WATER QUANTITY SURVEYS
COST SHARING AGREEMENT
CANADA - NEWFOUNDLAND
ANNUAL REPORT 1996 - 1997

Martin Goebel
Administrator for Newfoundland

Mr. W. S. Appleby
Administrator for Canada

In accordance with Article XII of the Memorandum of Agreement covering Water Quantity Surveys in the Province of Newfoundland, we submit herewith the annual report for fiscal year 1996 - 1997.

Members of the Co-ordinating Committee

H. Khan
Co-ordinator for Newfoundland
St. John's, Newfoundland

J. B. Merrick
Co-ordinator for Canada
Bedford, Nova Scotia

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INTRODUCTION

The year ending March 31, 1997 was the twenty second in which water quantity surveys in Newfoundland were conducted under a Memorandum of Agreement between the Federal and Provincial Governments.

The Agreement establishes the basis on which co-operative water quantity surveys are made. It is administered for Canada by the Director of the Atmospheric Environment Branch (AEB) of Environment Canada and for Newfoundland by the Director, Water Resources Division, Department of Environment and Labour.

A Co-ordinating Committee comprising the Manager Environmental Monitoring Division of AEB, and the Manager Surface Water Section, Newfoundland Department of Environment and Labour, reports to the Administrators. It is the responsibility of the Co-ordinating Committee to prepare annually, Schedules A and D for approval by the Administrators.

The full Memorandum of Agreement includes four schedules. The annually changing **Schedules A and D** for 1996 - 1997 are attached to this report in Appendices I and II. **Schedules B and C** are primarily administrative in nature. They are provided in previous annual water reports of this series, as well as in the publication entitled Compendium of Practices, Interpretations and Administrative Procedures for the Water Quantity Survey Agreements: dated 1985-07.

Schedule A is a list of water quantity stations operated under the terms of the Agreement and their responsibility classification as federal, federal-provincial or provincial.

Schedule D provides a summary of the 1996 - 1997 annual payment.

WATER QUANTITY SURVEYS

PROVINCE OF NEWFOUNDLAND

OPERATIONAL COSTS FOR HYDROMETRIC SURVEYS - ISLAND

1996 - 1997

Budget Item	1996 - 97
Personnel - Basic Pay - 01, 02, 03 (Salaries of hydrometric technical staff including overtime)	270,000
Transportation and Communications	
Travel - 07	20,700
Transportation and Postage - 09	1,800
Telecommunications - 10, 11	2,700
Professional and Special Services	
Professional Services - 18	450
Other Services - 22	3,600
Rentals - 25	42,500
Purchased Repair and Upkeep	
Equipment Purchased and Repairs - 28	4,000
Building and Structures Repairs - 29	3,100
Utilities, Materials and Supplies	
Public Utility Services - 32	1,400
Purchased Materials, Supplies,	
Misc. Goods - 33, 34	27,000
Parts and Consumable Tools - 35	5,000
Other Costs - Data Processing	12,600
Depreciation of Vehicles (5)	12,000
Depreciation of Field Equipment and Instruments	8,500
TOTAL	**415,350**

WATER QUANTITY SURVEYS

PROVINCE OF NEWFOUNDLAND

OPERATIONAL COSTS FOR HYDROMETRIC SURVEYS - LABRADOR

1996 - 1997

Budget Item	1996 - 97
Personnel - Basic Pay - 01, 02, 03	11,000
(Salaries of hydrometric technical staff including overtime)	
Transportation and Communications	
Travel - 07	5,500
Transportation and Postage - 09	500
Telecommunications - 10, 11	0
Professional and Special Services	
Professional Services - 18	0
Other Services - 22	300
Rentals - 25	15,200
Purchased Repair and Upkeep	
Equipment Purchased and Repairs - 28	200
Building and Structures Repairs - 29	0
Utilities, Materials and Supplies	
Public Utility Services - 32	0
Purchased Materials, Supplies,	
Misc. Goods - 33, 34	500
Parts and Consumable Tools - 35	200
Other Costs - Data Processing	600
Depreciation of Vehicles (5)	0
Depreciation of Field Equipment and Instruments	600
TOTAL	**34,600**

WATER QUANTITY SURVEYS

CALCULATION OF ANNUAL COSTS AND PAYMENTS - 1996 - 1997

HYDROMETRIC NETWORK - ISLAND

Station Category	Stations	Station Units
Federal 1	6	6.0
Federal 4	8	8.0
Federal / Provincial 3	42	42.0
Provincial 1	24	21.6
Total	**80**	**77.6**

Average Cost per Station Unit = $415,350.00 / 77.6 = $5352.00

Provincial Share = $5352 [(42 x .5) + 21.6] = $5352 [42.6] = $227,995.00

HYDROMETRIC NETWORK - LABRADOR

Station Category	Stations	Station Units
Federal 2	1	1.0
Federal 4	3	3.0
Provincial 1	1	0.2
Total	**5**	**4.2**

Average Cost per Station Unit = $34,600.00 / 4.2 = $8,238.00

Provincial Share = $8,238 [0.2] = $1,648.00

HUMBER BASIN METEOROLOGICAL STATIONS

Station Category	Stations	Station Units
Humber Basin Meteorology	5	1.0

Cost per Station = 20% of Hydrometric station = $5352.00 x .2 = $1070.00

Provincial Share = $1070.00 x 5 = $5,352.00

Instrumentation Installation = $1,432.00

Total Provincial Share = $236,427.00

TABLE 1
WATER QUANTITY SURVEYS
GAUGING STATION DATA FOR 1996 - 1997

No. of Stations: incl Contrib			Changes during 1995 - 1997		Stn. Designation April 1, 1996			
April 1, 1995	April 1, 1996	Change	Added	Discontinued	Fed	F/P	Prov.	Contrib.
117	99	18	0	18	18	42	25	14

TABLE 2
WATER QUANTITY SURVEYS
COMPARATIVE GAUGING STATION DATA April 1, 1975 - April 1, 1996

Federal Stations			F/P Stations			Provincial Stations			Total Stations		
Apr 1, 1975	Apr 1,1996	Change	Apr 1, 1975	Apr 1, 1996	Change	Apr 1, 1975	Apr 1, 1996	Change	Apr 1, 1975	Apr 1, 1996	Change
14	18	4	7	42	35	9	25	16	30	85	55

TABLE 3
WATER QUANTITY SURVEYS
DETAILED GAUGING STATION DATA 1996 - 1997

F-1	*F-2	F-3	F-4	Total F	FP-1	FP-2	FP-3	Total F/P	P-1	P-2	Total P	Contrib.	Total-All
67	1	0	11	18	0	0	42	42	25	0	25	14	99

TABLE 4
WATER QUANTITY SURVEYS
SUMMARY OF SCHEDULE D - 1996 - 1997
(does not include costs for Humber River Meteorological Stations or Sediment Program)

Streamflow & Water Level		Sediment		Total
Operation	Construction	Operation	Construction	
229,643	0	0	0	229,643

TABLE 5
WATER QUANTITY SURVEYS
COMPARISON - SCHEDULED & ACTUAL DOLLAR COSTS FOR 1996 - 1997
(does not include costs for Humber River Meteorological Stations or Sediment Program)

Salary & Operations		Construction		Total			Amount Payment Received	Received Minus Actual
Sch. D	Actual Cost	Sch. D	Actual Cost	Sch. D	Actual Cost	Difference		
229,643	229,643	0	0	229,643	229,643	0	229,643	0

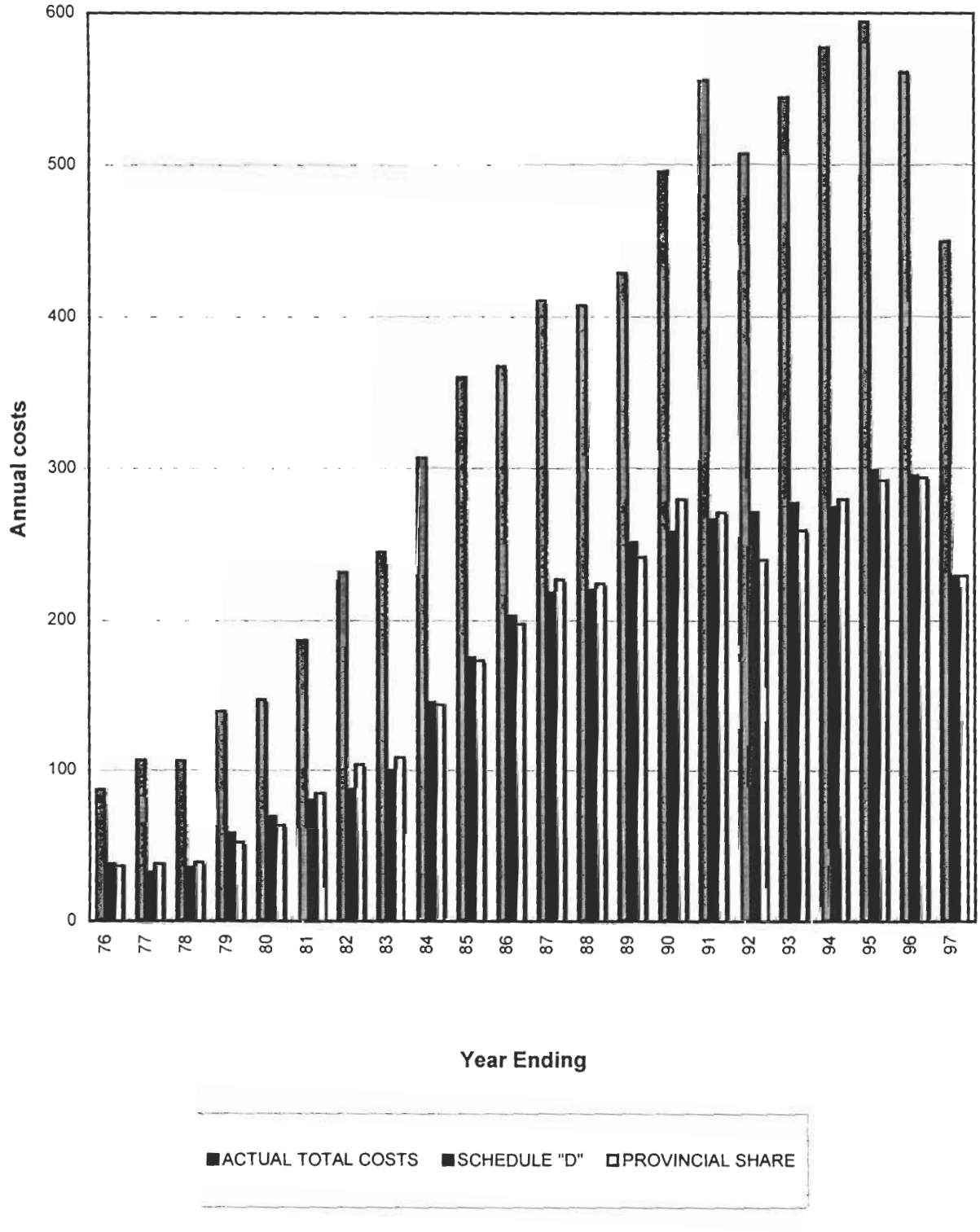
SUMMARY OF ANNUAL COSTS AND PAYMENTS
1975-76 TO 1996 - 1997

	SCHEDULE "D" PAYMENTS BY PROVINCE				ACTUAL PROVINCIAL SHARE				
YEAR	HYDROMET	SEDIMENT	CONSTR	TOTAL	HYDROMET	SEDIMENT	CONSTR	TOTAL	+CREDIT -DEBIT
1975-76	37,800	-	3,600	41,400	36,238	-	2,177	38,415	2,985
1976-77	32,340	-	12,000	44,340	37,840	-	1,573	39,413	4,927
1977-78	35,520	-	24,480	60,000	38,700	-	13,963	52,663	7,337
1978-79	56,775	1,400	11,825	70,000	51,371	679	26,000	78,050	-8,050
1979-80	68,338	933	25,729	95,000	62,256	896	22,476	85,628	9,372
1980-81	78,639	1,475	6,000	86,114	83,518	1,064	7,703	92,285	-6,171
1981-82	83,523	3,750	14,000	101,273	100,726	3,114	16,560	120,400	-19,127
1982-83	96,542	3,744	55,000	155,286	102,735	5,886	47,224	155,845	-559
1983-84	141,457	4,470	38,000	183,927	136,917	6,906	37,864	181,687	2,240
1984-85	168,244	7,350	52,000	227,594	168,247	5,295	48,662	222,204	5,390
1985-86	195,563	7,650	36,787	240,000	191,580	6,324	39,203	237,107	2,893
1986-87	211,706	6,975	34,641	253,322*	222,843	4,413	35,136	262,392	-9,070
1987-88	213,634	6,975	42,000	262,609*	220,934	3,597	47,957	272,488	-9,879
1988-89	245,221	6,300	15,000	266,521*	237,249	4,683	16,148	258,080	8,441
1989-90	253,392	5,173	30,000	288,567*	274,004	5,571	21,264	300,839	-12,272
1990-91	260,691	5,925	-	266,616**	266,058	4,809	2,532	273,399	-6,783
1991-92	264,591	6,450	-	271,041**	234,222	5,649	-	239,871	31,170
1992-93	273,482	3,825	-	277,307**	254,430	4,713	-	259,143	18,164
1993-94	270,983	3,700	21,000	295,683	276,163	3,505	20,496	300,164	-4,481
1994-95	295,500	3,200	-	298,700	288,835	3,220	-	292,055	6,645
1995-96	294,040	1,375	-	295,415	292,860	1,180	-	293,910	1,505
1996-97	229,643	0	-	229,643	229,643	0	-	229,643	0
								Net total	**+24,677**

NOTES. A positive net total indicates funds owed to the province.
* Not including $11,678 payment for imputed rental of 14 DCPs
** Not including $11,678 DCP payment plus cost of operation of Humber River met sites.

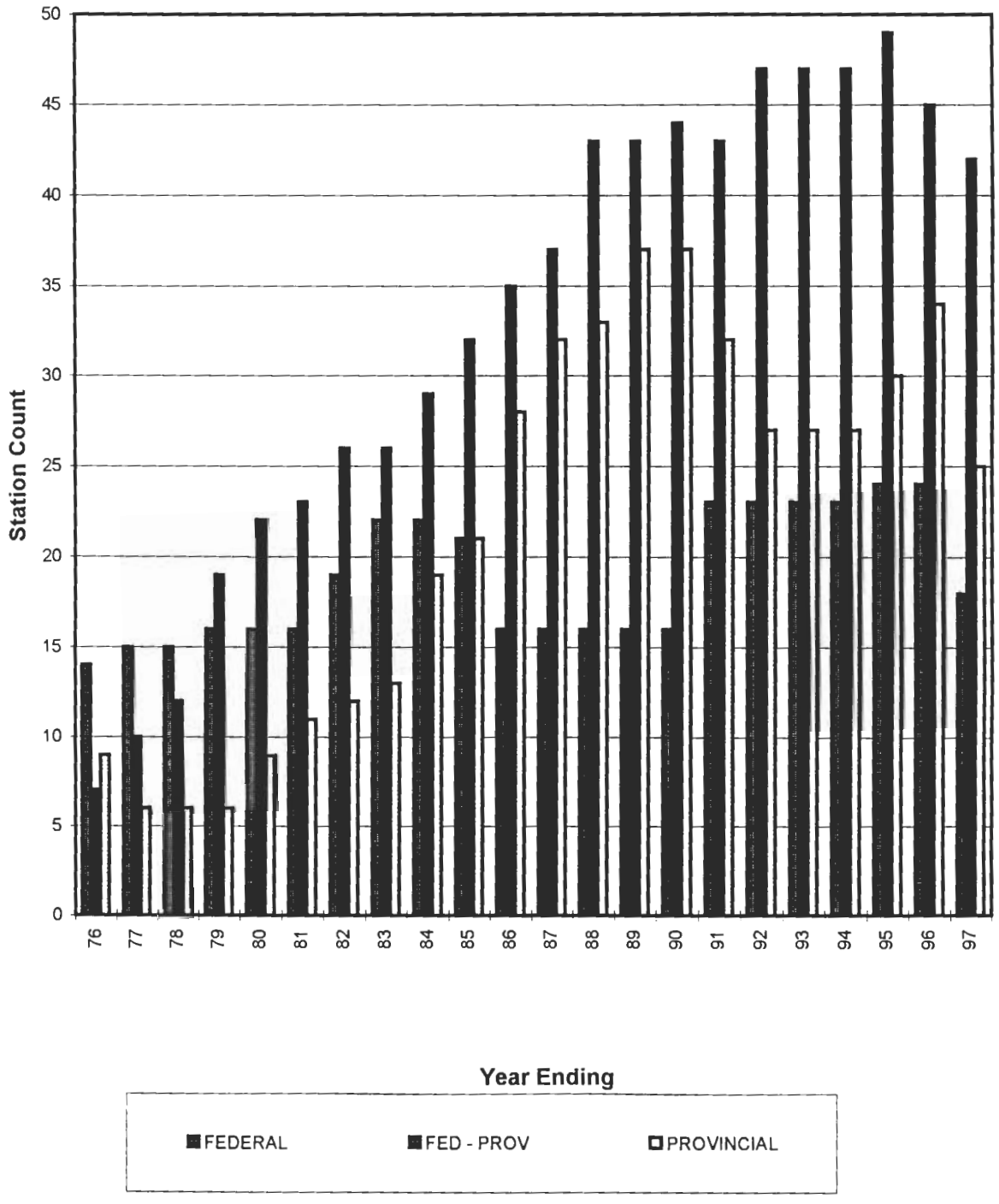
Newfoundland - Labrador

Operational Costs for gauging Stations



Newfoundland - Labrador

Station Category



APPENDIX I

SCHEDULE A

WATER QUANTITY SURVEY STATIONS

SCHEDULE "A" NEWFOUNDLAND 1996-97

FEDERAL 1 FEDERAL DEPARTMENTAL PROGRAMS (6)

STA. NO.	STATION NAME	ESTAB.	D.A.	RECORDS	REMARKS
02YH001	Bottom Creek near Rocky Harbour	1985	33.4	Q R C	*A B*
02ZB001	Isle aux Morts River below Hwy Bridge	1962	205	Q R C	DCP TYP LRTAP *A B E*
02YS006	Northwest River at Terra Nova National Park	1994	663	Q R C	DCP LOGGER *A*
02ZK001	Rocky River near Colinet	1948	285	Q R C	DCP TYP WQ *A B E*
02YS003	Southwest Brook at Terra Nova National Park	1967	36.7	Q R C	*A B E (CARRIER)*
02YL001	Upper Humber River near Reidville	1928	2110	Q R C	DCP TYP *A B E*

FEDERAL 2 INTERPROVINCIAL WATERS (1)

STA. NO.	STATION NAME	ESTAB.	D.A.	RECORDS	REMARKS
02XA003	Little Mecatina River above lac Fourmont	1979	4540	Q R C	DCP RMT *M A*

FEDERAL 4 NATIONAL WATER QUANTITY INVENTORY (11)

STA. NO.	STATION NAME	ESTAB.	D.A.	RECORDS	REMARKS
03QC002	Alexis River near Port Hope Simpson	1978	2310	Q R C	DCP RMT MET *M A*
02ZF001	Bay du Nord River at Big Falls	1950	1170	Q R C	DCP *A B E*
03QC001	Eagle River above Falls	1966	10900	Q R C	DCP RMT WQ TYP *M A*
02YQ001	Gander River at Big Chute	1949	4400	Q R C	DCP TYP *A B E*
02ZD002	Grey River near Grey River	1969	1340	Q R C	DCP RMT LRTAP MET *M A E*
02YJ001	Harrys River below Highway Bridge	1968	640	Q R C	DCP WQ LRTAP *A B C E*
02YL003	Humber River at Humber Village Bridge	1982	7860	Q R C	DCP REG *M A C*
02YG001	Main River at Paradise Pool	1986	627	Q R C	DCP RMT *M A E*
02YD002	Northeast Brook near Roddickton	1980	200	Q R C	*M A B*
02YC001	Torrent River at Bristol's Pool	1959	624	Q R C	WQ LOGGER *A B E*
03NF001	Ugjoktok River below Harp Lake	1979	7570	Q R C	RMT *M A*

FEDERAL-PROVINCIAL 3 REGIONAL WATER QUANTITY INVENTORY (42)

STA. NO.	STATION NAME	ESTAB.	D.A.	RECORDS	REMARKS
02YA002	Bartletts River near St. Anthony	1986	33.6	Q R C	*A B*
02ZH002	Come-by-Chance River near Goobies	1961	43.3	Q R C	*A B*
02ZE004	Conne River at Outlet of Conne Pond	1988	99.5	Q R C	DCP *M A*
02YO011	Exploits River below Noel Pauls Brook	1985	6300	Q R C	DCP REG *A E*
02ZG001	Garnish River near Garnish	1958	205	Q R C	LRTAP *A B*
02ZC002	Grandy Brook below Top Pond Brook	1982	230	Q R C	DCP RMT LRTAP *M A E*
02YO008	Great Rattling Brook above Tote River Confluence	1984	823	Q R C	DCP *M A E*
02YE001	Greavett Brook above Portland Creek Pond	1983	95.7	Q R C	*M A E*
02ZA002	Highlands River at TCH	1982	72.0	Q R C	*A B E*
02YR003	Indian Bay Brook near Northeast Arm	1981	554	Q R C	*A B E*
02YO010	Junction Brook near Badger	1985	61.6	Q R C	*M A*
02YK002	Lewasseechjeech Brook at Little Grand Lake	1952	470	Q R C	DCP RMT *M A E*
02ZA001	Little Barachois Brook near St. George's	1978	343	Q R C	*A B E*
02ZA003	Little Codroy River near Doyles	1982	139	Q R C	*M A E*
02YN002	Lloyds River below King George IV Lake	1980	469	Q R C	RMT *M A*
02YG002	Middle Arm Brook below Flatwater Pond	1987	224	Q R C	*M A E*
02YR001	Middle Brook near Gambo	1959	267	Q R C	*A B E*
02ZK002	Northeast River near Placentia	1979	89.6	Q R C	*A B*
02YQ004	Northwest Gander River near Gander Lake	1983	2150	Q R C	RMT LOGGER *A*
02YO006	Peters River near Botwood	1981	177	Q R C	*A B*
02YJ003	Pinchgut Brook at Outlet of Pinchgut Lake	1986	119	Q R C	*A B E*
02ZH001	Pipers Hole River at Mothers Brook	1952	764	Q R C	WQ LRTAP *A B*
02YR002	Ragged Harbour River near Musgrave Harbour	1977	399	Q R C	*A B*
02ZG004	Rattler Brook near Boat Harbour	1981	42.7	Q R C	*A B*
02YL005	Rattler Brook near McIvers	1985	17.0	Q R C	*A B*
02YQ005	Salmon River near Glenwood	1987	80.8	Q R C	*M A E*
02ZG003	Salmonier River near Lamaline	1980	115	Q R C	*M A E*
02ZM009	Seal Cove Brook near Cappahayden	1979	53.6	Q R C	*A B*
02YK005	Sheffield Brook near TCH	1972	391	Q R C	DCP *A B E*
02ZJ003	Shoal Harbour River near Clarenville	1985	106	Q R C	*A B*
02ZM016	South River near Holywood	1983	17.3	Q R C	*A B*
02ZJ001	Southern Bay River near Southern Bay	1976	67.4	Q R C	*M A*
02YO012	Southwest Brook at Lewisporte	1989	47.7	Q R C	*M A*
02YM003	South West Brook near Baie Verte	1980	93.2	Q R C	*A B*
02ZL003	Spout Cove Brook near Spout Cove	1979	10.8	Q R C	*A*
02YN003	Star Brook below Star Lake	1987	427	Q R C	RMT DCP *M A E*
02YA001	Ste. Genevieve River near Forresters Point	1969	306	Q R C	*A B E*
02YS005	Terra Nova River at Glovertown	1985	2000	Q R C	DCP *M A E*
02ZG002	Tides Brook below Freshwater Pond	1977	166	Q R C	DCP *A B*
02YL008	Upper Humber River above Black Brook	1988	471	Q R C	RMT DCP MET *M A E*
02ZM018	Virginia River at Pleasantville	1984	10.7	Q R C	*M A*
02ZM008	Waterford River at Kilbride	1974	52.7	Q R C	LOGGER *A*

PROVINCIAL (25)

STA. NO.	STATION NAME	ESTAB.	D.A.	RECORDS	REMARKS
02ZL005	Big Brook at Lead Cove	1985	11.2	Q R C	*A B*
03OE010	Big Pond Brook below Big Pond	1993	71.4	Q R C	RMT LOGGER *A*
02YK008	Boot Brook at Trans-Canada Highway	1985	20.4	Q R C	*A B*
02YF002	Cat Arm Reservoir near Spillway	1994		H R C	RMT DCP LOGGER *A*
02YL011	Copper Pond Brook near Corner Brook Lake	1994	12.9	Q R C	LOGGER *A*
02YL009	Corner Brook Lake at lake Outlet	1990		H R C	REG DCP MET
02YL007	Deer Lake at Deer Lake	1987		H R C	TMK *M*
02YK007	Glide Brook below Glide Lake	1984	112	Q R C	*M A E*
02YK010	Grand Lake East of Grand Lake Brook	1988		H R C	DCP RMT MET *M A*
02YM004	Indian Brook Diversion above Birchy Lake	1990		Q R C	DCP MET *M A E*
02ZM020	Leary Brook at Prince Philip Drive	1985	17.8	Q R C	*A*
02ZM017	Leary Brook at St. John's	1983	15.3	Q R C	LOGGER *A*
02ZK003	Little Barachois River near Placentia	1983	37.2	Q R C	*A B*
02ZK004	Little Salmonier River near North Harbour	1983	104	Q R C	*A B*
02ZM006	Northeast Pond River at Northeast Pond	1953	3.63	Q R C	*A B*
02ZM022	Raymond Brook at Outlet of Bay Bulls Big Pond	1988		Q R C	REG *A B*
02ZJ002	Salmon Cove River near Champneys	1983	73.6	Q R C	*A B*
02ZL004	Shearstown Brook at Shearstown	1983	28.9	Q R C	*A B*
02YP001	Shoal Arm Brook near Badger Bay	1982	63.8	Q R C	RMT *M A B*
02YL004	South Brook at Pasadena	1983	58.5	Q R C	*M A*
02ZM021	South Brook at Pearl Town Road	1986	9.21	Q R C	*A B*
02ZN002	St. Shotts River near Trepassey	1985	15.5	Q R C	DCP *M A*
02ZK005	Trout Brook near Bellevue	1986	50.3	Q R C	*A B*
02ZM019	Virginia River at Cartwright Place	1985	5.55	Q R C	*A B*
02YL010	West Pond Brook near Corner Brook lake	1994	13.1	Q R C	LOGGER *A E*

CONTRIBUTED STATIONS (14)

STA.NO.	STATION NAME	ESTAB.	D.A.	AGENCY	REMARKS
03OA001	Ashuanipi River at Menihek Rapids	1952	19000	IOCCL	REG RMT
03OC006	Atikonak River at Gabbro Lake	1973	21400	CFLCO	REG73 RMT
03OD006	Atikonak River at Ossakmanuan Lake Control	1977		CFLCO	REG64 RMT
03OD005	Churchill River at Churchill Falls Power House	1972	69200	CFLCO	REG71 RMT
02YL002	Corner Brook at Watsons Brook Powerhouse	1959	127	DLPCL	REG
02YO001	Exploits River at Grand Falls	1914	8390	AB-PR	REG
02YK006	Hinds Brook at Hinds Brook Power House	1981	651	N&LHY	REG81
02YK001	Humber River at Grand Lake Outlet	1898	5020	DLPCL	REG
02ZM003	Mobile River at Mobile First Pond	1962	112	NLPCL	REG
02ZM001	Petty Harbour River at Second Pond	1962	134	NLPCL	REG
02ZM002	Pierres Brook at Gull Pond		1962	117	NLPCL
02YO003	Rattling Brook at Rattling Brook Powerhouse	1962	378	NLPCL	REG
02ZE003	Salmon River at Bay D'Espoir Powerhouse	1967	5910	N&LHY	REG67
02YO004	Sandy Brook at Sandy Brook Powerhouse	1964	508	NLPCL	REG

EXPLANATION OF SYMBOLS & ABBREVIATIONS

TYPE OF RECORD

H	- water level data
Q	- flow data

TYPE OF GAUGE

M	- manual gauge
R	- automatic recording gauge

OPERATION SCHEDULE

C	- continuous record
M	- miscellaneous record
S	- seasonal record

REMARKS

DCP	- data collection platform
LRTAP	- samples collected for acid precipitation monitoring
MET	- data available from meteorological sensors
REG	- regulated flow
REG78	- regulated flow since 1978
RMT	- remote station accessed by aircraft
SED	- sediment data currently being collected
SEDM	- miscellaneous sediment samples obtained
TMK	- telephone interrogated Telemark
TYP	- typical stream; data used to produce statement on runoff conditions
WQ	- samples collected for water quality national overview network
LOGGER	- data recorded by digital data logger
A	- Building
B	- Well
C	- Power and / or Telephone
E	- Cableway
M	- Manometer

HUMBER RIVER DATA COLLECTION NETWORK

Real Time Instrumentation To Be Operated and Maintained By Water Survey of Canada In Accordance With Memorandum of Understanding.

Station		Response Time
1.	Burgeo Road near Buchans Access	48 Hrs.
2.	Grand Lake at Southwest End	48 Hrs.
3.	Grand Lake on Glover Island	48 Hrs.
4.	Upper Humber River above Black Brook	48 Hrs.
5.	Corner Brook Lake at Lake Outlet	48 Hrs.
6.	Sandy Lake at Howley Road	48 Hrs.
7.	Indian Brook Diversion to Birchy Lake	48 Hrs.
8.	Lewassechjeech Brook at Little Grand Lake	48 Hrs.
9.	Sheffield Brook near T.C.H.	48 Hrs.
10.	Humber River at Humber Village Bridge	48 Hrs.
11.	Upper Humber River near Reidville	48 Hrs.
12.	Deer Lake near Generating Station	48 Hrs.

Stations 8-12 are not equipped with meteorological sensors but are included in this list of "Response Time Repair" due to the significance of the data in supporting the "Humber River Basin Data Collection Network".

APPENDIX II

SCHEDULE D

SUMMARY OF ANNUAL PAYMENT

SCHEDULE 'D'

This schedule provides a summary of the annual payment. The details of the calculations for operation and construction are available and have been jointly reviewed by officers of each party.

ANNUAL PAYMENT FOR 1996-97 TO BE PAID TO THE RECEIVER GENERAL FOR CANADA BY THE PROVINCE OF NEWFOUNDLAND.

a)	Streamflow and Water Level Installations (Island)	$227.995
b)	Streamflow and Water Level Installations (Labrador)	$ 1.648
c)	Humber Basin Meteorological Stations	$ 5.284
d)	Meteorological Instrument Installation	$ 1.500
	Total	**$236,427**

HYDROMETRIC $229,643

Dr. W. Ullah
Director Water Resources Division
Department of the Environment and Labour

Administrator for the Province of Newfoundland

W. S. Appleby
Atmospheric Environment Branch
Environment Canada

Administrator for Canada

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APPENDIX III

MINUTES OF COORDINATING COMMITTEE MEETINGS

and

RELATED CORRESPONDENCE

CO-ORDINATING COMMITTEE MEETING

CANADA-NEWFOUNDLAND COST SHARING AGREEMENT

WATER QUANTITY SURVEYS

1996 - 1997

CO-ORDINATING COMMITTEE MEETING MINUTES

The co-ordinating committee for the Canada-Newfoundland Cost Sharing Agreement on Water Quantity Surveys, met on March 24, 1997 at the Provincial Department of Environment and Labour, Water Resources Division, office on the 4th floor, West Block, Confederation Building, in St. John's, Newfoundland. In attendance were the following:

W. Ullah (chair)	Prov. Water Resources div.	St. John's
H. Khan	Prov. Water Resources Div.	St. John's
C. Power	AEB Environmental Monitoring	Bedford
J. Merrick	AEB Environmental Monitoring	Bedford
C. Baker	AEB Environmental Monitoring	St. John's
D. Ambler	ECB	Dartmouth
T. Pollock	ECB. Water Quality	Moncton
S. Porter	AEB. Scientific Services	St. John's
K. Rollings	Prov. Water Resources Div.	St. John's

The following is an overview of discussions and decisions.

1. **Introductory Remarks and Budget Overview - Dr. Wasi Ullah**

Wasi presented an overview of the March budget and its impact on the Provincial Water Resources programs. He indicated that the Environment Departmental budget was reduced by approximately 30% however, the Water Resources Division was targeted for approximately a 60% reduction which will be effective April 1, 1997.

Due to staffing changes there are different personnel in some positions; H. Khan agreed to provide a current organizational chart of the department.

Wasi informed the group that this would be his last meeting since he would be retiring from his position of Director of Water Resources as of April 1, 1997. He complimented the group on the excellent working relationship and the commitment to provide the best possible service to the public in the area of Water Resources in Newfoundland.

Dr. Ullah's dedication, passion and foresight in developing a data base that is necessary for sound decision making in science, environmental assessment and all water resource based development activities is commendable. His skill as a negotiator and as a bureaucrat along with his sense of humour and interpersonal relations is well recognized. Members of this committee wish him well in his future endeavors and look forward to carrying on the professional approach and cooperation in cost sharing activities between Canada and Newfoundland.

2. Hydrometric Agreement

2.1 Network size and revised Schedule A

The provincial input to the Hydrometric Agreement for 1997-98 will be reduced by 50%, this will leave approximately $150K, which is projected to remain unchanged for 1998-99 and 1999-2000.

A review of the impact on the network ensued. A list of proposed stations to be considered for cuts was presented for discussion. The list was generally agreed upon with the decision to have input from other selected personnel before finalizing the downsizing.

In general, the network is projected to be reduced by 20 stations which will leave approximately 60 stations on the island. This will result in the loss of two Federal staff positions over the next two years. A fine tuning of the network will be carried out as soon as possible resulting in a final version of Schedule A and Schedule D for 1997-98.

Cal Baker will write to the following data users, regarding the potential impact on their operation due to network downsizing. A sample letter is attached at the end of these minutes.

- City of St. John's
- City of Mount Pearl
- City of Corner Brook
- Fisheries
- CWS
- Heritage Canada
- Deer Lake Power
- Abitibi Price -- Cost for loss of Star Lake stn.
- NF Hydro
- NF Light & Power
- Voisey's Bay Nickel Co. Ltd.

2.4 Network Modernization

Approximately 30% of the network on the Island is modernized with digital loggers. With the instrumentation on hand, the revised network will be approximately 65% modernized. This will

include equipment to be removed from presently modernized stations that will be discontinued. A memo will be sent to the Province detailing the cost of modernization.

2.5 Data Request and Charges.

It was requested by the Province that the number of data requests for hydrometric data received by Environmental Monitoring for 1996 be supplied. C. Baker agreed to provide this info., however, it was noted that this would only represent a fraction of the number of uses. Large users of Hydrometric data purchase their own CD ROM and through contact with these companies, data is accessed, without fail, every day. Generally, data requests from these companies are for current data not yet published.

3. Climate Agreement

3.1 Network Size and Revised Schedules (A2, B and C)

Stu Porter and Ken Rollings joined the meeting .

The Province gave notice that they would be reducing their contribution to the Climate Network, however, a decision had not been made as to how many stations would be supported. It was agreed that Ken Rollings would supply, to Charlie Power, within a few days, a list of stations to be terminated.

4. Water Quality Agreement

The Province indicated that the budget also had an effect on the Water Quality Program in that the Regional Water Quality Manager position in Grand Falls was eliminated.

Tom Pollock gave an overview of the Water Quality Program as projected for 1997-98. Burlington has the same number of Lab Credits as last year, however, the LRTAP program would be cut by 30% with 1997-98 being the last year for the program.

The Lake sampling program will continue for this year if funds are available. The two National Parks will continue their surface water sampling program. Precipitation samples from both federal and provincial samplers will be analyzed.

The planning of conducting another "Recurrent" survey was discussed and supported by the committee. Several proposals and suggestions were made, with a final plan to be agreed upon.

Follow up since meeting

There are no LRTAP funds for sampling lakes in 1997-98.
The Lake Sampling Program is suspended for 1997-98

Environmental Monitoring will continue to maintain its role in the Water Quality Program and collect samples at all previously sampled stations.
The number of Water Quality sampling stations operated under the agreement will remain unchanged, however, the sampling frequency will be adjusted to optimize the results.
Work plans for the water quality program have been completed.

SCHEDULE "A" RESPONSIBILITY CLASSIFICATION NEWFOUNDLAND 1997-98

FEDERAL 1 FEDERAL DEPARTMENTAL PROGRAMS (6)

STA. NO.	STATION NAME	ESTAB.	D.A.	RECORD	REMARKS
02YH001	Bottom Creek near Rocky Harbour **	1985	33.4	Q R C	*A B*
02ZB001	Isle aux Morts River below Highway Bridge	1962	205	Q R C	DCP TYP LRTAP *A B E*
02YS006	Northwest River at Terra Nova National Park	1994	663	Q R C	DCP LOGGER *A*
02ZK001	Rocky River near Colinet	1948	285	Q R C	DCP TYP WQ *A B E*
02YS003	Southwest Brook at Terra Nova National Park	1967	36.7	Q R C	*A B E(CARRIER)*
02YL001	Upper Humber River near Reidville	1928	2110	Q R C	LOGGER TYP *A B E*

** indicates stations scheduled for closure in 1998-99.

FEDERAL 2 INTERPROVINCIAL WATERS (1)

STA. NO.	STATION NAME	ESTAB.	D.A.	RECORD	REMARKS
02XA003 Hg	Little Mecatina River above lac Fourmont	1979	4540	Q R C	DCP RMT *M A*

FEDERAL 4 NATIONAL WATER QUANTITY INVENTORY (11)

STA. NO.	STATION NAME	ESTAB	D.A	RECORD	REMARKS
03QC002 Hg	Alexis River near Port Hope Simpson	1978	2310	Q R C	DCP RMT LOGGER MET *M A*
02ZF001	Bay du Nord River at Big Falls	1950	1170	Q R C	LOGGER *A B E*
03QC001 Hg	Eagle River above Falls	1966	10900	Q R C	LOGGER RMT WQ TYP A
02YQ001	Gander River at Big Chute	1949	4400	Q R C	LOGGER TYP *A B E*
02ZD002 Hg	Grey River near Grey River **	1969	1340	Q R C	DCP RMT LRTAP MET *M A E*
02YJ001	Harrys River below Highway Bridge	1968	640	Q R C	DCP WQ LRTAP *A B C E*
02YL003 Hg	Humber River at Humber Village Bridge	1982	7860	Q R C	LOGGER REG *A C*
02YG001 Hg	Main River at Paradise Pool	1986	627	Q R C	LOGGER RMT *A E*
02YD002 Hg	Northeast Brook near Roddickton	1980	200	Q R C	LOGGER *M A B*
02YC001	Torrent River at Bristol's Pool	1959	624	Q R C	WQ LOGGER *A B E*
03NF001 Hg	Ugjoktok River below Harp Lake	1979	7570	Q R C	RMT *LOGGER A*

** indicates stations scheduled for closure in 1998-99.

FEDERAL-PROVINCIAL 3 REGIONAL WATER QUANTITY INVENTORY (13)

STA. NO.	STATION NAME	ESTAB	D.A	RECORD	REMARKS
02YA002	Bartletts River near St. Anthony	1986	33.6	Q R C	*A B*
02ZH002	Come-by-Chance River near Goobies	1961	43.3	Q R C	*A B*
02ZE004 Hg	Conne River at Outlet of Conne Pond	1988	99.5	Q R C	DCP *M A*
02YO011	Exploits River below Noel Pauls Brook	1985	6300	Q R C	LOGGER REG *A E*
02ZG001	Garnish River near Garnish	1958	205	Q R C	LRTAP *A B*
02ZC002 Hg	Grandy Brook below Top Pond Brook	1982	230	Q R C	LOGGER RMT LRTAP *A E*
02YO008 Hg	Great Rattling Brook above Tote River Confluence	1984	823	Q R C	LOGGER *A E*
02YE001 Hg	Greavett Brook above Portland Creek Pond	1983	95.7	Q R C	LOGGER *M A E*
02ZA002	Highlands River at TCH	1982	72.0	Q R C	LOGGER *M A B E*
02YR003	Indian Bay Brook near Northeast Arm	1981	554	Q R C	LOGGER *A B E*
02YK002 Hg	Lewasseechjeech Brook at Little Grand Lake	1952	470	Q R C	DCP RMT *M A E*
02YN002 Hg	Lloyds River below King George IV Lake	1980	469	Q R C	RMT LOGGER *M A*
02YR001	Middle Brook near Gambo	1959	267	Q R C	*A B E*

FEDERAL-PROVINCIAL 3 REGIONAL WATER QUANTITY INVENTORY (20)

STA. NO.	STATION NAME	ESTAB	D.A.	RECORD	REMARKS
02ZK002	Northeast River near Placentia	1979	89.6	Q R C	*A B*
02YQ004	Northwest Gander River near Gander Lake**	1983	2150	Q R C	RMT LOGGER *A*
02YO006	Peters River near Botwood	1981	177	Q R C	*A B*
02ZH001	Pipers Hole River at Mothers Brook	1952	764	Q R C	WQ LRTAP *A B*
02ZG004	Rattler Brook near Boat Harbour	1981	42.7	Q R C	LOGGER *A B*
02YL005	Rattler Brook near McIvers	1985	17.0	Q R C	LOGGER *A B*
02YQ005 Hg	Salmon River near Glenwood	1987	80.8	Q R C	LOGGER *A E*
02ZG003 Hg	Salmonier River near Lamaline	1980	115	Q R C	LOGGER *A E*
02ZM009	Seal Cove Brook near Cappahayden	1979	53.6	Q R C	*A B*
02YK005	Sheffield Brook near TCH	1972	391	Q R C	DCP *A B E*
02ZJ003	Shoal Harbour River near Clarenville	1985	106	Q R C	LOGGER *A B*
02ZM016	South River near Holywood	1983	17.3	Q R C	*A B*
02ZJ001 Hg	Southern Bay River near Southern Bay	1976	67.4	Q R C	*LOGGER A*
02YO012 Hg	Southwest Brook at Lewisporte	1989	47.7	Q R C	*LOGGER A*
02YM003	South West Brook near Baie Verte	1980	93.2	Q R C	*A B*
02YN003 Hg	Star Brook below Star Lake **	1987	427	Q R C	RMT DCP *M A E*
02YS005 Hg	Terra Nova River at Glovertown	1985	2000	Q R C	LOGGER *A E*
02YL008 Hg	Upper Humber River above Black Brook	1988	471	Q R C	RMT LOGGER MET *A E*
02ZM018 Hg	Virginia River at Pleasantville	1984	10.7	Q R C	*LOGGER A*
02ZM008	Waterford River at Kilbride	1974	52.7	Q R C	LOGGER *A*

**indicates stations scheduled for closure in 1998-99

PROVINCIAL 1 PROVINCIAL DEPARTMENTAL PROGRAM (18)

STA. NO.	STATION NAME	ESTAB.	D.A.	RECORD	REMARKS
02ZL005	Big Brook at Lead Cove	1985	11.2	Q R C	*A B*
03OE010	Big Pond Brook below Big Pond	1993	71.4	Q R C	RMT LOGGER *A*
02YK008	Boot Brook at Trans-Canada Highway	1985	20.4	Q R C	LOGGER *A B*
02YF002	Cat Arm Reservoir near Spillway	1994		H R C	RMT DCP LOGGER *A*
02YL011	Copper Pond Brook near Corner Brook Lake	1994	12.9	Q R C	LOGGER *A*
02YL009	Corner Brook Lake at lake Outlet	1990		H R C	REG DCP MET
02YL007 Hg	Deer Lake at Deer Lake	1987		H R C	TMK *M C*
02YK010 Hg	Grand Lake East of Grand Lake Brook	1988		H R C	DCP RMT MET *M A*
02YM004 Hg	Indian Brook Diversion above Birchy Lake	1990		Q R C	DCP MET *M A E*
02ZM020	Leary Brook at Prince Philip Drive	1985	17.8	Q R C	LOGGER *A*
02ZK003	Little Barachois River near Placentia	1983	37.2	Q R C	*A B*
02ZK004	Little Salmonier River near North Harbour	1983	104	Q R C	*A B*
02ZM006	Northeast Pond River at Northeast Pond	1953	3.63	Q R C	*A B*
02ZM022	Raymond Brk at Outlet of Bay Bulls Big Pond	1988		Q R C	REG *A B*
02ZJ002	Salmon Cove River near Champneys	1983	73.6	Q R C	LOGGER *A B*
02ZL004	Shearstown Brook at Shearstown	1983	28.9	Q R C	*A B*
02YL004 Hg	South Brook at Pasadena	1983	58.5	Q R C	LOGGER *A* C
02ZN002 Hg	St. Shotts River near Trepassey	1985	15.5	Q R C	LOGGER DCP *A*

CONTRIBUTED STATIONS (14)

STA. NO.	STATION NAME	ESTAB.	D.A.	AGENCY	REMARKS
03OA001	Ashuanipi River at Menihek Rapids	1952	19000	IOCCL	REG RMT
03OC006	Atikonak River at Gabbro Lake	1973	21400	CFLCO	REG73 RMT
03OD006	Atikonak River at Ossakmanuan Control	1977		CFLCO	REG64 RMT
03OD005	Churchill River at Churchill Falls Pwrhouse	1972	69200	CFLCO	REG71 RMT
02YL002	Corner Brook at Watsons Brook Powerhouse	1959	127	DLPCL	REG
02YO001	Exploits River at Grand Falls	1914	8390	AB-PR	REG
02YK006	Hinds Brook at Hinds Brook Powerhouse	1981	651	N&LHY	REG81
02YK001	Humber River at Grand Lake Outlet	1898	5020	DLPCL	REG
02ZM003	Mobile River at Mobile First Pond	1962	112	NLPCL	REG
02ZM001	Petty Harbour River at Second Pond	1962	134	NLPCL	REG
02ZM002	Pierres Brook at Gull Pond	1962	117	NLPCL	REG
02YO003	Rattling Brook at Rattling Brook Pwrhouse	1962	378	NLPCL	REG
02ZE003	Salmon River at Bay D'Espoir Powerhouse	1967	5910	N&LHY	REG67
02YO004	Sandy Brook at Sandy Brook Powerhouse	1964	508	NLPCL	REG

HUMBER RIVER DATA COLLECTION NETWORK

Real Time Instrumentation To Be Operated and Maintained By Water Survey of Canada In Accordance With Memorandum of Understanding.

	Station	Response Time
1.	Burgeo Road near Buchans Access	48 Hrs.*
2.	Grand Lake at Southwest End	48 Hrs.
3.	Grand Lake on Glover Island	48 Hrs.*
4.	Upper Humber River above Black Brook	48 Hrs.
5.	Corner Brook Lake at Lake Outlet	48 Hrs.*
6.	Sandy Lake at Howley Road	48 Hrs.*
7.	Indian Brook Diversion to Birchy Lake	48 Hrs.
8.	Lewassechjeech Brook at Little Grand Lake	48 Hrs.
9.	Sheffield Brook near T.C.H.	48 Hrs.
10	Humber River at Humber Village Bridge	48 Hrs.
11	Upper Humber River near Reidville	48 Hrs.
12	Deer Lake near Generating Station	48 Hrs.
13	Aides Lake	48 Hrs*
14	Hinds Lake	48 Hrs*

* precipitation guage

Station 8-12 are not equipped with meteorological sensors but are included in this list of "Response Time Repair" due to the significance of the data in supporting the "Humber River Basin Data Collection Network".

April 23, 1997

From: Environment Canada

To: *[sample letter to affected agencies advising of potential station closures]*

Hydrometric Network – Newfoundland

The Environmental Monitoring Division of Environment Canada in cooperation with the Provincial Department of Environment and Labour, operates a network of hydrometric stations in Newfoundland and Labrador, providing information on water levels and discharge on approximately 90 rivers. Due to budget restraints at both levels of government, during the past few years the network has been gradually shrinking. The most recent provincial budget has again negatively impacted on the number of stations .

We realize the importance of hydrologic data to Municipal, Provincial and Federal governments, utility companies, and private consulting companies which enable them to make sound decisions in the design of water resource based infrastructure. Long term planning in response to ever changing runoff patterns due to watershed development, reservoir management and environmental concerns such as the protection of habitat for fish, and water quality are issues that we are sensitive to and will endeavor to provide support. However, we are faced with no alternative, due to reduced funding, to further reduce the hydrometric network by a minimum of 20 stations.

The following 16 stations are scheduled to close in 1997-98, unless otherwise supported.

1.	F/P	02YA001	St. Genevieve River
2	F/P	02YJ003	Pinchgut Brook
3.	F/P	02ZA001	Little Barachois Brook at St. Georges
4.	F/P	02ZA003	Little Codroy River
5.	P	02YL010	West Pond Brook
6.	P	02YK007	Glide Brook
7.	F/P	02YG002	Middle Arm Brook
8.	P	02YP001	Shoal Arm Brook
9.	F/P	02YO010	Junction Brook
10.	F/P	02YR002	Ragged Harbour River
11.	F/P	01ZG002	Tides Brook
12.	P	02ZK005	Trout Brook
13.	F/P	02ZL003	Spout Cove Brook
14.	P	02ZM021	South Brook at Pearl Town Road.
15.	P	02ZM017	Leary Brook at St. John's
16.	P	02ZM019	Virginia River at Cartwright Place

The following four stations are programmed for closure in 1998-99.

1.	F/P	02YN003	Star Brook.	hydro development project
2.	F	02YH001	Bottom Creek	
3.	F/P	02YQ004	North West Gander	
4.	F	02ZD002	Grey River	remote.

If you have any concerns over the implications of these station closures on your activities, please contact me.

Calvin Baker

[Editor's reference note: if all 16 stations go in 97-98 the classification breakdown is F18 F/P33 P18 (69)..... with 4 more to go in 98-99; F16 F/P31 P18 (65)]

NEWFOUNDLAND POWER

Newfoundland Light & Power Co. Limited

55 Kenmount Road
PO Box 8910
St. John's, Newfoundland
A1B 3P6
Business: (709) 737-5600
Facsimile: (709) 737-5832

5 May 1997

Environment Canada
Environmental Monitoring
P.O. Box 21130
St. John's, Newfoundland
A1A 5B2

Attention: Calvin Baker
Area Manager

Re: Hydrometric Network - Newfoundland
Our File: ENS-0795.00

Dear Mr. Baker,

With reference to your letter of April 23, 1997 regarding the closure of at least 20 Newfoundland hydrometric stations, I would like to express my concern over the loss of these valuable sources of hydrologic data. As I am sure you are aware, Newfoundland is an island of very diverse hydrologic regions. The number of hydrometric stations presently available is inadequate to predict streamflow characteristics with any degree of confidence in most areas. In addition, most stations have very short periods of record. These factors add substantially to the uncertainty of making investment decisions on water-related infrastructure in this province. A reduction in the hydrometric network by 20 stations will have a serious negative impact upon the streamflow database, creating a significant hinderance to the control and development of our province's substantial water resources.

In particular, several of these scheduled station closures will create difficulties in the operation of our existing hydroelectric developments. **Spout Cove Brook** is adjacent to several of our plants on the Bay de Verde Peninsula. While this gauge has only been in operation since 1979, it is of significant benefit as it is one of only two stations in this area (the other station having an even shorter period of record). **Little Barachois Brook** is extremely helpful in the operation of our Lookout Brook plant near St. George's. **Tides Brook** has been tremendously helpful in operating our three hydroelectric developments on the Burin Peninsula. The closure of these three stations are of particular concern to Newfoundland Power at this time. However, the loss of any

of these 20 stations represents a substantial step backwards in the study of this province's hydrology.

Should you wish to further discuss the impacts of this action on Newfoundland Power's hydroelectric operations please do not hesitate to contact the undersigned at 737-5844, or Mr. Ian Kerr at 737-2928.

Yours very truly,

J.L. Simmons
Manager, Energy Supply

Baker,Calvin [St. John's]

From: Rex Porter[SMTP:porterr@athena.nwafc.nf.ca]
Sent: Wednesday, May 07, 1997 8:45 PM
To: Baker,Calvin [St. John's]
Subject: Re: Hydrometric Station Closures

Thanks for the Heads-up on the Hydrometric stations.

We have a particular interest in the keeping the stations on
St. Genevieve River
Pinchgut Brook
Little Barachois Brook
Little Codroy River
Northwest river - Gander
Grey river
Ragged Harbour River

These stations provides information that are useful for our research and conducting assessments of atlantic salmon stocks. Are there any options for retaining these stations?

Rex Porter Telephone 709 772-4409
P.O. Box 5667 FAX 709 772-3578
St. John's, NF
Canada A1C 5X1

Rex

The average cost of operating a hydrometric station with conventional access is approximately $5,500 plus or minus / yr.

For a remote station such as Grey River which is only accessable by helicopter, the cost reflects charter helicopter rates. To collect and produce data at this station would be approximately $10K-12K /yr.

One option would be to operate stations seasonally eg. May-Oct which would result in approximately a 25% savings. There is, however, the issue of "modernization" of stations with new technology such as data loggers, real time access etc.. All stations have to modernized in order to be compatable with digital collection and processing of data. The cost of modernization per station is approximately $8K-$10K which would have to be completed in order to continue operation of the station.

I appreciate the usefulness of this data in your assessment of salmon stocks and other programs and welcome the opportunity to futher explore ways to provide the maximum amount of data possible within the constraints of PY's and budget.

Calvin

File No. _____

HYDRO

NEWFOUNDLAND AND LABRADOR HYDRO
Head Office: St. John's, Newfoundland P.O. Box 12400 A1B 4K7 • Telephone (709) 737-1400 • Fax (709) 737-1231

May 13, 1997

Environment Canada
Environmental Monitoring
P.O. Box 21130
St. John's, NF
A1A 5B2

Attention: Mr. Calvin Baker, Area Manager.

Dear Sir:

I refer to your letter of April 23, 1997 concerning your Department's plan to discontinue operation of a number of hydrometric stations in Newfoundland. We have reviewed the list of stations and wish to advise that we have no concerns about the closure of any of the stations with the exception of station number 20 - Grey River.

The Grey River Hydrometric Station is used by the Federal Department of Fisheries and Oceans and Newfoundland and Labrador Hydro to monitor flows in that River. Elimination of this station will impair our ability to ensure that the necessary flows are provided downstream of the Pudops Dam on the Grey River. We would appreciate your reconsideration of this decision.

Sincerely,

for: T. David Collett, Executive
Vice-President Production.

City Of St. John's
P.O. Box 908, St. John's, NF, Canada A1C 5M2 (709) 576-8600

May 16, 1997

Mr. Calvin Baker
Area Manager, Environmental Monitoring
Environment Canada
P.O. Box 21130
St. John's, Nfld.
A1A 4B2

Dear Mr. Baker

Re: Closure of Hydrometric Stations
St. John's Area

Further to your letter of April 23, 1997, please be advised that we have several concerns with the closure of the following stations:

1. South Brook at Pearl Town Road,
2. Leary's Brook at St. John's, and
3. Virginia River at Cartwright Place.

Firstly, these stations provide valuable information in allowing the City to calibrate its urban hydrologic computer models. The City presently models its storm sewer systems using HYDSYS, a third party engineering software package that uses ILLUDAS (Illinois Urban Drainage Area Simulator) to model urban runoff. Streamflow data is essential in calibrating this model.

Secondly, the City calculates the backwater effects of rivers and performs floodplain analysis using HEC-RAS and HEC-1, respectively. Each of these programs utilizes streamflow data as basic input. The accuracy of these models would be greatly reduced with the closure of the above stations.

Thirdly, the presence of two streamflow stations per catchment area provides a safeguard against gaps in data should one station fail or be taken out of service temporarily.

Other items such as time-series analysis of flows, estimation of peak runoff events, and storm water and reservoir management will be greatly effected by the proposed closures.

The City would like to discuss with you what action is required to keep these stations open and

..../2

operational. Mr. David Wadden of the Department of Engineering and Planning will be in contact with you to discuss this issue further.

Please contact the undersigned if you require further information.

Yours truly,

Art Cheeseman, P.Eng.
Associate Commissioner/
Director of Engineering and Planning

AC/dm

p.c. Mr. Walt Mills - Development Engineer
Mr. David Wadden - Construction Engineer

City Of St. John's
P.O. Box 908, St. John's, NF, Canada A1C 5M2 (709) 576-8600

June 18, 1997

Mr. Calvin Baker
Area Manager, Environmental Monitoring
Environment Canada
P.O. Box 21130
St. John's, NF
A1A 4B2

Dear Mr. Baker:

RE: Closure of Hydrometric Stations
St. John's Area

Further to our meeting of June 10, 1997, concerning the above, we regret to inform you that the City will not be able to take on the cost sharing requirement of $4,500.00 per station at this time. This is understandable given that such costs were not anticipated when we prepared this year's budget. I will recommend that our Department approach council for funding when we review next year's budget. At that time I will advise whether or not we will be able to cost share the three hydrometric stations referenced in my letter of May 16, 1997.

Please contact me if you have any questions or require further information.

Yours truly,

Dave Wadden, P.Eng.
Construction Engineer

DW/tb

p.c. Mr. Art Cheeseman
Associate Commissioner/
Director of Engineering and Planning

To: T.D. Collett
Exec. V.P Production
President CF(L)Co
Newfoundland and Labrador Hydro
P.O. Box 12400
St. John's, Newfoundland
A1B 4K7

January 21, 1998

Fr: Environment Canada
Environmental Monitoring
Bruce street, Donovans Ind. Pk.
Mount Pearl, Newfoundland
A1N 4T3

Subject: Grey River hydrometric gauging station

Environment Canada has operated a gauging station on the Grey River below Salmon Brook since 1969. However, as indicated in a memo dated April 23,1997, due to budget restraints, we are proposing to discontinue the operation of this station on March 31, 1998.

In the event Newfoundland Hydro is interested in maintaining daily flow records on this river, I am taking the liberty to provide you with an estimated cost of operation for Environment Canada to continue maintaining the station. The estimate is based on similar protocol as White Bear River including digital upgrade of instrumentation.

- Operate and maintain station and process data from June to Oct in conjunction with scheduled visits to White Bear River. $5000.00

- Instrumentation upgrade: logger c/w GOES transmitter, Accubar pressure sensor (Sutron) air compressor(Hydrologic). $10,000.00

Instrumentation installed by EC on a regular scheduled visit.

A more specific agreement would be drafted, to cover operational details.

I trust that this information will be of value to you in assessing your need for hydrological data.

C. F. Baker
Area Manager

cc R. D. Barnes

HYDRO

File No. _____

NEWFOUNDLAND AND LABRADOR HYDRO
Head Office: St. John's, Newfoundland P.O. Box 12400 A1B 4K7 • Telephone (709) 737-1400 • Fax (709) 737-1231

February 5, 1998

Environment Canada
Environmental Monitoring
Bruce Street, Donovan Industrial Park
Mount Pearl, Newfoundland
A1N 4T3

ATTENTION: C. F. Baker
Area Manager

SUBJECT: GREY RIVER HYDROMETRIC GAUGING STATION

Dear Mr. Baker,

Thank you for informing us about your proposed discontinuation of the operation of Grey River hydrometric gauging station. Newfoundland and Labrador Hydro is interested in maintaining the operation of this station and appreciate your offer of maintaining the operation at a cost of approximately $5000 per annum and a one time upgrade of approximately $10,000.

For detailed agreement, would you please discuss with our Mr. Bob Barnes, Senior Civil Engineer.

Thank you.

Sincerely yours,

T. D. Collett,
Executive V.P. - Production

MSR/mcd

cc: Bob Barnes

REQUEST P/O FOR INSTRUMENT