Annual Data Completeness Measures

Year	%PCL	%TP	%VSL	%VSMP	%COLEFF	%SEASALT	Overall
1990	100	65.2	53.3	50.0	N/A	31	4
1991	100	86.5	84.3	78.8	N/A	15.3	3
1992	100	95.8	60.6	91.2	96.2	20.8	4
1993	100	94.6	45.8	72.0	98.4	24.9	4
1994	100	84.3	41.2	91.4	N/A	19.8	4
1995	100	100	74.5	97.9	89.9	34.9	4

Individual Site Characteristics: Hope Brook

Latitude: 47°44'42" N Longitude: 58°04'41" W
UTM (N): 5288290 m UTM (E): 419180 m
Elevation: 118 m

Site Representative Rating: 2a
Deviations from Siting Criteria:
2 - less than 40km to open seawater.
4 - less than 500m from a dirt road - light traffic
8 - site is located in a barren area.

First Opened: 1989 02 Closed: 1996 05

Equipment:

Collector: Type AU (1989 01) replaced by Type AUC (1993 11)
Rain Gauge: Type B (1989)
Snow Gauge: Nipher (1989)
Bags: First used 1989 01
Balance: First used 1989 01
Dustbuster: First used 1989 01

Annual Data Completeness Measures

Year	%PCL	%TP	%VSL	%VSMP	%COLEFF	%SEASALT	Overall
1990	100	86.2	82.5	75.6	70.0	24	2
1991	100	85.6	82.4	82.7	71.3	11.5	4
1992	100	78.4	91.5	64.6	71.0	15.7	4
1993	100	83.7	91.7	71.4	92.3	19.0	4
1994	100	83.5	98.0	80.8	100.3	21.1	2
1995	100	96.2	88.2	90.4	N/A	29.7	1

Individual Site Characteristics: Loch Leven

Latitude: 48E10'05" N Longitude: 58E51'35" W
UTM (N): 5336420 m UTM (E): 361730 m
Elevation: 55 m

Site Representative Rating: 1
Deviations from Siting Criteria:
2 - less than 40km to open seawater (4.1km)

First Opened: 1994 10 Closed: 1996 06
Reopened : 1998 06 Closed:

Equipment:

Collector: Type AU (1994 10)
Rain Gauge: Belfort (1994)
Snow Gauge: Nipher Style (1994)
Bags: First used 1994 10
Balance: First used 1994 10
Dustbuster: First used 1994 10

Annual Data Completeness Measures

Year	%PCL	%TP	%VSL	%VSMP	%COLEFF	%SEASALT	Overall
1994	N/A	N/A	N/A	N/A	N/A	N/A	Part Yr
1995	100	56.4	92.0	64.7	N/A	36.6	4
1996	N/A	N/A	N/A	N/A	N/A	N/A	Closed

NB. Insufficient data were recorded in 1994 & 1996 to evaluate the performance of the site.

Individual Site Characteristics: Salmonier

Latitude: 47E15'59" N Longitude: 53E16'27" W
UTM (N): 5237050 m UTM (E): 327955 m
Elevation: 131 m

Site Representative Rating: 2b
Deviations from Siting Criteria:
1 - less than 50km from a SO2 source with emissions > 10,000 t/y.
2 - less than 40km to open seawater.

First Opened: 1991 01 Closed: 1996 04
Reopened : 1999 11 Closed:

Equipment:

Collector: Type AU (1991 01)
Rain Gauge: Type B (1991)
Snow Gauge: Nipher (1991)
Bags: First used 1991 01
Balance: First used 1991 01
Dustbuster: First used 1991 01

Annual Data Completeness Measures

Year	%PCL	%TP	%VSL	%VSMP	%COLEFF	%SEASALT	Overall
1991	100	96.4	100	94.3	64.4	9.1	1
1992	100	82.5	79.2	87.8	85.1	21.3	4
1993	100	81.8	80.0	87.9	95.0	22.6	3
1994	100	89.8	67.6	92.1	N/A	17.6	4
1995	100	91.3	85.0	90.2	N/A	24.8	1
1996	N/A	N/A	N/A	N/A	N/A	N/A	Part Yr

NB. Insufficient data were recorded in 1996 to evaluate the performance of the site.

Individual Site Characteristics: Terra Nova A

Latitude: 48E27'05" N Longitude: 54E01'02" W
UTM (N): 5370550 m UTM (E): 720550 m
Elevation: 122

Site Representative Rating: 2a
Deviations from Siting Criteria:
2 - less than 40km to open seawater.
4 - collector 50m from Trans Canada Highway.
5 - collector too close to trees.
6 - collector too close to a shed.

First Opened: 1981 01 Closed: 1991 01

Equipment:

Collector: Type A (1981 01)
Rain Gauge: 13km away
Snow Gauge: 13km away - Ruler
Bags: not used
Balance: not used
Dustbuster: not used

Annual Data Completeness Measures

Year	%PCL	%TP	%VSL	%VSMP	%COLEFF	%SEASALT	Overall
1990	100	94.0	100	92.3	79.9	17	4
1991							Closed

Individual Site Characteristics: Terra Nova B

Latitude: 48E29'43" N Longitude: 54E14'47" W
UTM (N): 5374800 m UTM (E): 703440 m
Elevation: 99 m

Site Representative Rating: 1
Deviations from Siting Criteria:
2 - less than 40km to open seawater.
4 - less than 100m from a dirt road - light traffic

First Opened: 1992 01 Closed:

Equipment:

Collector: Type AU (1992 01)
Rain Gauge: Belfort
Snow Gauge: Nipher style
Bags: First used 1992 02
Balance: First used 1992 02
Dustbuster: First used 1992 02

Annual Data Completeness Measures

Year	%PCL	%TP	%VSL	%VSMP	%COLEFF	%SEASALT	Overall
1992	100	92.4	96.0	86.3	95.4	11.9	2
1993	100	91.8	100	94.3	97.2	13.4	2
1994	100	98.0	100	90.6	86.3	11.2	1
1995	100	89.3	100	92.5	100	14.9	1
1996	100	87.4	100	86.8	100	18.8	1
1997	100	88.8	100	70.7	73.9	15.7	3
1998	100	85.3	100	72.2	90.1	19.0	2

Individual Site Characteristics: Wooddale

Latitude: 49E01'30" N Longitude: 55E33'00" W
UTM (N): 5431040 m UTM (E): 606010 m
Elevation: 150 m

Site Representative Rating: 1
Deviations from Siting Criteria:
2 - less than 40km to open seawater.

First Opened: 1998 11 Closed:

Equipment:

Collector: Type AU
Rain Gauge:
Snow Gauge:
Bags: First used 1998 11
Balance: First used 1998 11
Dustbuster: First used 1998 11

Annual Data Completeness Measures

Year	%PCL	%TP	%VSL	%VSMP	%COLEFF	%SEASALT	Overall
1998	N/A	N/A	N/A	N/A	N/A	N/A	Part Yr

NB. Insufficient data was recorded in 1998 to evaluate the performance of the site.

APPENDIX B

Network Siting Criteria

The quality of the data obtained from the acid precipitation program varies from site to site. A major factor in assessing the overall data quality is the site representativeness ranking, which estimates the extent to which precipitation collected in that location typifies precipitation in that area of the province. The Newfoundland Department of Environment and Labour has adopted the Canadian Air and Precipitation Monitoring Network (CAPMoN) siting criteria. The site representative ranking is determined by just how well the location is judged to meet the siting criteria listed in Table B.1.

Table B1 Siting Criteria

	Newfoundland Department of Environment Ideal Acid Rain Siting Criteria
1	No continuous single point source or area source of emissions greater than 10,000 t/y SO_2 or NO_x should exist within 50 km of the site.
2	Sites should be located 40 to 50 km from the shoreline of salt water bodies.
3	Sites should be located no closer than 5 km from the edge of small villages (population less than 5,000), 10 km from the edge of towns (population less than 10,000), and 40 km from the edge of cities.
4	Within 500 m of the site, there should be (a) no moving sources of pollution such as air, water and surface transportation; (b) no surface storage of pollutants (e.g. salt piles); (c) no wind activated sources of pollution such as exposed soil and (d) no intensive agricultural activity.
5	On-site obstructions (e.g. trees, towers, poles) should be located at least 2.5 times their height away from the precipitation collector.
6	On site buildings should be located at least 4 to 5 times their height away from the sampler.
7	The site should be flat, grass or moss covered and surrounded by trees.
8	The site should be sheltered from roads and fields by rows of trees.

NB The site must be near a 120 volt AC source and easily accessible to the operator at least on a weekly basis.

Site Representativeness Ranking

The CAPMoN siting criteria were established with the objective of selecting sites that would map the spatial distribution of pollutants across Canada in an unbiased manner. An evaluation of how well each site meets the siting criteria is obviously a measure of the quality of the data produced by the collector and is defined as the site representativeness. This measure is divided into four levels as defined in Table B.2. The determination of site representativeness level often requires a judgement call on the part of the network manager.

Table B.2

Site Representativeness Level	Definition
1 Regionally Representative	site does not deviate seriously from the siting criteria.
2a Potentially Regionally Representative	site fails to meet one, or more, of the siting criteria but the local influences are judged to be small.
2b Potentially Regionally Unrepresentative	site fails to meet one, or more, of the siting criteria, but the local influences are judged not to be severe enough for the data to be considered Level 3.
3 Regionally Unrepresentative	site is influenced significantly by local factors.

APPENDIX C

Data Completeness Statistics

Due to sampler malfunction or improper sampling procedures, some days are not represented in the data set. Six data completeness statistics are used to describe how effective the collection site was in generating valid data. These statistics are defined in Table C.1

Table C.1

Data Completeness Statistic	Definition
%PCL	Percent coverage length is the percent of the summary period for which information on whether or not precipitation occurred is available.
%TP	Percent total precipitation is the percent of the total precipitation depth measured during the sample period which is associated with valid samples.
%VSL	Percent valid sample length is the percentage of days during the summary period that are associated with valid sample periods. A valid sample period is $ 6 days and # 8 days.
%VSMP	Percent of wet deposition samples that have valid sample concentration measurements.
%COLEFF	Percent collection efficiency is the ratio (converted to percent) of the total sample volume (converted to depth) to the total precipitation depth for qualifying samples, i.e. samples that have (a) a co-located standard gauge and sample volume measurement and (b) that have a valid sample concentration measurement.
%SEASALT	Percent sea salt correction is the percent of the average sulphate concentration that is estimated to have come from sea salt, using sodium as a tracer of sea salt.

Data Completeness Level

Each of the above statistics is assigned a rating between 1 and 4 depending on its value (see Table C.2). This rating is the data completeness level for that particular statistic. Level 1 has the highest degree of data completeness and provides the best information. Less confidence is placed

in a data summary with a data completeness level of 2, and still less in level 3 data. Level 4 data summaries are seen as failing to provide adequately representative values for the particular summary period and are deemed to be of the lowest quality.

Table C.2

Data Completeness Statistic	Level 1	Level 2	Level 3	Level 4
%PLC				
Annual	$95%	$90%	$90%	<90%
Each Quarter	$75%	$60%	$50%	<50%
%TP,%VSL,%VSMP				
Annual	$80%	$70%	$60%	<60%
Each quarter	$70%	$60%	$50%	<50%
%COLEFF				
Annual	$70%	$40%	$30%	<30%
Winter	$50%	$40%	$30%	<30%
Spring,summer, autumn	$80%	$60%	$60%	<60%
%SEASALT	#25%	#50%	#75%	>75%

Overall Data Quality Levels

An overall Data Quality rating for a particular summary period is obtained by merging the poorest of the six Data Completeness levels with the Site Representativeness ranking (see Table C.3). It should be noted that the Overall Data Quality rating cannot be better than the rating assigned to the Site Representativeness. Level 1 data meets the most rigorous screening criteria and is considered to be of the best quality and most suitable for model evaluation and trend analysis. Level 3 represents what is considered to the minimum acceptable quality for model evaluation.

Table C.3 Overall Data Quality Levels

Site Representativeness Level	Annual Data Completeness Level			
	1	2	3	4
1	1	2	3	4
2a	2	2	3	4
2b	2	2	3	4
3	3	3	3	4

APPENDIX D

DATA LISTINGS

Explanation of terms - Weekly Rain Collection Statistics

1. **SITE LOCATION:** Area where site is located

2. **YEAR:** Sample Year covered by the listing.

3. **SAMPLE ID:** A five character label used to identify uniquely a particular sample. The first two characters specify the acid rain site:

   04 = Bay D'Espoir (closed)
   06 = Loch Leven (active)
   09 = Cormack (active)
   10 = Hope Brook (closed)
   12 = Gros Morne (closed)
   13 = Burgeo (new - active)
   14 = Salmonier (reopened 1999)
   15 = Terra Nova B (active)
   16 = Wooddale (new - active)

   -The third character refers to the year in which the sample was taken. i.e. an 8 signifies the eighth year of the program at that site.
   -The fourth and fifth characters indicate the sample number for that year. For example, the label 04845 identifies the 45th precipitation sample of the eighth year of sampling at the Bay D'Espoir site.

4. **START DATE:** The month and day on which sampling began.

5. **END DATE:** The month and day on which sampling ended.

6. **# DAYS:** The number of days from Start Date to End Date. Normally seven (7).

7. **SMPL VOL :** The volume of the precipitation sample in ml as determined from the field weight. The field operator weighs the bucket with a bag in it before installing it on the collector. Then the bucket and bag with the sample are weighed after the bucket is changed at the end of the week. The difference between the two weights gives the weight of the sample collected. The volume is then calculated by the following formula:

$$SMPL\ VOL = \frac{W}{\tilde{n}} \quad (1)$$

Where ;
SMPL VOL = sample volume
W = weight of precipitation sample (g)
ñ = density of water @ 20EC = 1g/cm^3

8. SMPL DEPTH: Depth of the precipitation sample. Calculated as:

$$SMPL\ DEPTH = \frac{(SMPL\ VOL) \times 10\ (mm/cm)}{A} \quad (2)$$

Where: SMPL DEPTH = sample depth
SMPL VOL = sample volume in cm^3 from equation (1).
A = area of bucket orifice (642 cm^2).

9. GAUGE DEPTH: Depth of precipitation collected over the sampling period in the standard rain gauge or the shielded snow gauge. Reported as mm equivalents of water. NB. Not all the acid rain sites have the same equipment.

10. COLL EFF (%): Collection efficiency of the precipitation chemistry collector as compared to the rain or snow gauge.

$$COLL\ EFF = \frac{SMPL\ DEPTH}{GAUGE\ DEPTH} \times 100\% \quad (3)$$

Where: SMPL DEPTH = sample depth in mm as calculated from Equation (2).
GAUGE DEPTH = depth of precipitation in mm from rain or snow gauge.

11. GAUGE TYPE: Type of precipitation gauge used to measure the gauge depth. The types of gauges are as follows:

RG = rain gauge
SG = shielded nipher snow gauge
RC = recording gauge
SR = snow ruler
UN = unknown

12. PREC TYPE: Type of precipitation collected in the precipitation collector during the week:

R = Rain
S = Snow
F = Freezing rain
M = Mixed (any combination of R,S,F)
D = Dew or Frost
U = Uncertain

13. ION BAL: The Ion Balance is the percent difference between cation and anion sums for a particular precipitation sample. The ion balance in µeq/L is calculated as follows:

$$ION\ BAL = \frac{(\Sigma\ ANIONS - \Sigma\ CATIONS)}{(\Sigma\ ANIONS + \Sigma\ CATIONS)} \times 100\% \quad (4)$$

Where: Σ ANIONS = the anion sum and is calculated as follows:

$$\Sigma ANIONS = \left(2\times\frac{[SO_4^{2-}]}{96.06} + \frac{[NO_3^- N]}{14.01} + \frac{[Cl^-]}{35.45} + 2\times\frac{[GranAlk]}{100.09}\right)\times 1000 \quad (5)$$

And where:

Σ CATIONS = the cation sum and is calculated as follows:

$$\Sigma CATIONS = \left(10^{-pH} + \frac{[NH_4^+ N]}{14.01} + \frac{[K^+]}{39.10} + 2\times\frac{[Ca^{2+}]}{40.08} + 2\times\frac{[Mg^{2+}]}{24.31} + \frac{[Na^+]}{22.99}\right)\times 1000 \quad (6)$$

Where square brackets [ ] indicates concentration in mg/L; [GranAlk] is gran alkalinity in mg of $CaCO_3$ per litre

14. pH: pH of the sample as measured in the laboratory.

15. H^+ (mg/L): Hydrogen ion concentration calculated from the pH measurement as follows:

$$[H^+] = 10^{-pH} \times 1010 \quad (7)$$

Where: 10^{-pH} = the hydrogen ion concentration in mol/L.
1010 = the factor to convert from mol/L to mg/L of H^+. (1.01 g/mol of H^+ times 1000 mg/g.)

16. Cond.: Conductivity in µmhos as measured in the lab.

17. SO_4^{2-}: Sulphate ion concentration in mg/L as measured in the lab.

18. XSO_4^{2-}: Excess sulphate concentration in mg/L or sulphate concentration corrected for sea-salt. The sulphate concentration is corrected for sea-salt by using one of three equations (see below), the choice of which is determined by a computerized algorithm (see Appendix G). The algorithm computes the ratios of Mg^{2+}/Na^+, Na^+/Cl^-, Mg^{2+}/Cl^- and compares these ratios to those in seawater.

$$[SO_4^{2-}] = [SO_4^{2-}] - 0.25[Na^+] \quad (8)$$

$$[SO_4^{2-}] = [SO_4^{2-} - 2.09[Mg^{2+}] \quad (9)$$

$$[SO_4^{2-}] = [SO_4^{2-}] - 0.14[Cl^-] \quad (10)$$

19. NO_3^--N: Nitrate ion concentration expressed in mg/L as nitrogen.

20. Cl^-: Chloride ion concentration expressed in mg/L.

21. NH_4^+-N: Ammonium ion concentration expressed in mg/L as nitrogen.

22. Na^+: Sodium ion concentration expressed in mg/L.

23. Ca^{2+}: Calcium ion concentration expressed in mg/L.

24. Mg^{2+}: Magnesium ion concentration expressed in mg/L.

25. K^+: Potassium ion concentration expressed in mg/L.

26. ALK: Gran alkalinity expressed in mg of calcium carbonate per litre.

Explanation of terms - Annual Summary Statistics

1. SITE LOCATION:

The acid rain site location is identified by the **SITE** name, latitude (**LAT (N)**) and longitude (**LONG (W)**), and Universal Transverse Mercator coordinates (**UTM (N)** and **UTM (W)**).

2. ACID RAIN YEAR:

The sample year covered by the listing. It is specified by the calendar **YEAR**, the **START** and **END** dates, and the number of **DAYS** and **WEEKS** in the acid rain year.

3. TOTAL SAMPLE PERIODS:

The total number of sample periods. A sample period encompasses the time from the start date to the end date of the collection of one acid rain sample. For the NEPMoN program, a valid sample period should be not be less than six (6) days or greater than eight (8) days. For a complete and valid listing for a site, there should be 52 periods.

4. TRACE PRECIPITATION PERIODS:

The number of periods in the sampling year in which have trace amounts (i.e. less than 1 mm) of precipitation was collected. Not enough precipitation was collected to have enough sample to do the chemical analysis.

5. NON-TRACE PRECIPITATION PERIODS:

The number of periods in the sampling year in which enough precipitation fell to collect a sample large enough for chemical analysis (i.e. greater than 1 mm of precipitation).

6. # OF VALID SAMPLES:

The number of samples, determined for sample depth, gauge depth and the chemical parameters including ion balance, $[H^+]$ and excess $[SO_4^{2-}]$, that have been excepted as valid. For an explanation of the determination of whether a sample is valid or invalid, refer to Appendix E.

7. % OF VALID SAMPLES:

The percent of the total number of periods for which valid samples were collected.

$$\%\ OF\ VALID\ SAMPLES = \frac{VALID\ SAMPLES}{TOTAL\ SAMPLES} \times 100 \qquad (11)$$

Where: VALID SAMPLES = # OF VALID SAMPLES (number 6 above).
TOTAL SAMPLES = # OF TOTAL SAMPLE PERIODS (number 3 above).

8. MEAN: As calculated for the sample depth, gauge depth and ion concentrations including ion balance, $[H^+]$ and excess $[SO_4^{2-}]$, is the average of all valid samples for the summary year.

$$\bar{X} = \sum_{i=1}^{n} \frac{X_i}{n} \qquad (12)$$

Where: $\bar{X}$ = average for all valid samples for the summary year
X_i = the value for the i^{th} sample
n = the total number of valid samples for the summary year.

9. STANDARD DEVIATION:

As calculated for the sample depth, gauge depth and ion concentrations including ion balance, $[H^+]$ and excess $[SO_4^{2-}]$, is the average absolute difference of each data point from the mean value. Only data from valid samples for the summary year are included in the calculation.

$$s = \sqrt{\sum_{i=1}^{n} \frac{(X_i - \bar{X})^2}{n-1}} \qquad (13)$$

Where: s = the standard deviation for all valid samples for the summary year
X_i = the value for the i^{th} sample
$\bar{X}$ = the mean of all valid samples for the summary year.
n = the total number of valid samples for the summary year.

10. MINIMUM: The lowest value of all the valid samples for the summary year.

11. MAXIMUM: The highest value of all the valid samples for the summary year.

12. PRECIPITATION WEIGHTED CONC. (mg/L):

The precipitation weighted mean concentration in mg/L over the summary period using the standard gauge depth as the weighting factor.

$$\overline{C}_{STND} = \frac{\sum_{i=1}^{n} C_i P_i}{\sum_{i=1}^{n} P_i} \quad (14)$$

Where: $\overline{C}_{STND}$ = precipitation weighted mean concentration based on the standard gauge depth.

C_i = the valid concentration for sample i.

P_i = the standard gauge depth for the same sample i with valid concentration.

n = the total number of valid samples for the summary period.

13. TOTAL GAUGE DEPTH: The total precipitation amount for summary period measured in mm of precipitation.

$$TGD = \sum_{i=1}^{n} P_i \quad (15)$$

Where: TGD = total gauge depth.

P_i = the standard gauge depth for sample i.

n = the total number of valid samples for the summary year.

14. DEPOSITION (kg/ha/period):

The deposition in kg/ha for the summary period based on the precipitation weighted concentration and the total gauge depth.

$$Dep_n = \frac{(\overline{C}_{STND}) \times (TGD)}{100} \quad (16)$$

Where: Dep'n = deposition

$\overline{C}_{STND}$ = precipitation weighted mean concentration (see number 12 above)

TGD = total gauge depth (see number 13 above)

15. DEPOSITION (kg/ha/year):

The yearly deposition based on the precipitation weighted mean, the total gauge depth and the ratio of days in a calendar year to the number of days in the summary period.

$$Dep'n = \frac{(\overline{C}_{STND}) \times (TGD)}{100} \times \frac{365}{No.Days(Summary)} \quad (17)$$

Where: Dep'n = deposition

$\overline{C}_{STND}$ = precipitation weighted mean concentration (see number 12 above)

TGD = total gauge depth (see number 13 above)

No. Days (Summary) = number of days in the summary period (see number 2 above)

16. COLL. EFFIC. (% COLEFF), %VSL, %PCL, %TP, %VSMP:

Data completeness **measures** (refer to Appendix C) that are defined for each of the seasons as well as the entire summary period. Based on the lowest data completion measure for each assay for the year, an annual data completeness **level** is assigned for each data completeness assay.

17. SEA SALT CORRECTION:

The percent of the average sulphate concentration that is estimated be derived from sea salt, using sodium, magnesium or chloride as a tracer of sea salt.

$$\%\ sea\ salt\ correction = \frac{(SO_4)\&(XSO_4)}{(SO_4)} \times 100 \quad (18)$$

Where: SO_4 = sulphate deposition in kg/ha/year (see number 15 above)

XSO_4 = excess sulphate deposition in kg/ha/year

18. SEA SALT CORR.- LEVEL:

Based on the % sea salt correction, a sea salt correction level is assigned to the site for the summary period.

19. DATA COMPLETENESS LEVEL:

Annual data completeness level based on the poorest rating of the six data completeness levels.

20. OVERALL DATA QUALITY LEVEL:

The overall data quality data level for the site for the summary period. It is obtained by coupling the annual data completeness level with the site representativeness level.

APPENDIX E

Determination of Sample Validity - Assignment of Data Validity Flags.

The sample data set is scrutinised in order to remove items that were collected under conditions that might bias the values, and consequently skew the summary statistics. The process is conducted in two stages. The initial stage consists of a manual inspection of the sample history form and the relevant laboratory results. The second stage involves the identification of possible outliers using a computer routine.

(1) ASSESSMENT OF SAMPLE HISTORY FORMS AND LAB DATA

i) **Sample Depth/Volume**

Both the Sample Depth and Volume will be flagged INVALID if the following conditions pertain:

(I1) - the sample is missing;
(I2) - the sample has spilled or leaked;
(I4) - is otherwise known to be in error;
(I5) - the sample is a bulk sample (i.e. a sample which has been exposed to the atmosphere before or after the precipitation event);
(I6) - the sample is confirmed as being an outlier.

If a sample represents only part of the precipitation that fell during the sample period, then the Sample Depth and Volume will be flagged VALID BUT QUALIFIED (Q1 or Q2). This means that the sample is not 100% representative of the precipitation that fell.

Any samples not having one of the flags mentioned above are assumed to be VALID (V0).

ii) **Gauge Depth**

The Standard Gauge Depth will be flagged INVALID (I1) if the datum is missing.

The Standard Gauge Depth will be flagged VALID BUT QUALIFIED in the following circumstances:

(Q1 - Q4) - an estimated value was used as there was no gauge measurement; or
(Q5 - Q7) - a corrected value was used; or
(Q9) - an error is suspected, but the measurement is accepted as the best estimate available.

In addition to the VALID flag (V0), there is a VALID - TRACE VALUE flag (V1) used

when the gauge registers a trace amount (ie <0.2mm water equivalent) for the collection period.

iii) **Collection Efficiency**

The Collection Efficiency is flagged INVALID if:

(I1) - the sample is missing;
(I2) - the sample has been spilled or leaked;
(I4) - the sample is known to be in error;
(I5) - the sample is a bulk sample;
(I6) - the sample is confirmed as being an outlier;
(I7) - the standard gauge depth is less than 0.2 mm ("Trace"); or
(I8) - the standard gauge depth has been set equal to the sample depth.

The Collection Efficiency is labeled VALID BUT QUALIFIED if:

(Q1,Q2) - the sample represents only part of the precipitation that fell;
(Q5) - the gauge depth had to be estimated;
(Q6) - the gauge depth had to be corrected;
(Q7) - the gauge depth was known to be in error but accepted as the best estimate.

iv) **Ion Balance**

The Ion Balance is labeled INVALID and not calculated if:

(I1) - the sample was insufficient;
(I2) - the sample is missing;
(I3) - the sample was too contaminated to analyze;
(I4) - the sample was contaminated in the laboratory;
(I5) - the sample was contaminated in the field;
(I6) - one or more concentration values were determined to be an outlier;
(I7) - one or more concentration values were invalidated because of poor ion balance; or
(I8) - the sample was invalidated because it was a bulk sample

The Ion Balance is flagged as VALID BUT QUALIFIED in the following circumstances:

(Q5) - the sample is suspected of being contaminated based on one or more suspect concentrations but there is no corroborating evidence;
(Q6) - the sample is known to have leaked.

v) **Concentrations**

The flags for the Concentrations are similar to those for the Ion Balance with the addition of the following flags:

The Ion Balance is flagged as VALID BUT QUALIFIED in the following circumstances;

(Q1) - the sample represents a non standard collection period ie it is not 7 days;
(Q3) - the particular ion is considered a statistical outlier.

The Ion Balance is flagged as VALID (V2) when the datum represents a LESS THAN DETECTION LIMIT value.

vi) **Excess SO_4^{2-} (XSO_4^{2-})**

The flags for the excess sulphate data are similar to those for the ion concentrations with the addition of a number of VALID flags:

(V0) - the "best case calculation" whereby sea salt ratios close to bulk seawater ratios;
(V1) - less than detection limit for sulphate;
(V2) - sea salt calculation based on sodium;
(V3) - sea salt calculation based on magnesium;
(V4) - sea salt ratio based on chloride;
(V5) - excess sulphate set equal to the suphate value as no valid indicator of sea salt was found.

(2) COMPUTERIZED ASSESSMENT OF DATA

After the manual input of the data validity flags mentioned above, the laboratory results are inspected using a computer program to determine if there are any statistical outliers. The outlier result is then flagged (Q3).

An individual data point is flagged as a outlier if it meets one of the following criteria:

(a) If the pH > 6, then the pH value is qualified as an outlier. The value of 6 was used based on the authors' experience and the chemistry of Newfoundland precipitation.

(b) If the alkalinity > 0.9, then the alkalinity is qualified as an outlier. The value of 0.9 was used to identify outliers based on the 95% confidence interval for alkalinity.

(c) For all other ions, the ion concentration in mg/L is multiplied by the Gauge depth. If this value is outside the 99% one-tailed interval for that ion, the ion is a statistical outlier. A statistical outlier is a datum whose value exceeds the value of the mean, plus or minus three standard deviations, estimated from all samples collected at that site over the entire existence of that site.

To determine if a value is an statistical outlier a z value is calculated as follows:

$$z_i = \frac{X_i - \bar{X}}{s} \qquad (19)$$

where; z^i is the i^{th} z value

X_i is the value of the gauge depth multiplied by the ion concentration

$\bar{X}$ is the sample mean (i.e. mean of all gauge depth multiplied by ion concentrations)

s is the sample standard deviation

The calculated z_i value is compared to the value of z(A) =2.326 at the selected percentile of 0.99 (99%). If the calculated z_i value is greater than 2.326, then that result is deemed an outlier.

Determination of Sample Validity

Once each parameter of the sample has been identified as being **VALID; VALID BUT QUALIFIED** or **INVALID**, the computer program will continue to determine the validity of the entire sample. A sample will be invalidated if it meets one of the following criteria:

(a) If a sample is missing, compromised, bulk or has a poor ion balance, the sample is immediately invalidated.

(b) In the samples that have an ion sum $\geq$ 50 Feq/L, a sample will be invalidated if each of the three sea salt ratios (a, b, and c) and the acid ratio (d) fail to fall within the range 0.75 to 1.25. (Refer to Appendix G for a definition of these ratios). Samples invalidated for this reason are identified in the database by an I6 flag.

(c) If $\geq$ 50% of the components of the sample have Q flags associated with them, then the sample as a whole is invalidated. These samples are also identified in the database by an I6 flag.

All data that is invalidated by the screening procedure is flagged invalid and the values are not reported or used in the deposition calculations. All data that is valid, or qualified, is reported and is used in the calculation of deposition.

Figure 1 is a flow chart which summarizes the sample screening procedure.

Data Screening Flow Chart

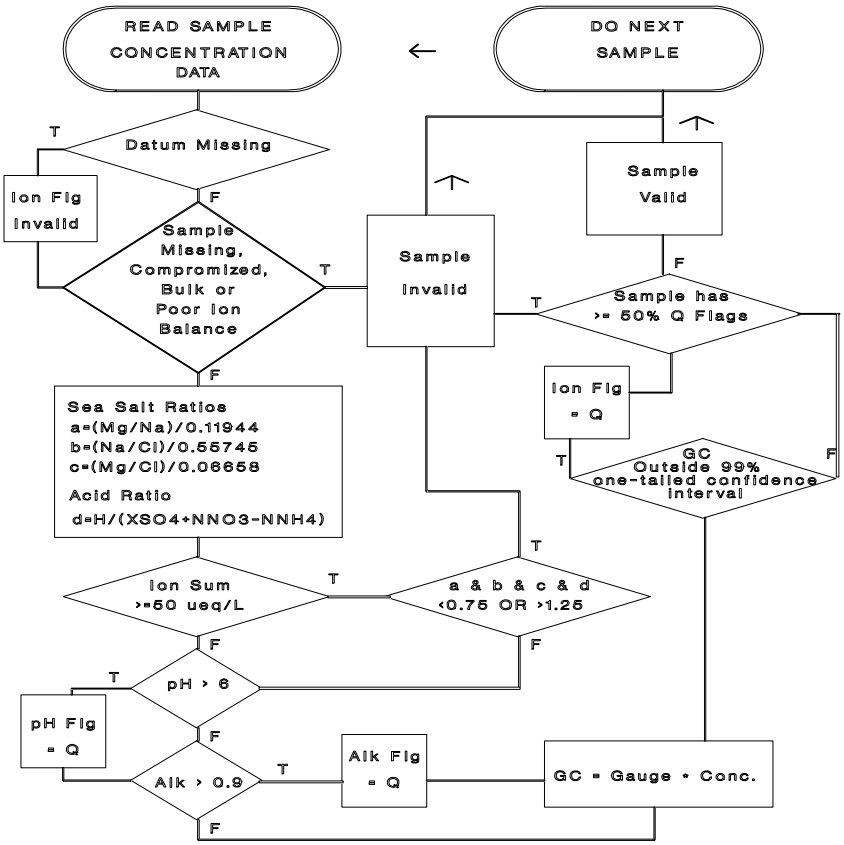

Figure 11

APPENDIX F

DEFINITION OF FLAGS

The system of flags used in this precipitation chemistry listing is a subset of the flags used in the CAPMoN Precipitation Chemistry Listing Summary - 1987. Any CAPMoN flag not used by NEPMoN is listed as NOT APPLICABLE.

Sample Volume (SMPL VOL) and Sample Depth (SMPL DEPTH) Flags

Flag	Description
INVALID	
I1	**MISSING / NOT VALID** - No field weight reported and therefore no sample volume or sample depth available.
I2	**INCORRECT - SAMPLE LEAKED OR SPILLED BEFORE WEIGHING** - The sample volume and sample depth are incorrect because the sample leaked or was spilled before it was weighed.
I3	**NOT APPLICABLE.**
I4	**INCORRECT - OTHER REASONS** - The sample volume and depth are known to be in error for other reasons. e.g. malfunctioning balance or improper use of balance.
I5	**BULK SAMPLE** - A bulk sample is defined as a sample which has been exposed to the atmosphere before or after the precipitation event.
I6	**OUTLIER CONFIRMED - INVALID**
VALID BUT QUALIFIED	
Q1	**PARTIAL EVENT COLLECTED (i.e. PARTIAL SAMPLE VOLUME)** - The sample volume and sample depth represents only part of the precipitation which fell during the week. Such cases generally correspond to collector malfunction or power failures.
Q2	**POOR HOOD TO BUCKET SEAL ON COLLECTOR (POTENTIAL EVAPORATION)** - The calculated volume and depth may be lower than actual because the bucket was not sealed tightly by the collector hood. Sample evaporation may have occurred.

Q3 **NOT APPLICABLE.**

Q4 **NOT APPLICABLE.**

Q5 **NOT APPLICABLE.**

Q6 **NOT APPLICABLE.**

VALID

V0 **VALID - NO PROBLEMS** - The sample volume and sample depth have no apparent problems and are considered to be valid.

Gauge Depth Flags

Flag	Description

INVALID

I1 **MISSING/NOT AVAILABLE** - No value available. This occurs only in exceptional circumstances when measurements or estimates cannot be made.

VALID BUT QUALIFIED

Q1 **ESTIMATED VALUE - EQUAL TO SAMPLE DEPTH** - No standard gauge measurement was available so an estimated value equal to the sample depth was inserted for the standard gauge depth. This is done only when the standard gauge datum is not available.

Q2 **ESTIMATED VALUE - EQUAL TO CO-LOCATED CLIMATE SITE VALUE** - No standard gauge value was available so an estimated value equal to the co-located Climate Network Station's standard gauge value was inserted. This is done whenever standard gauge data are missing at sites with co-located Climate Station measurements. Note that Climate Station typically use snow rulers for snow depth measurements. In such cases, the Standard Gauge Type is coded accordingly.

Q3 **ESTIMATED VALUE - EQUAL TO NEARBY CLIMATE STATION VALUE** - No standard gauge value was available so an estimated value equal to the value from a nearby Climate Network site was inserted. (This gauge would not be co-located but located typically with 5 km of the collector site). This flag is used when neither a sample depth nor a co-located gauge value is available.

Q4 **ESTIMATED VALUE - EQUAL TO SNOW RULER MEASUREMENT** - No standard gauge value was available so an estimated value based on the on-site snow ruler measurements was inserted, i.e. the difference in snow depth between sample start time and end time divided by snow density factor of 10.

Q5 **CORRECTED VALUE - EQUAL TO SAMPLE DEPTH** - The standard gauge depth was detected to be in error and was corrected (i.e. replaced) by the sample depth value.

Q6 **CORRECTED VALUE - EQUAL TO CO-LOCATED CLIMATE STATION VALUE** - The standard gauge depth was detected to be in error and was corrected (i.e. replaced) by a co-located Climate Station value.

Q7 **CORRECTED VALUE - EQUAL TO NEARBY CLIMATE STATION VALUE** - The standard gauge depth was detected to be in error and was corrected (i.e. replaced) by a nearby (typically <5 km) climate station value.

Q8 **NOT APPLICABLE**

Q9 **VALUE KNOWN OR SUSPECTED TO BE IN ERROR BUT BEST ESTIMATE AVAILABLE** - The standard gauge depth was known or suspected to be in error (e.g. spilled) but was accepted as the best available estimate of precipitation depth.

VALID

V0 **VALID DATUM - NO PROBLEMS** - No problems were apparent and the datum was considered valid.

V1 **VALID - TRACE VALUE** - The standard gauge was TRACE, i.e. less than 0.2 mm water equivalent.

Collection Efficiency (COLL EFF) Flags

Flag	Description
INVALID	
I1	**MISSING/NOT AVAILABLE** - Collection efficiency could not be calculated because the SAMPLE DEPTH was missing or unavailable.

I2 **INVALID - SAMPLE SPILLED OR LEAKED BEFORE WEIGHING** - Collection efficiency invalid because the SAMPLE DEPTH was incorrect due to sample spilling or leaking before being weighed (see SAMPLE DEPTH FLAG = I2)

I3 **NOT APPLICABLE**

I4 **INVALID - OTHER REASON(S)** - Collection efficiency invalid because the SAMPLE DEPTH was known to be in error for other reasons (see SAMPLE DEPTH FLAG = I4).

I5 **INVALID - BULK SAMPLE** - Collection efficiency invalid because it applies to bulk sample with potential evaporative or snow escape losses (see SAMPLE DEPTH FLAG = I5).

I6 **OUTLIER CONFIRMED INVALID**

I7 **INDETERMINATE VALUE - STANDARD GAUGE DEPTH EQUALS TRACE** - Collection efficiency could not be calculated because the GAUGE DEPTH = TRACE (<0.2mm).

I8 **INVALID CALCULATION - STANDARD GAUGE DEPTH = SAMPLE DEPTH** - Invalid collection efficiency calculation because the STANDARD GAUGE DEPTH was set equal to the SAMPLE DEPTH (i.e. STANDARD GAUGE DEPTH FLAG = Q1 OR Q5).

VALID BUT QUALIFIED

Q1 **PARTIAL SAMPLE** - Collection efficiency for a partial sample only (see SAMPLE DEPTH FLAG = Q1).

Q2 **POOR HOOD-TO-BUCKET SEAL ON COLLECTOR (POTENTIAL EVAPORATION)** - Collection efficiency susceptible to negative bias due to possible evaporation of sample.

Q3 **NOT APPLICABLE**

Q4 **NOT APPLICABLE.**

Q5 **ESTIMATED GAUGE DEPTH** - The standard gauge depth was estimated from Climate Station or snow ruler data (see GAUGE DEPTH FLAGS Q2 TO Q4).

Q6 **CORRECTED GAUGE DEPTH** - The standard gauge depth was corrected based on Climate Station or snow ruler data (See GAUGE DEPTH FLAGS Q6 TO Q7).

Q7 **GAUGE DEPTH IN ERROR BUT BEST AVAILABLE ESTIMATE** - The standard gauge depth was known, or suspected, to be in error but was accepted as the best available estimate.

VALID

V0 **VALID DATUM - NO PROBLEMS** - No problems were apparent and the datum is considered to be valid.

Ion Balance (IONBAL) Flags

Flag	Description
INVALID	
I1	**NOT CALCULATED - INSUFFICIENT SAMPLE** - One or more concentration values missing due to insufficient sample volume (see CONCENTRATION FLAG = I1).
I2	**NOT CALCULATED - NO SAMPLE** - Concentration data not available because sample was missing (see CONCENTRATION FLAG = I2).
I3	**NOT CALCULATED - TOO CONTAMINATED TO ANALYZE** - No concentration data available -- lab discarded sample because it was too contaminated to analyze (see CONCENTRATION FLAG = I3.)
I4	**NOT CALCULATED - LAB CONTAMINATION** - One or more concentration values invalid due to known laboratory contamination (see CONCENTRATION FLAG = I4).
I5	**NOT CALCULATED - FIELD CONTAMINATION** - One or more concentration values invalid due to known field contamination (see CONCENTRATION FLAG = I5).
I6	**NOT CALCULATED - OUTLIER DETECTED** - One or more concentration values were determined to be an outlier.
I7	**POOR ION BALANCE** - One or more concentrations invalid because of poor ion balance (see CONCENTRATION FLAG = I7).
I8	**NOT CALCULATED - BULK SAMPLE** - All concentrations are invalid because

the sample was known to be a bulk sample (see CONCENTRATION FLAG = I8).

I9 **NOT APPLICABLE**

VALID BUT QUALIFIED

Q0 **NOT APPLICABLE**

Q1 **NOT APPLICABLE**

Q2 **NOT APPLICABLE**

Q3 **NOT APPLICABLE**

Q4 **NOT APPLICABLE**

Q5 **ONE OR MORE CONCENTRATION SUSPECTED CONTAMINATE BUT NO PHYSICAL EVIDENCE AVAILABLE** - (see CONCENTRATION FLAG =Q5).

Q6 **SAMPLE LEAKED - CONCENTRATIONS MAY BE AFFECTED** - (see CONCENTRATION FLAG - Q6).

VALID

V0 **VALID CALCULATION** - Calculation considered valid because all concentration data valid.

V1 **NOT APPLICABLE**

Concentration Flags

Concentrations are reported in mg/l for SO_4^{2-}, XSO_4^{2-}, NO_3^--N, Na^+, Ca^{2+}, Mg^{2+}, K^+ and in pH units for pH. The flags provide information on the validity of the concentration data.

Flag **Description**

INVALID

I1 **MISSING DATUM - INSUFFICIENT SAMPLE** - No concentration datum available because the sample volume was insufficient for complete analysis.

I2 **MISSING DATUM - NO SAMPLE** - No concentration datum available because

a sample was not collected or a sample was collected but not submitted to the laboratory.

I3 **MISSING DATUM - TOO CONTAMINATED TO ANALYZE** - no concentration datum available because laboratory personnel considered the sample to be too contaminated with visible particles or debris to be analyzed.

I4 **REJECTED DATUM - KNOWN LABORATORY CONTAMINATION OF ONE OR MORE IONS** - The datum reported by the laboratory was deemed INVALID because the sample was contaminated in the laboratory.

I5 **REJECTED DATUM - FIELD CONTAMINATION AND/OR NONCONFORMING OPERATION PROCEDURES** - The concentration datum was deemed invalid because of: (1) evidence of field contamination (e.g. hair in sample); and/or (2) evidence that the operator was not following standard operating procedures so sample integrity may have been compromised.

I6 **ENTIRE SAMPLE CONFIRMED AS INVALID** - An entire sample can be determined to be invalid in two ways: (1) In samples with an ion sum $ 50 µeq/L, failure to have a sea salt or acid ratio within the range 0.75 # X $ 1.25 will result in the sample being invalidated. (2) If 50% or greater of the ion concentrations of a sample were considered to be statistical outliers, then the entire sample is invalidated (see Appendix E).

I7 **REJECTED - POOR ION BALANCE** - Concentration datum was considered invalid because it corresponded to a sample which had a very large ion balance and very inconsistent concentration values.

I8 **REJECTED - BULK SAMPLE** - Sampler cover was open before or after a precipitation event possibly allowing dry deposition to collect in the sample bucket.

I9 **NOT APPLICABLE**

VALID BUT QUALIFIED

Q1 **NON-STANDARD SAMPLE PERIOD** - The sample represents a non-standard week (sample period not 7 days), non-bulk sample. Multi-day, wet-only samples are deemed Valid but Qualified because they are not collected using standard operating procedures.

Q2 **NOT APPLICABLE**

Q3 **ION IS CONSIDERED A STATISTICAL OUTLIER** - A statistical outlier is a

datum whose value exceeded the value of the mean plus three standard deviations of all concentrations for that site for a year.

Q4 **NOT APPLICABLE**

Q5 **CONTAMINATION SUSPECTED BUT NO PHYSICAL EVIDENCE AVAILABLE** - The data is suspected because of potential but no supporting evidence is available on the sample history form.

Q6 **SAMPLE LEAKED** - The sample leaked in the field or in transit.

VALID

V0 **VALID DATUM - NO PROBLEMS** - The concentration datum was above the detection limit and appeared to have no problems.

V1 **NOT APPLICABLE**

V2 **LESS THAN DETECTION LIMIT VALUE** - The concentration datum represents a LESS THAN DETECTION LIMIT (LDL) value where LDL is defined as the analytical detection limit equal to three standard deviations of the baseline noise level. Actual LDL values are presented in the data base with a 'less than' sign and are summarized in Table 1.

V3 **NOT APPLICABLE**

5.9 Excess SO_4^{2-} (XSO_4^{2-}) Flags

Flag **Description**

INVALID

I1 **NO CALCULATION** - SO_4^{2-} Missing due to insufficient sample (See CONCENTRATION FLAG =I1)

I2 **NO CALCULATION** - SO_4^{2-} Missing due to missing sample (See CONCENTRATION FLAG = I2).

I3 **NO CALCULATION** - SO_4^{2-} Missing because sample was too contaminated to analyze (see CONCENTRATION FLAG =I3)

I4 **NO CALCULATION** - SO_4^{2-} Invalid due to lab contamination. (See

CONCENTRATION FLAG I4).

I5 **NO CALCULATION** - SO_4^{2-} Invalid due to field contamination or nonconforming operating procedures (See CONCENTRATION FLAG = I5)

I6 **OUTLIER - CONFIRMED INVALID** - Datum failed all of the sea-salt and acid ratios (see Appendix A).

I7 **NO CALCULATION** - SO_4^{2-} Invalid because of poor ion balance (see CONCENTRATION FLAG =I7)

I8 **NO CALCULATION** - SO_4^{2-} Invalid because of bulk Sample (See CONCENTRATION FLAG = I8)

I9 **NOT APPLICABLE**

VALID BUT QUALIFIED

Q1 **SO_4^{2-} QUALIFIED** - Non-standard sample period (See CONCENTRATION FLAG = Q1)

Q2 **NOT APPLICABLE**

Q3 **ION IS CONSIDERED A STATISTICAL OUTLIER** - Datum's value exceeded the value of the mean plus three standard deviations of all concentrations for that site for a year.

Q4 **NOT APPLICABLE**

Q5 **SO_4^{2-} QUALIFIED** - Contamination suspected but no evidence (See CONCENTRATION FLAG = Q5)

Q6 **SO_4^{2-} QUALIFIED** - SAMPLE LEAKED (see CONCENTRATION FLAG = Q6)

VALID

V0 **"BEST CASE CALCULATION" WHEREBY SEA SALT PARAMETERS APPEAR IN RATIOS CLOSE TO BULK SEAWATER RATIOS** - XSO_4^{2-} was calculated using sodium as the sea salt indicator since this ratio to magnesium was within ±25% of the Na^+/Mg^{2+} ratio in bulk seawater.

V1 **LESS THAN DETECTION LIMIT OR NON DETECTABLE VALUE OF XSO_4^{2-}** - The measured SO_4^{2-} concentration was LDL or ND so the excess sulphate

value was assigned LDL or ND.

V2 **CALCULATION BASED ON SODIUM** - The constituent ratios in the sample were not within ±25% of the bulk seawater ratios but sodium was still the best indicator and the calculation was therefore based on sodium.

V3 **CALCULATION BASED ON MAGNESIUM** - magnesium appeared to be the best indicator of seasalt and excess sulphate was calculated based on magnesium.

V4 **CALCULATION BASED ON CHLORIDE** - chloride appeared to be the best indicator of seasalt and excess sulphate was calculated based on chloride.

V5 **XSO_4^{2-} SET EQUAL TO SO_4^{2-}** - No valid indicator of sea salt was found; XSO_4^{2-} was set equal to the measured sulphate in the sample.

APPENDIX G

Calculation of Sea Salt Ratios and Sea Salt Correction

The sea salt ratios are the ratios of Mg^{2+}/Na^{+}, Na^{+}/Cl^{-} and Mg^{2+}/Cl^{-} as compared to these ratios in seawater. For each sample the following values are calculated:

$$a = \frac{\left(\frac{[Mg^{2\%}]}{[Na^{\%}]}\right)_{sample}}{\left(\frac{[Mg^{2\%}]}{[Na^{\%}]}\right)_{seawater}} \quad (20)$$

$$b = \frac{\left(\frac{[Na^{\%}]}{[Cl^{\&}]}\right)_{sample}}{\left(\frac{[Na^{\%}]}{[Cl^{\&}]}\right)_{seawater}} \quad (21)$$

$$c = \frac{\left(\frac{[Mg^{2\%}]}{[Cl^{\&}]}\right)_{sample}}{\left(\frac{[Mg^{2\%}]}{[Cl^{\&}]}\right)_{seawater}} \quad (22)$$

where all ion concentrations are in mg/L

The acid ratio is the ratio of hydrogen ion to the excess sulphate plus the nitrate minus the ammonia. This acid ratio, d, is calculated as follows:

$$d = \frac{[H^{\%}]}{[XSO_4^{2\&}] \% [N\&NO_3^{\&}] \& [N\&NH_4^{\%}]} \quad (23)$$

where all concentrations are in µeq/L

Ratios a, b, c, and d should theoretically all equal one. Each ratio is evaluated and if the total ion sum for the sample is $ 50 µg/L and (a) and (b) and (c) and (d) are all <0.75 or > 1.25, the entire sample is invalidated and it is flagged as I6. The evaluation of the salt and acid ratios is intended to eliminate samples which are contaminated and no other supporting evidence of contamination exists.

ALGORITHM TO DETERMINE WHICH ION CONCENTRATION TO USE IN THE SEA-SALT CORRECTION:

* Calculation of excess sulphate

```
Do if (cla > 0).
   Do if (naa > 0 and mga > 0).
      Do if (a >=0.75 and a <=1.25).
        Compute xso4a = (so4a - (0.24966 * naa)).
        Else if ((b <=0.75 or b >=1.25) and (c >=0.75 and c <=1.25)).
        Compute xso4a = (so4a - (2.09015 * mga)).
        Compute xso4flg = "V3".
        Else if ((b >=0.75 and b <=1.25) and (c <=0.75 or c >=1.25)).
        Compute xso4a = (so4a - (0.24966 * naa)).
        Else if (abs(b-1) < abs(c-1)).
        Compute xso4a = (so4a - (0.24966 * naa)).
        Compute xso4flg = "V2".
        Else.
        Compute xso4a = (so4a - (2.09015 * mga)).
        Compute xso4flg = "V3".
      End if.
   End if.
  If (cla > 0 & naa > 0 & sysmis (mga)) xso4a = (so4a - (0.24966 * naa)).
  If (cla > 0 & mga > 0 & sysmis (naa)) xso4a = (so4a - (2.09015 * mga)).
  If (cla > 0 & sysmis (mga) & sysmis (naa)) xso4a = (so4a - (0.13917 * cla)).
  If (cla > 0 & naa > 0 & sysmis (mga)) xso4flg = "V2".
  If (cla > 0 & mga > 0 & sysmis (naa)) xso4flg = "V3".
  If (cla > 0 & sysmis (mga) & sysmis (naa)) xso4flg = "V4".
End if.
Do if (sysmis(cla)).
 If (mga > 0) xso4a = (so4a - (2.09015 * mga)).
 If (naa > 0) xso4a = (so4a - (0.24966 * naa)).
 If (naa > 0 and mga > 0) xso4a = (so4a - (0.24966 * naa)).
End if.
Execute.
```

```
Compute xso4e = xso4a/48.033.
Compute d = he/(xso4e + nno3e - nnh4e).
If (xso4a < 0) xso4flg = "I6".

* Derive I6 based on salt ratios

Do if (ions >= .05).
If ((a<.75 | a>1.25) & (b<.75 | b>1.25) & (c<.75 | c>1.25) & (d<.75 | d>1.25)) ionflg = "I6".
End if.
Execute.
```