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1974 - 1976 ATLANTIC PROVINCES

WATER QUALITY MONITORING PROGRAM

Surveillance Report EPS-5-AR-79-7

Atlantic Region

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1974-1976 ATLANTIC PROVINCES WATER QUALITY MONITORING PROGRAM

C.S.L. MERCER-CLARKE AND D.A. LORD

Surveillance Report No. EPS-5-AR-79-7

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ABSTRACT

In 1974, a routine fresh water monitoring program was established in Nova Scotia and New Brunswick to provide a continuous record of receiving water quality in the vicinity of major industrial and municipal discharges. The New Brunswick Mine Water Quality Program, which had been run since 1966, was included in this program in an abbreviated form.

In all, 93 sampling stations were established and visited at regular intervals up to a maximum of eight times during any one year. At each station, water samples were collected and analyzed chemically. These results have been included in the National Water Quality Data System (NAQUADAT). In addition, at 46 of these sites which were designated as ecological monitoring stations, samples of benthic fauna were collected using multiplate artificial substrate samplers.

This report contains all biological and chemical information obtained for these stations during the period January 1, 1974 to March 31, 1977 and includes a discussion of the effects observed on the quality of the receiving waters.

RESUME

Un programme continu de vérification de la qualité de l'eau douce a été mis sur pied en 1974 en Nouvelle-Ecosse et au Nouveau-Brunswick. Le but de ce programme était de constituer un registre de données sur la qualité des eaux réceptrices situées dans le voisinage des principaux effluents industriels et municipaux. Le Programme de qualité des eaux stériles du Nouveau-Brunswick, en marche depuis 1966, a été intégré dans ce programme sous une forme abrégée.

Au total, 93 stations d'échantillonnage ont été établies et visitées à intervalles réguliers, jusqu'à huit fois par année. Des spécimens ont été recueillis à chacune des stations et soumis à des analyses chimiques. Les résultats de ces analyses ont été inclus dans le Système national de données sur la qualité de l'eau (NAQUADAT). De plus, des spécimens de faune benthique ont été recueillis à 46 stations, considérées comme stations d'échantillonnage écologique, par le moyen d'une sonde artificielle à plaques multiples pour fonds marins.

Ce rapport contient toutes les données biologiques et chimiques obtenues par l'échantillonnage effectué dans les 93 stations du 1er janvier 1974 au 31 mars 1977 et présente un examen des effets qui ont pu être observés sur la qualité des eaux réceptrices.

ACKNOWLEDGEMENTS

This report is the result of the efforts and the cooperation of many individuals and organizations.

Sample collection was carried out by P. Hawkins, C. Spencer, S. Dewis, W. Norton, W. Pierce, R. Scott, B. Trepanier and by summer employees from the New Brunswick Department of the Environment. All chemical analyses were performed by the laboratories of the Water Quality Branch, Environmental Management Service, Moncton; and the Environmental Protection Service, Halifax. The cooperation and advice of D. Cullen and Dr. H. Samant and their staffs is gratefully acknowledged. Identification of organisms was performed by Ken Neale and Jack Hayward.

The assistance of Emilie Hunt and Dr. S. Whitlow of the Water Quality Branch, EMS, Ottawa was much appreciated, as without their help, the computer retrieval and photo-composition of the results would not have been possible.

The assistance of Joan Keating who typed this large report is greatly appreciated. Much appreciation is expressed to G. Mosher and to R. Wilson who reviewed this manuscript.

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SYMBOLS AND ABBREVIATIONS

ppb	-	parts per billion or ng/g or µg/l
ppm	-	parts per million or µg/g or mg/l
µ sie/cm	-	micro-siemens per cm
Σ	-	total number of organisms per sampling effort
S	-	number of taxa
D.I.	-	Diversity Index (as calculated from Shannon and Wiener 1963)
J.T.U.	-	Jackson Turbidity Units

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1 INTRODUCTION

During the years 1974-1976, the Atlantic Provinces Water Quality Program was run by the Atlantic Region of the Environmental Protection Service. Prior to this, a number of separate monitoring programs had been operated in the Region. By combining these, and adjusting where necessary, this discrete Regional network was established.

The principal purpose of this program has been to collect stream quality data above, within and below the zones of influence of all major industrial and municipal operations in Nova Scotia and New Brunswick, in order to assess the effects of these activities on receiving aquatic environments.

2 METHODS

During the years 1974-1976, a total of 31 stations in Nova Scotia and 63 stations in New Brunswick were sampled on a regular basis. The geographical locations of these stations are detailed in Figures 1 and 2, Tables 1 and 2, for Nova Scotia and New Brunswick respectively. Sampling schedules for these stations are indicated in the last column of Tables 1 and 2. A key to the samples required for each station and a list of chemical parameters reported at these stations is provided in Appendix I, Table 1.

Where necessary, samples were preserved in the field; the techniques used are detailed in Appendix I, Table 2. All samples were then delivered to either the Environmental Management Service Laboratory in Moncton, New Brunswick, or

the Environmental Protection Service Laboratory in Dartmouth, Nova Scotia. All analytical results obtained from these laboratories were entered into the NAQUADAT (National Water Quality Data) System of the Environmental Management Service.

For certain key stations in the receiving waters (identified as ecological monitoring stations) samples of the benthic fauna were collected, in addition to the regular water quality data. Artificial multiplate substrate samplers (Machell, et. al., 1975) were installed in the stream beds for varying periods of time. Subsequent analysis and identification of organisms collected enabled benthic community structure and population densities to be determined. For each sample collected and identified a numerical species Diversity Index (DI) was calculated based on the Shannon-Wiener formula (Shannon and Wiener, 1963).

3 RESULTS

All analytical results in this report are a reproduction of a rearrangement of the computer printouts of these results, provided by the NAQUADAT System. Because of the discontinuity of information for some of the parameters, and the small numbers of results obtained, no statistical analysis of the results was undertaken. The reader is advised to examine all results critically before drawing conclusions. As well, certain exotic parameters, which were monitored at a very few stations, have been dealt with in the discussion only. Actual records of these parameters may be obtained from the Environmental Protection Service, Halifax.

For the purpose of discussion, stations have been grouped on a basis of river systems, and results are discussed accordingly. Data for individual stations are presented in geographical order from headwaters to river mouth. Benthic biological data immediately follow the water quality data for each station.

No mercury results are included in this report, as all available mercury information has been dealt with extensively in Report EPS-5-AR-77-10, "Mercury in the Atlantic Provinces", 1976.

4 DISCUSSION

4.1 Nova Scotia

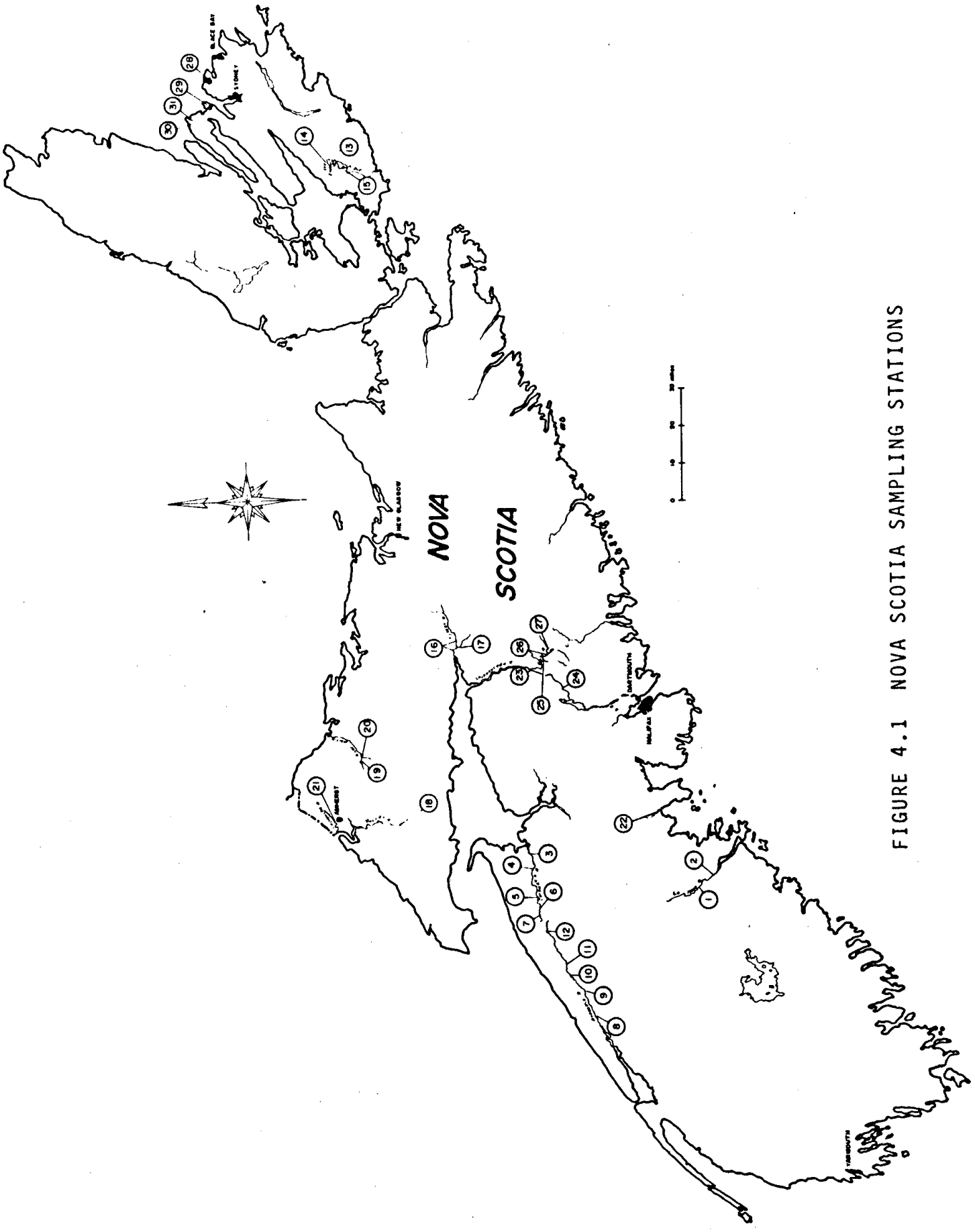

FIGURE 4.1 NOVA SCOTIA SAMPLING STATIONS

TABLE 4.1 NOVA SCOTIA: WATER QUALITY SURVEILLANCE NETWORK: 1974-76 STATION LIST AND SAMPLING SCHEDULE

EPS STATION #	NAQUADAT STATION #	ARDSR STATION #	STATION DESCRIPTION	LATITUDE	LONGITUDE	ANALYSIS SCHEDULE
NS-1*	00NS01EF0002	1LHR00900	La Have River at West Northfield Bridge on Bruhm Road (WSC Gauge), Lunenburg County	44°26'48"	64°35'30"	DD
NS-2*	02NS01EF0002	1LHR01000	La Have River estuary at Bridgewater 0.6 mile upstream of HWY 3 Bridge about 150 metres below Michelin outfall, Lunenburg Co.	44°23'05"	64°31'33"	DD
NS-3	02NS01DD0001	1CWR00100	Cornwallis River estuary at Port Williams at HWY 358 Bridge, Kings County	45°05'45"	64°24'23"	AA
NS-4*	02NS01DD0002	1CWR00200	Cornwallis River at HWY 359 Bridge, Kentville, Kings County	45°04'50"	64°29'41"	AA
NS-5	00NS01DD0016	1CWR00300	Cornwallis River at Bridge 0.5 mile north of HWY1, Cambridge, Kings County	45°03'52"	64°38'10"	AA
NS-6	00NS01DD0033	1CWR00400	Cornwallis River at Shaw Road Bridge 1.7 miles downstream of HWY 360 Bridge, Kings County	45°03'10"	64°43'28"	AA
NS-7*	00NS01DD0034	1CWR00500	Cornwallis River at HWY 360 Bridge, Berwick, Kings County	45°03'16"	64°44'22"	AA
NS-8	02NS01DC0003	1ANR00100	Annapolis River at Bridgetown 0.6 mile below HWY 201 Bridge, Annapolis County	44°50'19"	65°17'32"	AA
NS-9*	00NS01DC0085	1ANR00200	Annapolis River 1.7 miles below bridge at Lawrencetown, Annapolis County	44°52'42"	65°11'15"	AA
NS-10	00NS01DC0086	1ANR00300	Annapolis River 1.1 miles below HWY 10 Bridge at Middleton, Annapolis County	44°55'57"	65°05'12"	AA

EPS STATION #	NAQUADAT STATION #	ARDSR STATION #	STATION DESCRIPTION	LATITUDE	LONGITUDE	ANALYSIS SCHEDULE
NS-11	00NS01DC0001	1ANR00400	Annapolis River 0.4 mile south of HWY 1 Bridge (WSC Gauge), Wilmot, Annapolis Co.	44°57'14"	65°00'10"	AA
NS-12*	00NS01DC0087	1ANR00500	Annapolis River at Bridge 0.6 mile east of Aylesford (Intersection), Kings County	45°01'38"	64°49'30"	AA
NS-13*	01NS01FH0001	1ENL00100	Enon Lake east side 200 metres north of mine effluent drainage pipe, Cape Breton County	45°48'50"	60°32'25"	EE
NS-14	00NS01FH0002	1UNS00100	Unnamed stream from Monroe Lake at Bridge at Northern tip of Lake Uist, Cape Breton Co.	45°48'38"	60°33'34"	EE
NS-15*	00NS01FH0001	1GRR00100	Grand River at outlet of Loch Lomond at Bridge (WSC Guage), Richmond County	45°43'45"	63°36'10"	EE
NS-16*	02NS01DH0002	1SLR00100	Salmon River at Park Street Extension	45°22'36"	63°16'56"	AA+ penta-chloro-phenol
NS-17*	00NS01DH0026	1MCB00100	McClures Brook at east end of HWY 102 Culvert near Truro, Colchester County	45°22'02"	63°19'10"	AA
NS-18*	00NS01DL0007	1EAB00100	East Brook at Maccan River at HWY 302 Bridge, Southampton, Cumberland County	45°35'36"	64°14'58"	EE
NS-19*	00NS01DN0011	1BLB00100	Black Brook at Bridge 350 metres above Confluence with River Phillip, Oxford, Cumberland County	45°44'08"	63°52'04"	AA
NS-20*	00NS01DN0012	1PHR00100	River Philip at Oxford 1.5 miles below Confluence of Black River, Cumberland County	45°44'36"	63°50'55"	AA

EPS STATION #	NAQUADAT STATION #	ARDSR STATION #	STATION DESCRIPTION	LATITUDE	LONGITUDE	ANALYSIS SCHEDULE
NS-21	00NS01DL0008	1LPR00100	La Planche River at HWY 2 Bridge, Amherst, Cumberland County	45°50'14"	64°13'32"	AA
NS-22	00NS01EH0003	1LER00100	Little East River at HWY 329 about 1.9 miles southeast of East River, Lunenburg County	44°34'08"	64°08'42"	BB + Resin Acids
NS-23*	02NS01DG0001	1SNR00100	Shubenacadie River in Shubenacadie from Old HWY2 Bridge, Colchester County	45°05'21"	63°24'10"	EE
NS-24*	00NS01DG0008	1SNR00200	Shubenacadie River 0.7 mile southeast of HWY 2 at Elmsdale Bridge, Colchester Co.	44°57'41"	63°29'46"	EE
NS-25*	00NS01DG0011	1GAR00100	Gays River below Confluence of South Gays River at Bridge, Halifax County	45°01'43"	63°21'35"	EE
NS-26	00NS01DG0021	1GAR00200	Gays River 2.4 km below Egmont Lake at Road Bridge, Halifax County	45°01'04"	63°19'19"	EE
NS-27	00NS01DG0022	1COB00100	Cooks Brook about 0.5 mile above Confluence with Irvin Brook at Bridge, Halifax County	45°01'27"	63°17'35"	EE
NS-28*	00NS01FJ0011	1GCB00100	Gracie Brook north of Road Bridge, on West edge of Lingan mine property, Cape Breton Co.	46°15'00"	60°04'03"	EE
NS-29	00NS01FJ0012	1SLC00100	Sydney Mines Pond outlet into Lloyd Cove north of HWY, Sydney Mines, Cape Breton Co.	46°15'08"	60°13'02"	EE
NS-30*	00NS01FJ0013	1DVW00100	Devco Mines drainage brook to Morrison Pond about 40 M north of road, on west side of Devco property, Cape Brenton County	46°19'24"	60°19'05"	EE
NS-31*	00NS01FJ0014	1DVE00100	Devco Mines drainage brook 50 M east of road bridge north of McCreadyville, on east side of Devco property, Cape Breton County	46°18'58"	60°17'50"	EE

* DENOTES ECOLOGICAL MONITORING STATION

4.1.1 La Have River (NS 1, 2)

The La Have River is the third largest river in Nova Scotia, is ninety kilometers (fifty-seven miles) long, and drains an area of approximately fifteen thousand square kilometers (593 square miles).

The river both above and below the Michelin Tire Plant is characterized by relatively low pH, high colour, low hardness and low suspended solids. With the exception of an occasional high record in the spring, iron, copper, zinc and nickel are frequently present, but at very low levels.

The insect diversity index at both stations is low, which may in part be due to high numbers of chironomids in the sample. Various species of amphidpods, stoneflies, mayflies and caddisflies were also represented in the samples.

WATER QUALITY SURVEILLANCE NETWORK

E.P.S. ATLANTIC REGION 1974-1976

STATION **00NS01EF0002** LATITUDE **44** D **26** M **48** S LONGITUDE **64** D **35** M **30** S

LA HAVE RIVER AT WEST NORTHFIELD BRIDGE ON BRUHM ROAD (W.S.C. GAUGE), LUNENBURG COUNTY, NOVA S

SAMPLE DATE			TIME AS		02061F TEMP. WATER	08102F OXYGEN DISSOLVED DO O2	10301F PH	10301L PH	02041L SPECIFIC CONDUCTANCE	02073L TURBIDITY	10401L RESIDUE NONFILTR.	10451L RESIDUE FILTERABLE
D	M	Y	H	M	DEG.C.	MG/L	PH UNITS	PH UNITS	USIE/CM	JTU	MG/L	MG/L
5	4	74			3.0 61S		5.6 01S	6.3	30	0.6		
31	5	74			9.0 61S		4.6 01S	6.3	28	L.1		
28	6	74			19.0 61S		6.7 01S	5.9	30	0.3		
8	8	74			22.0 61S		6.7 01S	6.0	30	0.3		
9	9	74			17.0 61S		6.2 01S	6.1	30	0.6		
25	10	74			3.0 61S		6.2	5.9	28	0.7		
15	5	75	09	40	13.0 62S	10.4 02S	5.2 01S	6.1	20		5	
10	6	75	18	15	15.0 62S		6.0 01S	6.2	30			
19	6	75	05	30			6.0 01S	6.2	30			
8	7	75	15	10	22.0 62S			6.2	33		2	
5	8	75	17	30	24.0 62S		7.2 01S	6.4	48		2	
15	11	75	12	45	10.0 62S		6.0 01S	5.5	100		10	
11	2	76	13	00	0.0 62S	12.8 02S	5.9 01S	5.7	30		L2	
12	5	76	11	15	12.0	10.4	5.1	6.0	30		L5	
7	7	76	09	30	22.0	8.0	5.1	6.4	29		L5	
22	7	76	10	40	22.0	8.4	6.7	5.8	50		L5	

SAMPLE DATE			TIME AS		10501L RESIDUE FIXED NONFILTR.	10551L RESIDUE FIXED FILTERABLE	20103L CALCIUM DISSOLVED	20003P CALCIUM TOTAL	12102L MAGNESIUM DISSOLVED	12002P MAGNESIUM TOTAL	10606L HARDNESS TOTAL LAB CALC.	10101L ALKALINITY TOTAL
D	M	Y	H	M	MG/L	MG/L	CA MG/L	CA MG/L	MG MG/L	MG MG/L	CACO3 MG/L	CACO3 MG/L
5	4	74					1.4		0.7			2
31	5	74					1.50		0.6			2
28	6	74					1.30		0.6			4
8	8	74					6.00		1.1			3
9	9	74					1.8		0.8			4
25	10	74					1.4		0.3			3
15	5	75	09	40				1.18		0.5		2
10	6	75	18	15				1.50		0.6		2
19	6	75	05	30				1.39		0.6		2
8	7	75	15	10				1.36		0.5		3
5	8	75	17	30				1.20		0.5		
15	11	75	12	45				2.1		0.7		1
11	2	76	13	00				2.4		0.4		L1
12	5	76	11	15				1.4		0.4	5.	1
7	7	76	09	30				1.5		0.6	6.	1
22	7	76	10	40				1.7		0.6	7.	2

WATER QUALITY SURVEILLANCE NETWORK

E.P.S. ATLANTIC REGION 1974-1976

STATION **00NS01EF0002** LATITUDE **44** D **26** M **48** S LONGITUDE **64** D **35** M **30** S

LA HAVE RIVER AT WEST NORTHFIELD BRIDGE ON BRUHM ROAD (W.S.C. GAUGE), LUNENBURG COUNTY, NOVA S

SAMPLE DATE			TIME		16304L SULPHATE DISSOLVED	26302P IRON EXTRBLE.	25304P MANGANESE EXTRBLE.	29305P COPPER EXTRBLE.	30305P ZINC EXTRBLE.	82302P LEAD EXTRBLE.	33003P ARSENIC TOTAL	33303P ARSENIC EXTRBLE.
			AS									
					SO4	FE	MN	CU	ZN	PB	AS	AS
D	M	Y	H	M	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L
5	4	74			5.0	0.02		0.02	0.005	0.005		
31	5	74			3.0			L.001	L.001	0.005		
28	6	74			2.0	0.220		L.001		L.001		
8	8	74			6.0	0.200		0.002	0.005	L.001		
9	9	74			5.0	0.39		0.002	0.008	0.007		
25	10	74			4.0					0.009 02L		
15	5	75	09	40	4.0 03L			L.002				
10	6	75	18	15	12.5 03L			0.002				L.001
19	6	75	05	30	4.8 03L			L.002				L.001
8	7	75	15	10	L5.0 03L			L.001				
5	8	75	17	30	5.0 03L			0.002				L.002
15	11	75	12	45	40.0 03L			0.003				L.1
11	2	76	13	00	6.0 03L			L.001				0.01
12	5	76	11	15	9.			L.001			L.003	
7	7	76	09	30	5.			L.001			L.003	
22	7	76	10	40	10.			L.001			L.003	

SAMPLE DATE			TIME		80311P MERCURY EXTRBLE.	51302P ANTIMONY EXTRBLE.	48302P CADMIUM EXTRBLE.	50301P TIN EXTRBLE.	06581L HUMIC ACID
			AS						
					HG	SB	CD	SN	
D	M	Y	H	M	UG/L	MG/L	MG/L	MG/L	MG/L
5	4	74							8
31	5	74							12
28	6	74							14
8	8	74							13 82L
9	9	74							19 82L
25	10	74			0.07				8 82L
15	5	75	09	40	0.1	L.02	L.002		10
10	6	75	18	15	0.20				
19	6	75	05	30	0.80	L.02			
8	7	75	15	10	0.10	L.01			9
5	8	75	17	30	1.4	L.02			7
15	11	75	12	45	0.10	L.02			13
11	2	76	13	00	0.3	L.01			9
12	5	76	11	15	L.1	0.07			11
7	7	76	09	30		L.01			10
22	7	76	10	40		L.01			9

WATER QUALITY SURVEILLANCE NETWORK

E.P.S. ATLANTIC REGION 1974-1976

STATION **02NS01EF0002** LATITUDE **44** D **23** M **5** S LONGITUDE **64** D **31** M **33** S

LA HAVE RIVER ESTUARY AT BRIDGEWATER 0.6 MILE UPSTREAM OF HWY 3 BRIDGE ABOUT 150 METRES BELOW OUTFALL, LUNENBURG COUNTY, NOVA SCOTIA

SAMPLE DATE D	M	Y	TIME AS H	M	02061F TEMP. WATER DEG.C.	08102F OXYGEN DISSOLVED DO O2 MG/L	10301F PH PH UNITS	10301L PH PH UNITS	02041L SPECIFIC CONDUCTANCE USIE/CM	02073L TURBIDITY JTU	10401L RESIDUE NONFILTR. MG/L	10451L RESIDUE FILTERABLE MG/L
5	4	74			3.0 61S		5.5 01S	5.6	35	1.0		
31	5	74			10.0 61S		4.6 01S	6.1	32	0.8		
28	6	74			19.0 61S		6.4 01S	5.3	35	0.3		
8	8	74			22.0 61S		6.7 01S	5.4	117	0.4		
9	9	74			17.0 61S		6.3 01S	5.7	38	1.5		
25	10	74			4.0 61S		6.2	5.6	35	1.3		
15	5	75	10	40	14.0 62S	10.2 02S	5.9 01S	5.7	30		4	
18	6	75	20	20	21.0 62S		6.2 01S	6.0	40			
8	7	75	14	10	23.0 62S			6.5	46		L2	
5	8	75	18	30	24.0 62S		7.3 01S	6.2	32		0	
15	11	75	13	15	10.0 62S		6.4 01S	5.3	100		10	
11	2	76	13	50	0.0 62S	12.6 02S	5.6 01S	5.6	30		L2	
12	5	76	11	45	12.5	10.4	5.4	5.9	30		L5	
7	7	76	10	00	24.0	8.5	6.0	5.7	53		L5	
22	7	76	11	05	22.0	8.5	6.0	5.7	70		L5	

SAMPLE DATE D	M	Y	TIME AS H	M	10501L RESIDUE FIXED NONFILTR. MG/L	10551L RESIDUE FIXED FILTERABLE MG/L	20103L CALCIUM DISSOLVED CA MG/L	20003P CALCIUM TOTAL CA MG/L	12102L MAGNESIUM DISSOLVED MG MG/L	12002P MAGNESIUM TOTAL MG MG/L	10606L HARDNESS TOTAL LAB CALC. CACO3 MG/L	10101L ALKALINITY TOTAL CACO3 MG/L
5	4	74					2.00		0.7			2
31	5	74					1.90		0.6			1
28	6	74					1.80		0.6			4
8	8	74					1.70		1.5			3
9	9	74					2.4		0.8			4
25	10	74					1.8		0.7			3
15	5	75	10	40				1.40		0.5		4
18	6	75	20	20				2.05		0.5		1
8	7	75	14	10				2.20		0.6		2
5	8	75	18	30				1.56		0.5		
15	11	75	13	15				2.1		0.7		2
11	2	76	13	50				2.4		0.4		L1
12	5	76	11	45				1.5		0.4	5.	L1
7	7	76	10	00				2.6		0.7	10.	1
22	7	76	11	05				2.2		0.6	8.	2

WATER QUALITY SURVEILLANCE NETWORK

E.P.S. ATLANTIC REGION 1974-1976

STATION **02NS01EF0002** LATITUDE **44** D **23** M **5** S LONGITUDE **64** D **31** M **33** S

LA HAVE RIVER ESTUARY AT BRIDGEWATER 0.6 MILE UPSTREAM OF HWY 3 BRIDGE ABOUT 150 METRES BELOW OUTFALL, LUNENBURG COUNTY, NOVA SCOTIA

SAMPLE DATE			TIME AS		16304L SULPHATE DISSOLVED	26302P IRON EXTRBLE.	25304P MANGANESE EXTRBLE.	29305P COPPER EXTRBLE.	30305P ZINC EXTRBLE.	82302P LEAD EXTRBLE.	33003P ARSENIC TOTAL	33303P ARSENIC EXTRBLE.
D	M	Y	H	M	SO4 MG/L	FE MG/L	MN MG/L	CU MG/L	ZN MG/L	PB MG/L	AS MG/L	AS MG/L
5	4	74			8.0	0.150		0.005	0.017	0.005		
31	5	74			5.0			L.001	0.005	0.008		
28	6	74			5.0	0.220		L.001		L.001		
8	8	74			11.0	0.210		0.002	0.010	0.002		
9	9	74			10.0	0.35		L.002	0.04	0.008		
25	10	74			5.0							
15	5	75	10	40	5.2 03L			L.002				
18	6	75	20	20	8.5 03L			0.002				L.001
8	7	75	14	10	L5.0 03L			L.001				L.002
5	8	75	18	30	9.0 03L			0.003				
15	11	75	13	15	6.0 03L			0.002				L.1
11	2	76	13	50	4.0 03L			0.001				L.005
12	5	76	11	45	5.			L.001			0.003	
7	7	76	10	00	8.			0.001			L.005	
22	7	76	11	05	9.			0.001			0.005	

SAMPLE DATE			TIME AS		80311P MERCURY EXTRBLE.	51302P ANTIMONY EXTRBLE.	48302P CADMIUM EXTRBLE.	50301P TIN EXTRBLE.	06581L HUMIC ACID
D	M	Y	H	M	HG UG/L	SB MG/L	CD MG/L	SN MG/L	MG/L
5	4	74							8
31	5	74							14
28	6	74							13
8	8	74							13 82L
9	9	74							18 82L
25	10	74							8 82L
15	5	75	10	40	L.10	L.02	L.002		10
18	6	75	20	20	L.10				
8	7	75	14	10	0.20	L.01			9
5	8	75	18	30	L.10	L.02			7
15	11	75	13	15	0.20	0.01			14
11	2	76	13	50	L.1	L.01			8
12	5	76	11	45	L.1	0.05			11
7	7	76	10	00		L.01			10
22	7	76	11	05		L.01			15

BIOLOGICAL RESULTS

STATION: NS-1: LaHave River - above Michelin

TAXA				SAMPLING PERIOD 1975 - 8/7	SAMPLING PERIOD 1975 8/7- 5/8
Arthropoda					
Crustacea					
Amphipoda	Talitridae	Hyalella		0.5	
Insecta					
Plecoptera	Nemouridae	Leuctra		0.5	
	Perlidae	Acroneuria		6.5	3
		Perlesta			1
Ephemeroptera	Heptageniidae	Stenonema		5.5	
	Baetidae	Baetis		5	
	Tricorythidae	Tricorythodes		1	
	Ephemeridae	Ephemerella 2			6
Tricoptera	Hydropsychidae	Hydropsyche		0.5	
	Hydroptilidae	Hydroptila		1	
	Leptoceridae	Oecetis			2
	Psychomyiidae	Neureclipsis		2	
Diptera	Tipulidae	Antocha			1
	Tendipedidae	-		69.5	183
			Σ	92	196
			S	10	6
			DI	1.43	0.48

BIOLOGICAL RESULTS

STATION: NS-2: LaHave River - below Michelin

TAXA				SAMPLING PERIOD 1975 18/6-8/7
Arthropoda				
Crustacea				
Amphipoda	Gammaridae	Gammarus		2
Insecta				
Tricoptera	Limnephilidae	Drusinus		1
Coleoptera	Dytiscidae	Hydroporus		1
Diptera	Tendipedidae	-		127
			Σ	131
			S	4
			DI	0.24

4.1.2 Cornwallis River (NS 3-7)

The Cornwallis River drains one of the most fertile and productive agricultural areas in the Atlantic Provinces. The river is 25 kilometers (16 miles) long and receives effluent from a large number of domestic and municipal waste systems and food industries. Included in the latter are Larsen Packers, M.W. Graves, Kent Food, Scotian Gold, Hostess Food Products, Canard Poultry, Canada Foods, Avon Foods and A.C.A. Co-operative. All of these industries tend to produce wastes having a high organic content. Few have any treatment facilities and most discharge their wastes directly into the Cornwallis.

At all five stations sampled on the river, the water was hard, alkaline, high in dissolved solids and had high conductivity. In addition, nutrient levels were high (total nitrogen, 1-3 ppm) while, with the exception of iron (~1.5 ppm) trace metal levels were low. The relatively low levels of phosphorus is the most probable factor limiting the development of serious algal blooms on the river.

Biological samples taken at Berwick indicate a relatively low species diversity during 1974, primarily due to a preponderance of chironomids. In 1975, the diversity at this station was quite high with large numbers of mayflies, caddisflies, beetles and snails present. During 1975, samples taken at Kentville showed a much lower diversity, again dominated by chironomids.

WATER QUALITY SURVEILLANCE NETWORK

E.P.S. ATLANTIC REGION 1974-1976

STATION **02NS01DD0001** LATITUDE **45** D **5** M **45** S LONGITUDE **64** D **24** M **23** S

CORNWALLIS RIVER ESTUARY AT PORT WILLIAMS AT HWY 358 BRIDGE, KINGS COUNTY, NOVA SCOTIA

SAMPLE DATE			TIME AS		02061F TEMP. WATER	08102F OXYGEN DISSOLVED DO	10301F PH	10301L PH	02041L SPECIFIC CONDUCTANCE	02073L TURBIDITY	10401L RESIDUE NONFILTR.	10451L RESIDUE FILTERABLE
D	M	Y	H	M	DEG.C.	O2 MG/L	PH UNITS	PH UNITS	USIE/CM	JTU	MG/L	MG/L
4	4	74			2.0 61S		6.3 01S	7.0	37400	G100.	1130	26000
29	5	74			7.5 61S		7.4 01S	7.0	2110	G100.	5930	1320
5	7	74			17.0 61S		7.9 01S	7.3	24500	9.0	16552	2116
6	8	74			19.0 61S		7.4 01S	6.0	31361	7.5	1420	23400
10	9	74			15.0 61S		7.5 01S	7.0	8970	37.	269	5920
28	10	74			3.0 61S		7.2 01S	7.1	1490	40.	5250	768
14	5	75	09	40	14.0 62S	8.1 02S	8.2 01S	7.1	1350		2930	
9	6	75	17	30	10.0 62S	8.3 02S	7.7 01S	7.6	5000		9550	
7	7	75	15	45	21.0 62S	6.1 02S		7.6	24800		3070	
4	8	75	15	00	21.5 62S	3.8 02S	6.7 01S	7.6			930	
14	11	75	16	30	12.5 62S	5.1 02S	7.6 01S	6.9	4500		2400	
12	2	76	17	00	0.0 62S	12.0 02S	5.8 01S	7.2	960		1500	
11	5	76	17	10	14.0	7.7	7.5	7.7	8500		1120	
6	7	76	15	20	24.0	4.7	7.2	7.7	11800		340	
21	7	76	11	30	22.0	7.0	6.3	7.6	27000		705	
21	7	76	11	55	20.0		6.4	7.4	190		34	

SAMPLE DATE			TIME AS		10501L RESIDUE FIXED NONFILTR.	10551L RESIDUE FIXED FILTERABLE	07112L NITROGEN DISSOLVED NO3 E NO2	07103L NITRATE & NITRITE DISSOLVED	07012L NITROGEN TOTAL KJELDAHL	15365L PHOSPHORUS DISSOLVED INORG. PO4	15413L PHOSPHORUS TOTAL	06001L CARBON TOTAL ORGANIC
D	M	Y	H	M	MG/L	MG/L	N MG/L	NO3 MG/L	N MG/L	P MG/L	P MG/L	C MG/L
4	4	74			1070	22400	0.42 10L				0.75 14L	16.0
29	5	74			5460	1150	0.31 10L				4.95	9.2
5	7	74			14812	2000	0.48 10L				0.450	13.8
6	8	74			1320	20100	0.11 10L				0.20	23.0
10	9	74			53	2030	0.22 10L					7.6
28	10	74			4980	670	1.24 10L				4.0	12.3
14	5	75	09	40				0.45		0.362		24.0
9	6	75	17	30				0.88	1.4	0.178		25.0
7	7	75	15	45				2.20	2.4	0.26		38.0
4	8	75	15	00				0.91	0.6	0.09		35.0
14	11	75	16	30				1.7	1.6	0.35		35.0
12	2	76	17	00				0.99	0.6	0.02		6.0
11	5	76	17	10			0.665		1.0	0.110		16.
6	7	76	15	20			0.650		1.1	0.06		1.
21	7	76	11	30			0.422		0.5	0.045		12.
21	7	76	11	55			0.920		0.9	0.05		11.

WATER QUALITY SURVEILLANCE NETWORK

E.P.S. ATLANTIC REGION 1974-1976

STATION **02NS01DD0001** LATITUDE **45** D **5** M **45** S LONGITUDE **64** D **24** M **23** S

CORNWALLIS RIVER ESTUARY AT PORT WILLIAMS AT HWY 358 BRIDGE, KINGS COUNTY, NOVA SCOTIA

SAMPLE DATE			TIME AS		20103L CALCIUM DISSOLVED	20003P CALCIUM TOTAL	12102L MAGNESIUM DISSOLVED	12002P MAGNESIUM TOTAL	10606L HARDNESS TOTAL LAB CALC.	10101L ALKALINITY TOTAL	16304L SULPHATE DISSOLVED	26302P IRON EXTRBLE.
D	M	Y	H	M	CA MG/L	CA MG/L	MG MG/L	MG MG/L	CACO3 MG/L	CACO3 MG/L	SO4 MG/L	FE MG/L
4	4	74			330.		1100.			90		7.4
29	5	74			30.0		40.0			115		72.
5	7	74			205.		600.			97		15.
6	8	74			300.		1000.			106		34.
10	9	74			77.5		200.			72		6.4
28	10	74			28.0		30.0			63		82.
14	5	75	09	40		26.6		30.9		59	58.0 03L	
9	6	75	17	30		61.9		107.0		6	230.0 03L	
7	7	75	15	45		194.0		460.0		91	1080.0 03L	
4	8	75	15	00		170.0		370.0		89	920.0 03L	
14	11	75	16	30		35.0		40.0		55	100.0 03L	
12	2	76	17	00		35.0		19.0		35	45.0 03L	
11	5	76	17	10		34.		50.	290.	55	120.	
6	7	76	15	20		94.		140.	810.	80	600.	
21	7	76	11	30		210.		580.	2900.	90	1400.	
21	7	76	11	55		22.		2.8	66.	45	22.	

SAMPLE DATE			TIME AS		25304P MANGANESE EXTRBLE.	29305P COPPER EXTRBLE.	30305P ZINC EXTRBLE.	82302P LEAD EXTRBLE.	80311P MERCURY EXTRBLE.	48302P CADMIUM EXTRBLE.	24303P CHROMIUM EXTRBLE.	06581L HUMIC ACID
D	M	Y	H	M	MN MG/L	CU MG/L	ZN MG/L	PB MG/L	HG UG/L	CD MG/L	CR MG/L	MG/L
4	4	74			0.45	0.013	0.02	0.013				2
29	5	74			5.0	0.040	L.002	0.024				9 82L
5	7	74			1.75	0.011	0.048	0.023				5 82L
6	8	74			2.85	0.014	0.07	0.03				12 82L
10	9	74			0.50	0.004	0.07	0.013				
28	10	74				0.04	L.002	0.03	L.05			8 82L
14	5	75	09	40		0.003			0.1			
9	6	75	17	30		0.047			0.20			
7	7	75	15	45		0.022			0.20			
4	8	75	15	00		0.03			L.10			
14	11	75	16	30		0.040			0.40			
12	2	76	17	00		0.017			L.1			
11	5	76	17	10		0.003			L.1			
6	7	76	15	20		0.004						
21	7	76	11	30		0.010						
21	7	76	11	55		0.003						

WATER QUALITY SURVEILLANCE NETWORK

E.P.S. ATLANTIC REGION 1974-1976

STATION **02NS01DD0002** LATITUDE **45** D **4** M **50** S LONGITUDE **64** D **29** M **41** S

CORNWALLIS RIVER AT HWY 359 BRIDGE, KENTVILLE, KINGS COUNTY, NOVA SCOTIA

SAMPLE DATE D	M	Y	TIME AS H	M	02061F TEMP. WATER DEG.C.	08102F OXYGEN DISSOLVED DO O2 MG/L	10301F PH PH UNITS	10301L PH PH UNITS	02041L SPECIFIC CONDUCTANCE USIE/CM	02073L TURBIDITY JTU	10401L RESIDUE NONFILTR. MG/L	10451L RESIDUE FILTERABLE MG/L
4	4	74			4.0 61S		6.2 01S	6.7	156	6.0	15	132
29	5	74			7.0 61S		6.0 01S	6.8	118	22.	53	86
5	7	74			17.0 61S		7.0 01S	7.5	181	5.0	177	16
6	8	74			19.0 61S		8.5 01S	6.2	182	0.8		
10	9	74			13.0 61S		6.6 01S	7.4	200	4.3	L10	150
28	10	74			3.0 61S		6.3 01S	6.4	110	8.	21	82
14	5	75			14.			7.0	119	1.8		
10	6	75	08	30	9.0	7.3	6.4	7.0	126	5.2	24	
7	7	75	16	45	20.0	12.6		7.3	170	2.9 71L		
4	8	75	16	30	19.5	8.1	6.8	7.1	193	4.4	11	
15	11	75	07	30				6.8	124	55.	162	
11	5	76	10	20	13.0		6.0	7.0	150		7	
6	7	76	10	00	19.0		6.4	7.5	180		2	

SAMPLE DATE D	M	Y	TIME AS H	M	10501L RESIDUE FIXED NONFILTR. MG/L	10551L RESIDUE FIXED FILTERABLE MG/L	07112L NITROGEN DISSOLVED NO3 E NO2 N MG/L	07103L NITRATE & NITRITE DISSOLVED NO3 MG/L	07012L NITROGEN TOTAL KJELDAHL N MG/L	15365L PHOSPHORUS DISSOLVED INORG. PO4 P MG/L	15413L PHOSPHORUS TOTAL P MG/L	06001L CARBON TOTAL ORGANIC C MG/L
4	4	74			L10	31	1.36 10L				0.11 14L	9.0
29	5	74			42	59	0.68 10L				0.18 14L	7.9
5	7	74			140	L10	1.01 10L				0.145	7.5
6	8	74					0.06 10L				0.100	13.4
10	9	74			L10	116	0.49 10L				0.060	5.9
28	10	74			14	57	0.22 10L				0.080	11.0
14	5	75					0.44 10L				0.040	4.0
10	6	75	08	30			0.38 10L				0.055	7.2
7	7	75	16	45			1.20 10L				0.075	1.2
4	8	75	16	30			0.60 10L				0.13	3.8
15	11	75	07	30			0.64 10L					11.8
11	5	76	10	20			0.455		0.8	0.025		10.
6	7	76	10	00			0.800			0.045		8.

WATER QUALITY SURVEILLANCE NETWORK

E.P.S. ATLANTIC REGION 1974-1976

STATION **02NS01DD0002** LATITUDE **45** D **4** M **50** S LONGITUDE **64** D **29** M **41** S

CORNWALLIS RIVER AT HWY 359 BRIDGE, KENTVILLE, KINGS COUNTY, NOVA SCOTIA

SAMPLE DATE			TIME AS		20103L CALCIUM DISSOLVED	20003P CALCIUM TOTAL	12102L MAGNESIUM DISSOLVED	12002P MAGNESIUM TOTAL	10606L HARDNESS TOTAL LAB CALC.	10101L ALKALINITY TOTAL	16304L SULPHATE DISSOLVED	26302P IRON EXTRBLE.
					CA	CA	MG	MG	CACO3	CACO3	SO4	FE
D	M	Y	H	M	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L
4	4	74			14.5		2.0			25		0.42
29	5	74			15.0		2.0			23		1.1
5	7	74			22.		3.0			45		0.50
6	8	74			24.0		4.6			47		0.72
10	9	74			22.0		3.1			38		0.69
28	10	74			11.0		1.6			13		0.62
14	5	75			15.0		2.1			27	2.0	
10	6	75	08	30	16.5		2.2			31	16.0	
7	7	75	16	45	25.2		2.7			39	23.0	
4	8	75	16	30	23.3		2.7 03L			46	16.0	
15	11	75	07	30	14.5		2.0			22	20.0	
11	5	76	10	20		15.		1.8	45.	30	1.5	
6	7	76	10	00		22.		2.7	66.	45	20.	

SAMPLE DATE			TIME AS		25304P MANGANESE EXTRBLE.	29305P COPPER EXTRBLE.	30305P ZINC EXTRBLE.	82302P LEAD EXTRBLE.	80311P MERCURY EXTRBLE.	48302P CADMIUM EXTRBLE.	24303P CHROMIUM EXTRBLE.	06581L HUMIC ACID
					MN	CU	ZN	PB	HG	CD	CR	
D	M	Y	H	M	MG/L	MG/L	MG/L	MG/L	UG/L	MG/L	MG/L	MG/L
4	4	74			0.09	0.005	0.005	0.004				2
29	5	74			0.08	L.002	L.002	0.007				19
5	7	74			0.15	L.002	L.002	L.002				3 82L
6	8	74			0.22	0.002	0.010	0.006				3 82L
10	9	74			0.14	L.002	0.009	0.007				11 82L
28	10	74				0.002	0.03	L.002	L.05			8 82L
14	5	75				L.002			L.05			
10	6	75	08	30		L.002			L.05			
7	7	75	16	45		0.003			L.05			
4	8	75	16	30		0.002			L.05			
15	11	75	07	30		0.002			L.05			
11	5	76	10	20		0.001			L.1			
6	7	76	10	00		0.003						

WATER QUALITY SURVEILLANCE NETWORK

E.P.S. ATLANTIC REGION 1974-1976

STATION **00NS01DD0016** LATITUDE **45** D **3** M **52** S LONGITUDE **64** D **38** M **10** S

CORNWALLIS RIVER AT BRIDGE 0.5 MILE NORTH OF HWY 1, CAMBRIDGE, KINGS COUNTY, NOVA SCOTIA

SAMPLE DATE D	M	Y	TIME AS H	M	02061F TEMP. WATER DEG.C.	08102F OXYGEN DISSOLVED DO O2 MG/L	10301F PH PH UNITS	10301L PH PH UNITS	02041L SPECIFIC CONDUCTANCE USIE/CM	02073L TURBIDITY JTU	10401L RESIDUE NONFILTR. MG/L	10451L RESIDUE FILTERABLE MG/L
4	4	74			4.0 61S		5.9 01S	6.7	169	5.5	18	114
29	5	74			7.0 61S		6.0 01S	7.0	149	28.	47	107
5	7	74			16.0 61S		7.5 01S	7.8	232	2.8		
6	8	74			20.0 61S		8.8 01S	7.0	253	0.4		
10	9	74			14.0 61S			7.2	237	2.5		
28	10	74			2.0 61S		6.7 01S	7.4	122	8.	12	80
14	5	75	10	55	15.0 62S	9.6 02S	6.8 01S	7.2	1500		5	
10	6	75	09	30	9.0 62S	9.2 02S	6.8 01S	7.6	200		22	
7	7	75	17	20	20.0 62S	11.4 02S		7.6	349		3	
5	8	75	07	30	16.0 62S	6.2 02S	6.4 01S	7.6	440		12	
15	11	75	08	00	10.0 62S	6.8 02S	6.8 01S	6.6	400		35	
12	2	76	14	00	0.0 62S	11.8 02S	6.5 01S	7.1	210		5	
11	5	76	11	00	13.0	10.4	6.4	7.5	170		2	
6	7	76	10	30	17.5	8.0	6.5	7.5	240		1	
21	7	76	12	30	19.0	7.9	6.4	7.3	240		5	

SAMPLE DATE D	M	Y	TIME AS H	M	10501L RESIDUE FIXED NONFILTR. MG/L	10551L RESIDUE FIXED FILTERABLE MG/L	07112L NITROGEN DISSOLVED NO3 E NO2 N MG/L	07103L NITRATE & NITRITE DISSOLVED NO3 MG/L	07012L NITROGEN TOTAL KJELDAHL N MG/L	15365L PHOSPHORUS DISSOLVED INORG. PO4 P MG/L	15413L PHOSPHORUS TOTAL P MG/L	06001L CARBON TOTAL ORGANIC C MG/L
4	4	74			L10	26	1.28 10L				0.080 14L	61.2
29	5	74			35	70	1.02 10L				0.21 14L	9.8
5	7	74					1.64 10L				0.135	4.4
6	8	74					1.5 10L				0.125	8.0
10	9	74					1.25 10L				0.16	5.3
28	10	74			L10	56	0.62 10L				0.12	7.9
14	5	75	10	55				0.86		0.100		14.0
10	6	75	09	30				0.24	1.0	0.254		18.0
7	7	75	17	20				2.34	0.4	0.16		18.0
5	8	75	07	30				1.38	0.4	0.07		23.0
15	11	75	08	00				0.74	1.3	0.15		20.0
12	2	76	14	00				1.62	0.6	L.005		5.0
11	5	76	11	00			0.850		0.3	0.030		2.
6	7	76	10	30			1.90		0.4	0.09		8.
21	7	76	12	30			18.005		0.7	0.1		8.

WATER QUALITY SURVEILLANCE NETWORK

E.P.S. ATLANTIC REGION 1974-1976

STATION **00NS01DD0016** LATITUDE **45** D **3** M **52** S LONGITUDE **64** D **38** M **10** S

CORNWALLIS RIVER AT BRIDGE 0.5 MILE NORTH OF HWY 1, CAMBRIDGE, KINGS COUNTY, NOVA SCOTIA

SAMPLE DATE D	M	Y	TIME AS H	M	20103L CALCIUM DISSOLVED CA MG/L	20003P CALCIUM TOTAL CA MG/L	12102L MAGNESIUM DISSOLVED MG MG/L	12002P MAGNESIUM TOTAL MG MG/L	10606L HARDNESS TOTAL LAB CALC. CACO3 MG/L	10101L ALKALINITY TOTAL CACO3 MG/L	16304L SULPHATE DISSOLVED SO4 MG/L	26302P IRON EXTRBLE. FE MG/L
4	4	74			23.0		2.6			28		0.61
29	5	74			71.5		2.6			23		0.82
5	7	74			27.		3.6			49		0.34
6	8	74			32.0		4.4			56		0.42
10	9	74			27.0		3.5			41		0.43
28	10	74			11.0		2.8			22		0.39
14	5	75	10	55		18.0		2.6		65	18.0 03L	
10	6	75	09	30		19.4		3.0		29	29.3 03L	
7	7	75	17	20		34.8		3.3		43	37.0 03L	
5	8	75	07	30		30.4		2.9		54	28.0 03L	
15	11	75	08	00		18.0		2.5		20	35.0 03L	
12	2	76	14	00		25.0		2.4		25	25.0 03L	
11	5	76	11	00		18.		2.1	54.	30	20.	
6	7	76	10	30		29.		3.5	87.	45	30.	
21	7	76	12	30		27.		3.3	81.	45	30.	

SAMPLE DATE D	M	Y	TIME AS H	M	25304P MANGANESE EXTRBLE. MN MG/L	29305P COPPER EXTRBLE. CU MG/L	30305P ZINC EXTRBLE. ZN MG/L	82302P LEAD EXTRBLE. PB MG/L	80311P MERCURY EXTRBLE. HG UG/L	48302P CADMIUM EXTRBLE. CD MG/L	24303P CHROMIUM EXTRBLE. CR MG/L	06581L HUMIC ACID MG/L
4	4	74			0.10	0.005	0.004	0.004				10
29	5	74			0.10	L.002	L.002	0.007				15
5	7	74			0.06	L.002	L.002	L.002				5
6	8	74			0.14	0.002	0.009	L.002				4 82L
10	9	74			0.11	L.002	0.006	L.002				12 82L
28	10	74				0.002	0.04	0.002	L.05			7 82L
14	5	75	10	55		L.002			L.10			
10	6	75	09	30		0.003			0.30			
7	7	75	17	20		0.002			0.10			
5	8	75	07	30		0.002			L.10			
15	11	75	08	00		0.004			0.60			
12	2	76	14	00		0.003			L.1			
11	5	76	11	00		0.001			L.1			
6	7	76	10	30		0.003						
21	7	76	12	30		0.002						

WATER QUALITY SURVEILLANCE NETWORK
E.P.S. ATLANTIC REGION 1974-1976

STATION **00NS01DD0033** LATITUDE **45** D **3** M **10** S LONGITUDE **64** D **43** M **28** S

CORNWALLIS RIVER AT SHAW ROAD BRIDGE 1.7 MILES DOWNSTREAM OF HWY 360 BRIDGE, KINGS COUNTY, NOV

SAMPLE DATE D	M	Y	TIME AS H	M	02061F TEMP. WATER DEG.C.	08102F OXYGEN DISSOLVED DO O2 MG/L	10301F PH PH UNITS	10301L PH PH UNITS	02041L SPECIFIC CONDUCTANCE USIE/CM	02073L TURBIDITY JTU	10401L RESIDUE NONFILTR. MG/L	10451L RESIDUE FILTERABLE MG/L
4	4	74			4.0 61S		5.9 01S	6.7	195	13.0	28	130
29	5	74			8.0 61S		5.7 01S	7.0	147	25.	40	116
5	7	74			19.0 61S		7.5 01S	8.2	393	7.0	18	320
6	8	74			20.0 61S		7.5 01S	6.0	467	1.0		
10	9	74			15.0 61S			7.3	309	2.8		
28	10	74			2.0 61S		6.6 01S	7.0	134	6.5	L10	96
14	5	75	11	30	15.0 62S	7.5 02S	6.7 01S	6.9	2000		8	
10	6	75	10	00	9.5 62S	8.9 02S	6.8 01S	7.5	200		24	
7	7	75	17	50	21.0 62S	8.8 02S		7.5	455		6	
5	8	75	08	00	18.0 62S	1.6 02S	6.4 01S	7.6	500		6	
15	11	75	08	15	10.0 62S	6.2 02S	6.7 01S	6.7	300		35	
12	2	76	13	30	0.0 62S	10.8 02S	6.9 01S	6.7	290		9	
11	5	76	11	30	13.5	10.2	6.5	7.5	210		6	
6	7	76	11	40	20.0	5.4	6.0	7.5	370		7	
21	7	76	13	00	19.0	4.6	7.4	7.2	350		6	

SAMPLE DATE D	M	Y	TIME AS H	M	10501L RESIDUE FIXED NONFILTR. MG/L	10551L RESIDUE FIXED FILTERABLE MG/L	07112L NITROGEN DISSOLVED NO3 E NO2 N MG/L	07103L NITRATE & NITRITE DISSOLVED NO3 MG/L	07012L NITROGEN TOTAL KJELDAHL N MG/L	15365L PHOSPHORUS DISSOLVED INORG. PO4 P MG/L	15413L PHOSPHORUS TOTAL P MG/L	06001L CARBON TOTAL ORGANIC C MG/L
4	4	74			L10	17	1.23 10L				0.13 14L	7.2
29	5	74			28	79	1.22 10L				0.26 14L	11.8
5	7	74			15	277	1.81 10L				0.330	6.6
6	8	74					2.03 10L				0.25	12.3
10	9	74					1.73 10L				0.33	6.3
28	10	74			L10	70	0.94 10L				0.16	8.7
14	5	75	11	30				0.84		0.150		17.0
10	6	75	10	00				1.6	1.4	0.426		20.0
7	7	75	17	50				2.28	1.1	0.16		30.0
5	8	75	08	00				3.30	3.0	0.41		40.0
15	11	75	08	15				0.97	3.2	0.12		20.0
12	2	76	13	30				1.12	1.0	0.07		6.0
11	5	76	11	30			0.800		0.9	0.075		10.
6	7	76	11	40			3.395		1.3	0.235		9.
21	7	76	13	00			1.4		1.7	0.295		10.

WATER QUALITY SURVEILLANCE NETWORK

E.P.S. ATLANTIC REGION 1974-1976

STATION **00NS01DD0033** LATITUDE **45** D **3** M **10** S LONGITUDE **64** D **43** M **28** S

CORNWALLIS RIVER AT SHAW ROAD BRIDGE 1.7 MILES DOWNSTREAM OF HWY 360 BRIDGE, KINGS COUNTY, NOV

SAMPLE DATE			TIME AS		20103L CALCIUM DISSOLVED	20003P CALCIUM TOTAL	12102L MAGNESIUM DISSOLVED	12002P MAGNESIUM TOTAL	10606L HARDNESS TOTAL LAB CALC.	10101L ALKALINITY TOTAL	16304L SULPHATE DISSOLVED	26302P IRON EXTRBLE.
					CA	CA	MG	MG	CACO3	CACO3	SO4	FE
D	M	Y	H	M	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L
4	4	74			27.0		3.0			29		0.76
29	5	74			19.0		2.9			26		0.58
5	7	74			55.		6.0			76		1.2
6	8	74			63.0		6.0			88		1.5
10	9	74			35.5		4.4			48		0.86
28	10	74			15.0		3.1			26		0.40
14	5	75	11	30		24.8		3.1		43	32.0 03L	
10	6	75	10	00		20.0		3.2		31	28.5 03L	
7	7	75	17	50		64.8		5.8		62	81.0 03L	
5	8	75	08	00		58.0		5.0		98	81.0 03L	
15	11	75	08	15		14.0		2.4		50	25.0 03L	
12	2	76	13	30		28.0		3.3		25	30.0 03L	
11	5	76	11	30		23.		2.5	70.	35	30.	
6	7	76	11	40		50.		5.2	150.	75	65.	
21	7	76	13	00		40.		2.6	120.	60	50.	

SAMPLE DATE			TIME AS		25304P MANGANESE EXTRBLE.	29305P COPPER EXTRBLE.	30305P ZINC EXTRBLE.	82302P LEAD EXTRBLE.	80311P MERCURY EXTRBLE.	48302P CADMIUM EXTRBLE.	24303P CHROMIUM EXTRBLE.	06581L HUMIC ACID
					MN	CU	ZN	PB	HG	CD	CR	
D	M	Y	H	M	MG/L	MG/L	MG/L	MG/L	UG/L	MG/L	MG/L	MG/L
4	4	74			0.11	0.010	0.02	0.003				4
29	5	74			0.06	L.002	L.002	0.005				15
5	7	74			0.25	L.002	L.002	L.002				8 82L
6	8	74			0.43	0.003	0.010	L.002				9 82L
10	9	74			0.19	L.002	0.010	0.009				16 82L
28	10	74				0.002	0.03	L.002	L.05			8 82L
14	5	75	11	30		L.002			0.3			
10	6	75	10	00		0.004			0.30			
7	7	75	17	50		0.002			0.10			
5	8	75	08	00		0.001			L.10			
15	11	75	08	15		0.007			0.20			
12	2	76	13	30		0.004			L.1			
11	5	76	11	30		0.002			L.1			
6	7	76	11	40		0.001						
21	7	76	13	00		0.001						

WATER QUALITY SURVEILLANCE NETWORK

E.P.S. ATLANTIC REGION 1974-1976

STATION **00NS01DD0034** LATITUDE **45** D **3** M **16** S LONGITUDE **64** D **44** M **22** S

CORNWALLIS RIVER AT HWY 360 BRIDGE, BERWICK, KINGS COUNTY, NOVA SCOTIA

SAMPLE DATE			TIME AS		02061F TEMP. WATER	08102F OXYGEN DISSOLVED DO	10301F PH	10301L PH	02041L SPECIFIC CONDUCTANCE	02073L TURBIDITY	10401L RESIDUE NONFILTR.	10451L RESIDUE FILTERABLE
D	M	Y	H	M	DEG.C.	O2 MG/L	PH UNITS	PH UNITS	USIE/CM	JTU	MG/L	MG/L
4	4	74			4.0 61S		6.5 01S	6.8	226	15.0	32	150
29	5	74			10.0 61S		5.6 01S	7.1	124	28.	56	93
5	7	74			18.0 61S		6.9 01S	7.9	393	6.0	12	260
6	8	74			20.0 61S		7.7 01S	7.0	396	0.5		
10	9	74			15.0 61S		6.9 01S	7.1	242	5.0	14	165
28	10	74			2.0 61S		6.6 01S	6.8	131	4.4	15	93
14	5	75	11	55	15.0 62S	10.6 02S	7.1 01S	7.4	2300		31	
10	6	75	11	00	10.5 62S	9.7 02S	6.8 01S	7.4	200		21	
7	7	75	18	45	21.0 62S	10.4 02S		7.8	500		26	
5	8	75	09	30	18.0 62S	7.4 02S	6.3 01S	7.7	860		7	
15	11	75	08	45	10.0 62S	7.4 02S	6.8 01S	6.5	400		25	
12	2	76	13	00	0.0 62S	12.4 02S	6.5 01S	7.0	260		15	
11	5	76	11	45	20.0	8.5	7.0	7.7	190		3	
6	7	76	12	10	14.0	11.3	6.9	7.7	335		10	
21	7	76	13	15	0.0	12.4	6.5	7.6	310		8	

SAMPLE DATE			TIME AS		10501L RESIDUE FIXED NONFILTR.	10551L RESIDUE FIXED FILTERABLE	07112L NITROGEN DISSOLVED NO3 E NO2	07103L NITRATE & NITRITE DISSOLVED	07012L NITROGEN TOTAL KJELDAHL	15365L PHOSPHORUS DISSOLVED INORG. PO4	15413L PHOSPHORUS TOTAL	06001L CARBON TOTAL ORGANIC
D	M	Y	H	M	MG/L	MG/L	N MG/L	NO3 MG/L	N MG/L	P MG/L	P MG/L	C MG/L
4	4	74			L10	18	0.86 10L				0.060 14L	7.7
29	5	74			41	61	0.56 10L				0.14 14L	11.8
5	7	74			12	224	1.45 10L				0.080	6.6
6	8	74					0.95 10L				0.025	15.8
10	9	74			12	137	0.48 10L				0.060	6.0
28	10	74			L10	69	0.21 10L				0.065	10.2
14	5	75	11	55				0.46		0.010		16.0
10	6	75	11	00				1.75	0.8	0.352		19.0
7	7	75	18	45				1.36	0.5	L.01		24.0
5	8	75	09	30				0.72	0.4	L.005		30.0
15	11	75	08	45				0.85	1.3	0.11		20.0
12	2	76	13	00				3.18	0.6	0.05		8.0
11	5	76	11	45			0.425		0.5	L.005		9.
6	7	76	12	10			1.105		1.0	L.005		4.
21	7	76	13	15			0.99		0.6	L.005		9.

WATER QUALITY SURVEILLANCE NETWORK

E.P.S. ATLANTIC REGION 1974-1976

STATION **00NS01DD0034** LATITUDE **45** D **3** M **16** S LONGITUDE **64** D **44** M **22** S

CORNWALLIS RIVER AT HWY 360 BRIDGE, BERWICK, KINGS COUNTY, NOVA SCOTIA

SAMPLE DATE			TIME AS		20103L CALCIUM DISSOLVED	20003P CALCIUM TOTAL	12102L MAGNESIUM DISSOLVED	12002P MAGNESIUM TOTAL	10606L HARDNESS TOTAL LAB CALC.	10101L ALKALINITY TOTAL	16304L SULPHATE DISSOLVED	26302P IRON EXTRBLE.
					CA	CA	MG	MG	CACO3	CACO3	SO4	FE
D	M	Y	H	M	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L
4	4	74			28.0		3.5			32		0.90
29	5	74			16.0		2.4			21		0.77
5	7	74			57.		6.0			66		0.6
6	8	74			53.0		5.0			72		0.84
10	9	74			33.5		3.9			45		0.47
28	10	74			12.0		2.9			24		0.50
14	5	75	11	55		29.7		3.7		39	51.0 03L	
10	6	75	11	00		23.2		3.5		34	36.0 03L	
7	7	75	18	45		82.0		6.0		62	181.0 03L	
5	8	75	09	30		91.0		7.2		75	230.0 03L	
15	11	75	08	45		19.0		2.8		25	30.0 03L	
12	2	76	13	00		25.0		3.3		20	30.0 03L	
11	5	76	11	45		21.		2.4	60.	30	30.	
6	7	76	12	10		49.			140.	65	85.	
21	7	76	13	15		42.		4.6	120.	55	55.	

SAMPLE DATE			TIME AS		25304P MANGANESE EXTRBLE.	29305P COPPER EXTRBLE.	30305P ZINC EXTRBLE.	82302P LEAD EXTRBLE.	80311P MERCURY EXTRBLE.	48302P CADMIUM EXTRBLE.	24303P CHROMIUM EXTRBLE.	06581L HUMIC ACID
					MN	CU	ZN	PB	HG	CD	CR	
D	M	Y	H	M	MG/L	MG/L	MG/L	MG/L	UG/L	MG/L	MG/L	MG/L
4	4	74			0.12	0.013	0.03	0.004				5
29	5	74			0.07	L.002	L.002	0.005				20
5	7	74			0.24	L.002	L.002	L.002				8
6	8	74			0.10	0.003	0.010	L.002				5 82L
10	9	74			0.12	L.002	0.02	0.002				15 82L
28	10	74				0.003	0.03	L.002	L.05			11 82L
14	5	75	11	55		L.002			L.10			
10	6	75	11	00		0.004			0.30			
7	7	75	18	45		0.002			L.10			
5	8	75	09	30		0.001			0.10			
15	11	75	08	45		0.005			0.30			
12	2	76	13	00		0.002			L.1			
11	5	76	11	45		0.002			L.1			
6	7	76	12	10		0.002						
21	7	76	13	15		0.002						

BIOLOGICAL RESULTS

STATION: NS-7: Cornwallis River - Berwick

TAXA			SAMPLING PERIOD 1974 5/7-6/8	1974 6/8-10/9	1975 - 10/6	1975 10/6-7/7	1975 7/7-5/8	1975 - 28/11
Coelenterata								
Hydrozoa			2	-				
Annelida								
Oligochaeta			12	2	8	8.0	17.5	16.5
Lumbriculidae			-					
Mollusca								
Gastropoda			19					
	Amnicolidae	Amnicola	-			4.0	3.0	1.5
	Ancyclidae	Ferrissia	-				0.5	2.0
	Lymnaeidae	Lymnaea	-				1.5	14.5
	Physidae	Physa	-			0.5		5
	Planorbidae	Helisoma	-				0.5	1
Pelecypoda			2					
Arthropoda								
Crustacea								
Amphipoda	Talitridae	Hyalella	-					1
Insecta								
Ephemeroptera	Heptageniidae	Stenonema	-		14	11.5	5.5	
	Baetidae	Baetis	-		2	3.5	1.5	
	Ephemeridae	Ephemerella	-			0.5		
	Leptophlebidae	Paraleptophlebia	1			0.5	0.5	
Hemiptera	Mesoveliidae	Mesovelia				0.5		
Megaloptera	Sialidae	Sialis		2				
Tricoptera	Brachycentridae	Bracycentrus				3.0	1.5	
	Hydropsychidae	Hydropsyche	1	3	4	82.5	32	1
		Cheumatopsyche						4
	Hydroptilidae	Hydroptila					0.5	
	Limnephilidae	Limnephilus	2					
		Pycnopsyche			1	1.5	8.0	
	Psychomyiidae	Polycentropus	56	24			44.0	1.5

Cont'd

STATION: NS-7 (CONT'D)

TAXA			SAMPLING PERIOD					
			1974 5/7-6/8	1974 6/8-10/9	1975 -10/6	1975 10/6-7/7	1975 7/7-5/8	1975 -28/11
Arthropoda								
Insecta								
Coleoptera	Hydrophilidae	Berosus L.						1.5
	Dytiscidae	Hyroporus				0.5		
	Elmidae	Macronychus			2	3.5		
		Stenelmis	9			3.5	6.5	
		Dubiraphia				1	2.0	1.5
		Dubiraphia				2.5	17.0	17.5
		Optioserus				-	2.0	-
		Optioserus				1.0	5.5	3.0
Diptera	Tipulidae	Antocha				2.0		2.5
		Tipula						
	Simuliidae	Simulium						1.5
	Tendipedidae	-	411	21	92	153.0	35	102.0
	Tabanidae	Tabanus						0.5
		Σ	515	52	123	282.5	184.0	178
		S	10	5	7	19	19	18
		DI	1.14	1.64	1.34	2.00	3.18	2.37

BIOLOGICAL RESULTS

STATION: NS-4: Cornwallis River - Kentville

TAXA			SAMPLING PERIOD 1975 14/05-10/6	1975 10/6-7/7
Mollusca				
Gastropoda	Physidae	Physa		1
Arthropoda				
Crustacea				
Amphipoda	Gammaridae	Gammarus	18	51
Insecta				
Ephemeroptera	Baetidae	Baetis	2	
		Pseudocloeon		4
	Ephemeridae	Ephemerella 2	0.5	
Coleoptera		Dubiraphia		1
Diptera	Tendipedidae	-	419	141
		Σ	439.5	198
		S	4	5
		DI	0.30	1.04

4.1.3 Annapolis River (NS 8-12)

The Annapolis River is about 45 kilometers (28 miles) long and drains 1560 hectares (600 square miles) of fertile land. The River is tidal from its mouth on the Annapolis Basin as far as Bridgetown. Drainage from agricultural lands, domestic and municipal systems, and industrial effluents from companies such as McKenzie Dairies, United Elastic and Acadia Distillers, form a large portion of the loading to the River.

The control station, located at Aylesford, has slightly hard (29-46 ppm $CaCO_3$), alkaline water with occasional high levels of sulphates present (up to 25 ppm). Measurable levels of nitrogen, phosphorus and carbon are present at all stations along the river. As nitrogen levels are quite high (TKN ~1.2 ppm) it is hypothesized that phosphorus is the factor limiting eutrophic algal blooms. Trace metal levels are low throughout the river and at the sampling station at Bridgetown, occasional peaks in conductivity and calcium and magnesium levels during July and August, 1975 are probably attributable to intrusion of the salt wedge.

Biological samples taken on the river in 1974 and 1975 show an increasing diversity downstream. The number of species collected was high, as were the populations of the organisms. Although chironomids tended to dominate the sample taken at Aylesford, mayflies, dragonflies, water striders, beetles and caddisflies were also plentiful. Stoneflies were absent from the samples of this area. Further downstream representatives of most of the fauna common to these areas were plentiful and diversity was high, especially in early summer and fall, 1975.

WATER QUALITY SURVEILLANCE NETWORK
E.P.S. ATLANTIC REGION 1974-1976

STATION **02NS01DC0003** LATITUDE **44** D **50** M **19** S LONGITUDE **65** D **17** M **32** S

ANNAPOLIS RIVER AT BRIDGETOWN 0.6 MILE BELOW HWY 201 BRIDGE, ANNAPOLIS COUNTY, NOVA SCOTIA

SAMPLE DATE			TIME AS		02061F TEMP. WATER	08102F OXYGEN DISSOLVED DO	10301F PH	10301L PH	02041L SPECIFIC CONDUCTANCE	02073L TURBIDITY	10401L RESIDUE NONFILTR.	10451L RESIDUE FILTERABLE
D	M	Y	H	M	DEG.C.	O2 MG/L	PH UNITS	PH UNITS	USIE/CM	JTU	MG/L	MG/L
4	4	74			4.0 61S		6.5 01S	6.2	72	4.5	L10	51
30	5	74			8.0 61S		5.4 01S	6.8	57	7.5	13	48
6	7	74			17.0 61S		6.4 01S	7.1	1700	8.5	15	954
6	8	74			21.0 61S		6.6 01S	6.2	165	0.8		
10	9	74			14.0 61S		6.6 01S	6.4	91	2.6		
29	10	74			3.0 61S		6.5 01S	6.7	49	2.9		
14	5	75	16	30	15.0 62S	9.4 02S	6.5 01S	6.6	60		20	
10	6	75	15	30	14.5 62S		6.6 01S	6.8	70		9	
8	7	75	11	30	23.0 62S			7.1	2080		5	
5	8	75	15	10	22.0 62S	7.7 02S	6.9 01S	7.6	4900		2	
15	11	75	10	45	10.0 62S	8.2 02S	7.1 01S	6.1	100		30	
13	2	76	17	30	0.0 62S	12.8 02S	5.8 01S	6.6	80		8	
11	5	76	18	35	13.5	10.0	6.2	6.8	60		4	
6	7	76	17	15	23.0	9.1	7.0	7.3	360		3	
21	7	76	15	30	20.0	7.2	5.9	6.7	73		9	

SAMPLE DATE			TIME AS		10501L RESIDUE FIXED NONFILTR.	10551L RESIDUE FIXED FILTERABLE	07112L NITROGEN DISSOLVED NO3 E NO2	07103L NITRATE & NITRITE DISSOLVED	07012L NITROGEN TOTAL KJELDAHL	15365L PHOSPHORUS DISSOLVED INORG. PO4	15413L PHOSPHORUS TOTAL	06001L CARBON TOTAL ORGANIC
D	M	Y	H	M	MG/L	MG/L	N MG/L	NO3 MG/L	N MG/L	P MG/L	P MG/L	C MG/L
4	4	74			L10	21	0.30 10L				0.020 14L	7.0
30	5	74			31	L10	0.02 10L				0.05 14L	9.0
6	7	74			15	791	0.30 10L				0.061	10.3
6	8	74					0.10 10L				0.030	7.3
10	9	74					0.06 10L				0.040	9.5
29	10	74					0.10 10L				0.040	10.6
14	5	75	16	30				0.14		L.01		8.0
10	6	75	15	30				0.31	0.5	L.01		12.0
8	7	75	11	30				0.01	0.4	L.01		14.0
5	8	75	15	10				0.08	0.5	L.005		16.0
15	11	75	10	45				L.01	0.8	0.04		20.0
13	2	76	17	30				0.20		L.005		5.0
11	5	76	18	35			L.005		0.4	L.005		11.
6	7	76	17	15			0.23		0.9	L.005		8.
21	7	76	15	30			0.245		0.7	L.005		14.

WATER QUALITY SURVEILLANCE NETWORK

E.P.S. ATLANTIC REGION 1974-1976

STATION **02NS01DC0003** LATITUDE **44** D **50** M **19** S LONGITUDE **65** D **17** M **32** S

ANNAPOLIS RIVER AT BRIDGETOWN 0.6 MILE BELOW HWY 201 BRIDGE, ANNAPOLIS COUNTY, NOVA SCOTIA

SAMPLE DATE			TIME AS		20103L CALCIUM DISSOLVED	20003P CALCIUM TOTAL	12102L MAGNESIUM DISSOLVED	12002P MAGNESIUM TOTAL	10606L HARDNESS TOTAL LAB CALC.	10101L ALKALINITY TOTAL	16304L SULPHATE DISSOLVED	26302P IRON EXTRBLE.
					CA	CA	MG	MG	CACO3	CACO3	SO4	FE
D	M	Y	H	M	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L
4	4	74			5.8		1.6			10		0.28
30	5	74			4.5		1.3			9		0.37
6	7	74			15.		31.			14		0.65
6	8	74			7.1		2.7			13		0.60
10	9	74			6.4		1.7			13		0.61
29	10	74			4.0		0.8			7		0.42
14	5	75	16	30		4.01		0.9		7	9.0 03L	
10	6	75	15	30		5.02		1.2		7	6.5 03L	
8	7	75	11	30		23.8		40.0		17	86.0 03L	
5	8	75	15	10		28.2		51.0		23	170.0 03L	
15	11	75	10	45		4.3		1.1		5	8.0 03L	
13	2	76	17	30		6.1		1.1		6	8.0 03L	
11	5	76	18	35		4.		0.9	14.	6	6.	
6	7	76	17	15		9.6		6.8	52.	15	25.	
21	7	76	15	30		5.2		5.2	18.	8	15.	

SAMPLE DATE			TIME AS		25304P MANGANESE EXTRBLE.	29305P COPPER EXTRBLE.	30305P ZINC EXTRBLE.	82302P LEAD EXTRBLE.	80311P MERCURY EXTRBLE.	48302P CADMIUM EXTRBLE.	24303P CHROMIUM EXTRBLE.	06581L HUMIC ACID
					MN	CU	ZN	PB	HG	CD	CR	
D	M	Y	H	M	MG/L	MG/L	MG/L	MG/L	UG/L	MG/L	MG/L	MG/L
4	4	74			0.03	0.014	0.02	0.004				8
30	5	74			0.02	L.002	L.002	0.005				16
6	7	74			0.07	L.002	L.002	0.004				16
6	8	74			0.06	L.002	0.01	L.002				9 82L
10	9	74			0.07	0.005	0.014	0.004				17 82L
29	10	74				0.002	0.03	L.002	L.05			8 82L
14	5	75	16	30		L.002			L.10			
10	6	75	15	30		0.003			0.20			
8	7	75	11	30		0.002			0.90			
5	8	75	15	10		0.001			L.10			
15	11	75	10	45		0.003			0.10			
13	2	76	17	30		0.001			L.1			
11	5	76	18	35		0.005			L.1			
6	7	76	17	15		0.001						
21	7	76	15	30		0.001						

WATER QUALITY SURVEILLANCE NETWORK

E.P.S. ATLANTIC REGION 1974-1976

STATION **00NS01DC0085** LATITUDE **44** D **52** M **42** S LONGITUDE **65** D **11** M **15** S

ANNAPOLIS RIVER 1.7 MILES BELOW BRIDGE AT LAWRENCETOWN, ANNAPOLIS COUNTY, NOVA SCOTIA

SAMPLE DATE			TIME AS		02061F TEMP. WATER	08102F OXYGEN DISSOLVED DO	10301F PH	10301L PH	02041L SPECIFIC CONDUCTANCE	02073L TURBIDITY	10401L RESIDUE NONFILTR	10451L RESIDUE FILTERABLE
D	M	Y	H	M	DEG.C.	O2 MG/L	PH UNITS	PH UNITS	USIE/CM	JTU	MG/L	MG/L
4	4	74			4.0 61S		6.4 01S	6.2	61	2.5	L10	43
30	5	74			8.0 61S		5.2 01S	6.6	63	7.0	L10	52
6	7	74			17.0 61S		6.5 01S	6.4	57	4.0	13	42
6	8	74			20.0 61S		7.3 01S	6.0	102	0.2		
10	9	74			14.0 61S		6.2 01S	6.0	63	1.5		
29	10	74			3.0 61S		6.5 01S	6.7	50	2.7		5
14	5	75	15	40	14.0 62S	9.1 02S	6.5 01S	6.4	60		12	
10	6	75	15	00	13.0 62S		6.7 01S	6.8	60		L2	
8	7	75	10	10	23.0 62S			7.5	90		0	
5	8	75	14	30	21.5 62S	8.4 02S	7.2 01S	8.0	90			
15	11	75	10	30	10.0 62S	8.3 02S	7.1 01S	6.2	200		15	
13	2	76	14	45	0.0 62S	12.8 02S	6.0 01S	6.5	80		4	
11	5	76	14	40	14.0	10.8	6.0	6.7	60		2	
6	7	76	16	45	25.0	8.8	6.5	7.2	65		1	
21	7	76	15	10	20.0	8.2	6.0	6.7	67		L5	

SAMPLE DATE			TIME AS		10501L RESIDUE FIXED NONFILTR	10551L RESIDUE FIXED FILTERABLE	07112L NITROGEN DISSOLVED NO3 E NO2	07103L NITRATE & NITRITE DISSOLVED	07012L NITROGEN TOTAL KJELDAHL	15365L PHOSPHORUS DISSOLVED INORG. PO4	15413L PHOSPHORUS TOTAL	06001L CARBON TOTAL ORGANIC
D	M	Y	H	M	MG/L	MG/L	N MG/L	NO3 MG/L	N MG/L	P MG/L	P MG/L	C MG/L
4	4	74			L10	16	0.24 10L				0.020 14L	7.0
30	5	74			L10	33	0.08 10L				0.04 14L	10.1
6	7	74			13	31	0.08 10L				0.040	7.8
6	8	74					0.28 10L				0.025	6.7
10	9	74					L.01 10L				0.035	11.3
29	10	74					0.10 10L				0.040	10.6
14	5	75	15	40				0.09		L.01		8.0
10	6	75	15	00				0.28	0.4	L.01		12.0
8	7	75	10	10				0.03	0.4	L.01		13.0
5	8	75	14	30				0.01	0.4	L.005		12.0
15	11	75	10	30				L.01	0.9	L.005		20.0
13	2	76	14	45				0.28	0.4	L.005		7.0
11	5	76	14	40			L.005		0.4	L.005		11.
6	7	76	16	45			0.15		1.	L.005		9.
21	7	76	15	10			0.145		0.6	L.005		14.

WATER QUALITY SURVEILLANCE NETWORK

E.P.S. ATLANTIC REGION 1974-1976

STATION **00NS01DC0085** LATITUDE **44** D **52** M **42** S LONGITUDE **65** D **11** M **15** S

ANNAPOLIS RIVER 1.7 MILES BELOW BRIDGE AT LAWRENCETOWN, ANNAPOLIS COUNTY, NOVA SCOTIA

SAMPLE DATE			TIME AS		20103L CALCIUM DISSOLVED	20003P CALCIUM TOTAL	12102L MAGNESIUM DISSOLVED	12002P MAGNESIUM TOTAL	10606L HARDNESS TOTAL LAB CALC.	10101L ALKALINITY TOTAL	16304L SULPHATE DISSOLVED	26302P IRON EXTRBLE.
D	M	Y	H	M	CA MG/L	CA MG/L	MG MG/L	MG MG/L	CACO3 MG/L	CACO3 MG/L	SO4 MG/L	FE MG/L
4	4	74			4.9		1.2			8		0.26
30	5	74			4.8		1.3			8		0.37
6	7	74			4.4		1.0			8		0.53
6	8	74			11.0		1.8			19		0.28
10	9	74			6.2		1.4			11		0.37
29	10	74			3.6		0.9			7		0.62
14	5	75	15	40		4.28		0.9		8	7.8 03L	
10	6	75	15	00		4.87		1.1		9	6.5 03L	
8	7	75	10	10		7.60		1.1		11	L5.0 03L	
5	8	75	14	30		9.6		1.2		18	14.0 03L	
15	11	75	10	30		5.0		1.2		6	9.0 03L	
13	2	76	14	45		5.8		1.0		6	8.0 03L	
11	5	76	14	40		4.		0.8	13.	6	6.	
6	7	76	16	45		5.8		1.0	19.	9	8.	
21	7	76	15	10		5.2		1.1	18.	8	15.	

SAMPLE DATE			TIME AS		25304P MANGANESE EXTRBLE.	29305P COPPER EXTRBLE.	30305P ZINC EXTRBLE.	82302P LEAD EXTRBLE.	80311P MERCURY EXTRBLE.	48302P CADMIUM EXTRBLE.	24303P CHROMIUM EXTRBLE.	06581L HUMIC ACID
D	M	Y	H	M	MN MG/L	CU MG/L	ZN MG/L	PB MG/L	HG UG/L	CD MG/L	CR MG/L	MG/L
4	4	74			0.16	0.010	0.014	0.008				4
30	5	74			0.03	L.002	L.002	0.002				17
6	7	74			0.05	L.002	L.002	0.002				10
6	8	74			0.03	L.002	0.010	L.002				8 82L
10	9	74			0.08	L.002	1.5 04P	L.002				18 82L
29	10	74				0.003	0.03	L.002	L.05			10 82L
14	5	75	15	40		L.002			L.10			
10	6	75	15	00		0.002			0.80			
8	7	75	10	10		0.002			0.40			
5	8	75	14	30		0.002			0.20			
15	11	75	10	30		0.003			0.20			
13	2	76	14	45		0.001			L.1			
11	5	76	14	40		L.001			L.1			
6	7	76	16	45		0.001						
21	7	76	15	10		0.002						

WATER QUALITY SURVEILLANCE NETWORK

E.P.S. ATLANTIC REGION 1974-1976

STATION **00NS01DC0086** LATITUDE **44** D **55** M **57** S LONGITUDE **65** D **5** M **12** S

ANNAPOLIS RIVER 1.1 MILES BELOW HWY 10 BRIDGE AT MIDDLETON, ANNAPOLIS COUNTY, NOVA SCOTIA

SAMPLE DATE			TIME AS		02061F TEMP. WATER	08102F OXYGEN DISSOLVED DO	10301F PH	10301L PH	02041L SPECIFIC CONDUCTANCE	02073L TURBIDITY	10401L RESIDUE NONFILTR.	10451L RESIDUE FILTERABLE
D	M	Y	H	M	DEG.C.	O2 MG/L	PH UNITS	PH UNITS	USIE/CM	JTU	MG/L	MG/L
4	4	74			4.0 61S		6.5 01S	6.4	50	2.5	L10	39
30	5	74			8.0 61S		5.2 01S	6.4	51	13.	18	41
6	7	74			16.0 61S		6.3 01S	6.9	93	8.0	26	26
6	8	74			19.0 61S		6.1 01S	6.2	122	0.5		
10	9	74			13.0 61S		6.6 01S	6.6	104	4.5	10	85
29	10	74			2.0 61S		6.4 01S	6.2	49	2.8		
14	5	75	15	10	14.0 62S	9.6 02S	6.4 01S	6.3	50		4	
10	6	75	13	30	13.0 62S	9.8 02S	6.6 01S	6.8	60		11	
8	7	75	09	00	21.0 62S			7.2	140		6	
5	8	75	12	00	20.0 62S	7.3 02S	6.9 01S	7.5	200		3	
15	11	75	10	00	9.5 62S	8.3 02S	7.0 01S	6.2	200		15	
13	2	76	13	45	0.0 62S	12.8 02S	5.7 01S	6.4	70		7	
11	5	76	13	40	14.5	10.3	6.0	6.8	50		1	
6	7	76	13	40	23.0	8.6	6.6	7.0	65		1	
21	7	76	14	45	20.0	8.4	6.0	6.7	21		10	

SAMPLE DATE			TIME AS		10501L RESIDUE FIXED NONFILTR.	10551L RESIDUE FIXED FILTERABLE	07112L NITROGEN DISSOLVED NO3 E NO2	07103L NITRATE & NITRITE DISSOLVED	07012L NITROGEN TOTAL KJELDAHL	15365L PHOSPHORUS DISSOLVED INORG. PO4	15413L PHOSPHORUS TOTAL	06001L CARBON TOTAL ORGANIC
D	M	Y	H	M	MG/L	MG/L	N MG/L	NO3 MG/L	N MG/L	P MG/L	P MG/L	C MG/L
4	4	74			L10	15	0.22 10L				0.020 14L	7.0
30	5	74			12	21	0.06 10L				0.04 14L	11.8
6	7	74			26	25	0.55 10L				0.146	7.2
6	8	74					0.37 10L				0.030	7.0
10	9	74			L10	62	0.16 10L				0.050	14.1
29	10	74					0.03 10L				0.040	10.6
14	5	75	15	10				0.04		L.01		9.0
10	6	75	13	30				0.24	0.6	L.01		12.0
8	7	75	09	00				0.61	0.5	0.03		16.0
5	8	75	12	00				0.41	0.4	0.04		16.0
15	11	75	10	00				L.01	0.9	L.005		22.0
13	2	76	13	45				0.21		L.005		0.0
11	5	76	13	40			0.095		0.3	L.005		10.
6	7	76	13	40			0.135		1.0	L.005		10.
21	7	76	14	45			0.225		0.6	L.005		15.

WATER QUALITY SURVEILLANCE NETWORK

E.P.S. ATLANTIC REGION 1974-1976

STATION **00NS01DC0086** LATITUDE **44** D **55** M **57** S LONGITUDE **65** D **5** M **12** S

ANNAPOLIS RIVER 1.1 MILES BELOW HWY 10 BRIDGE AT MIDDLETON, ANNAPOLIS COUNTY, NOVA SCOTIA

SAMPLE DATE			TIME AS		20103L CALCIUM DISSOLVED	20003P CALCIUM TOTAL	12102L MAGNESIUM DISSOLVED	12002P MAGNESIUM TOTAL	10606L HARDNESS TOTAL LAB CALC.	10101L ALKALINITY TOTAL	16304L SULPHATE DISSOLVED	26302P IRON EXTRBLE.
D	M	Y	H	M	CA MG/L	CA MG/L	MG MG/L	MG MG/L	CACO3 MG/L	CACO3 MG/L	SO4 MG/L	FE MG/L
4	4	74			4.5		1.1			7		0.25
30	5	74			5.8		1.2			7		0.37
6	7	74			9.0		1.4			15		0.60
6	8	74			14.0		2.0			23		0.33
10	9	74			10.0		2.0			18		0.60
29	10	74			4.0		0.7			7		0.33
14	5	75	15	10		4.14		0.9		6	3.0 03L	
10	6	75	13	30		4.65		1.1		8	8.5 03L	
8	7	75	09	00		13.4		1.6		28	17.0 03L	
5	8	75	12	00		13.2		1.6		24	20.0 03L	
15	11	75	10	00		5.5		1.2		5	10.0 03L	
13	2	76	13	45		5.7		1.0		5	8.0 03L	
11	5	76	13	40		4.		0.7	13.	6	8.	
6	7	76	13	40		5.7		1.1	19.	8	8.	
21	7	76	14	45		4.8		1.0	16.	9	22.	

SAMPLE DATE			TIME AS		25304P MANGANESE EXTRBLE.	29305P COPPER EXTRBLE.	30305P ZINC EXTRBLE.	82302P LEAD EXTRBLE.	80311P MERCURY EXTRBLE.	48302P CADMIUM EXTRBLE.	24303P CHROMIUM EXTRBLE.	06581L HUMIC ACID
D	M	Y	H	M	MN MG/L	CU MG/L	ZN MG/L	PB MG/L	HG UG/L	CD MG/L	CR MG/L	MG/L
4	4	74			0.04	0.005	0.014	0.005				7
30	5	74			0.02	L.002	L.002	0.005				17
6	7	74			0.09	0.002	0.002	0.010				10
6	8	74			0.06	L.002	0.012	L.002				8 82L
10	9	74			0.11	L.002	0.009	0.002				17 82L
29	10	74				L.002	0.03	L.002	L.05			10 82L
14	5	75	15	10		L.002			L.10			
10	6	75	13	30		0.002			0.40			
8	7	75	09	00		0.003			0.20			
5	8	75	12	00		0.002			0.10			
15	11	75	10	00		0.003			L.10			
13	2	76	13	45		0.001			L.1			
11	5	76	13	40		L.001			L.1			
6	7	76	13	40		0.001						
21	7	76	14	45		0.002						

WATER QUALITY SURVEILLANCE NETWORK

E.P.S. ATLANTIC REGION 1974-1976

STATION **00NS01DC0001** LATITUDE **44** D **57** M **14** S LONGITUDE **65** D **0** M **10** S

ANNAPOLIS RIVER 0.4 MILE SOUTH OF HWY 1 BRIDGE (W.S.C. GAUGE), WILMOT, ANNAPOLIS COUNTY, NOVA

SAMPLE DATE			TIME AS		02061F TEMP. WATER	08102F OXYGEN DISSOLVED DO O2	10301F PH	10301L PH	02041L SPECIFIC CONDUCTANCE	02073L TURBIDITY	10401L RESIDUE NONFILTR.	10451L RESIDUE FILTERABLE
D	M	Y	H	M	DEG.C.	MG/L	PH UNITS	PH UNITS	USIE/CM	JTU	MG/L	MG/L
4	4	74			4.0 61S		6.1 01S	6.3	70	2.5	12	50
30	5	74			8.0 61S		5.2 01S	6.7	64	8.0	15	56
6	7	74			15.0 61S		6.4 01S	6.6	106	5.0	14	78
6	8	74			19.0 61S		7.8 01S	6.0	140	0.7		
10	9	74			13.0 61S		6.5 01S	6.6	100	2.9		
29	10	74			2.0 61S		6.2 01S	6.5	57	1.8		
14	5	75	14	00	15.0 62S	9.3 02S	6.4 01S	6.6	70		3	
10	6	75	13	00	11.0 62S	9.8 02S	6.7 01S	7.0	70		16	
8	7	75	08	30	19.0 62S			7.2	167		L2	
5	8	75	11	15	19.0 62S	7.1 02S	6.5 01S	7.5	220		2	
15	11	75	09	00	10.0 62S	8.1 02S	6.9 01S	6.3	200		20	
13	2	76	12	00	0.0 62S	12.6 02S	6.3 01S	6.8	90		L2	
11	5	76	10	20	14.0	10.8	5.9	7.1	70		L5	
6	7	76	13	00	21.0	8.9	6.7	7.4	125		L5	
21	7	76	14	15	21.0	8.2	4.1	7.0	95		1	

SAMPLE DATE			TIME AS		10501L RESIDUE FIXED NONFILTR.	10551L RESIDUE FIXED FILTERABLE	07112L NITROGEN DISSOLVED NO3 E NO2 N	07103L NITRATE & NITRITE DISSOLVED NO3	07012L NITROGEN TOTAL KJELDAHL N	15365L PHOSPHORUS DISSOLVED INORG. PO4 P	15413L PHOSPHORUS TOTAL P	06001L CARBON TOTAL ORGANIC C
D	M	Y	H	M	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L
4	4	74			L10	18	0.38 10L				0.025 14L	70.5
30	5	74			10	33	0.16 10L				0.05 14L	11.7
6	7	74			14	60	0.50 10L				0.120	6.8
6	8	74					0.76 10L				0.050	7.0
10	9	74					0.13 10L				0.030	9.6
29	10	74					0.18 10L				0.035	10.5
14	5	75	14	00				0.16		L.01		9.0
10	6	75	13	00				0.34	0.7	L.01		14.0
8	7	75	08	30				0.92	0.4	0.08		15.0
5	8	75	11	15				0.59	0.5	L.005		20.0
15	11	75	09	00				0.12	1.0	L.005		15.0
13	2	76	12	00				0.32		L.005		6.0
11	5	76	10	20			0.150		0.6	L.005		10.
6	7	76	13	00			0.700		0.9	0.05		9.
21	7	76	14	15			0.370		0.7	L.005		15.

WATER QUALITY SURVEILLANCE NETWORK

E.P.S. ATLANTIC REGION 1974-1976

STATION **00NS01DC0001** LATITUDE **44** D **57** M **14** S LONGITUDE **65** D **0** M **10** S

ANNAPOLIS RIVER 0.4 MILE SOUTH OF HWY 1 BRIDGE (W.S.C. GAUGE), WILMOT, ANNAPOLIS COUNTY, NOVA

SAMPLE DATE			TIME AS		20103L CALCIUM DISSOLVED	20003P CALCIUM TOTAL	12102L MAGNESIUM DISSOLVED	12002P MAGNESIUM TOTAL	10606L HARDNESS TOTAL LAB CALC.	10101L ALKALINITY TOTAL	16304L SULPHATE DISSOLVED	26302P IRON EXTRBLE.
D	M	Y	H	M	CA MG/L	CA MG/L	MG MG/L	MG MG/L	CACO3 MG/L	CACO3 MG/L	SO4 MG/L	FE MG/L
4	4	74			6.9		1.4			12		0.27
30	5	74			7.1		1.4			10		0.37
6	7	74			11.		1.5			17		0.57
6	8	74			19.0		2.2			32		0.56
10	9	74			10.0		2.0			19		0.58
29	10	74			5.0		0.9			9		0.32
14	5	75	14	00		6.00		1.2		13	18.0 03L	
10	6	75	13	00		6.35		1.4		11	10.0 03L	
8	7	75	08	30		16.6		1.9		34	17.0 03L	
5	8	75	11	15		16.4		1.9		31	22.0 03L	
15	11	75	09	00		6.5		1.4		2	15.0 03L	
13	2	76	12	00		8.4		1.3		9	9.0 03L	
11	5	76	10	20		6.0		1.	18.	9	8.	
6	7	76	13	00		14.		2.	43.	25	15.	
21	7	76	14	15		9.2		1.6	30.	20	10.	

SAMPLE DATE			TIME AS		25304P MANGANESE EXTRBLE.	29305P COPPER EXTRBLE.	30305P ZINC EXTRBLE.	82302P LEAD EXTRBLE.	80311P MERCURY EXTRBLE.	48302P CADMIUM EXTRBLE.	24303P CHROMIUM EXTRBLE.	06581L HUMIC ACID
D	M	Y	H	M	MN MG/L	CU MG/L	ZN MG/L	PB MG/L	HG UG/L	CD MG/L	CR MG/L	MG/L
4	4	74			0.04	0.013	0.006	0.004				4
30	5	74			0.03	L.002	L.002	0.005				16
6	7	74			0.06	L.002	L.002	0.004	L.05			12
6	8	74			0.06	L.002	0.010	L.002				7 82L
10	9	74			0.08	L.002	0.005	0.004				18 82L
29	10	74				L.002	0.03	0.004	L.05			10 82L
14	5	75	14	00		L.002			L.10			
10	6	75	13	00		0.003			0.2			
8	7	75	08	30		0.003			0.1 11L			
5	8	75	11	15		0.001			L.10			
15	11	75	09	00		0.003			0.30			
13	2	76	12	00		0.001			L.1			
11	5	76	10	20		0.007			L.1			
6	7	76	13	00		0.001						
21	7	76	14	15		L.001						

WATER QUALITY SURVEILLANCE NETWORK

E.P.S. ATLANTIC REGION 1974-1976

STATION **00NS01DC0087** LATITUDE **45** D **1** M **38** S LONGITUDE **64** D **49** M **30** S

ANNAPOLIS RIVER AT BRIDGE 0.6 MILE EAST OF AYLESFORD (INTERSECTION), KINGS COUNTY, NOVA SCOTIA

SAMPLE DATE D	M	Y	TIME AS H	M	02061F TEMP. WATER DEG.C.	08102F OXYGEN DISSOLVED DO O2 MG/L	10301F PH PH UNITS	10301L PH PH UNITS	02041L SPECIFIC CONDUCTANCE USIE/CM	02073L TURBIDITY JTU	10401L RESIDUE NONFILTR. MG/L	10451L RESIDUE FILTERABLE MG/L
4	4	74			4.0 61S		6.5 01S	6.4	69	1.2	L10	46
30	5	74			7.0 61S		5.0 01S	6.7	74	2.5		
6	7	74			14.0 61S		6.3 01S	7.1	135	8.5	19	89
6	8	74			19.0 61S		6.7 01S	6.2	142	0.6		
10	9	74			12.5 61S		6.2 01S	6.6	109	2.0		
29	10	74			2.0 61S		6.3 01S	6.7	77	2.0		
14	5	75	13	10	14.0 62S	10.2 02S	6.7 01S	6.8	80		7	
10	6	75	12	00	11.0 62S	9.4 02S	6.6 01S	7.1	80		14	
7	7	75	19	30	21.0 62S			7.6	149		5	
5	8	75	10	30	17.0 62S	6.7 02S	6.3 01S	7.4	138		3	
15	11	75	09	00	10.0 62S	6.7 02S	6.9 01S	6.2	200		30	
13	2	76	10	45	0.0 62S	11.9 02S	6.2 01S	7.0	110		2	
11	5	76	12	45	15.0	11.8	6.3	7.3	90		1	
6	7	76	12	30	20.0	8.6	6.7	7.6	120		2	
21	7	76	13	40	17.0	8.2	5.5	7.2	130		L5	

SAMPLE DATE D	M	Y	TIME AS H	M	10501L RESIDUE FIXED NONFILTR. MG/L	10551L RESIDUE FIXED FILTERABLE MG/L	07112L NITROGEN DISSOLVED NO3 E NO2 N MG/L	07103L NITRATE & NITRITE DISSOLVED NO3 MG/L	07012L NITROGEN TOTAL KJELDAHL N MG/L	15365L PHOSPHORUS DISSOLVED INORG. PO4 P MG/L	15413L PHOSPHORUS TOTAL P MG/L	06001L CARBON TOTAL ORGANIC C MG/L
4	4	74			L10	17	0.64 10L				0.015 14L	82.5
30	5	74					0.02 10L				0.010 14L	11.5
6	7	74			19	62	1.02 10L				0.083	6.2
6	8	74					0.48 10L				0.025	7.0
10	9	74					0.31 10L				0.020	9.7
29	10	74					0.36 10L				0.030	11.3
14	5	75	13	10				0.34		L.01		10.0
10	6	75	12	00				0.48	0.7	L.01		16.0
7	7	75	19	30				0.71	0.5	L.01		12.0
5	8	75	10	30				0.58	0.3	L.005		19.0
15	11	75	09	00				0.36	1.1	L.005		25.0
13	2	76	10	45				0.65		L.005		6.0
11	5	76	12	45			0.355		1.2			13.
6	7	76	12	30			0.685		0.9			8.
21	7	76	13	40			0.725		0.5			10.

WATER QUALITY SURVEILLANCE NETWORK

E.P.S. ATLANTIC REGION 1974-1976

STATION **00NS01DC0087** LATITUDE **45** D **1** M **38** S LONGITUDE **64** D **49** M **30** S

ANNAPOLIS RIVER AT BRIDGE 0.6 MILE EAST OF AYLESFORD (INTERSECTION), KINGS COUNTY, NOVA SCOTIA

SAMPLE DATE			TIME AS		20103L CALCIUM DISSOLVED	20003P CALCIUM TOTAL	12102L MAGNESIUM DISSOLVED	12002P MAGNESIUM TOTAL	10606L HARDNESS TOTAL LAB CALC.	10101L ALKALINITY TOTAL	16304L SULPHATE DISSOLVED	26302P IRON EXTRBLE.
D	M	Y	H	M	CA MG/L	CA MG/L	MG MG/L	MG MG/L	CACO3 MG/L	CACO3 MG/L	SO4 MG/L	FE MG/L
4	4	74			5.5		1.5			11		0.17
30	5	74			34.0		1.6			11		0.31
6	7	74			16.		2.3			27		1.0
6	8	74			17.0		2.2			36		0.77
10	9	74			13.0		2.1			28		0.75
29	10	74			8.3		1.9			16		0.37
14	5	75	13	10		7.33		1.5		9	9.0 03L	
10	6	75	12	00		8.10		1.6		16	11.5 03L	
7	7	75	19	30		16.8		1.9		28	11.0 03L	
5	8	75	10	30		16.7		1.9		36	12.0 03L	
15	11	75	09	00		8.5		1.8		10	15.0 03L	
13	2	76	10	45		12.0		1.8		15	10.0 03L	
11	5	76	12	45		9.		1.4	29.	20	8.	
6	7	76	12	30		15.		2.0	46.	30	25.	
21	7	76	13	40		14.		2.2	44.	30	15.	

SAMPLE DATE			TIME AS		25304P MANGANESE EXTRBLE.	29305P COPPER EXTRBLE.	30305P ZINC EXTRBLE.	82302P LEAD EXTRBLE.	80311P MERCURY EXTRBLE.	48302P CADMIUM EXTRBLE.	24303P CHROMIUM EXTRBLE.	06581L HUMIC ACID
D	M	Y	H	M	MN MG/L	CU MG/L	/N MG/L	PB MG/L	HG UG/L	CD MG/L	CR MG/L	MG/L
4	4	74			0.03	0.003	0.004	0.005				8
30	5	74			0.02	L.002	L.002	0.005				15
6	7	74			0.13	L.002	L.002	0.006				9
6	8	74			0.10	L.002	0.016	0.004				6 82L
10	9	74			0.15	L.002	0.005	0.004				17 82L
29	10	74				L.002	0.036	L.002	L.05			11 82L
14	5	75	13	10		L.002			L.10			
10	6	75	12	00		0.002			0.20			
7	7	75	19	30		0.002			0.10			
5	8	75	10	30		0.001			0.20			
15	11	75	09	00		0.004			0.20			
13	2	76	10	45		L.001			L.1			
11	5	76	12	45		L.001			L.1			
6	7	76	12	30		L.001						
21	7	76	13	40		L.001						

BIOLOGICAL RESULTS

STATION: NS-12: 00NS01DC0001: Annapolis River, Aylesford

TAXA			SAMPLING PERIOD 1974 6/7-6/8	1975 14/5-16/6	1975 16/6-7/7	1975 7/7-5/8	1975 - 28/11
Annelida							
Oligochaeta							
Lumbricultdae			-			-	4.5
Mollusca							
Gastropoda			4			-	
	Amnicolidae (Bulmidae)	Anmicola	-		1	-	1.0
	Ancylidae	Ferrissia	-			-	
	Physidae	Physa	-		3	-	0.5
Pelecypoda			2			-	
Arthropoda							
Arachnoida	Hydracarina		-			-	0.5
Crustacea							
Amphipoda	Talitridae	Hyalella	-		3	3	
Insecta							
Ephemeroptera	Heptageniidae	Stenonema A	5		3	-	
		Stenonema B	-	31.5		1	4.5
	Baetidae	Pseudocloeon	-			-	
		Habrophlebiodes	10	1.0		-	
	Ephemeridae	Ephemerella 1	-		1	-	2.0
		Ephemerella 2	-	0.5		-	
		Ephemerella 5	-	3.5		-	
	Leptophlebidae	Paraleptophlebia	-			2	
		Leptophlebia	-			-	24.5
Odonata	Gomphidae	Gomphus			12		
Hemiptera	Veliidae	Microvelia			1		

Cont'd

STATION: NS-12 (CONT'D)

TAXA			SAMPLING PERIOD 1974 6/7-6/8	1975 14/5-16/6	1975 16/6-7/7	1975 7/7-5/8	1975 - 28/11
Arthropoda							
Insecta							
Megaloptera	Sialidae	Sialis	-			-	2.0
	Corydalidae	Nigronia	-			-	0.5
Tricoptera	Hydroptilidae	Hydroptila	-			-	0.5
	Limnephilidae	Limnephilus	17			3	
		Drusinus	-	2.0		-	0.5
	Psychomyiidae	Polycentropus	22	10.5	1	6	18.0
Coleoptera	Elmidae	Stenelmis	2	0.5		-	
		Dubiraphia	-		6	6	
		Dubiraphia	-			2	2.0
	Dysticidae	Hydroporus	-	0.5	2	1	
		Hydroporus	-			5	
Diptera	Tipulidae	Antocha	-			-	1.5
	Tendipedidae		77	55	38	72	113.5
	Rhagionidae	Atherix	-			-	0.5
		Σ	139	105.0	71.0	101.0	176.5
		S	8	9	11	10	16
		DI	2.03	1.79	2.29	1.70	1.88

BIOLOGICAL RESULTS

STATION: NS-9: Annapolis River, Lawrencetown

TAXA			SAMPLING PERIOD				
			1974 6/7-6/8	1975 24/5-10/6	1975 10/6-8/7	1975 8/7-5/8	1975 - 28/11
Platyhelminthes							
Turbellaris							
Tricladida	Planariidae	Planaria	22			18.0	2.5
Annelida							
Hirudinea			1				
Mollusca							
Gastropoda			15				
	Amnicolidae	Amnicola		9.5	16	2.0	5.5
	Planorbidae	Helisoma				0.5	
		Gyraulus		1.0			
Arthropoda							
Insecta							
Plecoptera	Pteronarcidae	Pteronarcys		0.5			20.0
	Nemouridae	Taeniopteryx					
	Perlidae	Neoperla			0.5	0.5	0.5
		Acroneuria		0.5		1.5	
		Phasganophora		1.5	0.5		
Ephemeroptera	Heptageniidae	Heptagenia			16.5		
		Stenonema A	4	12.5			11.5
		Stenonema B		33.0	21.5	10.0	
	Baetidae	Baetis		3.0	57.5	62.5	16.0
		Pseudocloen			9.5		
		Habrophlebiodes	4				
		Caenis	6				
		Tricorythodes				1.0	
	Ephemeridae	Ephemera			6.0		
		Ephemerella 1		13.0			
		Ephemerella 2		29.0		1.0	9.0
		Ephemerella 4					16.0
	Leptophlebidae	Paraleptophlebia			0.5		

Cont'd

STATION: NS-9 (CONT'D)

TAXA			SAMPLING PERIOD 1974 6/7-6/8	1975 24/5-10/6	1975 10/6-8/7	1975 8/7-5/8	1975 - 28/11
Arthropoda							
Insecta							
Tricoptera	Hydropsychidae	Hydropsyche	32	11.0	10.5	10.0	39.5
		Cheumatopsyche		18.5		232.5	60.0
	Hydroptilidae	Hydroptila				1.5	128.5
	Lepidostomatidae	Lepidostoma		5.0		0.5	3.0
	Leptoceridae	Oecetis		1.5	2.0		0.5
	Limnephilidae	Pycnopsche A		0.5	0.5		
		Pycnopsche B		0.5			
	Philopotamidae	Chimarra				4.0	6.0
	Psychomiidae	Polycentropus		5.0	0.5	1.0	1.5
		Neureclipsis				2.5	4.0
Coleoptera	Hydroptilidae	Berosus					1.0
	Psephenidae	Psephenus					
	Elmidae	Macronychus		1.0	0.5	2.5	
		Stenelmis	5		5.0	0.5	
		Promoresia			1.0	1.0	0.5
					0.5	0.5	
Diptera	Tipulidae	Antocha				0.5	21.0
		Tipula					2.0
	Simulidae	Simulium		0.5	1.5		
	Tendipedidae	-	99	4.0	14.0	9.5	48.0
		Σ	188	151	164.5	363.0	397.0
		S	9	20	19	22	22
		DI	2.15	3.38	3.06	1.92	3.21

4.1.4(a) Lake Enon, Cape Breton Is. (NS 13-15)

Lake Enon is a small lake situated in south-eastern Cape Breton Island. The major source of waste to the watershed is the effluent from the Kaiser Strontium celestite mine. Station NS-13 is located on Lake Enon, NS-14 is on a small stream which flows from the next lake, Lake Monroe, and NS-15 is on the Grand River at the outlet of the third and largest lake, Loch Lomond.

The water in Lake Enon is hard, alkaline and high in sulphates (~208 ppm) and magnesium (~4.5 ppm). At the outlet to Monroe Lake the hardness is lower as are the levels of sulphates and magnesium. The water on the Grand River is quite soft, low in dissolved solids and trace minerals. These results indicate an appreciable contribution of dissolved minerals to the waters of Lake Enon, with fairly rapid dilution beyond Lake Enon.

During 1977, work at the mine was discontinued for an indefinite period.

Biological samples taken in Lake Enon and on the Grand River in 1974 and 1975 show high species diversity and large populations.

WATER QUALITY SURVEILLANCE NETWORK

E.P.S. ATLANTIC REGION 1974-1976

STATION **01NS01FH0001** LATITUDE **45** D **48** M **50** S LONGITUDE **60** D **32** M **25** S

ENON LAKE EAST SIDE 200 METRES NORTH OF MINE EFFLUENT DRAINAGE PIPE, CAPE BRETON COUNTY, NOVA

SAMPLE DATE			TIME AS		02061F TEMP. WATER	08102F OXYGEN DISSOLVED DO	10301F PH	10301L PH	02041L SPECIFIC CONDUCTANCE	02073L TURBIDITY	10401L RESIDUE NONFILTR.	10451L RESIDUE FILTERABLE
D	M	Y	H	M	DEG.C.	O2 MG/L	PH UNITS	PH UNITS	USIE/CM	JTU	MG/L	MG/L
10	4	74			3.0 61S		9.0 01S	6.6	247	40.0	49	165
5	6	74			13.0 61S		7.2 01S	7.2	714	1.2		
3	7	74			16.0 61S		7.8 01S	7.2		0.2		
22	8	74			21.0 61S		7.8 01S	7.4		0.3		
3	10	74			12.0 61S		6.9 01S	7.6		L.5		
27	10	74			4.0 61S		7.3 01S	7.9		0.7		
21	5	75	09	00	14.0 62S	9.4 02S	6.9 01S	7.6	400			
16	6	75	20	15	17.0 62S	9.8 02S	7.7 01S	7.6	180			
15	7	75	14	00	26.5 62S	7.8 02S	6.4 01S	7.9	478			
11	8	75	19	15	24.0 62S	7.6 02S	7.0 01S	6.5	640			
8	11	75	10	30	13.5 62S	10.4 02S	7.3 01S	8.0	700			
4	3	76	11	45	0.0 62S	10.6 02S	6.2 01S	7.4	100			

SAMPLE DATE			TIME AS		10501L RESIDUE FIXED NONFILTR.	10551L RESIDUE FIXED FILTERABLE	20103L CALCIUM DISSOLVED	20003P CALCIUM TOTAL	12102L MAGNESIUM DISSOLVED	12002P MAGNESIUM TOTAL	10606L HARDNESS TOTAL LAB CALC.	10101L ALKALINITY TOTAL
D	M	Y	H	M	MG/L	MG/L	CA MG/L	CA MG/L	MG MG/L	MG MG/L	CACO3 MG/L	CACO3 MG/L
10	4	74			38	154	3.40		2.5			
5	6	74					130.		8.0			
3	7	74					120.		8.0			
22	8	74					160.		8.0			
3	10	74					125.		7.4			
27	10	74					100.		7.2			
21	5	75	09	00				71.0		4.5		34
16	6	75	20	15				266.0		17.7		30
15	7	75	14	00				69.2		4.0		25
11	8	75	19	15				76.4		3.8		30
8	11	75	10	30				60.0		3.2		15
4	3	76	11	45				10.0		1.1		10

WATER QUALITY SURVEILLANCE NETWORK

E.P.S. ATLANTIC REGION 1974-1976

STATION **01NS01FH0001** LATITUDE **45** D **48** M **50** S LONGITUDE **60** D **32** M **25** S

ENON LAKE EAST SIDE 200 METRES NORTH OF MINE EFFLUENT DRAINAGE PIPE, CAPE BRETON COUNTY, NOVA

SAMPLE DATE			TIME AS		10251L ACIDITY PH = 8.3	16304L SULPHATE DISSOLVED	16502L THIOSULFATE TOTAL	16510L THIO-SALTS TOTAL	26302P IRON EXTRBLE.	29105P COPPER DISSOLVED	29305P COPPER EXTRBLE.	30105P ZINC DISSOLVED
D	M	Y	H	M	CACO3 MG/L	SO4 MG/L	S2O3 MG/L	S2O3 MG/L	FE MG/L	CU MG/L	CU MG/L	ZN MG/L
10	4	74							1.60		0.020	
5	6	74							0.060		L.001	
3	7	74							0.030		L.001	
22	8	74							0.040		0.002	
3	10	74							0.02		L.002	
27	10	74							0.38		L.002	
21	5	75	09	00		137.0 03L		L5.0	0.037 05P		L.002	
16	6	75	20	15		208.0 03L			0.018 05P		0.003	
15	7	75	14	00		200.0 03L	L5.0	L5.0	0.034 05P		0.002	
11	8	75	19	15		170.0 03L	L5.0	6.0	0.27 05P		0.002	
8	11	75	10	30		150.0 03L	L5.0	L5.0	0.22 05P		0.005	
4	3	76	11	45		15.0 03L	L5.0	L5.0	0.04 05P		0.001	

SAMPLE DATE			TIME AS		30305P ZINC EXTRBLE.	82103P LEAD DISSOLVED	82302P LEAD EXTRBLE.	80311P MERCURY EXTRBLE.	48302P CADMIUM EXTRBLE.	06581L HUMIC ACID
D	M	Y	H	M	ZN MG/L	PB MG/L	PB MG/L	HG UG/L	CD MG/L	MG/L
10	4	74			0.060		0.050			4
5	6	74			0.015		0.005			2
3	7	74			0.005		L.001			2
22	8	74			0.015		L.001 02L			2 82L
3	10	74			0.012		L.002	L.05		1 82L
27	10	74			0.04		0.007	L.05		2 82L
21	5	75	09	00	0.012 04P		0.006 01P	L.10		3
16	6	75	20	15	0.015 04P		L.002 01P	L.10	L.002	
15	7	75	14	00	0.015 04P		0.008 01P	0.20	0.001	2
11	8	75	19	15	0.009 04P		0.007 01P	L.10	0.003	2
8	11	75	10	30	L.001 04P		0.007 01P	L.10	L.001	2
4	3	76	11	45	0.011 04P		L.001 01P	L.1	L.001	1

WATER QUALITY SURVEILLANCE NETWORK

E.P.S. ATLANTIC REGION 1974-1976

STATION **00NS01FH0002** LATITUDE **45** D **48** M **38** S LONGITUDE **60** D **33** M **34** S

UNNAMED STREAM FROM MONROE LAKE AT BRIDGE AT NORTHERN TIP OF LAKE UIST, CAPE BRETON COUNTY, NO

SAMPLE DATE D	M	Y	TIME AS H	M	02061F TEMP. WATER DEG.C.	08102F OXYGEN DISSOLVED DO O2 MG/L	10301F PH PH UNITS	10301L PH PH UNITS	02041L SPECIFIC CONDUCTANCE USIE/CM	02073L TURBIDITY JTU	10401L RESIDUE NONFILTR. MG/L	10451L RESIDUE FILTERABLE MG/L
10	4	74			2.0 61S		7.9 01S	6.1	50	0.6	L1	39
5	6	74			13.0 61S		7.3 01S	6.9	152	1.0		
3	7	74			17.0 61S		6.5 01S	7.0		0.2		
22	8	74			22.0 61S		6.9 01S	7.0		0.2		
3	10	74			12.0 61S		6.7 01S	7.1		L.5		
27	10	74			6.0 61S		6.8 01S	7.1		L.5		
21	5	75	09	30	14.0 62S	9.6 02S	6.5 01S	7.0	200			
16	6	75	20	30	15.0 62S	9.3 02S	6.6 01S	6.9	170			
15	7	75	13	00	28.5 62S	7.2 02S	6.0 01S	6.6	195			
11	8	75	18	10	23.0 62S	7.7 02S	7.0 01S	6.0	220			
8	11	75	09	45	8.0 62S	10.2 02S	6.9 01S	7.6	300			
4	3	76	12	30	1.0 62S	13.2 02S	6.1 01S	6.7	60			
14	5	76	15	00	10.5	10.5	6.5	6.8	110			
7	7	76	19	45	20.0	8.4	6.4	7.2	110			
26	7	76	15	30	21.0	8.4	6.6	7.2	120			

SAMPLE DATE D	M	Y	TIME AS H	M	10501L RESIDUE FIXED NONFILTR. MG/L	10551L RESIDUE FIXED FILTERABLE MG/L	20103L CALCIUM DISSOLVED CA MG/L	20003P CALCIUM TOTAL CA MG/L	12102L MAGNESIUM DISSOLVED MG MG/L	12002P MAGNESIUM TOTAL MG MG/L	10606L HARDNESS TOTAL LAB CALC. CACO3 MG/L	10101L ALKALINITY TOTAL CACO3 MG/L
10	4	74			L1	15	4.70		0.8			
5	6	74					32.0		1.9			
3	7	74					20.0		1.8			
22	8	74					23.0		1.9			
3	10	74					19.0		1.9			
27	10	74					19.5		1.8			
21	5	75	09	30				21.8		1.7		8
16	6	75	20	30				20.3		1.8		10
15	7	75	13	00				20.4		1.5		10
11	8	75	18	10				29.0		1.9		20
8	11	75	09	45				18.0		1.4		9
4	3	76	12	30				5.8		0.8		4
14	5	76	15	00				11.		1.0		7
7	7	76	19	45				12.		1.2	35.	8
26	7	76	15	30				10.		1.2	29.	10

WATER QUALITY SURVEILLANCE NETWORK

E.P.S. ATLANTIC REGION 1974-1976

STATION **00NS01FH0002** LATITUDE **45** D **48** M **38** S LONGITUDE **60** D **33** M **34** S

UNNAMED STREAM FROM MONROE LAKE AT BRIDGE AT NORTHERN TIP OF LAKE UIST, CAPE BRETON COUNTY, NO

SAMPLE DATE			TIME AS		10251L ACIDITY PH = 8.3	16304L SULPHATE DISSOLVED	16502L THIOSULFATE TOTAL	16510L THIO-SALTS TOTAL	26302P IRON EXTRBLE.	29105P COPPER DISSOLVED	29305P COPPER EXTRBLE.	30105P ZINC DISSOLVED
D	M	Y	H	M	CACO3 MG/L	SO4 MG/L	S2O3 MG/L	S2O3 MG/L	FE MG/L	CU MG/L	CU MG/L	ZN MG/L
10	4	74							0.120		0.003	
3	7	74							0.020		L.001	
22	8	74							0.020		L.001	
3	10	74							0.03		L.002	
27	10	74							0.14		L.002	
21	5	75	09	30		52.0 03L		L5.0	0.048 05P		L.002	
16	6	75	20	30		30.7 03L			0.035 05P		0.002	
15	7	75	13	00		60.0 03L	L5.0	L5.0	0.015 05P		0.002	
11	8	75	18	10		55.0 03L	L5.0	L5.0	0.064 05P		0.001	
8	11	75	09	45		40.0 03L	L5.0	L5.0	0.09 05P		0.002	
4	3	76	12	30		10.0 03L	L5.0	L5.0	0.04 05P		0.001	
14	5	76	15	00		28.	L5.	L5.	0.05		L.001	
7	7	76	19	45		25.	L5.	L5.	0.04		L.001	
26	7	76	15	30		25.	L5.	L5.	L.01		L.001	

SAMPLE DATE			TIME AS		30305P ZINC EXTRBLE.	82103P LEAD DISSOLVED	82302P LEAD EXTRBLE.	80311P MERCURY EXTRBLE.	48302P CADMIUM EXTRBLE.	06581L HUMIC ACID
D	M	Y	H	M	ZN MG/L	PB MG/L	PB MG/L	HG UG/L	CD MG/L	MG/L
10	4	74			0.007		0.003			5
5	6	74					0.002 02L			5
3	7	74			L.001		0.002			4
22	8	74			0.010		L.001			5 82L
3	10	74			0.012		L.002	0.22		4 82L
27	10	74			0.03		0.006	L.05		3 82L
21	5	75	09	30	0.005 04P		0.003 01P	L.10		6
16	6	75	20	30	0.016 04P		L.002 01P	0.40	L.002	
15	7	75	13	00	0.015 04P		0.006 01P	L.10	0.001	4
11	8	75	18	10	0.009 04P		0.001 01P	L.10	0.003	3
8	11	75	09	45	L.001 04P		0.003 01P	L.10	L.001	5
4	3	76	12	30	0.001 04P		0.003 01P	L.1	L.001	3
14	5	76	15	00	L.001		L.001	L.1	L.001	5
7	7	76	19	45	L.001		L.001		0.002	5
26	7	76	15	30	L.001		L.001		L.001	5

WATER QUALITY SURVEILLANCE NETWORK

E.P.S. ATLANTIC REGION 1974-1976

STATION **00NS01FH0001** LATITUDE **45** D **43** M **45** S LONGITUDE **63** D **36** M **10** S

GRAND RIVER AT OUTLET OF LOCH LOMOND AT BRIDGE (WSC GUAGE) RICHMOND COUNTY, NOVA SCOTIA

SAMPLE DATE D	M	Y	TIME AS H	M	02061F TEMP. WATER DEG.C.	08102F OXYGEN DISSOLVED DO O2 MG/L	10301F PH PH UNITS	10301L PH PH UNITS	02041L SPECIFIC CONDUCTANCE USIE/CM	02073L TURBIDITY JTU	10401L RESIDUE NONFILTR MG/L	10451L RESIDUE FILTERABLE MG/L
10	4	74			2.0 61S		8.5 01S	5.9	43	1.3	L1	33
5	6	74			12.0 61S		7.3 01S	6.1	50	0.5		
3	7	74			16.0 61S		6.1 01S	6.4		0.3		
22	8	74			19.0 61S		6.6 01S	6.2		0.3		
3	10	74			12.0 61S		6.3 01S	6.5		L.5		
27	10	74			6.0 61S		6.6 01S	6.3		0.6		
21	5	75			14.			6.3	58			
16	6	75	18	30	14.	9.5	6.6	6.5	58			
15	7	75	12	00	24.	7.6	6.1	7.0	70			
11	8	75	17	00	23.5	7.3	7.2	6.4	68			
8	11	75	09	00	8.0	10.0	7.0	6.7	69			
14	5	76	13	15	12.0	10.0	7.2	7.6	340			
14	5	76	14	00	10.0	10.7	5.9	6.5	70			
7	7	76	19	00	19.0	9.0	5.9	6.9	67			
7	7	76	19	30	19.0	8.7	7.4	5.8	300			
26	7	76	14	30	22.0	8.5	5.9	6.8	85			
26	7	76	15	10	21.0	8.6	6.6	7.4	230			

SAMPLE DATE D	M	Y	TIME AS H	M	10501L RESIDUE FIXED NONFILTR MG/L	10551L RESIDUE FIXED FILTERABLE MG/L	20103L CALCIUM DISSOLVED CA MG/L	20003P CALCIUM TOTAL CA MG/L	12102L MAGNESIUM DISSOLVED MG MG/L	12002P MAGNESIUM TOTAL MG MG/L	10606L HARDNESS TOTAL LAB CALC. CACO3 MG/L	10101L ALKALINITY TOTAL CACO3 MG/L
10	4	74			L1	16	3.40		0.8			
5	6	74					4.50		0.9			
3	7	74					4.60		0.8			
22	8	74					5.10		0.9			
3	10	74					4.7		1.0			
27	10	74					6.2		0.9			4
21	5	75					5.4		0.9			2
16	6	75	18	30			5.5		0.9			6
15	7	75	12	00			5.9		1.0			4
11	8	75	17	00			5.8		0.6 03L			
8	11	75	09	00			5.3		1.1			5
14	5	76	13	15				46.		3.1		33
14	5	76	14	00				5.5		0.8		2
7	7	76	19	00				6.1		1.0	19.	3
7	7	76	19	30				39.		3.4	110.	15
26	7	76	14	30				6.0		1.0	19.	4
26	7	76	15	10				32.		2.7	91.	25

WATER QUALITY SURVEILLANCE NETWORK

E.P.S. ATLANTIC REGION 1974-1976

STATION **00NS01FH0001** LATITUDE **45** D **43** M **45** S LONGITUDE **63** D **36** M **10** S

GRAND RIVER AT OUTLET OF LOCH LOMOND AT BRIDGE (WSC GUAGE) RICHMOND COUNTY, NOVA SCOTIA

SAMPLE DATE			TIME AS		10251L ACIDITY PH = 8.3	16304L SULPHATE DISSOLVED	16502L THIOSULFATE TOTAL	16510L THIO-SALTS TOTAL	26302P IRON EXTRBLE.	29105P COPPER DISSOLVED	29305P COPPER EXTRBLE.	30105P ZINC DISSOLVED
D	M	Y	H	M	CACO3 MG/L	SO4 MG/L	S2O3 MG/L	S2O3 MG/L	FE MG/L	CU MG/L	CU MG/L	ZN MG/L
10	4	74							0.120		0.020	
5	6	74							0.060		L.001	
3	7	74							0.030		L.001	
22	8	74							0.060		L.001	
3	10	74							0.05		L.002	
21	5	75				12.0			L.01		L.002	
16	6	75	18	30		12.0			0.06		L.002	
15	7	75	12	00		14.0	L5.0		0.10		L.002	
11	8	75	17	00		12.0	L5.0		0.04		L.002	
8	11	75	09	00		13.0	5.6		0.01		L.002	
14	5	76	13	15		140.	L5.	L5.	0.10		L.001	
14	5	76	14	00		13.	L5.	L5.	0.04		L.001	
7	7	76	19	00		15.	L5.	L5.	0.05		L.001	
7	7	76	19	30		105.	L5.	L5.	0.05		L.001	
26	7	76	14	30		15.	L5.	L5.	L.01		L.001	
26	7	76	15	10		65.	L5.	L5.	0.02		0.001	

SAMPLE DATE			TIME AS		30305P ZINC EXTRBLE.	82103P LEAD DISSOLVED	82302P LEAD EXTRBLE.	80311P MERCURY EXTRBLE.	48302P CADMIUM EXTRBLE.	06581L HUMIC ACID
D	M	Y	H	M	ZN MG/L	PB MG/L	PB MG/L	HG UG/L	CD MG/L	MG/L
10	4	74			0.004		0.004			5
5	6	74			L.001		0.005	1.30		5
3	7	74			L.001		0.002			5
22	8	74			0.010		L.001			5 82L
3	10	74			0.04		L.002	L.05		4 82L
27	10	74					0.010 02L	L.05		4 82L
21	5	75			L.002		L.002	L.05	L.001	3 82L
16	6	75	18	30	0.004		0.002	L.05	L.001	3 82L
15	7	75	12	00	0.02		L.002	L.05	L.001	2 82L
11	8	75	17	00	0.026		L.002	L.05	L.001	2 82L
8	11	75	09	00	0.01		0.005	0.05	0.001 03P	4 82L
14	5	76	13	15	0.004		0.003		L.001	4
14	5	76	14	00	L.001		L.001	L.1	L.001	5
7	7	76	19	00	L.001		L.001		0.003	4
7	7	76	19	30	0.001		0.002		0.002	2
26	7	76	14	30	L.001		L.001		L.001	4
26	7	76	15	10	L.001		L.001		L.001	5

BIOLOGICAL RESULTS

STATION: NS-13: Lake Enon; East Side

TAXA			SAMPLING PERIOD 1974 5/6-3/7	1974 3/7-22/8	1974 - 3/10	1975 21/5-16/6	1975 16/6-15/7	1975 15/7-11/8	1975 - 8/11
Platyhelminthes									
Turbellaria									
Tricladida	Planaridae	Planaria	7		2				
Nematoda									
Annelida				1					
Hirudinea									
Mollusca			2	1					
Gastropoda						12.0	1.5	10.5	1.0
	Amnicolidae	Amnicola						2.0	0.5
	Planorbidae	Helisoma				0.5	4.0		
		Gyraulus			2				
	Physidae	Physa							
	Neritidae				1				
Pelecypoda									
Arthropoda									
Crustacea									
Amphipoda	Talitridae	Hyalella			3	5.0	0.5	3.0	0.5
Insecta									
Plecoptera	Perlidae	Acroneuria				2.5	3.5	1.5	0.5
		Neophasganophora		4					
		Paragnetina			3				
Ephemeroptera	Heptageniidae	Heptagenia	5	15	3	1.0	5.0	7.0	0.5
	Baetidae	-					2.5		
		Habrophlebia	3	2	38				
	Ephemeridae	Ephemera		5					10.0
	Leptophlebidae	Leptophlebia							

Cont'd

STATION: NS-13 (CONT'D)

TAXA			SAMPLING PERIOD 1974 5/6-3/7	1974 3/7-22/8	1974 - 3/10	1975 21/5-16/6	1975 16/6-15/7	1975 15/7-11/8	1975 - 8/11
Arthropoda									
Insecta									
Odonata	Aeshnidae	Basiaeschna	1	1					
		Boyeria	1						
	Gomphidae	Gomphus					0.5		
	Coenagrionidae	Teleallagma	2						
	Agrionidae	Enallagma				1.0			
	Libellulidae	Tetragoneuria				0.5			
	Cordulegasteridae	Cordulegaster							
Tricoptera	Psychomyiidae	Polycentropus		26	9	1.5		2/2-2.0	2.5
	Ryagophilidae	Agapetus	1						
Coleoptera	Dytiscidae	Hydroporus				1.0			
	Elmidae	Stenelmis	16	1		0.5	4.5	2.5	
		Stenelmis					0.5	0.5	
Diptera	Tendipedidae		36	37	35	2.0	62.5	6.0	13.0
		Σ	73	93	96	27.5	93.5	35	28.5
		S	10	10	9	11	10	9	7
		DI	2.22	2.29	2.15	2.62	2.15	2.75	1.93

BIOLOGICAL RESULTS

STATION: NS-15: 00NS01FH0002: Grand River - Outlet of Loch Lomond

TAXA			SAMPLING PERIOD 1974 5/6-3/7	1974 - 3/10	1975 21/5-16/6	1975 15/7-11/8	1975 - 8/11
Coelenterata			1	-			
Hydrozoa							
Platyhelminthes							
Turbellaria							
Tricladida	Planaridae	Planaria	1	-	4.5	5.0	
Annelida			18	-			
Hirudinea							
Mollusca			2	-			
Gastropoda							
	Amnicolidae	Amnicola	-	-			
	Physidae	Physa	-	-	0.5		1.5
Pelecypoda			47	9			
	Sphaeriidae	Musculium	-	-	1.5	2.5	2.5
Arthropoda							
Crustacea							
Amphipoda	Talitridae	Hyalella	-	2	0.5		0.5
Insecta							
Plecoptera	Perlidae	Neoperla	1	-			
		Acroneuria	-	-	1.0	1	3.0
Ephemeroptera	Heptageniidae	Stenonema A	33	9	1		1.5
		Stenonema B	-	-	8	6	0.5
	Baetidae	Baetis	-	-		6	
		Habrophlebia	8	4			
	Ephemeridae	Ephemerella	-	-	0.5		
	Leptophlebidae	Paraleptophlebia	9	1	16.0	2.0	3.5
Tricoptera	Hydropsychidae	Hydropsyche	13	20			
		Cheumatopsyche	2	-	22.0	1	
	Lepidostomatidae	Lepidostoma	-	-	0.5	1	6.5

Cont'd

STATION: NS-15 (CONT'D)

TAXA			SAMPLING PERIOD				
			1974 5/6-3/7	1974 -3/10	1975 21/5-16/6	1975 15/7-11/8	1975 -8/11
Arthropoda							
Insecta							
Tricoptera	Leptoceridae	Leptocerus	1	-			
		Athripsodes	-	-	0.5	0.5	3.0
	Limnephilidae	Limnephilus	2	22			
	Psychonyiidae	Polycentropus	36	98	14.5		
		Neureclipsis	-	-		3.5	
	Odontoceridae	Psilotreta	-	-		1.5	1.0
Diptera	Simuliidae	Simulium	-	-	1.5		0.5
	Tendipedidae	-	20	29	6.5	2.5	37.5
Coleoptera	Elmidae	Stenelmis	2	1			
		Promoresial	-	-			0.5
		Σ	195	195.0	79.0	32.50	62.0
		S	16	10	15	12	13
		DI	3.08	2.27	2.90	2.77	2.20

4.1.4 (b) Gracie Brook, Cape Breton Is. (NS-28)

Gracie Brook is a small stream east of Sydney and flowing northwards which collects runoff from the Lingan Mine area at its lower end. Monitoring of the water quality of this stream was begun in 1975.

Gracie Brook contains hard water (140-250 ppm) which is high in calcium, magnesium and sulphates (~ 230 ppm) and which has a high conductivity (210-1100 ppm). Levels of iron (0.74-2.3 ppm) and zinc (5-56 ppb) are also high year round. Extensive leaching of coal deposits in the banks occurs all along this river, characterized by red stains (oxides of iron).

Biologically, the species diversity of the stream was low at the times of sampling. Few insect species were collected and large numbers of annelid worms were noted.

WATER QUALITY SURVEILLANCE NETWORK

E.P.S. ATLANTIC REGION 1974-1976

STATION **00NS01FJ0011** LATITUDE **46** D **15** M **0** S LONGITUDE **60** D **4** M **3** S

GRACIE BROOK NORTH OF ROAD BRIDGE, ON WEST EDGE OF LINGAN MINE PROPERTY CAPE BRETON COUNTY

SAMPLE DATE			TIME AS		02061F TEMP. WATER	08102F OXYGEN DISSOLVED DO	10301F PH	10301L PH	02041L SPECIFIC CONDUCTANCE	02073L TURBIDITY	10401L RESIDUE NONFILTR.	10451L RESIDUE FILTERABLE
						O2						
D	M	Y	H	M	DEG.C.	MG/L	PH UNITS	PH UNITS	USIE/CM	JTU	MG/L	MG/L
16	6	75	17	00	21.0 62S	8.0 02S	6.5 01S	7.1	210			
15	7	75	15	45	29.0 62S	6.4 02S	6.3 01S	7.6	412			
12	8	75	09	30	24.0 62S	6.8 02S	7.0 01S	6.2	630			
8	11	75	12	30	14.5 62S	9.2 02S	6.0 01S	6.4	1100			
3	3	76	10	30	0.0 62S	12.6 02S	5.6 01S	5.6	380			
15	5	76	10	40	8.5	10.0	5.1	4.6	310			
8	7	76	08	20	17.0	9.0	6.4	7.3	600			
26	7	76	17	00	20.0	8.1	5.8	5.9	560			

SAMPLE DATE			TIME AS		10501L RESIDUE FIXED NONFILTR.	10551L RESIDUE FIXED FILTERABLE	20103L CALCIUM DISSOLVED	20003P CALCIUM TOTAL	12102L MAGNESIUM DISSOLVED	12002P MAGNESIUM TOTAL	10606L HARDNESS TOTAL LAB CALC.	10101L ALKALINITY TOTAL
							CA	CA	MG	MG	CACO3	CACO3
D	M	Y	H	M	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L
16	6	75	17	00				23.6		5.4		19
15	7	75	15	45				43.2		9.4		35
12	8	75	09	30				55.2		10.8		45
8	11	75	12	30				46.0		12.0		
3	3	76	10	30				39.0		9.6		2
15	5	76	10	40				0.025		6.2		
8	7	76	08	20				0.068		19.	250.	25
26	7	76	17	00				0.046		14.	170.	2

WATER QUALITY SURVEILLANCE NETWORK

E.P.S. ATLANTIC REGION 1974-1976

STATION **00NS01FJ0011** LATITUDE **46** D **15** M **0** S LONGITUDE **60** D **4** M **3** S

GRACIE BROOK NORTH OF ROAD BRIDGE, ON WEST EDGE OF LINGAN MINE PROPERTY CAPE BRETON COUNTY

SAMPLE DATE			TIME AS		10251L ACIDITY PH = 8.3	16304L SULPHATE DISSOLVED	16502L THIOSULFATE TOTAL	16510L THIO-SALTS TOTAL	26302P IRON EXTRBLE.	29105P COPPER DISSOLVED	29305P COPPER EXTRBLE.	30105P ZINC DISSOLVED
					CACO3	SO4	S2O3	S2O3	FE	CU	CU	ZN
D	M	Y	H	M	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L
16	6	75	17	00		76.0 03L			0.77 05P		0.002	
15	7	75	15	45		100.0 03L	L5.0	L5.0	0.77 05P		0.003	
12	8	75	09	30		135.0 03L	L5.0	5.0	0.74 05P		0.002	
8	11	75	12	30	2.0	160.0 03L	L5.0	L5.0	1.94 05P		0.004	
3	3	76	10	30		135.0 03L	L5.0	L5.0	2.11 05P		0.003	
15	5	76	10	40		115.	L5.	L5.	1.31		0.005	
8	7	76	08	20		230.	L5.	L5.	0.9		0.001	
26	7	76	17	00		170.	L5.	L5.	2.3		0.004	

SAMPLE DATE			TIME AS		30305P ZINC EXTRBLE.	82103P LEAD DISSOLVED	82302P LEAD EXTRBLE.	80311P MERCURY EXTRBLE.	48302P CADMIUM EXTRBLE.	06581L HUMIC ACID
					ZN	PB	PB	HG	CD	
D	M	Y	H	M	MG/L	MG/L	MG/L	UG/L	MG/L	MG/L
16	6	75	17	00	0.015 04P		L.002 01P	3.6	L.002	
15	7	75	15	45	0.014 04P		0.005 01P	L.10	0.002	3
12	8	75	09	30	0.005 04P		0.002 01P	L.10	0.002	2
8	11	75	12	30	L.001 04P		0.004 01P	L.10	L.001	1
3	3	76	10	30			L.001 01P	L.1	L.001	L1
15	5	76	10	40	0.013		L.001	L.1	L.001	4
8	7	76	08	20	L.003		L.001		0.004	2
26	7	76	17	00	0.056		L.001		0.001	5

BIOLOGICAL RESULTS

STATION: NS-28: Gracie Brook, Cape Breton Island

TAXA			SAMPLING PERIOD 1975 16/6-15/7	1975 15/7-18/8	1975 - 8/11
Annelida					
Oligochaeta	Lumbriculidae	-	44.0		-
Arthropoda					
Insecta					
Ephemeroptera	Heptageniidae	-		0.5	-
Diptera	Heleidae	-	2.0	0.5	-
	Tendipedidae	-	22.5	8.5	13
		Σ	68.5	9.5	13
		S	3	3	1
		DI	1.09	0.59	0

4.1.4 (c) Outlet from Mine Pond - Sydney Mines (NS-29)

This small stream, which discharges runoff from the mine pond, Sydney Mines into Lloyd's Cove on the northern coast of Cape Breton Island, has been contaminated for a number of years. Sampling has been carried out on the stream since 1975.

The water in the stream is very hard (1100-1600 ppm), acidic (1100-2000 ppm) and high in magnesium 77-150 ppm), calcium (154-410 ppm), sulphates (20-4900 ppm), iron (47-760 ppm) and copper (150-420 ppb). The pH is low (2.5-3.7), conductivity high (3400-5400 µs/cm) and cadmium is present in all samples (1-14 ppb). This water may be considered to represent a typical example of severe and uncontrolled acid mine drainage.

No biological samples were found in this area.

WATER QUALITY SURVEILLANCE NETWORK

E.P.S. ATLANTIC REGION 1974-1976

STATION **00NS01FJ0012** LATITUDE **46** D **15** M **8** S LONGITUDE **60** D **13** M **2** S

SYDNEY MINES POND OUTLET INTO LLOYD COVE NORTH OF HWY, SYDNEY MINES, CAPE BRETON COUNTY

SAMPLE DATE			TIME		02061F TEMP. WATER	08102F OXYGEN DISSOLVED DO	10301F PH	10301L PH	02041L SPECIFIC CONDUCTANCE	02073L TURBIDITY	10401L RESIDUE NONFILTR.	10451L RESIDUE FILTERABLE
			AS			O2						
D	M	Y	H	M	DEG.C.	MG/L	PH UNITS	PH UNITS	USIE/CM	JTU	MG/L	MG/L
16	6	75	13	30	25.0 62S	6.4 02S	2.8 01S	2.7	3400			
15	7	75	16	45	28.5 62S	6.1 02S	3.7 01S	2.6	3380			
12	8	75	10	30	27.0 62S	6.3 02S	2.9 01S					
8	11	75	14	00	14.5 62S	9.3 02S	2.7 01S	2.4	5600			
3	3	76	12	00	1.0 62S	15.4 02S	3.3 01S	2.8	4300			
15	5	76	08	45	12.0	7.9	3.2	2.5	7250			
8	7	76	09	30	24.0	8.0	2.5	2.6	4150			
27	7	76	08	40	21.0	7.9	2.5	2.6	4150			

SAMPLE DATE			TIME		10501L RESIDUE FIXED NONFILTR.	10551L RESIDUE FIXED FILTERABLE	20103L CALCIUM DISSOLVED	20003P CALCIUM TOTAL	12102L MAGNESIUM DISSOLVED	12002P MAGNESIUM TOTAL	10606L HARDNESS TOTAL LAB CALC.	10101L ALKALINITY TOTAL
			AS				CA	CA	MG	MG	CACO3	CACO3
D	M	Y	H	M	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L
16	6	75	13	30				195.0		112.0		
15	7	75	16	45				249.0		127.0		
12	8	75	10	30				270.0		142.0		
8	11	75	14	00				205.0		110.0		
3	3	76	12	00				410.0		140.0		
15	5	76	08	45				154.		77.		
8	7	76	09	30				240.		150.	1200.	
27	7	76	08	40				210.		130.	1100.	

WATER QUALITY SURVEILLANCE NETWORK

E.P.S. ATLANTIC REGION 1974-1976

STATION **00NS01FJ0012** LATITUDE **46** D **15** M **8** S LONGITUDE **60** D **13** M **2** S

SYDNEY MINES POND OUTLET INTO LLOYD COVE NORTH OF HWY, SYDNEY MINES, CAPE BRETON COUNTY

SAMPLE DATE			TIME		10251L ACIDITY PH = 8.3	16304L SULPHATE DISSOLVED	16502L THIOSULFATE TOTAL	16510L THIO-SALTS TOTAL	26302P IRON EXTRBLE.	29105P COPPER DISSOLVED	29305P COPPER EXTRBLE.	30105P ZINC DISSOLVED
			AS		CACO3	SO4	S2O3	S2O3	FE	CU	CU	ZN
D	M	Y	H	M	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L
16	6	75	13	30		465.0 03L					0.29	
15	7	75	16	45		2500.0 03L	L5.0	L5.0			0.35	
12	8	75	10	30		20.0 03L	L5.0	L5.0	47.0 05P		0.200	
8	11	75	14	00	1.0	1600.0 03L	L5.0	31.0			0.178	
3	3	76	12	00		3600.0 03L	L5.0	130.0			0.42	
15	5	76	08	45	110.0	1850.	L5.	L5.	290.		0.23	
8	7	76	09	30	200.0	4900.	L5.	L5.			0.19	
27	7	76	08	40	180.0	3000.	L5.	80.	400.		0.15	

SAMPLE DATE			TIME		30305P ZINC EXTRBLE.	82103P LEAD DISSOLVED	82302P LEAD EXTRBLE.	80311P MERCURY EXTRBLE.	48302P CADMIUM EXTRBLE.	06581L HUMIC ACID
			AS		ZN	PB	PB	HG	CD	
D	M	Y	H	M	MG/L	MG/L	MG/L	UG/L	MG/L	MG/L
16	6	75	13	30	L.002 04P		0.002 01P	0.20	0.003	
15	7	75	16	45	3.21 04P		0.15 01P	0.20	0.002	
12	8	75	10	30	L.001 04P		0.004 01P	L.10	L.001	
8	11	75	14	00	L.001 04P		0.012 01P	0.20	L.001	
3	3	76	12	00	0.001 04P		L.001 01P	0.2	0.002	
15	5	76	08	45	L.001		L.001	L.1	0.001	13
8	7	76	09	30	0.002		L.001		0.014	
27	7	76	08	40	0.001		0.001		0.002	

4.1.4 (d) Prince Mine (Devco) Area - Eastern and Western Drainage (NS 30, 31)

The two stations being monitored in this area are located on streams which drain the eastern and western areas of the Prince Mine Operation. These stations have been in effect since 1975.

Station 31, on the stream draining the eastern side of the property is relatively soft with occasional peaks in conductivity, magnesium and alkalinity. Iron levels are high (0.15-2.32 ppm) and dissolved oxygen occasionally drops to 3.2 ppm.

The control station, 30, on the western side typically exhibits soft water which is low in trace metals, with the exception of iron (0.15-1.58 ppm). However, during 1976 the pH was continually quite low, dropping to 3.2 on one occasion. As well, peaks were noted in levels of iron (~18.0 ppm), zinc (~ 1.6 ppm), copper (~ 38 ppb), lead (~8 ppb) and cadmium (~7 ppb).

Biological samples of the fauna of both streams were taken during 1975. The eastern drainage stream showed a low species diversity with only two taxa represented, blackfly larvae and chironomids. Although the diversity index for the western stream was higher, the number of species observed here was still quite small. The last two sampling dates of the summer found only an occasional mayfly and chironomids to be present. The sample taken of this stream in November indicated an increased diversity, although actual numbers of organisms were still very small.

WATER QUALITY SURVEILLANCE NETWORK

E.P.S. ATLANTIC REGION 1974-1976

STATION **00NS01FJ0013** LATITUDE **46** D **19** M **24** S LONGITUDE **60** D **19** M **5** S

DEVCO MINES DRAINAGE BROOK TO MORRISON POND ABOUT 40 M NORTH OF ROAD, ON WEST SIDE OF DEVCO PR CAPE BRETON COUNTY

SAMPLE DATE			TIME		02061F TEMP. WATER	08102F OXYGEN DISSOLVED DO	10301F PH	10301L PH	02041L SPECIFIC CONDUCTANCE	02073L TURBIDITY	10401L RESIDUE NONFILTR.	10451L RESIDUE FILTERABLE
			AS			O2						
D	M	Y	H	M	DEG.C.	MG/L	PH UNITS	PH UNITS	USIE/CM	JTU	MG/L	MG/L
16	6	75	15	30	13.0 62S	9.4 02S	5.9 01S	5.8	50			
16	7	75	08	00	22.5 62S	6.2 02S	6.5 01S	6.2	91			
12	8	75	12	00	18.5 62S	5.8 02S	7.3 01S	5.7	130			
8	11	75	15	00	11.0 62S	9.9 02S	6.5 01S	6.5	200			
3	3	76	12	45	0.0 62S	13.8 02S	5.9 01S	7.2	140			
15	5	76	13	15	4.5	10.6	4.8	4.7	90			
8	7	76	10	30	17.0	8.2	3.2	3.1	1200			
27	7	76	09	20	12.0	9.7	5.0	4.2	210			

SAMPLE DATE			TIME		10501L RESIDUE FIXED NONFILTR.	10551L RESIDUE FIXED FILTERABLE	20103L CALCIUM DISSOLVED	20003P CALCIUM TOTAL	12102L MAGNESIUM DISSOLVED	12002P MAGNESIUM TOTAL	10606L HARDNESS TOTAL LAB CALC.	10101L ALKALINITY TOTAL
			AS				CA	CA	MG	MG	CACO3	CACO3
D	M	Y	H	M	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L
16	6	75	15	30				1.25		0.8		1
16	7	75	08	00				2.20		1.1		8
12	8	75	12	00				4.08		1.9		9
8	11	75	15	00				3.9		1.8		
3	3	76	12	45				9.2		2.1		20
15	5	76	13	15				3.7		1.2		
8	7	76	10	30				99.		32.	38.	
27	7	76	09	20				12.		4.4	4.8	

WATER QUALITY SURVEILLANCE NETWORK

E.P.S. ATLANTIC REGION 1974-1976

STATION **00NS01FJ0013** LATITUDE **46** D **19** M **24** S LONGITUDE **60** D **19** M **5** S

DEVCO MINES DRAINAGE BROOK TO MORRISON POND ABOUT 40 M NORTH OF ROAD, ON WEST SIDE OF DEVCO PR CAPE BRETON COUNTY

SAMPLE DATE			TIME - AS		10251L ACIDITY PH = 8.3	16304L SULPHATE DISSOLVED	16502L THIOSULFATE TOTAL	16510L THIO-SALTS TOTAL	26302P IRON EXTRBLE.	29105P COPPER DISSOLVED	29305P COPPER EXTRBLE.	30105P ZINC DISSOLVED
					CACO3	SO4	S2O3	S2O3	FE	CU	CU	ZN
D	M	Y	H	M	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L
16	6	75	15	30		7.0 03L			0.22 05P		0.002	
16	7	75	08	00		2.0 03L	L5.0	L5.0	0.85 05P		0.003	
12	8	75	12	00		7.0 03L	L5.0	L5.0	2.02 05P		0.003	
8	11	75	15	00	2.0	8.0 03L	L5.0	L5.0	0.64 05P		0.002	
3	3	76	12	45		10.0 03L	L5.0	L5.0	0.51 05P		0.001	
15	5	76	13	15	4.	20.	L5.	L5.	1.58		L.001	
8	7	76	10	30	13.	60.	L5.	7.	18.		0.038	
27	7	76	09	20	20.	60.	L5.	L5.	2.6		0.003	

SAMPLE DATE			TIME AS		30305P ZINC EXTRBLE.	82103P LEAD DISSOLVED	82302P LEAD EXTRBLE.	80311P MERCURY EXTRBLE.	48302P CADMIUM EXTRBLE.	06581L HUMIC ACID
					ZN	PB	PB	HG	CD	
D	M	Y	H	M	MG/L	MG/L	MG/L	UG/L	MG/L	MG/L
16	6	75	15	30	0.011 04P		0.003 01P	0.60	L.002	
16	7	75	08	00	0.020 04P		0.004 01P	L.10	0.001	10
12	8	75	12	00	L.001 04P		0.003 01P	L.10	0.004	45
8	11	75	15	00	L.001 04P		0.007 01P	0.20	L.001	8
3	3	76	12	45	0.002 04P		L.001 01P	L.1	L.001	4
15	5	76	13	15	0.004		L.001	L.1	L.001	10
8	7	76	10	30	1.6		0.008		0.007	15
27	7	76	09	20	0.17		L.001		0.001	15

WATER QUALITY SURVEILLANCE NETWORK

E.P.S. ATLANTIC REGION 1974-1976

STATION **00NS01FJ0014** LATITUDE **46** D **18** M **58** S LONGITUDE **60** D **17** M **50** S

DEVCO MINES DRAINAGE BROOK 50 M EAST OF ROAD BRIDGE NORTH OF MCCREADYVILLE, ON EAST SIDE OF DE CAPE BRETON COUNTY

SAMPLE DATE D	M	Y	TIME AS H	M	02061F TEMP. WATER DEG.C.	08102F OXYGEN DISSOLVED DO O2 MG/L	10301F PH PH UNITS	10301L PH PH UNITS	02041L SPECIFIC CONDUCTANCE USIE/CM	02073L TURBIDITY JTU	10401L RESIDUE NONFILTR. MG/L	10451L RESIDUE FILTERABLE MG/L
16	6	75	15	00	16.0 62S	8.4 02S	6.6 01S	7.0	110			
16	7	75	09	30	24.5 62S	3.2 02S	6.4 01S	7.2	295			
12	8	75	11	00	21.0 62S	6.1 02S	7.0 01S	6.5	320			
8	11	75	14	30	12.0 62S	9.3 02S	6.4 01S	7.5	300			
3	3	76	13	15	0.0 62S	13.4 02S	6.6 01S	6.4	60			
15	5	76	12	45	7.5	10.8	6.2	6.3	70			
8	7	76	10	05	18.0	8.0	6.6	7.6	160			
27	7	76	09	10	12.	9.7 01F	6.0	7.1	135			

SAMPLE DATE D	M	Y	TIME AS H	M	10501L RESIDUE FIXED NONFILTR. MG/L	10551L RESIDUE FIXED FILTERABLE MG/L	20103L CALCIUM DISSOLVED CA MG/L	20003P CALCIUM TOTAL CA MG/L	12102L MAGNESIUM DISSOLVED MG MG/L	12002P MAGNESIUM TOTAL MG MG/L	10606L HARDNESS TOTAL LAB CALC. CACO3 MG/L	10101L ALKALINITY TOTAL CACO3 MG/L
16	6	75	15	00				6.61		1.8		14
16	7	75	09	30				20.0		1.3		80
12	8	75	11	00				20.1		5.8		80
8	11	75	14	30				9.0		2.8		
3	3	76	13	15				2.9		1.0		2
15	5	76	12	45				3.9		1.1		5
8	7	76	10	05				10.0		3.3		35
27	7	76	09	10				7.2		2.7	29.0	2

WATER QUALITY SURVEILLANCE NETWORK

E.P.S. ATLANTIC REGION 1974-1976

STATION **00NS01FJ0014** LATITUDE **46** D **18** M **58** S LONGITUDE **60** D **17** M **50** S

DEVCO MINES DRAINAGE BROOK 50 M EAST OF ROAD BRIDGE NORTH OF MCCREADYVILLE, ON EAST SIDE OF DE CAPE BRETON COUNTY

SAMPLE DATE D	M	Y	TIME AS H	M	10251L ACIDITY PH = 8.3 CACO3 MG/L	16304L SULPHATE DISSOLVED SO4 MG/L	16502L THIOSULFATE TOTAL S2O3 MG/L	16510L THIO-SALTS TOTAL S2O3 MG/L	26302P IRON EXTRBLE. FE MG/L	29105P COPPER DISSOLVED CU MG/L	29305P COPPER EXTRBLE. CU MG/L	30105P ZINC DISSOLVED ZN MG/L
16	6	75	15	00		13.0 03L			0.45 05P		0.002	
16	7	75	09	30		4.0 03L	L5.0	L5.0	2.32 05P		0.001	
12	8	75	11	00		L5.0 03L	L5.0	L5.0	1.90 05P		0.002	
8	11	75	14	30	1.0	15.0 03L	L5.0	L5.0	0.88 05P		0.002	
3	3	76	13	15		7.0 03L	L5.0	L5.0	0.15 05P		0.001	
15	5	76	12	45		13.	L5.	L5.	0.43		L.001	
8	7	76	10	05		15.	L5.	L5.	0.33		0.001	
27	7	76	09	10		15.	L5.	L5.	0.20		0.001	

SAMPLE DATE D	M	Y	TIME AS H	M	30305P ZINC EXTRBLE. ZN MG/L	82103P LEAD DISSOLVED PB MG/L	82302P LEAD EXTRBLE. PB MG/L	80311P MERCURY EXTRBLE. HG UG/L	48302P CADMIUM EXTRBLE. CD MG/L	06581L HUMIC ACID MG/L
16	6	75	15	00	0.011 04P		L.002 01P	0.20	L.002	
16	7	75	09	30	0.012 04P		0.002 01P	L.10	0.001	10
12	8	75	11	00	L.001 04P		0.003 01P	L.10	L.001	4
8	11	75	14	30	L.001 04P		0.006 01P	0.40	L.001	3
3	3	76	13	15	0.002 04P		0.002 01P	L.1	L.001	4
15	5	76	12	45	0.001		L.001	L.1	L.001	11
8	7	76	10	05	0.001		L.001		0.005	4
27	7	76	09	10	0.002		L.001		L.001	6

BIOLOGICAL RESULTS

STATION: NS-30: Morrison's Pond - Outlet: Devco Mines

TAXA			SAMPLING PERIOD			
			1975 - 16/6	1975 16/6- 16/7	1975 - 12/8	1975 - 8/11
Mollusca						
Pelecypoda	Sphaeridae	Musculium				2.0
Arthropoda						
Crustacea						
Copepoda					1	
Insecta						
Plecoptera	Nemouridae	Leuctra	0.5			
	Chloroperlidae	Alloperla	4.0			
Ephemeroptera	Leptophlebidae	Paraleptophlebia				0.5
Megaloptera	Sialidae	Sialis			1	0.5
Tricoptera	Lepidostomatidae	Lepidostoma	1.0			0.5
	Psychomyiidae	Polycentropus				0.5
Coleoptera	Dytiscidae	Hydroporus				0.5
Diptera	Heleidae	-				1.0
	Tendipedidae	-	8.0	4	11	6.5
		Σ	13.5	4	13	12.0
		S	4	1	3	8
		DI	1.42	0.0	0.77	2.16

BIOLOGICAL RESULTS

STATION: NS-31: East Side Drainage - Devco Mine

TAXA			SAMPLING PERIOD 1975 16/6
Arthropoda			
Insecta			
Diptera	Simulidae	Simulium	1.0
	Tendipedidae	-	13.5
		Σ	14.5
		S	2
		DI	0.36

4.1.5 Salmon River, McClure's Brook, Truro (NS 16, 17)

The Salmon River lies almost entirely in Colchester County in the northern section of Nova Scotia. Much of the river basin area is rural, with agriculture and lumbering the two major industries. Above the sampling station sources of pollution include municipal wastes and effluents from a wood preservation plant, and a woolen mill.

At the sampling station the water is hard (~40 ppm) and high in suspended solids (~1030 ppm), nitrogen and phosphorus. Pentachlorophenols continue to be present. Occasional high levels of sodium and chloride would indicate possible penetration of the salt wedge to this point.

Biological samples taken in this area in 1974 and 1975 show diversity of species but with a preponderance of chironomids and annelid worms.

McClure's Brook is a small brook which drains into the lower reaches of the Salmon River at Truro. Effluent from the Crossley Karastan plant enters the brook above the sampling station.

Water in McClure's Brook is hard, alkaline, high in sulphates (~50 ppm), nitrogen and phosphorus and has a high conductivity. The dissolved oxygen content is usually at acceptable levels, but on occasion has been observed to drop to near zero during the summer months. Occasional high levels of iron (~1.4 ppm) and Zinc (~30 ppb) have also been noted.

The high level of organics in the water is reflected in the fauna of the stream. Diversity is always low, dropping off considerably in the summer months. Chironomids and annelids form the bulk of the organisms present.

WATER QUALITY SURVEILLANCE NETWORK

E.P.S. ATLANTIC REGION 1974-1976

STATION **02NS01DH0002** LATITUDE **45** D **22** M **36** S LONGITUDE **63** D **16** M **56** S

SALMON RIVER AT PARK STREET EXTENSION BRIDGE, TRURO, COLCHESTER COUNTY, NOVA SCOTIA

SAMPLE DATE D	M	Y	TIME AS H	M	02061F TEMP. WATER DEG.C.	08102F OXYGEN DISSOLVED DO O2 MG/L	10301F PH PH UNITS	10301L PH PH UNITS	02041L SPECIFIC CONDUCTANCE USIE/CM	02073L TURBIDITY JTU	10401L RESIDUE NONFILTR MG/L	10451L RESIDUE FILTERABLE MG/L
18	4	74			5.0 61S		5.7 01S	6.7	146	1.5		
12	6	74			16.0 61S		6.4 01S	6.7	49	2.8		
11	7	74			15.0 61S		6.3 01S	6.5	83	13.0	174	56
23	8	74			20.0 61S		7.0 01S	6.0	187	32.0	122	100
24	9	74			11.0 61S			6.8	87	4.5	12	66
22	10	74			3.0 61S		6.4 01S	6.5	60	2.2		
22	5	75			18.			6.0	74	1.6		
11	6	75	17	00	20.	9.6	7.5	7.0	80	1.8		
9	7	75	13	00	22.0 61S	5.4 02S	7.1 01S	6.1	370	80. 71L	L10	
6	8	75	11	00	25.	6.6	7.2	6.8	531	70.0	250	
22	11	75	14	00	10.0		6.8	6.5	137	80.	464	
7	5	76	12	30	8.0	11.6	6.3	6.8	60		2	
14	6	76	12	30	15.0	9.2	6.6	7.2	170		1030	
20	7	76	09	15	20.0	7.3	7.1	7.2	190		77	

SAMPLE DATE D	M	Y	TIME AS H	M	10501L RESIDUE FIXED NONFILTR MG/L	10551L RESIDUE FIXED FILTERABLE MG/L	07112L NITROGEN DISSOLVED NO3 E NO2 N MG/L	07103L NITRATE & NITRITE DISSOLVED NO3 MG/L	07012L NITROGEN TOTAL KJELDAHL N MG/L	15365L PHOSPHORUS DISSOLVED INORG. PO4 P MG/L	15413L PHOSPHORUS TOTAL P MG/L	06001L CARBON TOTAL ORGANIC C MG/L
18	4	74					2.8 10L				0.32 14L	6.2
12	6	74					0.07 10L				0.11 14L	5.3
11	7	74			170	38	L.01 10L				0.153	10.6
23	8	74			99	88	0.38 10L				0.21	8.0
24	9	74			L10	45	0.02 10L				0.16	8.0
22	10	74					0.08 10L				0.035	7.0
22	5	75					L.01 10L				0.065	4.7
11	6	75	17	00			0.24 10L				0.085	8.1
9	7	75	13	00			0.01 10L				1.7	30.8
6	8	75	11	00			0.50 10L				0.52	8.1
22	11	75	14	00			1.39 10L					7.4
7	5	76	12	30			0.035			L.005		
14	6	76	12	30			0.015		1.0	0.25		8.
20	7	76	09	15			5.		0.8	0.31		7.

WATER QUALITY SURVEILLANCE NETWORK

E.P.S. ATLANTIC REGION 1974-1976

STATION **02NS01DH0002** LATITUDE **45** D **22** M **36** S LONGITUDE **63** D **16** M **56** S

SALMON RIVER AT PARK STREET EXTENSION BRIDGE, TRURO, COLCHESTER COUNTY, NOVA SCOTIA

SAMPLE DATE			TIME AS		20103L CALCIUM DISSOLVED	20003P CALCIUM TOTAL	12102L MAGNESIUM DISSOLVED	12002P MAGNESIUM TOTAL	10606L HARDNESS TOTAL LAB CALC.	10101L ALKALINITY TOTAL	16304L SULPHATE DISSOLVED	26302P IRON EXTRBLE.
					CA	CA	MG	MG	CACO3	CACO3	SO4	FE
D	M	Y	H	M	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L
18	4	74			13.0		1.3			18		0.12
12	6	74			5.3		1.2			14		0.09
11	7	74			2.9		1.3			14		1.5
23	8	74			14.0		3.0			36		2.1
24	9	74			6.3		1.5			16		0.26
22	10	74			6.2		1.1			9		0.27
22	5	75			5.1		1.0			1	12.0	
11	6	75	17	00	6.0		1.1			12	5.0	
9	7	75	13	00	25.7		5.0			84	12.0	
6	8	75	11	00	20.5		4.5 03L			68	17.0	
22	11	75	14	00	12.5		2.0			22	14.0	
7	5	76	12	30		5.4		0.8	15.	5	6.	
14	6	76	12	30		16.		4.	56.	20	8.	
20	7	76	09	15		12.		2.4	40.	30	13.	

SAMPLE DATE			TIME AS		25304P MANGANESE EXTRBLE.	29305P COPPER EXTRBLE.	30305P ZINC EXTRBLE.	82302P LEAD EXTRBLE.	80311P MERCURY EXTRBLE.	48302P CADMIUM EXTRBLE.	24303P CHROMIUM EXTRBLE.	06581L HUMIC ACID
					MN	CU	ZN	PB	HG	CD	CR	
D	M	Y	H	M	MG/L	MG/L	MG/L	MG/L	UG/L	MG/L	MG/L	MG/L
18	4	74			0.03	0.014	0.03	0.005		L.001	0.001	6
12	6	74			0.04	L.002	0.009	0.002		L.001	0.001	9
11	7	74			0.12	0.005	0.005	0.002		L.001	0.0016	15
23	8	74			0.31	0.002	0.010	0.004		L.001	0.004	5 82L
24	9	74			0.11	L.002	0.012	L.002		L.001	L.0005	11 82L
22	10	74			0.03	L.002	0.02	0.015	L.05	L.001	L.0005	6 82L
22	5	75							L.05			
11	6	75	17	00		L.002			L.05			
9	7	75	13	00		0.006						
6	8	75	11	00		0.01						
22	11	75	14	00		0.05			L.05			
7	5	76	12	30		L.001			L.1			
14	6	76	12	30		0.007						
20	7	76	09	15		0.005						

WATER QUALITY SURVEILLANCE NETWORK

E.P.S. ATLANTIC REGION 1974-1976

STATION **00NS01DH0026** LATITUDE **45** D **22** M **2** S LONGITUDE **63** D **19** M **10** S

MCCLURES BROOK AT EAST END OF HWY 102 CULVERT NEAR TRURO, COLCHESTER COUNTY, NOVA SCOTIA

SAMPLE DATE			TIME AS		02061F TEMP. WATER	08102F OXYGEN DISSOLVED DO	10301F PH	10301L PH	02041L SPECIFIC CONDUCTANCE	02073L TURBIDITY	10401L RESIDUE NONFILTR.	10451L RESIDUE FILTERABLE
D	M	Y	H	M	DEG.C.	O2 MG/L	PH UNITS	PH UNITS	USIE/CM	JTU	MG/L	MG/L
18	4	74			5.0 61S		5.7 01S	6.3	94	4.4	L10	68
12	6	74			17.0 61S		7.5 01S	6.9	80	7.0	10	162
11	7	74			15.0 61S		7.0 01S	6.5	99	4.5	30	70
23	8	74			20.0 61S		6.8 01S	6.4	347	2.6		
24	9	74			11.0 61S		7.0 01S	6.8	212	6.5	L10	150
22	10	74			3.0 61S		6.8 01S	7.1	143	15.	14	104
22	5	75	11	00	16.0 62S	12.7 02S	7.2 01S	6.9	200		9	
11	6	75	18	00	20.5 62S	12.1 02S	7.7 01S	7.0	260		34	
9	7	75	12	15	21.5 62S	2.7 02S	6.7 01S	7.2			30	
6	8	75	10	30	23.5 62S	0.6 02S	6.8 01S	7.1	750		335	
7	11	75	14	30	7.5 62S	9.7 02S	7.0 01S	7.5	1000		4	
10	2	76	13	30	1.0 62S	10.2 02S	6.4 01S	7.0	380		4	
7	5	76	13	10	7.5	9.8	6.4	7.0	160		3	
14	6	76	13	10	14.0	9.6	6.9	7.2	370		15	
20	7	76	10	00	21.0	5.2	7.4	7.4	400		12	

SAMPLE DATE			TIME AS		10501L RESIDUE FIXED NONFILTR.	10551L RESIDUE FIXED FILTERABLE	07112L NITROGEN DISSOLVED NO3 E NO2	07103L NITRATE & NITRITE DISSOLVED	07012L NITROGEN TOTAL KJELDAHL	15365L PHOSPHORUS DISSOLVED INORG. PO4	15413L PHOSPHORUS TOTAL	06001L CARBON TOTAL ORGANIC
D	M	Y	H	M	MG/L	MG/L	N MG/L	NO3 MG/L	N MG/L	P MG/L	P MG/L	C MG/L
18	4	74			L10	50	0.27 10L				0.025 14L	6.1
12	6	74			6	134	0.89 10L				0.29 14L	9.9
11	7	74			30	48	L.01 10L				0.123	11.1
23	8	74					0.13 10L				0.060	20.2
24	9	74			L10	121	0.87 10L				0.18	8.7
22	10	74			L10	82	0.48 10L				0.050	8.8
22	5	75	11	00				0.21		0.064		20.0
11	6	75	18	00				0.01	1.6	2.51		39.0
9	7	75	12	15				0.02	6.2	1.74		45.0
6	8	75	10	30				17.05	16.0	0.66		70.0
7	11	75	14	30				0.06	1.6	0.70		25.0
10	2	76	13	30				1.37	0.6	0.13		2.0
7	5	76	13	10			L.005			0.145		9.
14	6	76	13	10			0.280		2.	0.15		10.
20	7	76	10	00			0.225		5.	0.485		9.

WATER QUALITY SURVEILLANCE NETWORK

E.P.S. ATLANTIC REGION 1974-1976

STATION **00NS01DH0026** LATITUDE **45** D **22** M **2** S LONGITUDE **63** D **19** M **10** S

MCCLURES BROOK AT EAST END OF HWY 102 CULVERT NEAR TRURO, COLCHESTER COUNTY, NOVA SCOTIA

SAMPLE DATE			TIME AS		20103L CALCIUM DISSOLVED	20003P CALCIUM TOTAL	12102L MAGNESIUM DISSOLVED	12002P MAGNESIUM TOTAL	10606L HARDNESS TOTAL LAB CALC.	10101L ALKALINITY TOTAL	16304L SULPHATE DISSOLVED	26302P IRON EXTRBLE.
					CA	CA	MG	MG	CACO3	CACO3	SO4	FE
D	M	Y	H	M	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L
18	4	74			8.3		1.6			5		0.52
12	6	74			43.0		3.6			43		0.69
11	7	74			7.8		1.5			15		0.60
23	8	74			27.0		5.0			92		1.4
24	9	74			22.5		3.4			37		0.69
22	10	74			10.0		3.1			24		0.73
22	5	75	11	00		19.2		2.9		39	29.0 03L	
11	6	75	18	00		22.2		2.6		34	31.5 03L	
9	7	75	12	15		29.8		4.1		90		
6	8	75	10	30		38.5		9.6		135	45.0 03L	
7	11	75	14	30		27.0		6.4		3	50.0 03L	
10	2	76	13	30		35.0		3.2		40	35.0 03L	
7	5	76	13	10.		22.		2.0	65.	20	20.	
14	6	76	13	10		37.		5.3	110.	80	40.	
20	7	76	10	00		32.		4.4	98.	80	35.	

SAMPLE DATE			TIME AS		25304P MANGANESE EXTRBLE.	29305P COPPER EXTRBLE.	30305P ZINC EXTRBLE.	82302P LEAD EXTRBLE.	80311P MERCURY EXTRBLE.	48302P CADMIUM EXTRBLE.	24303P CHROMIUM EXTRBLE.	06581L HUMIC ACID
					MN	CU	ZN	PB	HG	CD	CR	
D	M	Y	H	M	MG/L	MG/L	MG/L	MG/L	UG/L	MG/L	MG/L	MG/L
18	4	74			0.07	0.008	0.03	0.005		L.001	0.006	6
12	6	74			0.20	L.002	0.011	0.007		L.001	0.003	11
11	7	74			0.08	L.002	0.002	L.002		L.001	0.0010	20
23	8	74			0.36	L.002	0.014	0.004		L.001	0.001	10 82L
24	9	74			0.19	L.002	0.018	L.002		L.001	L.0005	12 82L
22	10	74			0.13	0.002	0.018	0.004	L.05	L.001	L.0005	7 82L
22	5	75	11	00		0.002			L.10			
11	6	75	18	00		0.005			L.10			
9	7	75	12	15		0.007			0.10			
6	8	75	10	30		0.004			0.20			
7	11	75	14	30		0.003			0.20			
10	2	76	13	30		0.002			L.1			
7	5	76	13	10		0.001			L.1			
14	6	76	13	10		L.001						
20	7	76	10	00		0.004						

BIOLOGICAL RESULTS

STATION: NS-16: 02NS01DH0002: Salmon River, Truro

TAXA			SAMPLING PERIOD 1974 12/6-11/7	1975 22/5-11/6
Platyhelminthes				
Turbellaria	Planariidae	Planaria	1	
Annelida				
Oligochaeta		-	8	
	Lumbriculidae	-	-	39.5
Mollusca				
Gastropoda		-	1	
Arthropoda				
Insecta				
Collembola	Isotomidae	Isoturnus	1	
Ephemeroptera	Hepatagenidae	Stenonema	-	0.5
		Stenonema A	-	0.5
	Baetidae	Caenis	14	
		Baetis	-	1.0
	Ephemeridae	Ephemerella	-	0.5
	Leptophlebidae	Paraleptophlebia	-	1.5
Coleoptera	Elmidae	Stenelmis	13	
Diptera	Psychodidae	Pericoma	1	
	Tendipedidae	-	57	50.5
		Σ	96.0	94.0
		S	8	7
		DI	1.82	1.29

BIOLOGICAL RESULTS

STATION: NS-17: 00NS01DH0026: McClures Brook, Truro

TAXA			SAMPLING PERIOD					
			1974 2/6-23/8	1974 23/8-24/9	1974 22/5-11/6	1975 11/6-9/7	1975 9/7-6/8	1975 - 30/11
Chordata								
Pisces								
Anguilliformes	Anguillidae	A. rostrata			1.0	0.5		
Annelida								
Oligochaeta		-		31				
Mollusca								
Gastropoda	Neritidae	-		2				
	Planorbidae	Helisoma						3
Crustacea	Amphipoda		1					
Arthropoda								
Insecta								
Ephemeroptera	Lepotphlebidae	Leptophlebia						1
	Baetidae	Habrophebiodes	2					
Coleoptera	Elmidae	Stenelmis						1
Diptera	Psychodidae	Pericoma	2	2				
	Tendipedidae	-	9	72	20.5		10.5	17
		Tendipes				73.5		
		Σ	13	108	21.5	74.0	10.5	22
		S	3	5	2	2	1.0	4
		DI	1.20	1.18	0.27	0.06	0.0	1.08

4.1.6 East Brook (Maccan River), Southhampton (NS 18)

East Brook is a small brook in Cumberland County which flows into the Maccan River near Southhampton. Drainage from the now abandoned Springhill Coal Mining Operation is the major source of pollution of this river basin.

At the sampling station on East Brook, the water is relatively hard (30-44 ppm) and alkaline, with occasional peaks in conductivity (~900 µsie/cm) and magnesium (~4.0 ppm). Iron levels are relatively high year round (100-770 ppb).

Biological sampling carried out in 1974 and 1975 showed a high species diversity in 1975 as compared with lower diversities in 1974. The number of species collected each year was high, as were the populations.

WATER QUALITY SURVEILLANCE NETWORK

E.P.S. ATLANTIC REGION 1974-1976

STATION **00NS01DL0007** LATITUDE **45** D **35** M **36** S LONGITUDE **64** D **14** M **58** S

EAST BROOK AT MACCAN RIVER AT HWY 302 BRIDGE, SOUTHAMPTON, CUMBERLAND COUNTY, NOVA SCOTIA

SAMPLE DATE			TIME AS		02061F TEMP. WATER	08102F OXYGEN DISSOLVED DO	10301F PH	10301L PH	02041L SPECIFIC CONDUCTANCE	02073L TURBIDITY	10401L RESIDUE NONFILTR.	10451L RESIDUE FILTERABLE
D	M	Y	H	M	DEG.C.	O2 MG/L	PH UNITS	PH UNITS	USIE/CM	JTU	MG/L	MG/L
18	4	74			5.0 61S		6.6 01S	6.4	69	3.6	L1	52
11	6	74			21.0 61S		8.0 01S	6.9	133	1.6		
11	7	74			20.0 61S		7.2 01S	6.3		0.7		
25	8	74			20.0 61S		7.8 01S	6.2		L.1		
7	10	74			12.0 61S		7.4 01S	6.6		0.5		
26	10	74			4.0 61S		6.3 01S	5.9		4.0	21	55
16	5	75	14	25	15.0 62S	9.2 02S	6.5 01S	6.7	900			
19	6	75	17	45	27.0 62S	7.9 02S	8.2 01S	9.2	104			
17	7	75	14	30	27.0 62S	7.7 02S	6.6 01S	8.0	400			
13	8	75	13	00	25.0 62S	8.4 02S	7.5 01S	6.5	280			
9	11	75	16	40	10.0 62S	10.1 02S	7.2 01S	7.2	300			
2	3	76	13	30	0.0 62S	14.0 02S	6.3 01S	6.8	120			
7	5	76	09	20	9.5	10.1	6.3	7.0	90			
9	6	76	13	30	26.0	8.5	6.8	7.5	140			
20	7	76	13	00	26.0	8.5	7.4	7.3	130			

SAMPLE DATE			TIME AS		10501L RESIDUE FIXED NONFILTR.	10551L RESIDUE FIXED FILTERABLE	20103L CALCIUM DISSOLVED	20003P CALCIUM TOTAL	12102L MAGNESIUM DISSOLVED	12002P MAGNESIUM TOTAL	10606L HARDNESS TOTAL LAB CALC.	10101L ALKALINITY TOTAL
D	M	Y	H	M	MG/L	MG/L	CA MG/L	CA MG/L	MG MG/L	MG MG/L	CACO3 MG/L	CACO3 MG/L
18	4	74			L1	18	5.40		1.7			
11	6	74					10.0		3.0			
11	7	74					9.00		2.9			
25	8	74					15.0		3.5			
7	10	74					9.2		2.5			
26	10	74			18	44	6.9		2.0			
16	5	75	14	25				6.34		1.9		9
19	6	75	17	45				9.84		2.4		28
17	7	75	14	30								40
13	8	75	13	00				19.7		4.0		40
9	11	75	16	40				11.0		2.4		
2	3	76	13	30				9.8		2.7		5
7	5	76	09	20				14.		1.4	40.	10
9	6	76	13	30				12.		3.3	44.	20
20	7	76	13	00				8.4		2.2	30.	15

WATER QUALITY SURVEILLANCE NETWORK

E.P.S. ATLANTIC REGION 1974-1976

STATION **00NS01DL0007** LATITUDE **45** D **35** M **36** S LONGITUDE **64** D **14** M **58** S

EAST BROOK AT MACCAN RIVER AT HWY 302 BRIDGE, SOUTHAMPTON, CUMBERLAND COUNTY, NOVA SCOTIA

SAMPLE DATE			TIME AS		30305P ZINC EXTRBLE.	82103P LEAD DISSOLVED	82302P LEAD EXTRBLE.	80311P MERCURY EXTRBLE.	48302P CADMIUM EXTRBLE.	06581L HUMIC ACID
					ZN	PB	PB	HG	CD	
D	M	Y	H	M	MG/L	MG/L	MG/L	UG/L	MG/L	MG/L
18	4	74			0.040		0.006			9
11	6	74			L.001		0.005			12
11	7	74			L.001		0.006			20 82L
25	8	74			0.010		0.002			9 82L
7	10	74			0.10 04P		L.002	L.05		14 82L
26	10	74			0.04		0.002	L.05		8 82L
16	5	75	14	25	0.003 04P		0.003 01P	0.1		11
19	6	75	17	45				L.10	0.001	2
17	7	75	14	30						6
13	8	75	13	00				L.10		5
9	11	75	16	40	L.001 04P		0.004 01P	0.10	L.001	12
2	3	76	13	30	0.005 04P		0.002 01P	L.1	L.001	4
7	5	76	09	20	L.001		L.001	L.1	L.001	10
9	6	76	13	30	L.001		L.001		L.001	9
20	7	76	13	00	L.001		L.001		L.001	15

SAMPLE DATE			TIME AS		10251L ACIDITY PH = 8.3	16304L SULPHATE DISSOLVED	16502L THIOSULFATE TOTAL	16510L THIO-SALTS TOTAL	26302P IRON EXTRBLE.	29105P COPPER DISSOLVED	29305P COPPER EXTRBLE.	30105P ZINC DISSOLVED
					CACO3	SO4	S2O3	S2O3	FE	CU	CU	ZN
D	M	Y	H	M	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L
18	4	74							0.270		0.008	
11	6	74							0.410		L.001	
11	7	74							0.400		L.001	
25	8	74							0.100		L.001	
7	10	74							0.24		0.005	
26	10	74							0.77		0.005	
16	5	75	14	25		20.0 03L		L5.0	0.30 05P		L.002	
19	6	75	17	45		17.0 03L		L5.0			0.001	
17	7	75	14	30		40.0 03L	L5.0	L5.0				
13	8	75	13	00		50.0 03L	L5.0	L5.0	0.064 05P		0.002	
9	11	75	16	40	1.0	30.0 03L	L5.0	L5.0	0.32 05P		0.002	
2	3	76	13	30		25.0 03L	L5.0	L5.0	0.11 05P		0.001	
7	5	76	09	20		15.	L5.	L5.	0.25		L.001	
9	6	76	13	30		30.	L5.	L5.	0.39		0.001	
20	7	76	13	00		30.	L5.	L5.	0.50		0.003	

BIOLOGICAL RESULTS

STATION: NS-18: 00NS01DL0007: East Brook, Maccan River, Southhampton

TAXA			SAMPLING PERIOD						
			1974 11/6-11/7	1974 3/8-25/8	1974 - 7/10	1975 16/5-19/6	1975 19/6-17/7	1975 17/7-13/8	1975 - 9/11
Annelida									
Oligochaeta			7	-	-				
Hirudinea	Hirudidae		-	1	-				
Mollusca									
Gastropoda	Ancyclidae	Ferrissia					0.5		
	Physidae	Physa	-	4	-		0.5	3.0	
	Planorbidae	Helisoma	-	-	4			1.0	0.5
Arthropoda									
Crustacea									
Ispoda	Asellidae	-	-	-	2				
Insecta									
Plecoptera	Pteronarcidae	Allonarcys	-	-	-	0.5	2.0		
	Perlidae	Acroneuria	-	-	-	14.0	11.5	4.0	0.5
		Paragnetina	11	-	1				
Ephemeroptera	Heptageniidae	Heptagenia	-	-	-	0.5	3.5	6.0	
		Stenonema	5	3	55			9.0	
		Stenonema A	-	-	-			8.0	7.0
	Baetidae	Baetis	-	-	-	13.5	11.5	8.5	1.0
		Centroptilum	-	-	-	1.0		1.0	
		Habrophlebiodes	-	4	14				
		Caenis	-	-	-				2.0
		Tricorythodes	-	-	-			2.0	
	Ephemeridae	Ephemerella 3	-	-	-	3.0	15.0		
		Ephemerella 4	-	-	-	0.5			16.5
		Ephemerella 5	-	-	-	3.5			
	Leptophlebidae	Paraleptophlebia	53	-	-	2.0			
		Habrophlebia	54	-	-				
		Leptophlebia	-	-	-			1.0	1.0
Odonata	Aeshnidae	Epiaeschna	-	1	-				
	Coenagrionidae	Argia	-	1	-				
Megaloptera	Sialidae	Sialis	-	1	1				

Cont'd

STATION: NS-18 (CONT'D)

TAXA			SAMPLING PERIOD 1974 11/6-11/7	1974 3/8-25/8	1974 - 7/10	1975 16/5-19/6	1975 19/6-17/7	1975 17/7-13/8	1975 - 9/11
Arthropoda									
Insecta									
Tricoptera	Helicopsychidae	Helicopsyche	-	-	1			0.5	
	Hydropsychidae	Hydropsyche	4	-	-	2.0	1.5	2.0	
	Lepidostomatidae	Lepidostoma	-	-	-	1.0			
	Limnephilidae	Limnephilus	-	2	-				
		Drusinus 1	-	-	-	7.0			
		Drusinus 2	-	-	-	1.0	1.5		
	Philopotamide	Chimarra	-	-	-	1.0	1.5		
	Psychomyiidae	Polycentropus	1	11	8				
		Neureclipsis	-	-	-			2.5	3.0
	Odontoceridae	Psilotreta	-	-	-			0.5	
Coleoptera	Psephenidae	Psephenus	-	-	-			1.0	
	Elmidae	Macronychus	-	-	-		2.0	0.5	
		Stenelmis	1	13	-	1.0	7.0	0.5	
		Stenelmis	-	-	-			0.5	1.0
Diptera	Tipulidae	Antocha	-	-	-	0.5			
	Tendipedidae	-	354	50	32	16.0	32.5	10.5	2.7
	Rhagionidae	Atherix	2	-	-			2.0	0.5
		Σ	492	90	118	67	64	66	89
		S	10	11	9	17	20	11	12
		DI	1.44	2.15	2.09	3.08	3.66	2.41	2.73

4.1.7 River Phillip and Black Brook (NS 19, 20)

The drainage basin of River Phillip is located in Cumberland County and is generally rural in nature. One of the major tributaries to River Phillip is Black Brook, which receives effluent directly from the Challenge Mills textile plant.

Water in Black Brook is relatively hard, alkaline and has occasional high levels of conductivity, sulphates, magnesium, nitrates and iron (~1.7 ppm).

Conditions in River Phillip are similar, although the high levels of magnesium and conductivity are somewhat reduced.

Biological samples taken at both stations indicate high species diversity with high populations and representatives from most of the commonly occurring organisms.

WATER QUALITY SURVEILLANCE NETWORK

E.P.S. ATLANTIC REGION 1974-1976

STATION **00NS01DN0011** LATITUDE **45** D **44** M **8** S LONGITUDE **63** D **52** M **4** S

BLACK BROOK AT BRIDGE 350 METRES ABOVE CONFLUENCE WITH RIVER PHILLIP, OXFORD, CUMBERLAND COUNT

SAMPLE DATE			TIME AS		02061F TEMP. WATER	08102F OXYGEN DISSOLVED DO	10301F PH	10301L PH	02041L SPECIFIC CONDUCTANCE	02073L TURBIDITY	10401L RESIDUE NONFILTR.	10451L RESIDUE FILTERABLE
D	M	Y	H	M	DEG.C.	O2 MG/L	PH UNITS	PH UNITS	USIE/CM	JTU	MG/L	MG/L
18	4	74			5.0 61S		5.4 01S	6.4	98	7.0	13	65
11	6	74			18.0 61S		6.7 01S	6.8	259	2.5		
11	7	74			17.0 61S		6.6 01S	6.3	217	0.7		
25	8	74			19.0 61S		7.2 01S	6.2	605	1.6		
7	10	74			12.0 61S		6.5 01S	7.0	302	4.0	L10	188
26	10	74			4.0 61S		6.8 01S	5.6	102	14.	76	71
16	5	75	12	30	13.0 62S	9.3 02S	6.1 01S	6.7	200		4	
19	6	75	19	15	25.0 62S	9.7 02S	7.5 01S	7.9	123		4	
17	7	75	09	00	24.0 62S	7.7 02S	6.6 01S	7.1	690		3	
13	8	75	11	15	20.5 62S	6.1 02S	6.7 01S	6.3	1100		L2	
9	11	75	15	10	11.5 62S	8.9 02S	6.8 01S	7.5	700		3	
2	3	76	12	00	0.0 62S	13.0 02S	6.2 01S	7.0	180		L2	
14	6	76	17	40	16.5	10.0	6.8	7.6	390		L5	
20	7	76	11	35	22.0	8.4	6.9	7.2	280		17	

SAMPLE DATE			TIME AS		10501L RESIDUE FIXED NONFILTR.	10551L RESIDUE FIXED FILTERABLE	07112L NITROGEN DISSOLVED NO3 E NO2	07103L NITRATE & NITRITE DISSOLVED	07012L NITROGEN TOTAL KJELDAHL	15365L PHOSPHORUS DISSOLVED INORG. PO4	15413L PHOSPHORUS TOTAL	06001L CARBON TOTAL ORGANIC
D	M	Y	H	M	MG/L	MG/L	N MG/L	NO3 MG/L	N MG/L	P MG/L	P MG/L	C MG/L
18	4	74			L10	17	0.10 10L				0.010 14L	8.7
11	6	74					0.03 10L				0.02 14L	7.4
11	7	74					L.01 10L				0.018	11.0
25	8	74					0.04 10L				0.010	28.2
7	10	74			L10	166	0.04 10L				0.050	6.4
26	10	74			75	53	0.35 10L				0.080	10.4
16	5	75	12	30				0.05		L.01		8.0
19	6	75	19	15				L.01	0.6	0.01		5.0
17	7	75	09	00				0.08	1.6	L.005		10.0
13	8	75	11	15				L.01	0.4	L.005		9.0
9	11	75	15	10				L.01	0.6	0.11		15.0
2	3	76	12	00				0.62		L.005		4.0
14	6	76	17	40			0.085		0.4	L.005		7.
20	7	76	11	35			L.005		0.5	L.005		12.

WATER QUALITY SURVEILLANCE NETWORK

E.P.S. ATLANTIC REGION 1974-1976

STATION **00NS01DN0011** LATITUDE **45** D **44** M **8** S LONGITUDE **63** D **52** M **4** S

BLACK BROOK AT BRIDGE 350 METRES ABOVE CONFLUENCE WITH RIVER PHILLIP, OXFORD, CUMBERLAND COUNT

SAMPLE DATE			TIME AS		20103L CALCIUM DISSOLVED	20003P CALCIUM TOTAL	12102L MAGNESIUM DISSOLVED	12002P MAGNESIUM TOTAL	10606L HARDNESS TOTAL LAB CALC.	10101L ALKALINITY TOTAL	16304L SULPHATE DISSOLVED	26302P IRON EXTRBLE.
					CA	CA	MG	MG	CACO3	CACO3	SO4	FE
D	M	Y	H	M	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L
18	4	74			5.0		1.3			7		0.21
11	6	74			13.0		2.6			14		0.22
11	7	74			11.0		2.7			13		0.30
25	8	74			24.0		4.2			20		0.22
7	10	74			13.0		3.4			27		0.37
26	10	74			6.5		0.9			6		1.7
16	5	75	12	30		7.22		1.7		8	21.0 03L	
19	6	75	19	15		16.0		2.6		10	L5.0 03L	
17	7	75	09	00		24.6		3.5		25	40.0 03L	
13	8	75	11	15		31.0		4.5		25	55.0 03L	
9	11	75	15	10		15.0		2.8		15	35.0 03L	
2	3	76	12	00		9.5		1.6		7	20.0 03L	
14	6	76	17	40		18.		3.9	61.	7	40.	
20	7	76	11	35		12.		2.6	40.	15	25.	

SAMPLE DATE			TIME AS		25304P MANGANESE EXTRBLE.	29305P COPPER EXTRBLE.	30305P ZINC EXTRBLE.	82302P LEAD EXTRBLE.	80311P MERCURY EXTRBLE.	48302P CADMIUM EXTRBLE.	24303P CHROMIUM EXTRBLE.	06581L HUMIC ACID
					MN	CU	ZN	PB	HG	CD	CR	
D	M	Y	H	M	MG/L	MG/L	MG/L	MG/L	UG/L	MG/L	MG/L	MG/L
18	4	74			0.07	0.005	0.02	0.002				8
11	6	74			0.08	L.002	L.002	0.005				8
11	7	74			0.05	0.002	L.002	L.002				17
25	8	74			0.16	0.010	0.013	L.002				9 82L
7	10	74			0.20	L.002	0.016	L.002	L.05			11 82L
26	10	74				0.002	0.05	0.004	L.05			6 82L
16	5	75	12	30		L.002			L.10			
19	6	75	19	15		L.001			0.10			
17	7	75	09	00		0.002			0.10			
13	8	75	11	15		0.002			L.10			
9	11	75	15	10		0.002			0.20			
2	3	76	12	00		L.001			L.1			
14	6	76	17	40		L.001						
20	7	76	11	35		0.002						

WATER QUALITY SURVEILLANCE NETWORK

E.P.S. ATLANTIC REGION 1974-1976

STATION **00NS01DN0012** LATITUDE **45** D **44** M **36** S LONGITUDE **63** D **50** M **55** S

RIVER PHILIP AT OXFORD 1.5 MILES BELOW CONFLUENCE OF BLACK RIVER, CUMBERLAND COUNTY, NOVA SCOT

SAMPLE DATE			TIME AS		02061F TEMP. WATER	08102F OXYGEN DISSOLVED DO	10301F PH	10301L PH	02041L SPECIFIC CONDUCTANCE	02073L TURBIDITY	10401L RESIDUE NONFILTR.	10451L RESIDUE FILTERABLE
D	M	Y	H	M	DEG.C.	O2 MG/L	PH UNITS	PH UNITS	USIE/CM	JTU	MG/L	MG/L
18	4	74			5.0 61S		5.3 01S	6.3	95	8.0	17	73
11	6	74			16.0 61S		6.3 01S	6.8	199	2.8		
11	7	74			16.0 61S		6.8 01S	6.5	192	2.0		
27	8	74			20.0 61S		7.6 01S	6.7	407	2.0		
7	10	74			10.0 61S		6.3 01S	6.6	207	2.0		
26	10	74			4.0 61S		6.6 01S	5.5	81	20.	78	64
16	5	75			12.			6.9	94	2.2		
19	6	75	12	30	23.5	9.3	8.0	6.0	243	1.2		
17	7	75	10	00	24.5	7.4	6.5	7.1	384	2.0 71L		
13	8	75	10	15	20.0	7.4	6.6	6.5	581	1.0		
9	11	75	14	20	12.5	9.8	6.8	6.9	305	1.8		
7	5	76	11	00	9.0	10.8	6.1	6.7	150		1	
14	6	76	18	00	15.0	10.2	6.9	7.2	250		L5	
20	7	76	11	20	24.0	9.0	6.9	7.1	330		9	

SAMPLE DATE			TIME AS		10501L RESIDUE FIXED NONFILTR.	10551L RESIDUE FIXED FILTERABLE	07112L NITROGEN DISSOLVED NO3 E NO2	07103L NITRATE & NITRITE DISSOLVED	07012L NITROGEN TOTAL KJELDAHL	15365L PHOSPHORUS DISSOLVED INORG. PO4	15413L PHOSPHORUS TOTAL	06001L CARBON TOTAL ORGANIC
D	M	Y	H	M	MG/L	MG/L	N MG/L	NO3 MG/L	N MG/L	P MG/L	P MG/L	C MG/L
18	4	74			L10	18	0.16 10L				0.010 14L	5.5
11	6	74					0.03 10L				0.010 14L	6.0
11	7	74					L.01 10L				0.027	10.6
27	8	74					0.03 10L				0.005	5.4
7	10	74					0.02 10L				0.010	8.7
26	10	74			75	42	0.31 10L				0.11	9.8
16	5	75					L.01 10L				0.015	5.0
19	6	75	12	30			L.01 10L				0.020	7.2
17	7	75	10	00			0.05 10L				0.015	2.2
13	8	75	10	15			0.02 10L				0.025	2.6
9	11	75	14	20			0.02 10L				0.015	7.5
7	5	76	11	00			0.065		15.	L.005		7.
14	6	76	18	00			0.055		15.			7.
20	7	76	11	20			0.01		30.			7.

WATER QUALITY SURVEILLANCE NETWORK

E.P.S. ATLANTIC REGION 1974-1976

STATION **00NS01DN0012** LATITUDE **45** D **44** M **36** S LONGITUDE **63** D **50** M **55** S

RIVER PHILIP AT OXFORD 1.5 MILES BELOW CONFLUENCE OF BLACK RIVER, CUMBERLAND COUNTY, NOVA SCOT

SAMPLE DATE			TIME AS		20103L CALCIUM DISSOLVED	20003P CALCIUM TOTAL	12102L MAGNESIUM DISSOLVED	12002P MAGNESIUM TOTAL	10606L HARDNESS TOTAL LAB CALC.	10101L ALKALINITY TOTAL	16304L SULPHATE DISSOLVED	26302P IRON EXTRBLE.
D	M	Y	H	M	CA MG/L	CA MG/L	MG MG/L	MG MG/L	CACO3 MG/L	CACO3 MG/L	SO4 MG/L	FE MG/L
18	4	74			5.2		0.9			7		0.22
11	6	74			10.0		1.2			10		0.17
11	7	74			9.5		1.2			10		0.23
27	8	74			22.0		1.8			17		0.25
7	10	74			10.0		1.4			14		0.22
26	10	74			5.4		1.0			7		1.6
16	5	75			5.1		0.7			4	12.0	
19	6	75	12	30	11.7		1.2			11	24.0	
17	7	75	10	00	18.5		1.4			17	35.0	
13	8	75	10	15	25.0		1.6 03L			16	51.0	
9	11	75	14	20	14.5		1.9			11	35.0	
7	5	76	11	00		11.		0.8		5	15.	
14	6	76	18	00		13.		1.4	38.	10	15.	
20	7	76	11	20		16.		1.6	47.	15	30.	

SAMPLE DATE			TIME AS		25304P MANGANESE EXTRBLE.	29305P COPPER EXTRBLE.	30305P ZINC EXTRBLE.	82302P LEAD EXTRBLE.	80311P MERCURY EXTRBLE.	48302P CADMIUM EXTRBLE.	24303P CHROMIUM EXTRBLE.	06581L HUMIC ACID
D	M	Y	H	M	MN MG/L	CU MG/L	ZN MG/L	PB MG/L	HG UG/L	CD MG/L	CR MG/L	MG/L
18	4	74			0.06	0.005	0.013	0.004				6
11	6	74			0.06	L.002	L.002	0.007				5
11	7	74			0.07	L.002	L.002	0.002				16
27	8	74			0.10	L.002	0.012	0.005				7 82L
7	10	74			0.05	L.002	0.02	L.002	L.05			7 82L
26	10	74				0.008	0.30 04P	0.005	L.05			6 82L
16	5	75							L.05			
19	6	75	12	30		L.002						
17	7	75	10	00		L.002						
13	8	75	10	15		0.002						
9	11	75	14	20		L.002						
7	5	76	11	00		0.001			L.1			
14	6	76	18	00		L.001						
20	7	76	11	20		0.002						

BIOLOGICAL RESULTS

STATION: NS-20: OONSO1DNOO12: River Phillip, Oxford

TAXA			SAMPLING PERIOD 1974 22/6-27/8	1974 - 7/10	1975 16/5-19/6	1975 19/6-17/7	1975 17/7-13/8	1975 - 9/11
Annelida								
Oligochaeta			-	18				-
	Lumbriculidae	-	-	-		7.0		-
Hirudinea			-	19				-
	Hirudinidae		21	-				-
Mollusca								
Gastropoda			-	16				-
	Amnicolidae	Amnicola	-	-				1
Pelecypoda			-	5				-
Arthropoda								
Insecta								
Plecoptera	Pteronarcidae	Allonarcys	-	-			1.0	-
		Phasganophora	-	-	4.0		0.5	-
	Nemouridae	Nemoura	-	-	.5			-
	Perlidae	Acroneuria	-	-	1.0			1
	Perlodidae	Isogenus	-	-	7.0			-
	Chloroperlidae	Alloperla	-	-	0.5			-
Ephemeroptera	Heptageniidae	Heptagenia	-	-				-
		Rhithrogenia	-	-	0.5			-
		Stenonema	-	67			1.0	6
		Stenonema A	-	-	1.5			-
		Stenonema B	-	-	0.5			-
	Baetidae	Baetis	-	-	0.5			-
		Centroptilum	-	-	6.5		4.5	-
		Habrophlebiodes	-	-				-
		Caenis	6	8		0.5		-
		Tricorythodes	-	-		116.0	5.5	-
	Siphlonuridae	Siphonurus	-	-	1.0			-
	Ephemeridae	Ephemera	2	5		0.5		-
		Ephemerella 1	-	-	22.0	0.5		-
		Ephemerella 2	-	-	33.5			-

Cont'd

STATION: NS-20 (CONT'D)

TAXA			SAMPLING PERIOD					
			1974 22/6-27/8	1974 - 7/10	1975 16/5-19/6	1975 19/6-17/7	1975 17/7-13/8	1975 - 9/11
Arthropoda								
Insecta								
Ephemeroptera	Ephemeridae	Ephemerella 3	-	-	2.0			-
		Ephemerella 4	-	-	16.5	21.5		-
		Ephemerella 5	-	-		0.5		-
	Leptophlebidae	Paraleptophlebia	-	-	24.5	4.5	1.5	-
		Habroleptophlebia	3	36	0.5			-
		Leptophlebia	-	-	0.5			-
Odonata	Aeshnidae	Boyeria	-	-	0.5			-
		Epiaeschna	-	1				-
Megaloptera	Sialidae	Sialis	-	1				-
	Corydalidae	Corydalus	3	-				-
		Nigronia	-	-				1
Tricoptera	Hydropsychidae	Hydropsyche	-	24	1.0	2.5	7.5	6
	Lepidostomatidae	Lepidostoma	-	-	12.5	1.5		-
	Limnephilidae	Drusinus	-	-		0.5		-
		Limnephilus	2	1				-
	Psychomyiidae	Polycentropus	10	23	0.5		16.0	39
Coleoptera	Dytiscidae	Oreodytes	-	-		0.5		-
	Elmidae	Stenelmis	-	2		0.5	0.5	-
		Optioserus	-	-			0.5	-
Diptera	Tipulidae	Antocha	-	-	1.5			5
	Tendipedidae	-	32	211	125.0	113.0	148.5	354
	Rhagionidae	Atherix	-	1				-
	Heleidae	-	-	-			0.5	-
		Σ	79	438	263.5	269.50	187.50	422
		S	8	16	23	14	12	9
		DI	2.32	2.60	2.70	1.80	1.26	0.96

STATION: NS-19: OONSOIDNOOII: Black Brook, Oxford

TAXA			SAMPLING PERIOD 1974 11/6-27/8	1975 16/5-19/6	1975 19/6-17/7	1975 17/7-13/8	1975 13/8-9/11
Coelenterata							
Hydrozoa		-	6				
Annelida							
Hirudinea		-	25				
Mollusca							
Gastropoda	Ammicolidae	Amnicola	12	1	1.0		1.5
	Physidae	Physa	1		4.5	1.5	0.5
Pelecypoda		-					
Arthropoda							
Insecta							
Plecoptera	Perlidae	Acroneuria				0.5	
Ephemeroptera	Heptageniidae	Heptagenia			10.5		
		Stenonema			0.5	0.5	
	Baetidae	Centroptilium		1	30.5	20.0	
		Caenis			3.5	1.5	5.5
		Tricorythodes			15.5	0.5	
	Ephemeridae	Ephemerella 1					
		Ephemerella 6			1.0		
	Leptophlebidae	Paraleptophebia	83				
		Leptophlebia				16	20
Odonata	Gomphidae	Gomphus			0.5		
	Coenagrionidae	-	3				
Megaloptera	Sialidae	Sialis	2				
	Cordulidae	Cordulus	2				
Tricoptera	Leptoceridae	Oecetis				1.5	
	Limnephilidae	Drusinus		1	1.0		
	Psychomyiidae	Polycentropus	3		0.5	4	5.5

Cont'd

STATION: NS-19 (CONT'D)

TAXA				SAMPLING PERIOD 1974 11/6-27/8	1975 16/5-19/6	1975 19/6-17/7	1975 17/7-13/8	1975 13/8-9/11
Arthropoda								
Insecta								
Coleoptera	Dytiscidae	Oreodytes				8.5		
	Elmidae	Stenelmis		1				
Diptera	Tendipedidae	-		13	105	61.0	31.0	151.0
			Σ	147.0	109.0	138.0	77.0	184.0
			S	11	4	12	10	6
			DI	1.99	0.30	2.40	2.20	0.96

4.1.8 La Planche River (NS 21)

The La Planche River is located in Cumberland County in northeastern Nova Scotia. It receives effluent from municipal waste systems and the industrial park at Amherst.

Water at the sampling station is slightly hard, alkaline and high in nitrogen, and total organic carbon. Dissolved oxygen levels are relatively high year round (8-9 ppm) but drop to dangerous levels during the summer months (~4.6 ppm). Humic acid levels are high (~20 ppm) as are iron (1.2-2.0 ppm), manganese (~0.26 ppm) and zinc (~70 ppm).

No biological data are available for this station.

WATER QUALITY SURVEILLANCE NETWORK

E.P.S. ATLANTIC REGION 1974-1976

STATION **00NS01DL0008** LATITUDE **45** D **50** M **14** S LONGITUDE **64** D **13** M **32** S

LA PLANCHE RIVER AT HWY 2 BRIDGE, AMHERST, CUMBERLAND COUNTY, NOVA SCOTIA

SAMPLE DATE			TIME AS		02061F TEMP. WATER	08102F OXYGEN DISSOLVED DO O2	10301F PH	10301L PH	02041L SPECIFIC CONDUCTANCE	02073L TURBIDITY	10401L RESIDUE NONFILTR.	10451L RESIDUE FILTERABLE
D	M	Y	H	M	DEG.C.	MG/L	PH UNITS	PH UNITS	USIE/CM	JTU	MG/L	MG/L
18	4	74			9.0 61S		5.7 01S	6.2	103	22.0	49	79
18	6	74			16.0 61S		6.2 01S	7.1	93	23.	79	79
22	7	74			17.0 61S		6.1 01S	6.5	103	19.0	42	86
25	8	74			17.0 61S		6.8 01S	6.2	113	8.0	33	87
7	10	74			12.5 61S		6.5 01S	6.8	166	17.	43	134
26	10	74			5.0 61S		6.3 01S	6.3	151	18.	63	118
16	5	75	13	15	15.5 62S	5.9 02S	5.9 01S	6.4	50		25	
19	6	75	16	00	24.0 62S	8.4 02S	6.8 01S	7.6	42		24	
17	7	75	12	30	21.0 62S		6.4 01S	7.5	167		20	
13	8	75	16	30	25.0 62S	4.6 02S	7.4 01S	5.8	200		35	
9	11	75	17	30	11.0 62S	8.4 02S	6.7 01S	7.1	400		8	
2	3	76	14	30	0.0 62S	8.4 02S	5.6 01S	6.7	90		2	
7	5	76	08	15	9.0	8.2	5.8	6.3	70		10	
9	6	76	14	20	23.0	9.1	6.6	7.2	110		20	
20	7	76	14	00	22.0	4.9	6.2	6.4	110		32	

SAMPLE DATE			TIME AS		10501L RESIDUE FIXED NONFILTR.	10551L RESIDUE FIXED FILTERABLE	07112L NITROGEN DISSOLVED NO3 E NO2 N	07103L NITRATE & NITRITE DISSOLVED NO3	07012L NITROGEN TOTAL KJELDAHL N	15365L PHOSPHORUS DISSOLVED INORG. PO4 P	15413L PHOSPHORUS TOTAL P	06001L CARBON TOTAL ORGANIC C
D	M	Y	H	M	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L
18	4	74			L10	27	0.60 10L				0.17 14L	14.0
18	6	74			67	52	0.45 10L				0.19 14L	18.8
22	7	74			40	50	0.04 10L				0.135	23.3
25	8	74			L10	62	0.09 10L				0.090	
7	10	74			36	99	0.10 10L				0.12	21.0
26	10	74			59	80	L.01 10L				0.080	18.3
16	5	75	13	15				L.01		0.036		70.0
19	6	75	16	00				L.01	1.3	0.02		12.0
17	7	75	12	30				1.38	1.6	0.15		21.0
13	8	75	16	30				1.35	2.4	0.16		22.0
9	11	75	17	30				L.01	1.0	L.005		25.0
2	3	76	14	30				0.62		L.005		15.0
7	5	76	08	15			L.005		0.7	L.005		23.
9	6	76	14	20			0.090		0.8	0.1		20.
20	7	76	14	00			L.005		1.5	L.005		43.

WATER QUALITY SURVEILLANCE NETWORK

E.P.S. ATLANTIC REGION 1974-1976

STATION **00NS01DL0008** LATITUDE **45** D **50** M **14** S LONGITUDE **64** D **13** M **32** S

LA PLANCHE RIVER AT HWY 2 BRIDGE, AMHERST, CUMBERLAND COUNTY, NOVA SCOTIA

SAMPLE DATE			TIME AS		20103L CALCIUM DISSOLVED	20003P CALCIUM TOTAL	12102L MAGNESIUM DISSOLVED	12002P MAGNESIUM TOTAL	10606L HARDNESS TOTAL LAB CALC.	10101L ALKALINITY TOTAL	16304L SULPHATE DISSOLVED	26302P IRON EXTRBLE.
D	M	Y	H	M	CA MG/L	CA MG/L	MG MG/L	MG MG/L	CACO3 MG/L	CACO3 MG/L	SO4 MG/L	FE MG/L
18	4	74			7.2		1.6			17		1.2
18	6	74			8.3		1.5			21		1.90
22	7	74			7.5		1.5			13		1.2
25	8	74			11.0		1.8			23		2.0
7	10	74			9.7		2.7			23		1.8
26	10	74			7.1		2.4			11		1.5
16	5	75	13	15		4.51		1.1		16	6.1 03L	
19	6	75	16	00		8.12		1.2		11	L5.0 03L	
17	7	75	12	30		13.1		2.0		25	6.0 03L	
13	8	75	16	30		17.9		2.8		25	15.0 03L	
9	11	75	17	30		12.0		3.2		10	30.0 03L	
2	3	76	14	30		6.6		1.2		15	6.0 03L	
7	5	76	08	15		8.3		0.9	25.	10	6.	
9	6	76	14	20		9.6		1.9	32.	20	6.	
20	7	76	14	00		8.0		1.7	27.	20	15.	

SAMPLE DATE			TIME AS		25304P MANGANESE EXTRBLE.	29305P COPPER EXTRBLE.	30305P ZINC EXTRBLE.	82302P LEAD EXTRBLE.	80311P MERCURY EXTRBLE.	48302P CADMIUM EXTRBLE.	24303P CHROMIUM EXTRBLE.	06581L HUMIC ACID
D	M	Y	H	M	MN MG/L	CU MG/L	ZN MG/L	PB MG/L	HG UG/L	CD MG/L	CR MG/L	MG/L
18	4	74			0.08	0.007	0.05	0.010				15
18	6	74			0.26	L.002	0.007	0.006				20
22	7	74			0.13	0.002	0.002	0.004				30 82L
25	8	74			0.22	L.002	0.012	0.002				20 82L
7	10	74			0.19	L.002	0.02	0.014	L.05			30 82L
26	10	74				0.005	0.07	0.002	L.05			20 82L
16	5	75	13	15		L.002			L.10			
19	6	75	16	00		L.001			L.10			
17	7	75	12	30		0.005			0.20			
13	8	75	16	30		0.009			L.10			
9	11	75	17	30		0.005			0.10			
2	3	76	14	30		0.004			L.1			
7	5	76	08	15		L.001			L.1			
9	6	76	14	20		L.001						
20	7	76	14	00		0.001						

4.1.9 Little East River, Lunenburg Co. (NS 22)

Little East River is a small stream flowing into Mahone Bay. Just above its mouth the stream receives effluent from the Masonite Canada plant (formerly Anil).

Below the effluent entry stream water is relatively soft, low in pH (4.1-6.1), and high in dissolved and suspended solids. There is also a high organic load, as indicated by carbon content. Dissolved oxygen levels are relatively low year round, but drop severely to 1-2 ppm during summer months. Occasional high levels of manganese (~1.9 ppm), iron (~2.6 ppm) and zinc (~0.200 ppm) were noted during the three year period. Lignosulphates (~240 ppm) and humic acids (~200) were also recorded at high levels.

Although still far from favourable, the levels of many of these parameters showed improvements during 1976. No biological information was available for this station.

A previous detailed survey of the effects of this effluent has been published by EPS (Machell et. al., 1974).

WATER QUALITY SURVEILLANCE NETWORK

E.P.S. ATLANTIC REGION 1974-1976

STATION **00NS01EH0003** LATITUDE **44** D **34** M **8** S LONGITUDE **64** D **8** M **42** S

LITTLE EAST RIVER AT HWY 329 ABOUT 1.9 MILES SOUTHEAST OF EAST RIVER, LUNENBURG COUNTY, NOVA S

SAMPLE DATE D	M	Y	TIME AS H	M	02061F TEMP. WATER DEG.C.	08102F OXYGEN DISSOLVED DO O2 MG/L	10301F PH PH UNITS	10301L PH PH UNITS	02041L SPECIFIC CONDUCTANCE USIE/CM	02073L TURBIDITY JTU	10401L RESIDUE NONFILTR MG/L	10451L RESIDUE FILTERABLE MG/L
5	4	74			3.0 61S		5.6 01S	5.6	69	32.	97	68
31	5	74			9.0 61S		4.1 01S	6.1	62	25.	48	77
28	6	74			16.0 61S		4.6 01S	6.2	144	0.3		
8	8	74			21.0 61S		5.3 01S	6.0	265	17.	66	323
9	9	74			15.0 61S		5.9 01S	6.0	95	27.	54	121
25	10	74			5.0 61S		5.8 01S	6.6	64	12.	28	105
15	5	75	12	15	15.0 62S	6.4 02S	5.5 01S	5.4	70		30	
19	6	75	06	30	19.0 62S	1.7 02S	5.0 01S	5.3	160		100	
8	7	75	16	20	21.5 62S	1.3 02S		4.7	442		140	
5	8	75	19	15	20.5 62S	1.1 02S	5.7 01S	5.2	240		160	
15	11	75	14	15	9.5 62S	7.1 02S	5.2 01S	5.6	200		30	
11	2	76	15	15	0.0 62S	9.5 02S	6.1 01S	6.0	120		50	
12	5	76	13	00	10.0	8.4	4.8	6.0	70		12	
7	7	76	11	00	21.0	3.0	5.1	6.0	90		30	
27	7	76	12	20	22.0	3.4	4.7	5.9	110		33	

SAMPLE DATE D	M	Y	TIME AS H	M	10501L RESIDUE FIXED NONFILTR MG/L	10551L RESIDUE FIXED FILTERABLE MG/L	07112L NITROGEN DISSOLVED NO3 E NO2 N MG/L	07103L NITRATE & NITRITE DISSOLVED NO3 MG/L	07012L NITROGEN TOTAL KJELDAHL N MG/L	15365L PHOSPHORUS DISSOLVED INORG. PO4 P MG/L	15413L PHOSPHORUS TOTAL P MG/L	06001L CARBON TOTAL ORGANIC C MG/L
5	4	74			L10	29	0.02 10L				0.185 14L	75.5
31	5	74			L10	37	0.01 10L				0.21 14L	51.1
28	6	74					L.01 10L				0.495	224.
8	8	74			L10	159	0.22 10L				0.50	560.
9	9	74			L10	48	0.02 10L				0.36	115.
25	10	74			13	49	0.11 10L				0.12	57.1
15	5	75	12	15				0.02		0.142		20.0
19	6	75	06	30				0.13	3.0	0.702		290.0
8	7	75	16	20				0.35	6.7	0.88		825.0
5	8	75	19	15				0.14	1.9	0.01		305.0
15	11	75	14	15				0.03	1.5	0.02		50.0
11	2	76	15	15				0.03	1.0	0.02		60.0
12	5	76	13	00			L.005		1.2	0.025		50.
7	7	76	11	00			0.20		2.9	L.005		75.
27	7	76	12	20			0.015		1.7	L.044		71.

WATER QUALITY SURVEILLANCE NETWORK

E.P.S. ATLANTIC REGION 1974-1976

STATION **00NS01EH0003** LATITUDE **44** D **34** M **8** S LONGITUDE **64** D **8** M **42** S

LITTLE EAST RIVER AT HWY 329 ABOUT 1.9 MILES SOUTHEAST OF EAST RIVER, LUNENBURG COUNTY, NOVA S

SAMPLE DATE			TIME AS		20103L CALCIUM DISSOLVED	20003P CALCIUM TOTAL	12102L MAGNESIUM DISSOLVED	12002P MAGNESIUM TOTAL	10606L HARDNESS TOTAL LAB CALC.	10101L ALKALINITY TOTAL	16304L SULPHATE DISSOLVED	26302P IRON EXTRBLE.
D	M	Y	H	M	CA MG/L	CA MG/L	MG MG/L	MG MG/L	CACO3 MG/L	CACO3 MG/L	SO4 MG/L	FE MG/L
5	4	74			4.3		1.7			9		0.35
31	5	74			3.8		1.5			10		0.46
28	6	74			11.0		4.1			38		2.0
8	8	74			28.0		10.			L1		2.6
9	9	74			7.0		2.8			32		0.85
25	10	74			4.1		1.7			11		
15	5	75	12	15		3.93		1.3		8	12.0 03L	
19	6	75	06	30		11.2		2.8		15	28.5 03L	
8	7	75	16	20		36.0		9.3			L5.0 03L	
5	8	75	19	15		22.6		6.3			170.0 03L	
15	11	75	14	15		4.2		1.3		6	9.0 03L	
11	2	76	15	15		9.4		2.0		25	20.0 03L	
12	5	76	13	.00		5.0		0.7	15.	7	8.	
7	7	76	11	00		7.8		1.3	25.	20	4.	
27	7	76	12	20		8.8		1.4	28.	20	5.	

SAMPLE DATE			TIME AS		25304P MANGANESE EXTRBLE.	29305P COPPER EXTRBLE.	30305P ZINC EXTRBLE.	82302P LEAD EXTRBLE.	80311P MERCURY EXTRBLE.	48302P CADMIUM EXTRBLE.	24303P CHROMIUM EXTRBLE.	06581L HUMIC ACID
D	M	Y	H	M	MN MG/L	CU MG/L	ZN MG/L	PB MG/L	HG UG/L	CD MG/L	CR MG/L	MG/L
5	4	74			0.27	0.008	0.017	0.003		0.001	L.0005	19
31	5	74			0.21	L.002	L.002	0.002		L.001	0.002	50
28	6	74			0.60	0.005	0.002	L.002		L.001	0.001	30 82L
8	8	74			1.9	0.007	0.02	L.002		0.001	0.001	200 82L
9	9	74			0.39	0.007	0.02	0.017		0.001	L.0005	70 82L
25	10	74			0.22 04L			L.002 02L	L.05			19 82L
15	5	75	12	15		L.002			L.10			
19	6	75	06	30		0.004			1.5 11L			
8	7	75	16	20		0.030			L.10			
5	8	75	19	15		0.004			0.10			
15	11	75	14	15		0.005			0.20			
11	2	76	15	15		0.005			L.1			
12	5	76	13	00		0.002			L.1			
7	7	76	11	00		0.001						
27	7	76	12	20		0.006						

4.1.10 Shubenacadie, Gays Rivers and Cooks Brook (NS 23-27)

Sampling stations were located in this region in order to monitor the effects of the development of Cuvier Mines area, which is bounded by Cook's Brook and Gay's River.

The station located on Cook's Brook indicates very hard water (~540 ppm) with high conductivity and sulphate content. Levels of iron (0.06-1.64 ppm) and tin (2-4.0 ppm) were also high.

On the Gay's River the conditions are quite similar. The water is still quite hard with high levels of sulphates (24~600 ppm) and a high conductivity. Iron levels are lower but occasionally peak to heights of 1 ppm. Tin remains high in the upper reaches as are chlorides and sodium, but levels drop down river. Thiosulfates are present at above threshold levels.

A summary of total tin levels measured at these stations is given below. This parameter was measured during 1974 only, and as a result, is not included in the overall data listings. All results are in ppm.

Sampling Date	NS-27	NS-26	NS-25	NS-24	NS-23
27-6-74	< 1	3	2	1	1
19-8-74	4	4	4	2	< 1

Biological sampling carried out on the lower Gay's River during 1974 and 1975 indicates a high species diversity in this area. Hydroids, annelids, snails, amphipods, stoneflies, mayflies, dragon flies, beetles and chironomids were amongst the taxa collected.

On the shubenacadie River the water is softer with lower levels of sulfates than was evident at Cook's Brook and Gay's River. Conductivity occasionally attained high peaks and levels of trace metals (with the exception of iron and tin) were generally quite low. The station located at Shubenacadie showed evidence of occasional high levels of conductivity, calcium, magnesium, iron and tin. As there is a 10 foot tidal fluctuation observed on the river at this point, it is to be assumed these aberrant values may be the result of intrusion of the salt wedge.

Biological samples taken on the Shubenacadie in 1975, show high species diversity with representative snail, bivalve, mayfly, stonefly, dragonfly and chironomid species at the upper station. At the lower station, at Shubenacadie, the diversity was very low and the number of organisms sampled, much reduced. This variation between stations is most likely due to the tidal nature of the lower sampling point.

The entire drainage basin of the Shubenacadie is now under intensive study by the Shubenacadie River Basin Study Board.

WATER QUALITY SURVEILLANCE NETWORK

E.P.S. ATLANTIC REGION 1974-1976

STATION **02NS01DG0001** LATITUDE **45** D **5** M **20** S LONGITUDE **63** D **24** M **10** S

SHUBENACADIE RIVER IN SHUBENACADIE FROM OLD HWY2 BRIDGE COLCHESTER COUNTY

SAMPLE DATE D	M	Y	TIME AS H	M	02061F TEMP. WATER DEG.C.	08102F OXYGEN DISSOLVED DO O2 MG/L	10301F PH PH UNITS	10301L PH PH UNITS	02041L SPECIFIC CONDUCTANCE USIE/CM	02073L TURBIDITY JTU	10401L RESIDUE NONFILTR MG/L	10451L RESIDUE FILTERABLE MG/L
9	4	74			3.0 61S		6.8 01S	5.9	77	10.0	20	60
28	5	74	11	00	5.0 61S		5.4 01S	6.6	111	15.0	30	76
27	6	74	11	00	14.0 61S		6.4 01S	6.2		6.5	12	92
19	8	74						7.0		33.	95	21800
20	9	74	11	00	12.0 61S		7.3 01S	6.5		27.	567	408
22	10	74	11	00	3.0 61S		6.2 01S	6.6		14.	32	85
23	5	75	18	00	17.5	9.5		6.1	131			
11	6	75	13	00	15.5	9.6	6.6	7.0	120			
9	7	75	11	01	22.5 61S	7.5 02S	7.5 01S	7.3	388			
7	8	75	09	15	23.	5.1	6.6	6.6	3500			
22	11	75	12	15	9.5		7.2	6.7	137			
7	5	76	16	30	10.5	10.0	5.8	6.5	110			
14	6	76	10	45	15.5	8.2	6.8	6.3	200			
19	7	76	12	30	22.0	8.4	6.7	7.0	150			

SAMPLE DATE D	M	Y	TIME AS H	M	10501L RESIDUE FIXED NONFILTR MG/L	10551L RESIDUE FIXED FILTERABLE MG/L	20103L CALCIUM DISSOLVED CA MG/L	20003P CALCIUM TOTAL CA MG/L	12102L MAGNESIUM DISSOLVED MG MG/L	12002P MAGNESIUM TOTAL MG MG/L	10606L HARDNESS TOTAL LAB CALC. CACO3 MG/L	10101L ALKALINITY TOTAL CACO3 MG/L
9	4	74			L1	18	9.60		0.9			
28	5	74	11	00	27	62	14.0		1.2			
27	6	74	11	00	12	71	18.0		1.3			
19	8	74			69	19700	290.		920.			
20	9	74	11	00	542	359	32.5		11.5			
22	10	74	11	00	32	58	10.5		1.5			8
23	5	75	18	00			16.0		1.4			9
11	6	75	13	00			16.0		1.3			23
9	7	75	11	01			28.0		7.8			46
7	8	75	09	15			70.5		73.0 03L			
22	11	75	12	15			13.5		1.9			9
7	5	76	16	30				14.		0.9	40.	5
14	6	76	10	45				17.		4.2	60.	6
19	7	76	12	30				16.		1.6	47.	8

WATER QUALITY SURVEILLANCE NETWORK

E.P.S. ATLANTIC REGION 1974-1976

STATION **02NS01DG0001** LATITUDE **45** D **5** M **20** S LONGITUDE **63** D **24** M **10** S

SHUBENACADIE RIVER IN SHUBENACADIE FROM OLD HWY2 BRIDGE COLCHESTER COUNTY

SAMPLE DATE			TIME AS		10251L ACIDITY PH = 8.3	16304L SULPHATE DISSOLVED	16502L THIOSULFATE TOTAL	16510L THIO-SALTS TOTAL	26302P IRON EXTRBLE.	29105P COPPER DISSOLVED	29305P COPPER EXTRBLE.	30105P ZINC DISSOLVED
					CACO3	SO4	S2O3	S2O3	FE	CU	CU	ZN
D	M	Y	H	M	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L
9	4	74							0.140		0.005	
28	5	74	11	00					0.500		L.001	
27	6	74	11	00					0.400		0.002	
19	8	74							0.17		L.002	
20	9	74	11	00					8.3		0.009	
22	10	74	11	00					0.73		0.003	
23	5	75	18	00		35.0			0.75		0.002	
11	6	75	13	00		37.0			0.62		0.002	
9	7	75	11	01		71.0			4.6		0.002	
7	8	75	09	15		400.	L5.0		1.8		0.002	
22	11	75	12	15		38.0	5.6		1.0		0.002	
7	5	76	16	30		25.	L5.	L5.	0.21		L.001	
14	6	76	10	45		40.	L5.	L5.	3.1		0.003	
19	7	76	12	30		35.	L5.	L5.	0.65		0.003	

SAMPLE DATE			TIME AS		30305P ZINC EXTRBLE.	82103P LEAD DISSOLVED	82302P LEAD EXTRBLE.	80311P MERCURY EXTRBLE.	48302P CADMIUM EXTRBLE.	06581L HUMIC ACID	
					ZN	PB	PB	HG	CD		
D	M	Y	H	M	MG/L	MG/L	MG/L	UG/L	MG/L	MG/L	
9	4	74			0.012		0.003			6	
28	5	74	11	00	0.004		0.007			12	
27	6	74	11	00	0.002		L.001			15	
19	8	74			0.02		0.006			5	82L
20	9	74	11	00	0.06		0.03			11	82L
22	10	74	11	00	0.019		L.002	L.05		6	82L
23	5	75	18	00	0.006		0.002	0.05	L.001	3	82L
11	6	75	13	00	0.008		0.002	L.05	L.001	5	82L
9	7	75	11	01	0.018		0.003		L.001	6	82L
7	8	75	09	15	0.024		L.002		L.001	3	82L
22	11	75	12	15	0.013		0.008	L.05	0.001	8	82L
7	5	76	16	30	L.001		L.001	L.1	L.001	7	
14	6	76	10	45	0.004		0.009		L.001		
19	7	76	12	30	0.003		0.700		L.001	9	

WATER QUALITY SURVEILLANCE NETWORK

E.P.S. ATLANTIC REGION 1974-1976

STATION **00NS01DG0008** LATITUDE **44** D **57** M **41** S LONGITUDE **63** D **29** M **46** S

SHUBENACADIE RIVER 0.7 MILE SOUTHEAST OF HWY 2 AT ELMSDALE BRIDGE COLCHESTER COUNTY

SAMPLE DATE D	M	Y	TIME AS H	M	02061F TEMP. WATER DEG.C.	08102F OXYGEN DISSOLVED DO O2 MG/L	10301F PH PH UNITS	10301L PH PH UNITS	02041L SPECIFIC CONDUCTANCE USIE/CM	02073L TURBIDITY JTU	10401L RESIDUE NONFILTR. MG/L	10451L RESIDUE FILTERABLE MG/L
9	4	74			2.0 61S		5.7 01S	5.6	49	1.3	L1	49
28	5	74			5.0 61S		4.0 01S	5.7	69	2.7		
27	6	74			15.0 61S		5.4 01S	5.5		1.5		
19	8	74			21.0 61S		6.4 01S	6.0		0.7		
20	9	74			13.0 61S		6.0 01S	5.4		1.0		
22	10	74			5.0 61S		5.7 01S	6.2		2.6		
23	5	75	10	30	12.0 62S	10.7 02S	6.0 01S	6.0	400			
12	6	75	12	30	16.0 62S	9.4 02S	5.8 01S	5.8	70			
9	7	75	17	45	22.5 62S	9.1 02S	7.0 01S	6.4				
7	8	75	10	30	23.0 62S	6.3 02S	6.0 01S	6.2	127			
22	11	75	10	15	11.0 62S		6.4 01S	6.0	130			
10	2	76	11	00	0.0 62S	11.7 02S	4.7 01S	5.6	60			
7	5	76	16	00	7.5	11.6	5.1	5.7	70			
14	6	76	11	30	15.5	9.0	5.4	6.1	65			
19	7	76	13	30	22.0	8.5	5.3	5.3	80			

SAMPLE DATE D	M	Y	TIME AS H	M	10501L RESIDUE FIXED NONFILTR. MG/L	10551L RESIDUE FIXED FILTERABLE MG/L	20103L CALCIUM DISSOLVED CA MG/L	20003P CALCIUM TOTAL CA MG/L	12102L MAGNESIUM DISSOLVED MG MG/L	12002P MAGNESIUM TOTAL MG MG/L	10606L HARDNESS TOTAL LAB CALC. CACO3 MG/L	10101L ALKALINITY TOTAL CACO3 MG/L
9	4	74			L1	16	3.50		0.7			
28	5	74					4.30		0.9			
27	6	74					4.30		0.8			
19	8	74					5.20		2.0			
20	9	74					6.7		1.3			
22	10	74					4.7		0.9			
23	5	75	10	30				4.14		0.7		1
12	6	75	12	30				0.453		0.8		1
9	7	75	17	45				4.48		0.7		3
7	8	75	10	30				5.32		0.7		2
22	11	75	10	15				5.0		1.0		2
10	2	76	11	00				4.5		0.6		L1
7	5	76	16	00				11.		0.6	30.	L1
14	6	76	11	30				4.4		0.7	14.	1
19	7	76	13	30				4.4		0.8	14.	1

WATER QUALITY SURVEILLANCE NETWORK

E.P.S. ATLANTIC REGION 1974-1976

STATION **00NS01DG0008** LATITUDE **44** D **57** M **41** S LONGITUDE **63** D **29** M **46** S

SHUBENACADIE RIVER 0.7 MILE SOUTHEAST OF HWY 2 AT ELMSDALE BRIDGE COLCHESTER COUNTY

SAMPLE DATE			TIME AS		10251L ACIDITY PH = 8.3	16304L SULPHATE DISSOLVED	16502L THIOSULFATE TOTAL	16510L THIO-SALTS TOTAL	26302P IRON EXTRBLE.	29105P COPPER DISSOLVED	29305P COPPER EXTRBLE.	30105P ZINC DISSOLVED
					CACO3	SO4	S2O3	S2O3	FE	CU	CU	ZN
D	M	Y	H	M	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L
9	4	74							0.140		0.002	
28	5	74							0.190		L.001	
27	6	74							0.220		0.002	
19	8	74							0.200		L.001	
20	9	74							0.13		L.002	
22	10	74							0.36		L.002	
23	5	75	10	30		14.0 03L		L5.0	0.15 05P		L.002	
12	6	75	12	30		15.6 03L			0.16 05P		0.003	
9	7	75	17	45					0.32 05P		0.003	
7	8	75	10	30		28.0 03L	L5.0	L5.0	0.39 05P		0.001	
22	11	75	10	15		15.0 03L	L5.0	L5.0	0.46 05P		0.003	
10	2	76	11	00		10.0 03L	L5.0	L5.0	0.09 05P		0.002	
7	5	76	16	00		10.	L5.	L5.	0.15		0.001	
14	6	76	11	30		10.	L5.	L5.	0.21		L.001	
19	7	76	13	30		17.	L5.	L5.	0.12		0.002	

SAMPLE DATE			TIME AS		30305P ZINC EXTRBLE.	82103P LEAD DISSOLVED	82302P LEAD EXTRBLE.	80311P MERCURY EXTRBLE.	48302P CADMIUM EXTRBLE.	06581L HUMIC ACID
					ZN	PB	PB	HG	CD	
D	M	Y	H	M	MG/L	MG/L	MG/L	UG/L	MG/L	MG/L
9	4	74			0.008		0.009			5
28	5	74			0.013		0.002			7
27	6	74			0.002		0.006			7
19	8	74			0.009		0.004			L1 82L
20	9	74			0.014		0.02			3 82L
22	10	74			0.02		L.002	L.05		4 82L
23	5	75	10	30	0.010 04P		0.003 01P	2.3		
12	6	75	12	30			L.002 01P	2.8	L.002	
9	7	75	17	45	0.012 04P		0.004 01P	0.20		
7	8	75	10	30	0.040 04P		0.003 01P	0.10	L.001	3
22	11	75	10	15	L.001 04P		L.001 01P	0.20	L.001	2
10	2	76	11	00	0.002 04P		0.002 01P	L.1	L.001	4
7	5	76	16	00	0.002		L.001	L.1	L.001	4
14	6	76	11	30	0.001		0.001		L.001	4
19	7	76	13	30	L.001		L.001		L.001	3

WATER QUALITY SURVEILLANCE NETWORK

E.P.S. ATLANTIC REGION 1974-1976

STATION **00NS01DG0011** LATITUDE **45** D **1** M **43** S LONGITUDE **63** D **21** M **35** S

GAYS RIVER BELOW CONFLUENCE OF SOUTH GAY RIVER AT BRIDGE HALIFAX COUNTY

SAMPLE DATE			TIME AS		02061F TEMP. WATER	08102F OXYGEN DISSOLVED DO	10301F PH	10301L PH	02041L SPECIFIC CONDUCTANCE	02073L TURBIDITY	10401L RESIDUE NONFILTR.	10451L RESIDUE FILTERABLE
D	M	Y	H	M	DEG.C.	O2 MG/L	PH UNITS	PH UNITS	USIE/CM	JTU	MG/L	MG/L
9	4	74			2.0 61S		7.8 01S	6.0	127	2.0	L1	91
28	5	74			5.0 61S		5.2 01S	6.6	126	9.0	16	98
27	6	74			12.0 61S		6.0 01S	6.2		0.7		
19	8	74			24.0 61S		7.4 01S	7.2		0.5		
20	9	74			13.0 61S		7.3 01S	7.0		L.5		
22	10	74			2.0 61S		6.1 01S	6.4		1.6		
23	5	75			16.			6.8	220			
11	6	75	14	15	17.5	9.8	6.9	7.1	221			
9	7	75	15	00	23.0	9.8	7.4	7.2	803			
6	8	75	14	00	27.	7.1	6.6	7.3	868			
22	11	75	11	30	9.0		7.4	6.4	191			
7	5	76	15	20	9.0	11.0	6.1	6.7	190			
14	6	76	14	15	18.5	9.5	7.0	7.5	550			
19	7	76	14	00	24.0	8.7	7.1	7.5	350			

SAMPLE DATE			TIME AS		10501L RESIDUE FIXED NONFILTR.	10551L RESIDUE FIXED FILTERABLE	20103L CALCIUM DISSOLVED	20003P CALCIUM TOTAL	12102L MAGNESIUM DISSOLVED	12002P MAGNESIUM TOTAL	10606L HARDNESS TOTAL LAB CALC.	10101L ALKALINITY TOTAL
D	M	Y	H	M	MG/L	MG/L	CA MG/L	CA MG/L	MG MG/L	MG MG/L	CACO3 MG/L	CACO3 MG/L
9	4	74			L1	12	21.0		1.0			
28	5	74			12	80	21.0		1.1			
27	6	74					13.0		0.8			
19	8	74					150.		7.0			
20	9	74					71.0		3.2			
22	10	74					21.0		0.8			
23	5	75					37.5		1.6			6
11	6	75	14	15			36.5		1.7			6
9	7	75	15	00			152.		6.2			38
6	8	75	14	00			200.		8.5 03L			46
22	11	75	11	30			28.		2.0			8
7	5	76	15	20				36.		1.2	95.	5
14	6	76	14	15				0.120		6.	320.	30
19	7	76	14	00				56.		2.6	150.	15

WATER QUALITY SURVEILLANCE NETWORK

E.P.S. ATLANTIC REGION 1974-1976

STATION **00NS01DG0011** LATITUDE **45** D **1** M **43** S LONGITUDE **63** D **21** M **35** S

GAYS RIVER BELOW CONFLUENCE OF SOUTH GAY RIVER AT BRIDGE HALIFAX COUNTY

SAMPLE DATE			TIME AS		10251L. ACIDITY PH = 8.3	16304L SULPHATE DISSOLVED	16502L THIOSULFATE TOTAL	16510L THIO-SALTS TOTAL	26302P IRON EXTRBLE.	29105P COPPER DISSOLVED	29305P COPPER EXTRBLE.	30105P ZINC DISSOLVED
					CACO3	SO4	S2O3	S2O3	FE	CU	CU	ZN
D	M	Y	H	M	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L
9	4	74							0.130		L.001	
28	5	74							0.480		L.001	
27	6	74							0.260		0.002	
19	8	74							0.13		L.002	
20	9	74							0.11		0.002	
22	10	74							0.25		0.003	
23	5	75				84.0			0.23		L.002	
11	6	75	14	15		83.0			0.20		L.002	
9	7	75	15	00		370.			0.15		L.002	
6	8	75	14	00		580.	L5.0		0.18		L.002	
22	11	75	11	30		66.0	6.7		0.23		0.002	
7	5	76	15	20		65.	L5.	L5.	0.12		L.001	
14	6	76	14	15		250.	L5.	L5.	0.10		L.001	
19	7	76	14	00		130.	L5.	L5.	0.09		0.002	

SAMPLE DATE			TIME AS		30305P ZINC EXTRBLE.	82103P LEAD DISSOLVED	82302P LEAD EXTRBLE.	80311P MERCURY EXTRBLE.	48302P CADMIUM EXTRBLE.	06581L HUMIC ACID
					ZN	PB	PB	HG	CD	
D	M	Y	H	M	MG/L	MG/L	MG/L	UG/L	MG/L	MG/L
9	4	74			0.003		0.003			7
28	5	74			0.005		0.005			11
27	6	74			L.001		0.008			18
19	8	74			0.010		0.002			5 82L
20	9	74			0.10 04P		0.02			6 82L
22	10	74			0.016		L.002	L.05		7 82L
23	5	75			0.002		0.002	L.05	L.001	4 82L
11	6	75	14	15	0.004		0.002	L.05	L.001	5 82L
9	7	75	15	00	0.015		L.002	L.05	L.001	3 82L
6	8	75	14	00	0.003		L.002	L.05	L.001	2 82L
22	11	75	11	30	0.013		0.007	L.05	0.001	8 82L
7	5	76	15	20	0.001		L.001	L.1	L.001	8
14	6	76	14	15	L.001		L.001		L.001	5
19	7	76	14	00	L.001		L.001		0.001	9

WATER QUALITY SURVEILLANCE NETWORK

E.P.S. ATLANTIC REGION 1974-1976

STATION **00NS01DG0021** LATITUDE **45** D **1** M **4** S LONGITUDE **63** D **19** M **19** S

GAYS RIVER 2.4 KM BELOW EGMONT LAKE AT ROAD BRIDGE, HALIFAX COUNTY, (18)*
*DAL UNIV NO., NS MINES DEPT - 18, EPS - 13, DOE - NS26

SAMPLE DATE			TIME AS		02061F TEMP. WATER	08102F OXYGEN DISSOLVED DO	10301F PH	10301L PH	02041L SPECIFIC CONDUCTANCE	02073L TURBIDITY	10401L RESIDUE NONFILTR.	10451L RESIDUE FILTERABLE
D	M	Y	H	M	DEG.C.	O2 MG/L	PH UNITS	PH UNITS	USIE/CM	JTU	MG/L	MG/L
9	4	74			3.0 61S		7.2 01S	6.1	86	4.0	L1	66
28	5	74			5.0 61S		5.0 01S	6.7	105	1.3		
27	6	74			14.0 61S		6.3 01S	6.2		0.4		
19	8	74			21.0 61S		7.4 01S	7.2		0.6		
20	9	74			13.0 61S		7.0 01S	6.9		L.5		
22	10	74			2.0 61S		6.3	6.9		0.6		
23	5	75			16.5			6.8	175			
11	6	75	14	40	17.5	9.6	6.8	6.9	251			
9	7	75	15	30	23.0	9.9	7.6	7.5	795			
6	8	75	14	30	25.	7.7	6.6	7.5	916			
22	11	75	11	45	8.0		7.2	6.5	178			
7	5	76	14	00	11.0	10.0	5.7	6.4	100			
14	6	76	14	30	17.0	9.1	6.7	7.3	370			
19	7	76	14	30	23.0	8.7	6.9	7.3	270			

SAMPLE DATE			TIME AS		10501L RESIDUE FIXED NONFILTR.	10551L RESIDUE FIXED FILTERABLE	20103L CALCIUM DISSOLVED	20003P CALCIUM TOTAL	12102L MAGNESIUM DISSOLVED	12002P MAGNESIUM TOTAL	10606L HARDNESS TOTAL LAB CALC.	10101L ALKALINITY TOTAL
D	M	Y	H	M	MG/L	MG/L	CA MG/L	CA MG/L	MG MG/L	MG MG/L	CACO3 MG/L	CACO3 MG/L
9	4	74			L1	18	10.9		1.1			
28	5	74					16.0		1.2			
27	6	74					37.0		1.8			
19	8	74					150.		6.0			
20	9	74					82.5		3.2			
22	10	74					18.0		0.7			7
23	5	75					27.7		1.5			11
11	6	75	14	40			43.5		1.9			40
9	7	75	15	30			150.		6.0			46
6	8	75	14	30			220.		8.5 03L			
22	11	75	11	45			26.0		2.0			4
7	5	76	14	00				15.		0.9	40.	5
14	6	76	14	30				62.		3.	170.	25
19	7	76	14	30				40.		1.9	110.	15

WATER QUALITY SURVEILLANCE NETWORK

E.P.S. ATLANTIC REGION 1974-1976

STATION **00NS01DG0021** LATITUDE **45** D **1** M **4** S LONGITUDE **63** D **19** M **19** S

GAYS RIVER 2.4 KM BELOW EGMONT LAKE AT ROAD BRIDGE, HALIFAX COUNTY, (18)*
*DAL UNIV NO., NS MINES DEPT - 18, EPS - 13, DOE - NS26

SAMPLE DATE			TIME AS		10251L ACIDITY PH = 8.3	16304L SULPHATE DISSOLVED	16502L THIOSULFATE TOTAL	16510L THIO-SALTS TOTAL	26302P IRON EXTRBLE.	29105P COPPER DISSOLVED	29305P COPPER EXTRBLE.	30105P ZINC DISSOLVED
					CACO3	SO4	S2O3	S2O3	FE	CU	CU	ZN
D	M	Y	H	M	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L
9	4	74							0.170		0.002	
28	5	74							0.160		L.001	
27	6	74							0.150		0.002	
19	8	74							0.140		L.001	
20	9	74							0.08		L.002	
23	5	75				24.0			0.18		L.002	
11	6	75	14	40		98.0			0.13		L.002	
9	7	75	15	30		370.			0.26		L.002	
6	8	75	14	30		600.	L5.0		0.10		L.002	
22	11	75	11	45		64.0	9.5		0.10		L.002	
7	5	76	14	00		25.	L5.	L5.	0.16		L.001	
14	6	76	14	30		140.	L5.	L5.	0.13		L.001	
19	7	76	14	30		80.	L5.	L5.	1.1		0.001	

SAMPLE DATE			TIME AS		30305P ZINC EXTRBLE.	82103P LEAD DISSOLVED	82302P LEAD EXTRBLE.	80311P MERCURY EXTRBLE.	48302P CADMIUM EXTRBLE.	06581L HUMIC ACID
					ZN	PB	PB	HG	CD	
D	M	Y	H	M	MG/L	MG/L	MG/L	UG/L	MG/L	MG/L
9	4	74			L.001		0.003			9
28	5	74			L.001		0.004			10
27	6	74			L.001		L.001			11
19	8	74			0.016		L.001			4 82L
20	9	74			0.012		0.014			5 82L
22	10	74					L.002 02L	L.05		4 82L
23	5	75			0.004		L.002	L.05	L.001	4 82L
11	6	75	14	40	0.005		L.002	L.05	L.001	3 82L
9	7	75	15	30	0.013		L.002	L.05	L.001	2 82L
6	8	75	14	30	0.015		L.002	0.05	L.001	1 82L
22	11	75	11	45	0.008		0.004	L.05	0.001	7 82L
7	5	76	14	00	L.001		L.001	L.1	L.001	7
14	6	76	14	30	L.001		0.001		L.001	3
19	7	76	14	30	L.001		L.001		L.001	7

WATER QUALITY SURVEILLANCE NETWORK

E.P.S. ATLANTIC REGION 1974-1976

STATION **00NS01DG0022** LATITUDE **45** D **1** M **27** S LONGITUDE **63** D **17** M **35** S

COOKS BROOK ABOUT 0.5 MILE ABOVE CONFLUENCE WITH IRVIN BROOK AT BRIDGE, HALIFAX COUNTY

SAMPLE DATE			TIME AS		02061F TEMP. WATER	08102F OXYGEN DISSOLVED DO	10301F PH	10301L PH	02041L SPECIFIC CONDUCTANCE	02073L TURBIDITY	10401L RESIDUE NONFILTR.	10451L RESIDUE FILTERABLE
D	M	Y	H	M	DEG.C.	O2 MG/L	PH UNITS	PH UNITS	USIE/CM	JTU	MG/L	MG/L
9	4	74			2.0 61S		6.8 01S	6.1	188	2.0	L1	128
28	5	74			4.0 61S		5.3 01S	6.1	99	6.0	28	66
27	6	74			11.0 61S		6.5 01S	7.0		0.3		
19	8	74			18.0 61S		7.4 01S	7.2		2.9		
20	9	74			11.0 61S		7.4 01S	7.5		L.5		
22	10	74			2.0 61S		6.5 01S	6.1		0.6		
23	5	75	12	35	13.0 62S	10.8 02S	7.0 01S	7.4	400			
11	6	75	15	00	15.0 62S	9.6 02S	7.1 01S	7.4	310			
9	7	75	16	00	20.0 62S	10.0 02S	7.8 01S	7.9				
6	8	75	14	45	23.0 62S	7.3 02S	7.0 01S	7.7	700			
22	11	75	11	55	9.0 62S		7.2 01S	6.3	200			
10	2	76	15	35	0.0 62S	10.8 02S	6.3 01S	7.2	500			
7	5	76	14	25	7.0	11.2	6.2	6.9	240			
14	6	76	14	45	14.5	10.0	7.0	7.6	700			
19	7	76	14	45	20.0	8.9	7.8	7.6	650			

SAMPLE DATE			TIME AS		10501L RESIDUE FIXED NONFILTR.	10551L RESIDUE FIXED FILTERABLE	20103L CALCIUM DISSOLVED	20003P CALCIUM TOTAL	12102L MAGNESIUM DISSOLVED	12002P MAGNESIUM TOTAL	10606L HARDNESS TOTAL LAB CALC.	10101L ALKALINITY TOTAL
D	M	Y	H	M	MG/L	MG/L	CA MG/L	CA MG/L	MG MG/L	MG MG/L	CACO3 MG/L	CACO3 MG/L
9	4	74			L1	20	29.0		1.5			
28	5	74			21	48	15.0		1.1			
27	6	74					30.0		1.5			
19	8	74					120.		4.2			
20	9	74					110.0		4.1			
22	10	74					25.0		1.5			
23	5	75	12	35				58.8		2.4		3
11	6	75	15	00				46.0		2.1		17
9	7	75	16	00				130.0		3.7		60
6	8	75	14	45				125.0		4.0		62
22	11	75	11	55				14.0		1.9		5
10	2	76	15	35				210.0		2.8		30
7	5	76	14	25				52.		1.8	140.	15
14	6	76	14	45				140.		4.8	360.	50
19	7	76	14	45				110.		4.0	290.	5

WATER QUALITY SURVEILLANCE NETWORK

E.P.S. ATLANTIC REGION 1974-1976

STATION **00NS01DG0022** LATITUDE **45** D **1** M **27** S LONGITUDE **63** D **17** M **35** S

COOKS BROOK ABOUT 0.5 MILE ABOVE CONFLUENCE WITH IRVIN BROOK AT BRIDGE, HALIFAX COUNTY

SAMPLE DATE			TIME AS		10251L ACIDITY PH = 8.3	16304L SULPHATE DISSOLVED	16502L THIOSULFATE TOTAL	16510L THIO-SALTS TOTAL	26302P IRON EXTRBLE.	29105P COPPER DISSOLVED	29305P COPPER EXTRBLE.	30105P ZINC DISSOLVED
D	M	Y	H	M	CACO3 MG/L	SO4 MG/L	S2O3 MG/L	S2O3 MG/L	FE MG/L	CU MG/L	CU MG/L	ZN MG/L
9	4	74							0.110		0.014	
28	5	74							0.510		L.001	
27	6	74							0.090		0.002	
19	8	74							0.440		0.005	
20	9	74							0.15		L.002	
22	10	74							0.12		L.002	
23	5	75	12	35		60.0 03L		L5.0	0.081 05P		L.002	
11	6	75	15	00		93.0 03L			0.080 05P		0.002	
9	7	75	16	00					0.22 05P		0.001	
6	8	75	14	45		330.0 03L	L5.0	L5.0	0.22 05P		0.001	
22	11	75	11	55		30.0 03L	L5.0	L5.0	1.64 05P		0.005	
10	2	76	15	35		190.0 03L	L5.0	L5.0	0.08 05P		0.001	
7	5	76	14	25		75.	L5.	L5.	0.06		L.001	
14	6	76	14	45		275.	L5.	L5.	0.12		L.001	
19	7	76	14	45		250.	L5.	L5.	0.37		0.006	

SAMPLE DATE			TIME AS		30305P ZINC EXTRBLE.	82103P LEAD DISSOLVED	82302P LEAD EXTRBLE.	80311P MERCURY EXTRBLE.	48302P CADMIUM EXTRBLE.	06581L HUMIC ACID
D	M	Y	H	M	ZN MG/L	PB MG/L	PB MG/L	HG UG/L	CD MG/L	MG/L
9	4	74			0.009		0.005			4
28	5	74			L.001		L.001			9
27	6	74			L.001		L.001			7
19	8	74			0.005		L.001			3 82L
20	9	74			0.013		0.004			2 82L
22	10	74			0.014		L.002	L.05		2 82L
23	5	75	12	35	0.007 04P		0.003 01P	L.10		3
11	6	75	15	00	0.010 04P		L.002 01P	0.80	L.002	
9	7	75	16	00	0.012 04P		0.003 01P	0.60	0.002	
6	8	75	14	45	0.038 04P		0.006 01P	L.10	L.001	2
22	11	75	11	55	L.001 04P		L.001 01P	0.20	L.001	5
10	2	76	15	35	0.002 04P		L.001 01P	L.1	L.001	L1
7	5	76	14	25	L.001		L.001	L.1	L.001	2
14	6	76	14	45	L.001		L.001		L.001	2
19	7	76	14	45	L.001		L.001		L.001	2

BIOLOGICAL RESULTS

STATION: NS-24: 00NS01D60008: Shubenacadie River, Elmsdale

TAXA			SAMPLING PERIOD 1975 23/5-12/6	1975 12/6-9/7	1975 9/7-7/8	1975 - 30/11
Annelida						
Oligochaeta			0.5	4.0	4	0.5
Lumbriculidae			1.0		1	
Hirudinea						
Mollusca						
Gastropoda	Amnicolidae	Amnicola	11.0	4.0	7	2.0
	Ancyclidae	Ferrissia		2.0	1	
	Planorbidae	Helisoma			-	0.5
		Gyraulus			-	3.0
Pelecypoda	Sphaeridae	Musculium	1.0	2.0	-	
Arthropoda						
Arachnoida						
Hydracarina			0.5		-	
Crustacea						
Cladocera	Chydoridae	Eurycercus	0.5		-	
Eucopepoda	Cyclopodia	-	1.5		-	
Insecta						
Ephemeroptera	Heptageniidae	Stenonema B			5	
	Baetidae	Baetis			1	
		Centroptilum		0.5	-	
	Ephemeridae	Ephemerella 1	2.0		-	
	Leptophlebidae	Leptophlebia	2.5		-	
Odonata	Aesnidae	Boyeria	0.5	0.5	-	
Tricoptera	Hydropsychidae	Cheumatopsyche		1.5	5	
	Leptoceridae	Oecetis			1	
	Psychomyiidae	Polycentropus		1.0	1	

Cont'd

STATION: NS-24 (CONT'D)

TAXA			SAMPLING PERIOD 1975 23/5-12/6	1975 12/6-9/7	1975 9/7-7/8	1975 - 30/11
Arthropoda						
Insecta						
Coleoptera	Dytiscidae	Oreodytes		1.5	-	
	Elmidae	Dubiraphia	0.5	3.0	-	
		Optioserus			-	0.5
Diptera	Tendipedidae	-	7.0	10.5	17	
	Neleidae	-		1.0	-	
		Σ	28.5	31.5	43	6.5
		S	12	12	10	5
		DI	2.70	3.04	2.63	1.89

BIOLOGICAL RESULTS

STATION: NS-23: 02NS01D60001: Shubenacadie River at Shubenacadie

TAXA			SAMPLING PERIOD 1975 23/5-10/6	1975 11/6-9/7	1975 9/7-7/8
Arthropoda					
Crustacea					
Amphipoda	Corophiidae	Corophium		0.5	
	Gammaridae	Gammarus	5.0	107.0	611.0
Insecta					
Collembola			0.5		
Diptera	Simulidae	Simulium	0.5		
	Tendipedidae	-	3.5		
		Σ	9.5	107.0	611.0
		S	4	2	1
		DI	1.47	0.04	0

BIOLOGICAL RESULTS

STATION: NS-25: 00NS01DG0011: Gays's River at Bridge below S. Gay's River

TAXA			SAMPLING PERIOD					
			1974 27/6-19/8	1974 20/9-22/10	1975 23/5-11/6	1975 11/6-9/7	1975 9/7-6/8	1975 - 22/11
Coelenterata								
Hydrozoa			1					
Annelida								
Oligochaeta	Lumbriculidae	-						9
Hirudinea			1					
Mollusca								
Gastropoda			2					
	Physidae	Physa					0.5	
	Planorbidae	Gyraulus				0.5		
Arthropoda								
Crustacea								
Amphipoda				1				
	Talitridae	Hyalella				0.5		
Insecta								
Plecoptera	Nemouridae	Taeniopteryx						10
	Perlidae	Acroneuria			1	1	2	
		Phasganophora			0.5			
		Paragnetina		1				
Ephemeroptera	Heptageniidae	Heptagenia			1	2.5	10.5	
		Stenonema	4	5				
		Stenonema A			0.5		5.5	
		Stenonema B			3	2		
		Iron			1.0			
	Baetidae	Baetis			1.0	19.5	28.5	
		Caenis						
		Tricorythodes				0.5	1	2
	Ephemeridae	Ephemerella 1					0.5	
		Ephemerella 2			5.0			
		Ephemerella 3			1.0			
		Ephemerella 4			1.5		1	

Cont'd

STATION: NS-25 (CONT'D)

TAXA			SAMPLING PERIOD 1974 27/6-19/8	1974 20/9-22/10	1975 23/5-11/6	1975 11/6-9/7	1975 9/7-6/8	1975 - 22/11
Arthropoda								
Insecta								
Ephemeroptera	Leptophlebidae	Paraleptophlebia			2.5			1
		Habrophlebia	12	17				
		Leptophlebia				1.0		
Odonata	Aeshnidae	Boyeria				1.0		
	Coenagrionidae	Argia	-	1				
Megaloptera	Sialidae	Sialis	1	-				
Tricoptera	Hydropsychidae	Hydropsyche			0.5	4.5	2.5	1
		Cheumatopsyche						3
	Lepidostomatidae	Lepidostoma				0.5		
	Leptoceridae	Mustacides						1
	Limnephilidae	Drusinus				1.0		
	Philopotamide	Chimarra						
	Psychomiidae	Polycentropus	9	4				
		Neureclipsis				2.0	2.5	
	Odontoceridae	Psilotreta				1.0		
Coleoptera	Elmidae	Macronychus				0.5		
		Optioserus			0.5			
Diptera	Simulidae	Simulium			1.5			
	Tendipedidae	-	73	9	7.5	59.5	25.5	204
	Rhagionidae	Atherix			1.5	7.0	1.0	3
		Σ	103	38	24.5	104.5	80.0	235
		S	9	8	16	17	11	10
		DI	1.51	2.15	2.90	2.22	2.40	0.90

4.2 New Brunswick

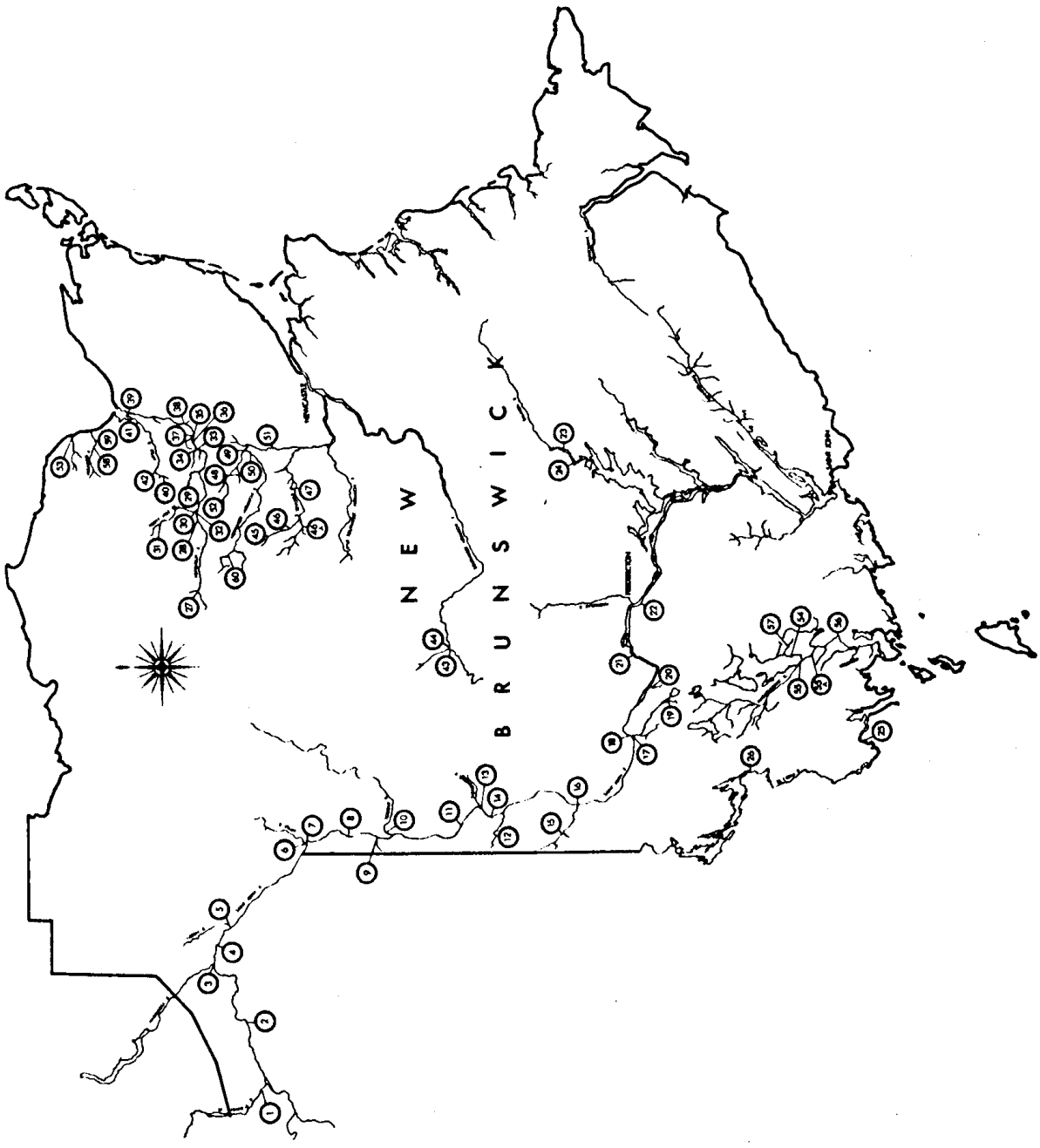

FIGURE 4.2 NEW BRUNSWICK SAMPLING STATIONS

TABLE 4.2 NEW BRUNSWICK: WATER QUALITY SURVEILLANCE NETWORK: 1974-76 STATION LIST AND SAMPLING SCHEDULE

EPS STATION #	NAQUADAT STATION #	ARDSR STATION #	STATION DESCRIPTION	LATITUDE	LONGITUDE	ANALYSIS SCHEDULE
NB-1	00NB01AD0013	2SFR00100	St. Francis River above mouth at picnic site, Madawaska County	47°12'17"	68°56'21"	AA
NB-2*	00NB01AD0001	2SJR00100	Saint John River at Clair at Bridge Boundary Plaque (WSC Gauge) Madawaska County	47°14'55"	68°36'20"	AA
NB-3	00NB01AD0014	2SJR00200	Saint John River 200 M above confluence with Ruisseau Deux Milles, Edmundston Madawaska County	47°21'20"	68°21'53"	AA
NB-4	00NB01AF0020	2SJR00300	Saint John River 400 M below Ruisseau A Lavoie (Stream) at St. Basile Madawaska County	47°21'18"	68°14'03"	BB
NB-5	00NB01AF0016	2GRR00100	Green River at TCH Bridge 1.3 km SE of Green River, Madawaska County	47°18'25"	68°08'08"	CC
NB-6	00NB01AF0001	2LTR00100	Little River at mouth at Grand Falls Bridge, Victoria County	47°03'10"	67°44'25"	AA
NB-7	01NB01AF0005	2SJR00400	Saint John River approx. 150 M above Dam, Madawaska County	47°03'02"	67°44'31"	AA
NB-8	00NB01AF0005	2SJR00500	Saint John River at Brooks Bridge, Near Limestone, Victoria County	46°55'40"	67°41'57"	AA
NB-9	00NB01AG0002	2ARR00100	Aroostook River at TCH Bridge at Four Falls, Victoria County	46°49'19"	67°44'09"	AA
NB-10	01NB01AH0006	2TBR00100	Tobique River at Narrows, Beechwood Dam, Victoria County	46°46'48"	67°41'42"	AA

EPS STATION #	NAQUADAT STATION #	ARDSR STATION #	STATION DESCRIPTION	LATITUDE	LONGITUDE	ANALYSIS SCHEDULE
NB-11	01NB01AJ0004	2SJR00600	Saint John River, approx. 400 M above Beechwood Dam, at right bank of Beechwood Headpond, Victoria County	46°32'36"	67°40'16"	AA
NB-12	00NB01AJ0026	2PQR00100	Presquile River at Hwy 560 Bridge, Centreville, Carleton County	46°25'36"	67°42'36"	AA
NB-13	00NB01AJ0027	2SJR00700	Saint John River 600 M below Junction with Little Shikatehawk River, Bristol Carleton County	46°28'08"	67°35'10"	AA
NB-14	00NB01AJ0028	2SJR00800	Saint John River at Hwy 110 Bridge Florenceville, Carleton County	46°26'29"	67°37'16"	AA
NB-15	00NB01AJ0029	2MER00100	Meduxnekeag River at Bridge above junction with Mill Stream, Belleville Carleton Co.	46°11'57"	67°42'00"	AA
NB-16	00NB01AJ0014	2SJR00900	Saint John River at Grafton Bridge at Woodstock (WSC Gauge), Carleton County	46°09'53"	67°34'11"	AA
NB-17	00NB01AK0020	2POR00300	Pokiok River mouth at TCH Bridge LGA-4, York County	45°57'33"	67°14'54"	DD
NB-18	00NB01AK0009	2SJR01000	Saint John River at New Nackawic Bridge, Pokiok, York County	45°57'40"	67°14'53"	AA
NB-19	00NB01AK0029	2POR00200	Pokiok River at outlet of Lake George near Magundy, York County	45°50'06"	67°04'21"	DD
NB-20	00NB01AK0028	2JOB00100	Jocelyne Brook 2.5 km NW of Lower Prince William, at TCH Bridge, York County	45°54'04"	67°01'30"	AA

EPS STATION #	NAQUADAT STATION #	ARDSR STATION #	STATION DESCRIPTION	LATITUDE	LONGITUDE	ANALYSIS SCHEDULE
NB-21	01NB01AK0011	2SJR01100	Saint John River approx. 150 M above control gates, Mactaquac Headpond, York County	45°57'06"	66°52'12"	AA
NB-22	00NB01AK0030	2SJR01400	Saint John River at TCH Bridge below Fredericton, York County	45°56'39"	66°37'39"	AA
NB-23	00NB01AN0005	2SAR00100	Salmon River from Hwy 10 Bridge at Chipman, Queens County	46°10'33"	65°53'07"	DD
NB-24*	00NB01AN0003	2IBS00100	Iron Bound Cove Stream at lower causeway, Sunbury County	46°08'30"	65°57'03"	DD
NB-25*	00NB01AR0001	2SCR00100	St. Croix River at International Bridge, Milltown, Charlotte County	45°10'10"	67°17'50"	KK
NB-26*	00NB01BK0002	2SCR00200	St. Croix River at International Bridge (WSC Gauge), York County	45°34'05"	67°25'45"	KK
NB-27*	00NB01BK0035	2NPR00100	Nepisiguit River 400 M above Confluence with Portage Brook, R-6, Northumberland Co.	47°24'05"	66°31'20"	EE
NB-28	00NB01BK0017	2NPR00200	Nepisiguit River 1.3 km above Forty Mile Brook above Wedge Mine, W-1, Northumberland County	47°23'40"	66°08'16"	EE
NB-29*	00NB01BK0020	2NPR00300	Nepisiguit River 4 km below Forty Mile Brook at Hwy 430 Bridge, Northumberland County	47°23'34"	66°04'23"	EE
NB-30	00NB01BK0015	2FMB00100	Forty Mile Brook just above Confluence with Nepisiguit River, Northumberland County	47°23'39"	66°07'15"	EE

EPS STATION #	NAQUADAT STATION #	ARDSR STATION #	STATION DESCRIPTION	LATITUDE	LONGITUDE	ANALYSIS SCHEDULE
NB-31	00NB01BK0012	2FMB00200	Nepisiguit River 300 M above Confluence with Austin Brook, Bathurst Mines Gloucester County	47°34'10"	66°18'03"	EE
NB-32*	00NB01BK0032	2NPR00400	Nepisiguit River just above Confluence of Forty Mile Brook, Northumberland County	47°23'32"	66°07'19"	EE
NB-33*	00NB01BK0007	2NPR00500	Forty Mile Brook at pumpsite 800 M above Anaconda Brass Mine Property, AB-1 Northumberland County	47°23'44"	65°49'20"	EE
NB-34	00NB01BK0006	2AUB00100	Austin Brook at Confluence with Nepisiguit River, Gloucester County	47°23'50"	65°49'10"	EE
NB-35	00NB01BK0003	2KNB00100	Knight Brook at Confluence with Nepisiguit River, Gloucester County	47°24'12"	65°45'43"	EE
NB-36	01NB01BK0009	2NPR00600	Nepisiguit River at Power Dam Headpond Nepisiguit Falls, Gloucester County	47°24'16"	65°47'35"	EE
NB-37*	00NB01BK0050	2NPR00700	Nepisiguit River about 50 M below Confluence with Knight Brook, Gloucester County	47°24'10"	65°45'39"	EE
NB-38*	00NB01BK0026	2NPR00800	Nepisiguit River at HWY 360 Bridge, near NLU Mine B#6-13, Gloucester Co.	47°26'28"	65°42'22"	EE
NB-39	00NB01BK0030	2NPR00900	Nepisiguit River at Bathurst at Irving Pier below HWY 11 Bridge, Gloucester Co.	47°36'52"	65°38'24"	EE
NB-40*	00NB01BJ0009	2SLR00100	South Little River at Theriault Road Bridge (WSC Gauge), Gloucester County	47°31'10"	65°48'24"	EE

EPS STATION #	NAQUADAT STATION #	ARDSR STATION #	STATION DESCRIPTION	LATITUDE	LONGITUDE	ANALYSIS SCHEDULE
NB-41*	00NB01BJ0010	2LIR00100	Little River about 6.4 Km SW of Bathurst (WSC Gauge), at Carrolls Farm, Gloucester Co.	47°34'02"	65°42'09"	EE
NB-42*	00NB01MJ0051	2LIR00200	Little River about 100 M below Confluence with South Little River, Gloucester Co.	47°31'28"	65°47'53"	EE
NB-43*	00NB01BM0002	2SMR00100	Southwest Miramichi River 2.4 Km above Burnthill Brook at Wardens Camp, BT-1 York County	46°33'25"	66°49'53"	EE
NB-44	00NB01BM0003	2SMR00200	Southwest Miramichi River 1 Km below Burnthill Brook, York County	46°34'22"	66°47'40"	EE
NB-45*	00NB01BQ0020	2CWS00100	Clearwater Stream at Bridge 300 M above Chester Mine Property, C-1 Northumberland County	47°06'36"	66°14'08"	EE
NB-46*	00NB01BQ0021	2CWS00200	Clearwater Stream 800 M below Mine 4 Km above South Sevogle River, C-2 Northumberland County	47°04'46"	66°12'55"	EE
NB-46A	00NB01BQ0054	2SSR00100	South Sevogle River at Bridge 6 Km above Junction with Clearwater Stream Northumberland County	47°04'07"	66°15'30"	EE
NB-47*	00NB01BQ0055	2SSR00200	South Sevogle River about 3 Km above Confluence of Sheephouse Brook Northumberland County	47°03'49"	66°01'16"	EE
NB-48	00NB01BQ0017	2LSR00100	Northwest Miramichi River just above Junction with Tomogonops River, H-18 Northumberland County	47°17'21"	66°01'40"	EE

EPS STATION #	NAQUADAT STATION #	ARDSR STATION #	STATION DESCRIPTION	LATITUDE	LONGITUDE	ANALYSIS SCHEDULE
NB-49*	00NB01BQ0018	2TOR00100	Little South Tomogonops River 3 km above Tomogonops River H-16 (O'Briens) Northumberland County	47°13'57"	65°50'05"	EE
NB-50*	00NB01BQ0019	2NMR00100	Tomogonops River at confluence with Northwest Miramichi River 9 miles above Wayerton Bridge, Northumberland County	47°13'57"	65°50'10"	EE
NB-51*	00NB01BQ0044	2NMR00200	Northwest Miramichi River at Wayerton Bridge, H-21, Northumberland County	47°08'05"	65°50'05"	EE
NB-52	00NB01BQ0045	2NTR00100	Tomogonops River north branch at water supply dam by HWY 430, H-22 (Control) Northumberland County	47°19'40"	66°04'09"	EE
NB-53	00NB01BJ0052	2ELR00100	Elmtree River 200 M above R.R. Bridge Petit Rocher Nord, Gloucester County	47°48'31"	65°45'01"	EE
NB-54	00NB01AQ0011	2PKR00100	Piskahegan River at Bridge, 3 km below Confluence with Hatch Brook, MP-2 Charlotte County	45°25'08"	66°53'13"	DD
NB-55*	00NB01AQ0012	2MGR00100	Magaguadavic River at Pomeroy Bridge, 1.75 km above Piskahegan River, MP-3,Charlotte County	45°23'48"	66°55'15"	DD
NB-55A	00NB01AQ0013	2MGR00200	Magaguadavic River 2.75 km below Piskahegan River at Little Falls, MP-4, Charlotte Co.	45°21'30"	66°53'25"	DD
NB-56*	00NB01AQ0002	2MGR00300	Magaguadavic River at covered bridge at Second Falls, (WSC Gauge), Charlotte Co.	45°13'55"	66°50'42"	DD

EPS STATION #	NAQUADAT STATION #	ARDSR STATION #	STATION DESCRIPTION	LATITUDE	LONGITUDE	ANALYSIS SCHEDULE
NB-57	00NB01AQ0016	2NTB00100	Hatch Brook at bridge 2.3 km above Piskahegan River, Charlotte County	45°26'10"	66°51'02"	DD
NB-58	00NB01BJ0012	2NGR00100	Nigadoo River 400 M above mine area, NIG-3, Gloucester County	47°44'15"	65°48'13"	EE
NB-59	00NB01BJ0013	2NGR00200	Nigadoo River 1.6 km below mine at bridge at Tremblay Settlement, NIG-4 Gloucester County	47°43'54"	65°45'30"	EE
NB-60*	00NB01BQ0056	2NMR00300	Northwest Miramichi River at HWY 430 Bridge, Northumberland County	47°16'41"	66°19'30"	EE
NB-60A	00NB01BQ0026		NW Miramichi River north branch 1 km above junction with south branch, T-2 Northumberland County	47°11'16"	65°53'35"	EE

* DENOTES ECOLOGICAL MONITORING STATION

4.2.1 St. John River and Tributaries (NB 1-22)

The St. John River Basin, like that of the St. Croix River, is an international watershed. Of the total 55,000 hectares (21,000 square miles) included in the basin, only slightly more than 50% is in the Province of New Brunswick. Above St. John, the river travels for 660 kilometers (418 miles) through an area of fairly high industrial and agricultural activity. The river and its tributaries have been the subject of numerous studies, all of which conclude that the waters of the St. John continue to be stressed by a combination of industrial and municipal effluents.

In the upper reaches of the St. John River, at Clair, the water is soft, slightly alkaline and has a high turbidity for much of the year. The levels of trace metals and nutrients are low. The water of the St. Francis River, which enters the St. John above Clair, is very similar, although less turbid. Cadmium is present in measurable quantities (0.002 ppb) and chromium levels reach 8 ppb. Above Edmundston, the St. John maintains this quality, with occasional peaks in conductivity and suspended solids probably due to rainfall and runoff.

The effluent from the Fraser Companies Ltd. pulp and paper mill at Edmundston has a definite effect on the water quality downstream on the St. John. The water is hard, alkaline and high levels for conductivity, nitrogen (~3.4 ppm), organic carbon (~90 ppm), iron (~1.9 ppm), and manganese (~0.55 ppm) were recorded.

The Green River, which enters the St. John at Green River, has moderate levels of suspended and dissolved material. Nutrient and trace metal levels are low, indicating a water quality superior to that of the St. John at this point.

The Little River joins the St. John below the dam at Grand Falls. Results from the sampling station on the Little River indicate that the water is less turbid and lower in nutrients than the water of the St. John above this point. However, a wide range of pH readings was noted (6.3 - 9.1) on the Little River as were occasional peaks in conductivity.

The waters of the St. John sampled at the dam at Grand Falls continue to show high levels of total nitrogen (~1.2 ppm) and organic carbon (~35 ppm), although reduced from the levels recorded at St. Bastille. The water is highly coloured, and contains measurable quantities of chromium and cadmium.

Further downstream on the St. John, at Limestone, the effects of the mill at Edmundston are less obvious. Levels of conductivity, colour, nitrogen, carbon continue to fall. Other parameters such as hardness (~71 ppm) and alkalinity (~55 ppm) show increases over the station at Grand Falls. Lignosulphonates, measured in 1974, are high (21.0, 22.7 ppm).

The Tobique and Aroostook Rivers enter the St. John System between Limestone and Beechwood. The Aroostook is largely an American river, and has hard (~100 ppm), alkaline (~ 120 ppm) water which is lower in suspended solids, turbidity and trace metals than is the St. John in this area. However, higher levels were recorded for nitrogen and carbon in the Aroostook and cadmium and chromium continue to be present. The Tobique River is somewhat "cleaner" than the Aroostook. The water is softer and contains lower levels of nitrogen and carbon.

Little change is noted in the downstream water quality of the St. John River from Limestone to Florenceville. Nitrogen and carbon levels remain high and concentrations of trace metals (with the exception of chromium) continue to decline.

Another tributary, the Presquile River, joins the St. John at Centreville. Conductivity, turbidity, nitrogen and carbon levels are all higher for the Presquile than for the St. John at this point. The water of the Presquile is very hard (100-140 ppm) and alkaline (~115 ppm). Trace metal levels for the most part are similar to the St. John, but cadmium (~4 ppb) and manganese (~120 ppm) appear in larger concentrations in the Presquile waters.

Below the confluence of the Presquile and St. John rivers, at Woodstock, the waters of the St. John show a reduction in levels of nitrogen and carbon present. Hardness and alkalinity are higher as are the levels of most trace metals, especially chromium (~6 ppm).

The Meduxnekeag River, which flows into the St. John at Woodstock, has a water quality very similar to that of the St. John. Iron (~190 ppm), manganese (~ 40 ppb) and chromium levels are lower than St. John readings and cadmium (0.002 ppb) is once more present in measurable quantities.

The Pokiok River and Jocelyne Brook are tributaries of the southern St. John River. Both these water courses receive effluent from the Lake George Antimony Mine on Lake George. The waters of the Pokiok are softer, less turbid and have lower levels of trace metals than the waters of the St. John above this point. Arsenic and antimony are present in the Pokiok in measurable quantities up to levels of 0.06 ppm and 0.008 ppm respectively and tin was observed to reach 3 ppm. Jocelyne Brook, which enters the St. John below Nackawic, has water quality similar to the Pokiok River. Arsenic and antimony are absent from these waters but measurable quantities of chromium were noted. Levels for both copper and zinc were much lower in the Pokiok and Jocelyne Brook than those recorded on the St. John at Woodstook.

Below the confluence of the Pokiok and St. John Rivers the water quality is very similar to that observed at the station at Woodstock. Levels of the trace metals manganese, iron and chromium have dropped from the maximums noted upstream, but copper and zinc remain the same.

At the Mactaquac Headpond of the St. John River the effects of the effluent of the pulp and paper mill at St. Anne can be seen in the increases in nitrogen and carbon levels in the river water. Further increases in the organic loading of the river water is evident at the station below Fredericton. Chromium and cadmium continue to be present at these stations, levels of other trace metals are relatively low.

Only one station on the St. John was studied biologically. In 1974 the benthic fauna at Clair on the upper reaches of the river was sampled. Diversity was relatively low as compared to samples taken in faster rocky rivers of New Brunswick. However, mayflies, stoneflies, dragonflies and the occasional chironomid were found in the samples.

During the last water sampling run carried out on the St. John River in 1976 there was a heavy rainfall. Aberrant readings associated with samples collected at that time may be linked with the ensuing runoff.

WATER QUALITY SURVEILLANCE NETWORK

E.P.S. ATLANTIC REGION 1974-1976

STATION **00NB01AD0013** LATITUDE **47** D **12** M **17** S LONGITUDE **68** D **56** M **21** S

ST. FRANCIS RIVER ABOVE MOUTH AT PICNIC SITE, MADAWASKA COUNTY

SAMPLE DATE D	M	Y	TIME AS H	M	02061F TEMP. WATER DEG.C.	08102F OXYGEN DISSOLVED DO O2 MG/L	10301F PH PH UNITS	10301L PH PH UNITS	02041L SPECIFIC CONDUCTANCE USIE/CM	02073L TURBIDITY JTU	10401L RESIDUE NONFILTR. MG/L	10451L RESIDUE FILTERABLE MG/L
14	5	74			3.0 61S		8.5 01S	7.1	67	5.5	17	56
18	6	74				9.6 02S	6.2 01S	6.9	61	4.0	10	57
23	7	74				11.0 02S		7.0	80	0.6		
28	8	74			18.9 61S	8.5 02S		6.9	85	1.0		
29	5	75			8.		6.6	7.2	64	2.9		
8	7	75	08	30	21.	7.8	6.9	7.5	83	0.6 71L		
5	8	75	07	30	20.	7.5	6.9	7.0	82	L.5		
22	10	75	08	00	5.0	10.0	6.6	7.2	80	0.6		
30	3	76	09	00	1.0	9.2	6.3	6 8	98	0.5		
26	5	76	14	20	9.0	11.8	5.8	7.3	70		L5	
16	6	76	19	30	17.0		6.7	7.4	60		L5	
11	8	76	10	30	17.0	8.2	6.8	7.0	60		55	

SAMPLE DATE D	M	Y	TIME AS H	M	10501L RESIDUE FIXED NONFILTR. MG/L	10551L RESIDUE FIXED FILTERABLE MG/L	07112L NITROGEN DISSOLVED NO3 E NO2 N MG/L	07103L NITRATE & NITRITE DISSOLVED NO3 MG/L	07012L NITROGEN TOTAL KJELDAHL N MG/L	15365L PHOSPHORUS DISSOLVED INORG. PO4 P MG/L	15413L PHOSPHORUS TOTAL P MG/L	06001L CARBON TOTAL ORGANIC C MG/L
14	5	74			L10	33	0.05 10L				0.020 14L	
18	6	74			L10	41	0.01 10L				0.020 14L	9.0
23	7	74					L.01 10L				0.020	7.3
28	8	74					0.04 10L				L.005	5.4
29	5	75					0.12 10L				0.005	8.4
8	7	75	08	30			0.07 10L				0.020	5.6
5	8	75	07	30			0.05 10L				0.015	5.8
22	10	75	08	00			0.04 10L				0.020	5.7
30	3	76	09	00			0.25 10L				0.005	3.3
26	5	76	14	20			0.105		0.3	L.005		9.
16	6	76	19	30			0.08		0.4	L.005		10.
11	8	76	10	30			L.005		0.4	L.005		18.

WATER QUALITY SURVEILLANCE NETWORK

E.P.S. ATLANTIC REGION 1974-1976

STATION **00NB01AD0013** LATITUDE **47** D **12** M **17** S LONGITUDE **68** D **56** M **21** S

ST. FRANCIS RIVER ABOVE MOUTH AT PICNIC SITE, MADAWASKA COUNTY

SAMPLE DATE D	M	Y	TIME AS H	M	20103L CALCIUM DISSOLVED CA MG/L	20003P CALCIUM TOTAL CA MG/L	12102L MAGNESIUM DISSOLVED MG MG/L	12002P MAGNESIUM TOTAL MG MG/L	10606L HARDNESS TOTAL LAB CALC. CACO3 MG/L	10101L ALKALINITY TOTAL CACO3 MG/L	16304L SULPHATE DISSOLVED SO4 MG/L	26302P IRON EXTRBLE. FE MG/L
14	5	74			9.6		1.0			19		0.32
18	6	74			10.0		0.9			22		
23	7	74			12.		0.9			29		0.05
28	8	74			14.0		1.2			24		0.07
29	5	75			9.8		0.9			21	8.0	
8	7	75	08	30	12.7		1.1			30	5.0	
5	8	75	07	30	14.0		1.1 03L			30	5.0	
22	10	75	08	00	13.0		0.8			34	6.0	
30	3	76	09	00	17.0		1.4			35	8.0	
26	5	76	14	20		10.		0.9	29.	25	7.	
16	6	76	19	30		11.		0.8	30.	25	8.	
11	8	76	10	30		11.		1.0	32.	L1	6.	

SAMPLE DATE D	M	Y	TIME AS H	M	25304P MANGANESE EXTRBLE. MN MG/L	29305P COPPER EXTRBLE. CU MG/L	30305P ZINC EXTRBLE. ZN MG/L	82302P LEAD EXTRBLE. PB MG/L	80311P MERCURY EXTRBLE. HG UG/L	48302P CADMIUM EXTRBLE. CD MG/L	24303P CHROMIUM EXTRBLE. CR MG/L	06581L HUMIC ACID MG/L
14	5	74			0.04	L.002	L.002	0.006		L.001	0.008	9
18	6	74			L.01 04L			L.002 02L				8
23	7	74			L.01	0.002	L.002	L.002		L.001	0.0006	9
28	8	74			L.01	0.017	0.002	0.011		0.001	0.0010	6 82L
29	5	75				0.002			0.05			
8	7	75	08	30		0.019			0.05			
5	8	75	07	30		0.04	0.07	L.002	0.05	0.001		
22	10	75	08	00		L.002			L.05			
30	3	76	09	00		0.003			L.05			
26	5	76	14	20		L.001			0.2			
16	6	76	19	30		L.001						
11	8	76	10	30		0.001						

WATER QUALITY SURVEILLANCE NETWORK

E.P.S. ATLANTIC REGION 1974-1976

STATION **00NB01AD0001** LATITUDE **47** D **14** M **55** S LONGITUDE **68** D **36** M **20** S

SAINT JOHN RIVER AT CLAIR AT BRIDGE BOUNDARY PLAQUE (WSC GAUGE) MADAWASKA COUNTY

SAMPLE DATE			TIME AS		02061F TEMP. WATER	08102F OXYGEN DISSOLVED DO	10301F PH	10301L PH	02041L SPECIFIC CONDUCTANCE	02073L TURBIDITY	10401L RESIDUE NONFILTR.	10451L RESIDUE FILTERABLE
D	M	Y	H	M	DEG.C.	O2 MG/L	PH UNITS	PH UNITS	USIE/CM	JTU	MG/L	MG/L
25	4	74			2.0 61S		4.8 01S	7.0	47	15.	20	53
14	5	74			4.0 61S		9.0 01S	6.7	35	20.	48	51
18	6	74				12.4 02S	6.6 01S	7.5	62	L.5		
23	7	74				12.0 02S		7.3	65	0.5		
27	8	74			18.0 61S	9.2 02S		7.5	72	1.2		
29	5	75			9.0		6.4	7.2	54	2.0		
8	7	75	09	30	23.	7.5	7.0	7.4	77	0.6 71L		
5	8	75	09	30	21.	7.3	6.8	6.9	74	2.5		
22	10	75	09	00	5.0	8.5 01F	6.5	6.9	66	2.0		
30	3	76	08	00	0.0	9.2	5.7	6.5	64	1.5		
26	5	76	13	30	10.0	11.4	5.2	6.9	50		L5	
16	6	76	18	45	22.0		6.8	7.2	60		50	
11	8	76	09	15	16.0	8.4	6.1	6.6	40		120	

SAMPLE DATE			TIME AS		10501L RESIDUE FIXED NONFILTR.	10551L RESIDUE FIXED FILTERABLE	07112L NITROGEN DISSOLVED NO3 E NO2	07103L NITRATE & NITRITE DISSOLVED	07012L NITROGEN TOTAL KJELDAHL	15365L PHOSPHORUS DISSOLVED INORG. PO4	15413L PHOSPHORUS TOTAL	06001L CARBON TOTAL ORGANIC
D	M	Y	H	M	MG/L	MG/L	N MG/L	NO3 MG/L	N MG/L	P MG/L	P MG/L	C MG/L
25	4	74			16	26	0.28 10L				0.040 14L	10.8
14	5	74			42	24	0.01 10L				0.080 14L	
18	6	74					0.01 10L				0.010 14L	7.0
23	7	74					L.01 10L				0.006	10.3
27	8	74					0.01 10L				L.005	8.9
29	5	75					0.01 10L				0.005	10.0
8	7	75	09	30			0.02 10L				0.015	6.9
5	8	75	09	30			0.02 10L				0.005	11.4
22	10	75	09	00			0.10 10L				0.010	11.1
30	3	76	08	00			0.59 10L			0.015	0.015	10.5
26	5	76	13	30			0.045		0.3	L.005		14.
16	6	76	18	45			0.085		0.4	L.005		10.
11	8	76	09	15			0.040		0.7	L.005		22.

WATER QUALITY SURVEILLANCE NETWORK

E.P.S. ATLANTIC REGION 1974-1976

STATION **00NB01AD0001** LATITUDE **47** D **14** M **55** S LONGITUDE **68** D **36** M **20** S

SAINT JOHN RIVER AT CLAIR AT BRIDGE BOUNDARY PLAQUE (WSC GAUGE) MADAWASKA COUNTY

SAMPLE DATE			TIME AS		20103L CALCIUM DISSOLVED	20003P CALCIUM TOTAL	12102L MAGNESIUM DISSOLVED	12002P MAGNESIUM TOTAL	10606L HARDNESS TOTAL LAB CALC.	10101L ALKALINITY TOTAL	16304L SULPHATE DISSOLVED	26302P IRON EXTRBLE.
					CA	CA	MG	MG	CACO3	CACO3	SO4	FE
D	M	Y	H	M	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L
25	4	74			7.5		1.1			15		0.60
14	5	74			4.7		0.7			6		0.92
18	6	74			10.0		1.1			21		
23	7	74			7.5		1.1			24		0.26
27	8	74			13.0		1.5			32		0.71
29	5	75			8.1		1.0			15	8.0	
8	7	75	09	30	11.5		1.4			30	5.0	
5	8	75	09	30	10.0		1.3 03L			22	5.0	
22	10	75	09	00	9.0		1.2			21	8.0	
30	3	76	08	00	9.2		1.4			17	8.0	
26	5	76	13	30		7.5		0.9	23.	15	6.	
16	6	76	18	45		9.5		1.1	30.	20	7.	
11	8	76	09	15		8.0		1.0	24.	15	5.	

SAMPLE DATE			TIME AS		25304P MANGANESE EXTRBLE.	29305P COPPER EXTRBLE.	30305P ZINC EXTRBLE.	82302P LEAD EXTRBLE.	80311P MERCURY EXTRBLE.	48302P CADMIUM EXTRBLE.	24303P CHROMIUM EXTRBLE.	06581L HUMIC ACID
					MN	CU	ZN	PB	HG	CD	CR	
D	M	Y	H	M	MG/L	MG/L	MG/L	MG/L	UG/L	MG/L	MG/L	MG/L
25	4	74			0.10	0.005	0.007	0.006		L.001	L.0005	11
14	5	74			0.08	0.002	L.002	0.003		L.001	0.002	14
18	6	74			0.03 04L			0.011 02L				8
23	7	74			0.06	0.002	L.002	0.002		0.002	0.0006	15
27	8	74			0.04	0.008	0.50 04P	0.015		0.001	0.0005	8 82L
29	5	75				L.002			0.45			
8	7	75	09	30		0.018			L.05			
5	8	75	09	30		0.04	0.07	L.002	L.05	L.001		
22	10	75	09	00		L.002			L.05			
30	3	76	08	00		0.006			0.05			
26	5	76	13	30		L.001						
16	6	76	18	45		0.001			0.2			
11	8	76	09	15		0.002			0.1			

WATER QUALITY SURVEILLANCE NETWORK

E.P.S. ATLANTIC REGION 1974-1976

STATION **00NB01AD0014** LATITUDE **47** D **21** M **20** S LONGITUDE **68** D **21** M **53** S

SAINT JOHN RIVER 200M ABOVE CONFLUENCE WITH RUISSEAU DEUX MILLES, EDMUNSTON MADAWASKA COUNTY

SAMPLE DATE			TIME AS		02061F TEMP. WATER	08102F OXYGEN DISSOLVED DO O2	10301F PH	10301L PH	02041L SPECIFIC CONDUCTANCE	02073L TURBIDITY	10401L RESIDUE NONFILTR.	10451L RESIDUE FILTERABLE
D	M	Y	H	M	DEG.C.	MG/L	PH UNITS	PH UNITS	USIE/CM	JTU	MG/L	MG/L
25	4	74			2.0 61S		6.3 01S	7.1	51	24.	58	49
14	5	74			4.0 61S		8.6 01S	6.7	35	30.	84	38
18	6	74				10.1 02S	7.9 01S	7.3	64	1.5		
23	7	74				10.0 02S		6.4	97	2.0		
26	8	74			17.2 61S	8.2 02S		7.0	164	0.8		
29	5	75	07	00	9.0 62S	11.0 02S	6.0 01S	7.2	50		1	
7	7	75	17	00	25.0 62S	7.9 02S	7.5 01S	6.5	120		L2	
4	8	75	16	00	23.0 62S	6.5 02S	6.9 01S	6.3	110		4	
22	10	75	10	30	5.0 62S	9.1 02S	6.6 01S	7.3	200		L2	
30	3	76	11	00	0.0 62S	9.3 02S	5.9 01S	7.0	60		6	
26	5	76	12	45	10.0	11.6	5.5	7.2	50		L5	
16	6	76	18	15	21.0		7.2	6.4	60		L5	
11	8	76	07	30	17.0	8.4	6.6	7.8	20		250	

SAMPLE DATE			TIME AS		10501L RESIDUE FIXED NONFILTR.	10551L RESIDUE FIXED FILTERABLE	07112L NITROGEN DISSOLVED NO3 E NO2	07103L NITRATE & NITRITE DISSOLVED	07012L NITROGEN TOTAL KJELDAHL	15365L PHOSPHORUS DISSOLVED INORG. PO4	15413L PHOSPHORUS TOTAL	06001L CARBON TOTAL ORGANIC
							N	NO3	N	P	P	C
D	M	Y	H	M	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L
25	4	74			L10	35	0.27 10L				0.080 14L	10.0
14	5	74			72	18	0.01 10L				0.040 14L	
18	6	74					L.01 10L				0.025 14L	8.6
23	7	74					0.05 10L				0.035	7.9
26	8	74					0.03 10L				0.010	3.6
29	5	75	07	00				L.01		0.022		14.0
7	7	75	17	00				0.06	0.7	L.005		19.0
4	8	75	16	00				L.01		L.005		20.0
22	10	75	10	30				L.01		L.005		20.0
30	3	76	11	00				0.50		0.010		10.0
26	5	76	12	45			0.065		0.3	L.005		12.
16	6	76	18	15			0.04		0.4	L.005		10.
11	8	76	07	30			L.005		0.6	L.005		15.

WATER QUALITY SURVEILLANCE NETWORK

E.P.S. ATLANTIC REGION 1974-1976

STATION **00NB01AD0014** LATITUDE **47** D **21** M **20** S LONGITUDE **68** D **21** M **53** S

SAINT JOHN RIVER 200M ABOVE CONFLUENCE WITH RUISSEAU DEUX MILLES, EDMUNSTON MADAWASKA COUNTY

SAMPLE DATE			TIME AS		20103L CALCIUM DISSOLVED	20003P CALCIUM TOTAL	12102L MAGNESIUM DISSOLVED	12002P MAGNESIUM TOTAL	10606L HARDNESS TOTAL LAB CALC.	10101L ALKALINITY TOTAL	16304L SULPHATE DISSOLVED	26302P IRON EXTRBLE.
					CA	CA	MG	MG	CACO3	CACO3	SO4	FE
D	M	Y	H	M	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L
25	4	74			8.2		1.1			16		0.85
14	5	74			5.0		0.7			8		0.91
18	6	74			9.9		1.2			24		
23	7	74			12.		1.6			27		0.09
26	8	74			24.0		3.0			8		0.22
29	5	75	07	00		8.20		0.9		20	7.0 03L	
7	7	75	17	00		12.2		1.1		1	8.0 03L	
4	8	75	16	00		10.5		1.0		20	8.0 03L	
22	10	75	10	30		14.0		1.5		40	6.0 03L	
30	3	76	11	00		11.0		1.0		15	8.0 03L	
26	5	76	12	45		7.6		1.0	23.	20	7.	
16	6	76	18	15		9.4		1.1	30.	17	8.	
11	8	76	07	30		8.4		1.2	26.	5	5.	

SAMPLE DATE			TIME AS		25304P MANGANESE EXTRBLE.	29305P COPPER EXTRBLE.	30305P ZINC EXTRBLE.	82302P LEAD EXTRBLE.	80311P MERCURY EXTRBLE.	48302P CADMIUM EXTRBLE.	24303P CHROMIUM EXTRBLE.	06581L HUMIC ACID
					MN	CU	ZN	PB	HG	CD	CR	
D	M	Y	H	M	MG/L	MG/L	MG/L	MG/L	UG/L	MG/L	MG/L	MG/L
25	4	74			0.11	0.005	0.018	0.009		L.001	0.0005	10
14	5	74			0.09 04L	0.002	0.002	0.006		L.001	0.002	14
18	6	74			0.03 04L			0.002 02L				8
23	7	74			L.01	0.002	0.002	L.002		L.001	0.0006	11
26	8	74			0.14	0.04	0.006	0.010		0.001	0.0010	6 82L
29	5	75	07	00		0.004			1.9			
7	7	75	17	00					L.10			
4	8	75	16	00					L.10			
22	10	75	10	30		0.005			L.10			
30	3	76	11	00		0.001			L.1			
26	5	76	12	45		L.001			L.1			
16	6	76	18	15		L.001			0.1			
11	8	76	07	30		0.005			0.1			

WATER QUALITY SURVEILLANCE NETWORK

E.P.S. ATLANTIC REGION 1974-1976

STATION **00NB01AF0020** LATITUDE **47** D **21** M **18** S LONGITUDE **68** D **14** M **3** S

SAINT JOHN RIVER 400 M BELOW RUISSEAU A LAVOIE (STREAM) AT ST. BASILE MADAWASKA COUNTY

SAMPLE DATE			TIME AS		02061F TEMP. WATER	08102F OXYGEN DISSOLVED DO	10301F PH	10301L PH	02041L SPECIFIC CONDUCTANCE	02073L TURBIDITY	10401L RESIDUE NONFILTR.	10451L RESIDUE FILTERABLE
D	M	Y	H	M	DEG.C.	O2 MG/L	PH UNITS	PH UNITS	USIE/CM	JTU	MG/L	MG/L
25	4	74			3.0 61S		5.8 01S	6.9	80	10.	13	75
14	5	74			5.0 61S		7.5 01S	7.0	52	20.	27	47
17	6	74						7.2	106	8.0	31	105
22	7	74				9.0 02S		6.3	183	1.5		
26	8	74			24.0 61S	7.0 02S		6.2	153	2.8		
29	5	75	11	45	9.0 62S	10.0 02S	6.1 01S	6.8	110		2	
8	7	75	11	00	26.0 62S	7.5 02S	7.2 01S	6.6	390		3	
4	8	75	15	30	23.0 62S	6.1 02S	6.6 01S	6.1	230		7	
22	10	75	11	00	6.0 62S	5.0 02S	6.1 01S	6.0	400		L2	
30	3	76	12	00	1.0 62S		6.0 01S	7.0	100		5	
26	5	76	11	45	10.5	11.0	5.5	7.1	100		6	
16	6	76	17	30	20.0		6.9	7.0	150		L5	
11	8	76	12	00	19.0	7.9	6.7	7.7	460		15	

SAMPLE DATE			TIME AS		10501L RESIDUE FIXED NONFILTR.	10551L RESIDUE FIXED FILTERABLE	07112L NITROGEN DISSOLVED NO3 E NO2	07103L NITRATE & NITRITE DISSOLVED	07012L NITROGEN TOTAL KJELDAHL	15365L PHOSPHORUS DISSOLVED INORG. PO4	15413L PHOSPHORUS TOTAL	06001L CARBON TOTAL ORGANIC
D	M	Y	H	M	MG/L	MG/L	N MG/L	NO3 MG/L	N MG/L	P MG/L	P MG/L	C MG/L
25	4	74			L10	44	1.00 10L				0.07 14L	16.0
14	5	74			24	24	0.08 10L				0.050 14L	
17	6	74			24	58	1.22 10L				0.040 14L	21.6
22	7	74					4.0 10L				0.032	90.0
26	8	74					4.0 10L				0.03	70.0
29	5	75	11	45				1.18	0.8	0.020		30.0
8	7	75	11	00				0.62	0.8			33.0
4	8	75	15	30				L.01		0.03		60.0
22	10	75	11	00				3.55		0.23		70.0
30	3	76	12	00				0.51	1.8	L.005		20.0
26	5	76	11	45			0.150		0.8	L.005	L.005	17.
16	6	76	17	30			0.040		3.4	L.005		50.
11	8	76	12	00			4.60		0.9	0.375		10.

WATER QUALITY SURVEILLANCE NETWORK

E.P.S. ATLANTIC REGION 1974-1976

STATION **00NB01AF0020** LATITUDE **47** D **21** M **18** S LONGITUDE **68** D **14** M **3** S

SAINT JOHN RIVER 400 M BELOW RUISSEAU A LAVOIE (STREAM) AT ST. BASILE MADAWASKA COUNTY

SAMPLE DATE			TIME AS		20103L CALCIUM DISSOLVED		20003P CALCIUM TOTAL	12102L MAGNESIUM DISSOLVED	12002P MAGNESIUM TOTAL	10606L HARDNESS TOTAL LAB CALC.	10101L ALKALINITY TOTAL	16304L SULPHATE DISSOLVED	26302P IRON EXTRBLE.
D	M	Y	H	M	CA MG/L		CA MG/L	MG MG/L	MG MG/L	CACO3 MG/L	CACO3 MG/L	SO4 MG/L	FE MG/L
25	4	74			11.0	04L		1.4			22		0.70
14	5	74			6.9			1.1			12		0.59
17	6	74			15.0			1.9			30		
22	7	74			24.1			2.1			44		0.86
26	8	74			26.0			2.3			18		1.9
29	5	75	11	45			14.4		1.4		30	10.0	03L
8	7	75	11	00			18.3		1.7		2	20.0	03L
4	8	75	15	30			20.2		1.5		30	20.0	03L
22	10	75	11	00			20.0		1.7		15	35.0	03L
30	3	76	12	00			16.0		1.3		25	10.0	03L
26	5	76	11	45			14.		1.8	42.	30	9.	
16	6	76	17	30			21.2		1.9	60.	45	20.	
11	8	76	12	00			55.		5.1	160.	125	40.	

SAMPLE DATE			TIME AS		25304P MANGANESE EXTRBLE.		29305P COPPER EXTRBLE.	30305P ZINC EXTRBLE.	82302P LEAD EXTRBLE.	80311P MERCURY EXTRBLE.	48302P CADMIUM EXTRBLE.	24303P CHROMIUM EXTRBLE.	06581L HUMIC ACID
D	M	Y	H	M	MN MG/L		CU MG/L	ZN MG/L	PB MG/L	HG UG/L	CD MG/L	CR MG/L	MG/L
25	4	74			0.1		0.005	0.006	0.005		L.001		16
14	5	74			0.05		0.004	L.002	0.006		L.001	0.005	11
17	6	74			0.39	04L			0.002	02L			20
22	7	74			0.40		0.002	L.002	0.002		L.001	0.0006	30 82L
26	8	74			0.55		0.012	0.008	0.018		0.001		30 82L
29	5	75	11	45			0.003			2.8			
8	7	75	11	00						L.10			
4	8	75	15	30						L.10			
22	10	75	11	00			0.007			0.10			
30	3	76	12	00						L.1			
26	5	76	11	45			0.001			L.1			
16	6	76	17	30			0.004			0.3			
11	8	76	12	00			0.006			L.1			

WATER QUALITY SURVEILLANCE NETWORK

E.P.S. ATLANTIC REGION 1974-1976

STATION **00NB01AF0016** LATITUDE **47** D **18** M **25** S LONGITUDE **68** D **8** M **8** S

GREEN RIVER AT TCH BRIDGE 1.3 KM SE OF GREEN RIVER, MADAWASKA COUNTY

SAMPLE DATE D	M	Y	TIME AS H	M	02061F TEMP. WATER DEG C.	08102F OXYGEN DISSOLVED DO O2 MG/L	10301F PH PH UNITS	10301L PH PH UNITS	02041L SPECIFIC CONDUCTANCE USIE/CM	02073L TURBIDITY JTU	10401L RESIDUE NONFILTR MG/L	10451L RESIDUE FILTERABLE MG/L
25	4	74			2.0 61S		6.4 01S	7.4	77	2.2		
14	5	74			4.0 61S		8.5 01S	6.9	51	45.0	113	44
17	6	74				9.0 02S	7.9 01S	7.2	83	1.0		
22	7	74				11.5 02S		7.0	89	4.5	19	54
26	8	74			20.0 61S	9.7 02S		7.3	88	1.2		
29	5	75	12	30	10.0 62S	11.0 02S	6.3 01S	7.1	80		2	
7	7	75	15	30	25.0 62S	7.2 02S	8.3 01S	6.4	370		L2	
4	8	75	15	00	20.0 62S	8.3 02S	7.5 01S	6.3	140		6	
21	10	75	16	30	7.0 62S	9.1 02S	7.0 01S	7.8	200		L2	
30	3	76	12	20	0.0 62S		6.0 01S	7.5	80		3	
25	5	76	11	00	9.0	12.2	5.9	7.7	70		6	
16	6	76	17	10	21.0	10.4	7.5	7.9	80		1	
11	8	76	12	30	16.0	8.6	6.6	6.6	40		240	

SAMPLE DATE D	M	Y	TIME AS H	M	10501L RESIDUE FIXED NONFILTR MG/L	10551L RESIDUE FIXED FILTERABLE MG/L	07112L NITROGEN DISSOLVED NO3 E NO2 N MG/L	07103L NITRATE & NITRITE DISSOLVED NO3 MG/L	07012L NITROGEN TOTAL KJELDAHL N MG/L	15365L PHOSPHORUS DISSOLVED INORG. PO4 P MG/L	15413L PHOSPHORUS TOTAL P MG/L	06001L CARBON TOTAL ORGANIC C MG/L
25	4	74					0.39 10L				0.010 14L	4.7
14	5	74			105	32	0.18 10L				0.19 14L	
17	6	74					0.28 10L				0.010 14L	3.1
22	7	74			10	45	L.01 10L				0.035	4.9
26	8	74					0.06 10L				L.005	4.0
29	5	75	12	30				0.86	0.3	L.01		11.0
7	7	75	15	30				0.08	0.5	L.005		21.0
4	8	75	15	00				0.04		L.005		15.0
21	10	75	16	30				0.10		L.005		15.0
30	3	76	12	20				0.50	0.8	L.005		2.0
25	5	76	11	00			0.155		0.1	L.005		4.
16	6	76	17	10			0.055		0.3	L.005		4.
11	8	76	12	30			0.380		0.9	0.02		16.

WATER QUALITY SURVEILLANCE NETWORK

E.P.S. ATLANTIC REGION 1974-1976

STATION **00NB01AF0016** LATITUDE **47** D **18** M **25** S LONGITUDE **68** D **8** M **8** S

GREEN RIVER AT TCH BRIDGE 1.3 KM SE OF GREEN RIVER, MADAWASKA COUNTY

SAMPLE DATE			TIME AS		20103L CALCIUM DISSOLVED	20003P CALCIUM TOTAL	12102L MAGNESIUM DISSOLVED	12002P MAGNESIUM TOTAL	10606L HARDNESS TOTAL LAB CALC.	10101L ALKALINITY TOTAL	16304L SULPHATE DISSOLVED	26302P IRON EXTRBLE.
D	M	Y	H	M	CA MG/L	CA MG/L	MG MG/L	MG MG/L	CACO3 MG/L	CACO3 MG/L	SO4 MG/L	FE MG/L
25	4	74			11.9		1.6					
14	5	74			6.9		1.1					
17	6	74			12.5		1.5					
22	7	74			13.		1.9					
26	8	74			16.0		2.2					
29	5	75	12	30		11.7		1.4			5.0 03L	
7	7	75	15	30		15.3		1.8		2	L5.0 03L	
4	8	75	15	00		14.3		1.6			6.0 03L	
21	10	75	16	30		14.0		1.8			5.0 03L	
30	3	76	12	20		14.0		1.5		30	6.0 03L	
25	5	76	11	00		0.011		1.6	34.	30	5.	
16	6	76	17	10		13.3		17.5	40.	35	5.	
11	8	76	12	30		7.6		1.4	25.	15	4.	

SAMPLE DATE			TIME AS		25304P MANGANESE EXTRBLE.	29305P COPPER EXTRBLE.	30305P ZINC EXTRBLE.	82302P LEAD EXTRBLE.	80311P MERCURY EXTRBLE.	48302P CADMIUM EXTRBLE.	24303P CHROMIUM EXTRBLE.	06581L HUMIC ACID
D	M	Y	H	M	MN MG/L	CU MG/L	ZN MG/L	PB MG/L	HG UG/L	CD MG/L	CR MG/L	MG/L
29	5	75	12	30					2.4			
7	7	75	15	30					L.10			
4	8	75	15	00					0.1			
21	10	75	16	30					L.10			
30	3	76	12	20					L.1			
25	5	76	11	00					L.1			
16	6	76	17	10					3.0			
11	8	76	12	30					0.4			

WATER QUALITY SURVEILLANCE NETWORK

E.P.S. ATLANTIC REGION 1974-1976

STATION **00NB01AF0001** LATITUDE **47** D **3** M **10** S LONGITUDE **67** D **44** M **25** S

LITTLE RIVER AT MOUTH AT GRAND FALLS BRIDGE, VICTORIA COUNTY

SAMPLE DATE			TIME		02061F TEMP. WATER	08102F OXYGEN DISSOLVED DO	10301F PH	10301L PH	02041L SPECIFIC CONDUCTANCE	02073L TURBIDITY	10401L RESIDUE NONFILTR.	10451L RESIDUE FILTERABLE
			AS			O2						
D	M	Y	H	M	DEG.C.	MG/L	PH UNITS	PH UNITS	USIE/CM	JTU	MG/L	MG/L
25	4	74			2.0 61S		6.5 01S	7.2	117	10.	16	86
14	5	74			4.0 61S		8.5 01S	7.1	71	10.	39	53
17	6	74				8.9 02S	7.9 01S	8.0	163	0.5		
22	7	74				11.5 02S						
26	8	74			17.2 61S	10.6 02S		7.3	152	0.8		
29	5	75	13	30	9.0 62S	12.0 02S	7.4 01S	7.3	130		3	
7	7	75	14	00	21.0 62S	8.5 02S	7.9 01S	6.7	300		L2	
4	8	75	14	30	19.0 62S	8.5 02S	7.9 01S	6.3	270		6	
21	10	75	16	00	6.0 62S	10.2 02S	7.4 01S	7.6	500		L2	
30	3	76	13	15	1.0 62S		6.3 01S	7.5	110		60	
25	5	76	19	45	7.5	11.4	7.0	7.6	130		4	
16	6	76	16	10	19.0	8.8	9.1	9.2	150		20	
10	8	76	16	30	17.2	8.0	6.9	7.0	110		35	

SAMPLE DATE			TIME		10501L RESIDUE FIXED NONFILTR.	10551L RESIDUE FIXED FILTERABLE	07112L NITROGEN DISSOLVED NO3 E NO2	07103L NITRATE & NITRITE DISSOLVED	07012L NITROGEN TOTAL KJELDAHL	15365L PHOSPHORUS DISSOLVED INORG. PO4	15413L PHOSPHORUS TOTAL	06001L CARBON TOTAL ORGANIC
			AS				N	NO3	N	P	P	C
D	M	Y	H	M	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L
25	4	74			10	64	0.78 10L				0.04 14L	6.7
14	5	74			33	36	0.14 10L				0.040 14L	
17	6	74					0.45 10L				0.020 14L	8.2
26	8	74					0.45 10L				L.005	5.3
29	5	75	13	30				0.50	0.3	L.01		22.0
7	7	75	14	00				0.61	0.5	L.005		25.0
4	8	75	14	30				0.61		L.005		30.0
21	10	75	16	00				0.86		L.005		30.0
30	3	76	13	15				0.90	0.8	L.005		6.0
25	5	76	19	45			0.		0.2	L.005		6.
16	6	76	16	10			0.525		0.3	L.005		8.
10	8	76	16	30			0.925		1.0	0.02		23.

WATER QUALITY SURVEILLANCE NETWORK

E.P.S. ATLANTIC REGION 1974-1976

STATION **00NB01AF0001** LATITUDE **47** D **3** M **10** S LONGITUDE **67** D **44** M **25** S

LITTLE RIVER AT MOUTH AT GRAND FALLS BRIDGE, VICTORIA COUNTY

SAMPLE DATE			TIME AS		20103L CALCIUM DISSOLVED	20003P CALCIUM TOTAL	12102L MAGNESIUM DISSOLVED	12002P MAGNESIUM TOTAL	10606L HARDNESS TOTAL LAB CALC.	10101L ALKALINITY TOTAL	16304L SULPHATE DISSOLVED	26302P IRON EXTRBLE.
					CA	CA	MG	MG	CACO3	CACO3	SO4	FE
D	M	Y	H	M	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L
25	4	74			19.0		1.5			44		0.33
14	5	74			11.0		0.8			20		0.62
17	6	74			31.5		2.0			71		
22	7	74			24.0		1.7			L1		
26	8	74			28.0		2.0			71		0.19
29	5	75	13	30		21.4		1.2		55	10.0 03L	
7	7	75	14	00		32.6		1.9		3	5.0 03L	
4	8	75	14	30		35.4		1.6		80	9.0 03L	
21	10	75	16	00		34.0		1.0		80	10.0 03L	
30	3	76	13	15		23.0		1.3		45	9.0 03L	
25	5	76	19	45		22.		1.4	61.	50	8.	
16	6	76	16	10		28.5		1.7	80.	70	8.	
10	8	76	16	30		21.		1.8	60.	40	8.	

SAMPLE DATE			TIME AS		25304P MANGANESE EXTRBLE.	29305P COPPER EXTRBLE.	30305P ZINC EXTRBLE.	82302P LEAD EXTRBLE.	80311P MERCURY EXTRBLE.	48302P CADMIUM EXTRBLE.	24303P CHROMIUM EXTRBLE.	06581L HUMIC ACID
					MN	CU	ZN	PB	HG	CD	CR	
D	M	Y	H	M	MG/L	MG/L	MG/L	MG/L	UG/L	MG/L	MG/L	MG/L
25	4	74			0.02	L.002	0.010	0.003		L.001	0.0007	5
14	5	74			0.05	L.002	L.002	0.006		0.001	0.003	8
17	6	74			L.01 04L			L.002 02L				3
22	7	74									0.0006	
26	8	74			0.03	0.02	0.04	0.010		0.001	0.0038	17 82L
29	5	75	13	30		0.003			0.2			
7	7	75	14	00					L.10			
4	8	75	14	30					L.10			
21	10	75	16	00		0.002			L.10			
30	3	76	13	15		0.001			L.1			
25	5	76	19	45		L.001			L.1			
16	6	76	16	10		L.001						
10	8	76	16	30		0.005						

WATER QUALITY SURVEILLANCE NETWORK

E.P.S. ATLANTIC REGION 1974-1976

STATION **01NB01AF0005** LATITUDE **47** D **3** M **2** S LONGITUDE **67** D **44** M **31** S

SAINT JOHN RIVER APPROX. 150 M. ABOVE DAM, MADAWASKA COUNTY, NEW BRUNSWICK

SAMPLE DATE			TIME AS		02061F TEMP. WATER	08102F OXYGEN DISSOLVED DO	10301F PH	10301L PH	02041L SPECIFIC CONDUCTANCE	02073L TURBIDITY	10401L RESIDUE NONFILTR.	10451L RESIDUE FILTERABLE
						O2						
D	M	Y	H	M	DEG.C.	MG/L	PH UNITS	PH UNITS	USIE/CM	JTU	MG/L	MG/L
14	5	74			5.0 61S		8.8 01S	7.0	46	25.	77	46
22	7	74				8.0 02S		6.9	282	12.0	35	187
26	8	74			22.0 61S	5.0 02S		7.0	98	2.5		
29	5	75	13	50	10.0 62S	11.0 02S	6.6 01S	7.2	70		1	
7	7	75	14	30	24.0 62S	7.1 02S	6.5 01S	6.3	150		L2	
4	8	75	13	30	23.0 62S	5.9 02S	6.8 01S	6.2	150		4	
21	10	75	15	30	8.0	7.5	6.4 01S	6.5	200		10	
30	3	76	13	30	0.0 62S	8.4 02S	6.0 01S	7.2	70		20	
26	5	76	07	30	17.0	10.8	6.6	7.1	60		2	
10	8	76	16	00	19.0	6.0	6.9	6.8	70		20	

SAMPLE DATE			TIME AS		10501L RESIDUE FIXED NONFILTR.	10551L RESIDUE FIXED FILTERABLE	07112L NITROGEN DISSOLVED NO3 E NO2	07103L NITRATE & NITRITE DISSOLVED	07012L NITROGEN TOTAL KJELDAHL	15365L PHOSPHORUS DISSOLVED INORG. PO4	15413L PHOSPHORUS TOTAL	06001L CARBON TOTAL ORGANIC
							N	NO3	N	P	P	C
D	M	Y	H	M	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L
14	5	74			67	24	0.12 10L				0.12 14L	
22	7	74			15	146	1.51 10L				0.117	29.5
26	8	74					1.34 10L				0.020	27.2
29	5	75	13	50				0.14	0.4	L.01		19.0
7	7	75	14	30				0.02	0.6	L.005		22.0
4	8	75	13	30				0.07		L.005		30.0
21	10	75	15	30				1.12		0.005		35.0
30	3	76	13	30				0.49	1.0	L.005		8.0
26	5	76	07	30			0.095		0.3	L.005		13.
10	8	76	16	00			0.090		1.2	0.01		22.

WATER QUALITY SURVEILLANCE NETWORK

E.P.S. ATLANTIC REGION 1974-1976

STATION **01NB01AF0005** LATITUDE **47** D **3** M **2** S LONGITUDE **67** D **44** M **31** S

SAINT JOHN RIVER APPROX. 150 M. ABOVE DAM, MADAWASKA COUNTY, NEW BRUNSWICK

SAMPLE DATE			TIME AS		20103L CALCIUM DISSOLVED	20003P CALCIUM TOTAL	12102L MAGNESIUM DISSOLVED	12002P MAGNESIUM TOTAL	10606L HARDNESS TOTAL LAB CALC.	10101L ALKALINITY TOTAL	16304L SULPHATE DISSOLVED	26302P IRON EXTRBLE.
D	M	Y	H	M	CA MG/L	CA MG/L	MG MG/L	MG MG/L	CACO3 MG/L	CACO3 MG/L	SO4 MG/L	FE MG/L
14	5	74			6.9		1.0			13		1.0
22	7	74			15.		5.3			20		0.70
26	8	74			18.0		1.8			28		0.56
29	5	75	13	50		11.0		1.1		26	9.0 03L	
7	7	75	14	30		13.8		1.4		1	5.0 03L	
4	8	75	13	30		13.9		1.3		30	10.0 03L	
21	10	75	15	30		4.0		1.4		25	15.0 03L	
30	3	76	13	30		14.0		1.2		20	9.0 03L	
26	5	76	07	30		9.3		1.2	28.	20	9.	
10	8	76	16	00		12.		1.4	36.	20	8.	

SAMPLE DATE			TIME AS		25304P MANGANESE EXTRBLE.	29305P COPPER EXTRBLE.	30305P ZINC EXTRBLE.	82302P LEAD EXTRBLE.	80311P MERCURY EXTRBLE.	48302P CADMIUM EXTRBLE.	24303P CHROMIUM EXTRBLE.	06581L HUMIC ACID
D	M	Y	H	M	MN MG/L	CU MG/L	ZN MG/L	PB MG/L	HG UG/L	CD MG/L	CR MG/L	MG/L
14	5	74			0.07	L.002	L.002	0.006		L.001	0.004	10
22	7	74			0.13	0.004	L.002	0.002		L.001	0.0006	20 82L
26	8	74			0.13	0.05	0.04	0.011		0.001	0.0005	20 82L
29	5	75	13	50		0.005			1.4			
7	7	75	14	30					L.10			
4	8	75	13	30					L.10			
21	10	75	15	30		0.002			L.10			
30	3	76	13	30		0.002			L.1			
26	5	76	07	30		L.001			L.1			
10	8	76	16	00		0.001						

WATER QUALITY SURVEILLANCE NETWORK

E.P.S. ATLANTIC REGION 1974-1976

STATION **00NB01AF0005** LATITUDE **46** D **55** M **40** S LONGITUDE **67** D **41** M **57** S

SAINT JOHN RIVER AT BROOKS BRIDGE, NEAR LIMESTONE, VICTORIA COUNTY

SAMPLE DATE			TIME AS		02061F TEMP. WATER	08102F OXYGEN DISSOLVED DO	10301F PH	10301L PH	02041L SPECIFIC CONDUCTANCE	02073L TURBIDITY	10401L RESIDUE NONFILTR.	10451L RESIDUE FILTERABLE
D	M	Y	H	M	DEG.C.	O2 MG/L	PH UNITS	PH UNITS	USIE/CM	JTU	MG/L	MG/L
25	4	74			2.0 61S		6.0 01S	7.0	65	5.0	24	61
14	5	74			5.0 61S		7.5 01S	7.1	51	20.	114	47
17	6	74	06	00				7.6	95	2.0		
22	7	74				7.0 02S		6.3	211	2.0		
26	8	74				8.0 02S		6.8	112	2.8		
29	5	75			10.0		6.8	6.9	90	4.2	12	
7	7	75	13	00	23.	8.3	7.1	8.2	169	1.4 71L		
4	8	75	12	30	21.	7.5	7.1	7.1	145	1.9		
22	10	75	14	00	7.0	12.5	6.5	7.1	143	2.4		
29	3	76	16	15	0.0	10.3	6.2	6.7	114	23.	65	
26	5	76	08	30	8.0	12.4	6.5	7.3	90		6	
16	6	76	15	30	20.0	8.5	7.4	7.4	120		1	
16	6	76	16	00	17.0	8.1	7.5	7.2	90		8	
10	8	76	15	35	19.0	7.4	6.8	6.9	130		560	

SAMPLE DATE			TIME AS		10501L RESIDUE FIXED NONFILTR.	10551L RESIDUE FIXED FILTERABLE	07112L NITROGEN DISSOLVED NO3 E NO2	07103L NITRATE & NITRITE DISSOLVED	07012L NITROGEN TOTAL KJELDAHL	15365L PHOSPHORUS DISSOLVED INORG. PO4	15413L PHOSPHORUS TOTAL	06001L CARBON TOTAL ORGANIC
							N	NO3	N	P	P	C
D	M	Y	H	M	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L
25	4	74			16	35	2.3 10L				0.03 14L	11.5
14	5	74			105	L10	0.10 10L				0.11 14L	
17	6	74	06	00			0.27 10L				0.010 14L	14.0
22	7	74					0.65 10L				0.015	26.6
26	8	74					0.83 10L				0.01	24.2
29	5	75					0.19 10L				0.015	8.2
7	7	75	13	00			0.50 10L				0.010	3.4
4	8	75	12	30			0.31 10L				0.015	14.7
22	10	75	14	00			1.01 10L				0.025	19.2
29	3	76	16	15			0.75 10L				0.14	
26	5	76	08	30			0.215		0.4	L.005		12.
16	6	76	15	30			0.27		0.6	L.005		15.
16	6	76	16	00			0.09		1.0	L.005		20.
10	8	76	15	35			0.72		0.8	0.06		18.

WATER QUALITY SURVEILLANCE NETWORK

E.P.S. ATLANTIC REGION 1974-1976

STATION **00NB01AF0005** LATITUDE **46** D **55** M **40** S LONGITUDE **67** D **41** M **57** S

SAINT JOHN RIVER AT BROOKS BRIDGE, NEAR LIMESTONE, VICTORIA COUNTY

SAMPLE DATE			TIME AS		20103L CALCIUM DISSOLVED	20003P CALCIUM TOTAL	12102L MAGNESIUM DISSOLVED	12002P MAGNESIUM TOTAL	10606L HARDNESS TOTAL LAB CALC.	10101L ALKALINITY TOTAL	16304L SULPHATE DISSOLVED	26302P IRON EXTRBLE.
D	M	Y	H	M	CA MG/L	CA MG/L	MG MG/L	MG MG/L	CACO3 MG/L	CACO3 MG/L	SO4 MG/L	FE MG/L
25	4	74			8.3		1.1			21		0.64
14	5	74			7.7		1.0			14		1.0
17	6	74	06	00	14.5		1.7			31		
22	7	74			16.		2.7			32		0.37
26	8	74			20.0		2.0			40		0.80
29	5	75			14.2		1.6			36	5.0	
7	7	75	13	00	24.0		2.3			64	8.0	
4	8	75	12	30	26.0		2.5 03L			61	7.0	
22	10	75	14	00	19.5		2.3			53	12.0	
29	3	76	16	15	20.0		2.0			42	8.0	
26	5	76	08	30		12.		1.4	36.	30	7.0	
16	6	76	15	30		19.		1.7	55.	45	10.0	
16	6	76	16	00		12.6		1.4	35.	30	8.	
10	8	76	15	35		74.		7.6	71.	55	9.	

SAMPLE DATE			TIME AS		25304P MANGANESE EXTRBLE.	29305P COPPER EXTRBLE.	30305P ZINC EXTRBLE.	82302P LEAD EXTRBLE.	80311P MERCURY EXTRBLE.	48302P CADMIUM EXTRBLE.	24303P CHROMIUM EXTRBLE.	06581L HUMIC ACID
D	M	Y	H	M	MN MG/L	CU MG/L	ZN MG/L	PB MG/L	HG UG/L	CD MG/L	CR MG/L	MG/L
25	4	74			0.05	0.003	0.004	0.005		L.001	L.0005	16
14	5	74			0.07	L.002	L.002	0.005		L.001	0.005	9
17	6	74	06	00	0.05 04L			L.002 02L				11
22	7	74			0.09	0.002	L.002	L.002		L.001	0.0010	20 82L
26	8	74			0.10	0.04	0.06	0.013		0.001	0.0005	3 82L
29	5	75				0.002			0.09			
7	7	75	13	00		0.018			0.05			
4	8	75	12	30		0.03	0.07	L.002	0.06	0.002		
22	10	75	14	00		L.002			0.05			
29	3	76	16	15		0.011			L.05			
26	5	76	08	30		0.001			L.05			
16	6	76	15	30		L.001						
16	6	76	16	00		L.001						
10	8	76	15	35		0.011						

WATER QUALITY SURVEILLANCE NETWORK

E.P.S. ATLANTIC REGION 1974-1976

STATION **00NB01AG0002** LATITUDE **46** D **49** M **19** S LONGITUDE **67** D **44** M **9** S

AROOSTOOK RIVER AT TCH BRIDGE AT FOUR FALLS, VICTORIA COUNTY

SAMPLE DATE			TIME AS		02061F TEMP. WATER	08102F OXYGEN DISSOLVED DO	10301F PH	10301L PH	02041L SPECIFIC CONDUCTANCE	02073L TURBIDITY	10401L RESIDUE NONFILTR	10451L RESIDUE FILTERABLE
D	M	Y	H	M	DEG.C.	O2 MG/L	PH UNITS	PH UNITS	USIE/CM	JTU	MG/L	MG/L
25	4	74			2.0 61S		6.2 01S	7.1	67	7.0	13	53
14	5	74			7.0 61S	9.0 02S	8.0 01S	7.3	122	9.0	10	81
17	6	74			20.0 61S	10.0 02S	7.6 01S	7.6	111	2.5		
22	7	74				10.5 02S		6.5	99	4.0	16	77
22	8	74			24.0 61S	9.5 02S		6.0	106	2.7		
29	5	75	15	30	10.0 62S	11.0 02S	6.7 01S	7.3	220		6	
7	7	75	12	30	21.0 62S	8.4 02S	8.1 01S	7.0	140		5	
4	8	75	11	30	19.0 62S	8.5 02S	7.8 01S	6.5	420		22	
21	10	75	14	30	7.0 62S	10.5 02S	7.8 01S	7.7	600		L2	
29	3	76	15	45	1.0 62S		6.5 01S	7.9	130		65	
26	5	76			7.0	11.4	7.2	7.8	210		8	
16	6	76	15	00	21.0	8.6	7.7	7.6	100		2	
10	8	76	15	05	19.0	8.2	6.5	6.9	160		41	

SAMPLE DATE			TIME AS		10501L RESIDUE FIXED NONFILTR	10551L RESIDUE FIXED FILTERABLE	07112L NITROGEN DISSOLVED NO3 E NO2	07103L NITRATE & NITRITE DISSOLVED	07012L NITROGEN TOTAL KJELDAHL	15365L PHOSPHORUS DISSOLVED INORG. PO4	15413L PHOSPHORUS TOTAL	06001L CARBON TOTAL ORGANIC
D	M	Y	H	M	MG/L	MG/L	N MG/L	NO3 MG/L	N MG/L	P MG/L	P MG/L	C MG/L
25	4	74			L10	37	0.82 10L				0.05 14L	7.3
14	5	74			L10	56	0.73 10L				0.02 14L	
17	6	74					0.12 10L				0.035 14L	8.4
22	7	74			9	52	L.01 10L				0.040	12.7
22	8	74					0.04 10L				0.030	11.5
29	5	75	15	30				1.48	0.5	L.01		32.0
7	7	75	12	30				1.85	0.5	0.005		40.0
4	8	75	11	30				0.45		L.005		35.0
21	10	75	14	30				1.0		L.005		40.0
29	3	76	15	45				1.55	1.2	L.005		4.0
26	5	76					1.060		0.4	L.005		9.
16	6	76	15	00			0.26		0.6	L.005		15.
10	8	76	15	05			0.405		1.5	0.09		20.

WATER QUALITY SURVEILLANCE NETWORK

E.P.S. ATLANTIC REGION 1974-1976

STATION **00NB01AG0002** LATITUDE **46** D **49** M **19** S LONGITUDE **67** D **44** M **9** S

AROOSTOOK RIVER AT TCH BRIDGE AT FOUR FALLS, VICTORIA COUNTY

SAMPLE DATE			TIME AS		20103L CALCIUM DISSOLVED	20003P CALCIUM TOTAL	12102L MAGNESIUM DISSOLVED	12002P MAGNESIUM TOTAL	10606L HARDNESS TOTAL LAB CALC.	10101L ALKALINITY TOTAL	16304L SULPHATE DISSOLVED	26302P IRON EXTRBLE.
D	M	Y	H	M	CA MG/L	CA MG/L	MG MG/L	MG MG/L	CACO3 MG/L	CACO3 MG/L	SO4 MG/L	FE MG/L
25	4	74			10.4		1.4			20		0.52
14	5	74			20.0		1.9			36		0.55
17	6	74			17.0		2.2			39		
22	7	74			14.		1.8			24		0.35
22	8	74			17.0		2.4			41		0.21
29	5	75	15	30		35.8		2.8		80	22.0 03L	
7	7	75	12	30		51.4		4.0		4	20.0 03L	
4	8	75	11	30		54.8		3.2		110	20.0 03L	
21	10	75	14	30		51.0		1.0		120	25.0 03L	
29	3	76	15	45		28.0		2.0		50	10.0 03L	
26	5	76				35.		3.0	100.	75	15.	
16	6	76	15	00		16.2		2.0	50.	40	10.	
10	8	76	15	05		37.		2.8	91.	65	15.	

SAMPLE DATE			TIME AS		25304P MANGANESE EXTRBLE.	29305P COPPER EXTRBLE.	30305P ZINC EXTRBLE.	82302P LEAD EXTRBLE.	80311P MERCURY EXTRBLE.	48302P CADMIUM EXTRBLE.	24303P CHROMIUM EXTRBLE.	06581L HUMIC ACID
D	M	Y	H	M	MN MG/L	CU MG/L	ZN MG/L	PB MG/L	HG UG/L	CD MG/L	CR MG/L	MG/L
25	4	74			0.06	0.005	0.007	0.005		L.001	0.0007	8
14	5	74			0.04	L.002	0.002	0.003		0.001	0.002	9
17	6	74			0.03 04L			L.002 02L				8
22	7	74			0.02	0.002	0.002	L.002		L.001	0.0006	20
22	8	74			0.08	L.002	L.002	0.004		L.001	0.0005	13 82L
29	5	75	15	30		0.010			1.3			
7	7	75	12	30					L.10			
4	8	75	11	30					L.10			
21	10	75	14	30		0.002			L.10			
29	3	76	15	45		0.005			L.1			
26	5	76				0.001			L.1			
16	6	76	15	00		0.001						
10	8	76	15	05		0.027						

WATER QUALITY SURVEILLANCE NETWORK

E.P.S. ATLANTIC REGION 1974-1976

STATION **01NB01AH0006** LATITUDE **46** D **46** M **48** S LONGITUDE **67** D **41** M **42** S

TOBIQUE RIVER AT NARROWS, BEECHWOOD DAM, VICTORIA COUNTY, NEW BRUNSWICK

SAMPLE DATE			TIME AS		02061F TEMP. WATER	08102F OXYGEN DISSOLVED DO	10301F PH	10301L PH	02041L SPECIFIC CONDUCTANCE	02073L TURBIDITY	10401L RESIDUE NONFILTR.	10451L RESIDUE FILTERABLE
D	M	Y	H	M	DEG.C.	O2 MG/L	PH UNITS	PH UNITS	USIE/CM	JTU	MG/L	MG/L
25	4	74			2.0 61S		6.0 01S	7.3	69	7.0	L10	57
14	5	74			7.0 61S		5.4 01S	7.1	50	10.	10	46
17	6	74			18.9 61S	10.8 02S	7.4 01S	7.4	82	2.0		
22	7	74				10.0 02S		7.1	88	0.4		
22	8	74			24.0 61S	10.5 02S		7.2	95	1.3		
29	5	75	17	00	11.0 62S	11.0 02S	6.8 01S	7.1	60		4	
7	7	75	11	00	23.0 62S	7.5 02S	7.1 01S	7.0	150		L2	
4	8	75	10	30	22.0 62S	7.6 02S	6.8 01S	6.2	170		3	
21	10	75	13	30	8.0 62S	8.1 02S	6.6 01S	7.0	200		L2	
30	3	76	15	50	0.0 62S	10.0 02S	6.7 01S	7.6	70		5	
25	5	76	18	10	7.5	10.4	6.6	7.4	60		2	
16	6	76	14	15	17.5	9.1	7.6	7.7	80		1	
10	8	76	14	30	24.0	8.1	6.5	7.9	100		10	

SAMPLE DATE			TIME AS		10501L RESIDUE FIXED NONFILTR.	10551L RESIDUE FIXED FILTERABLE	07112L NITROGEN DISSOLVED NO3 E NO2	07103L NITRATE & NITRITE DISSOLVED	07012L NITROGEN TOTAL KJELDAHL	15365L PHOSPHORUS DISSOLVED INORG. PO4	15413L PHOSPHORUS TOTAL	06001L CARBON TOTAL ORGANIC
D	M	Y	H	M	MG/L	MG/L	N MG/L	NO3 MG/L	N MG/L	P MG/L	P MG/L	C MG/L
25	4	74			L10	38	1.3 10L				0.020 14L	6.0
14	5	74			L10	29	0.13 10L				0.02 14L	
17	6	74					0.06 10L				0.020 14L	8.9
22	7	74					L.01 10L				0.005	5.5
22	8	74					0.01 10L				0.010	5.5
29	5	75	17	00				0.14	0.3	L.01		14.0
7	7	75	11	00				L.01	0.4	L.005		28.0
4	8	75	10	30				L.01		0.03		15.0
21	10	75	13	30				0.18		L.005		15.0
30	3	76	15	50				0.40	0.8	L.005		4.0
25	5	76	18	10			0.210		0.3	L.005		10.
16	6	76	14	15			0.15		0.4	L.005		6.
10	8	76	14	30			0.043		0.4	0.025		6.

WATER QUALITY SURVEILLANCE NETWORK

E.P.S. ATLANTIC REGION 1974-1976

STATION **01NB01AH0006** LATITUDE **46** D **46** M **48** S LONGITUDE **67** D **41** M **42** S

TOBIQUE RIVER AT NARROWS, BEECHWOOD DAM, VICTORIA COUNTY, NEW BRUNSWICK

SAMPLE DATE			TIME AS		20103L CALCIUM DISSOLVED	20003P CALCIUM TOTAL	12102L MAGNESIUM DISSOLVED	12002P MAGNESIUM TOTAL	10606L HARDNESS TOTAL LAB CALC.	10101L ALKALINITY TOTAL	16304L SULPHATE DISSOLVED	26302P IRON EXTRBLE.
D	M	Y	H	M	CA MG/L	CA MG/L	MG MG/L	MG MG/L	CACO3 MG/L	CACO3 MG/L	SO4 MG/L	FE MG/L
25	4	74			11.1		1.3			24		0.15
14	5	74			6.9		0.9			14		0.40
17	6	74			13.5		1.4			30		
22	7	74			14.		1.4			23		0.05
22	8	74			15.0		1.6			37		0.10
29	5	75	17	00		9.56		0.9		25	7.0 03L	
7	7	75	11	00		15.9		1.3		1	5.0 03L	
4	8	75	10	30		17.0		1.3		35	10.0 03L	
21	10	75	13	30		17.0		1.5		40	15.0 03L	
30	3	76	15	50		14.0		1.0		25	5.0 03L	
25	5	76	18	10		9.2		1.0	27.	20	7.	
16	6	76	14	15		13.1		12.5	40.	35	8.	
10	8	76	14	30		16.		1.6	47.	40	10.	

SAMPLE DATE			TIME AS		25304P MANGANESE EXTRBLE.	29305P COPPER EXTRBLE.	30305P ZINC EXTRBLE.	82302P LEAD EXTRBLE.	80311P MERCURY EXTRBLE.	48302P CADMIUM EXTRBLE.	24303P CHROMIUM EXTRBLE.	06581L HUMIC ACID
D	M	Y	H	M	MN MG/L	CU MG/L	ZN MG/L	PB MG/L	HG UG/L	CD MG/L	CR MG/L	MG/L
25	4	74			0.02	L.002	0.002	0.005		L.001	0.0005	4
14	5	74			0.03	L.002	L.002	0.002		L.001	0.0005	8
17	6	74			0.04 04L			L.002 02L				4
22	7	74			0.01	L.002	L.002	L.002		L.001	0.0008	6
22	8	74			0.02	L.002	L.002	0.004		L.001	0.0010	5 82L
29	5	75	17	00		0.006			0.8			
7	7	75	11	00					L.10			
4	8	75	10	30					0.20			
21	10	75	13	30		0.003			L.10			
30	3	76	15	50		0.001						
25	5	76	18	10		L.001			L.1			
16	6	76	14	15		L.001						
10	8	76	14	30		L.001						

WATER QUALITY SURVEILLANCE NETWORK

E.P.S. ATLANTIC REGION 1974-1976

STATION **01NB01AJ0004** LATITUDE **46** D **32** M **36** S LONGITUDE **67** D **40** M **16** S

SAINT JOHN RIVER, APPROX. 400 M. ABOVE BEECHWOOD DAM, AT RIGHT BANK OF BEECHWOOD HEADPOND, VIC NEW BRUNSWICK

SAMPLE DATE			TIME AS		02061F TEMP. WATER	08102F OXYGEN DISSOLVED DO	10301F PH	10301L PH	02041L SPECIFIC CONDUCTANCE	02073L TURBIDITY	10401L RESIDUE NONFILTR	10451L RESIDUE FILTERABLE
D	M	Y	H	M	DEG.C.	O2 MG/L	PH UNITS	PH UNITS	USIE/CM	JTU	MG/L	MG/L
25	4	74			2.0 61S		6.4 01S	7.2	84	10.	13	69
14	5	74			6.0 61S		5.1 01S	7.3	72	20.	34	54
17	6	74			17.5 61S	9.7 02S	7.9 01S	7.3	95	2.0		
22	7	74				8.0 02S		6.0	94	2.0		
22	8	74			25.0 61S	7.5 02S		6.2	111	2.2		
29	5	75	17	45	10.0 62S	11.0 02S	6.9 01S	7.2	90		2	
8	7	75	13	00	24.0 62S	6.5 02S	6.9 01S	6.6	180		L2	
5	8	75	11	00	21.0 62S	5.4 02S	6.7 01S	6.3	160		4	
22	10	75	13	00	8.0 62S	5.2 02S	6.4 01S	6.8	200		3	
29	3	76	15	00	0.0 62S	9.3 02S	6.3 01S	7.4	100		7	
25	5	76	17	30	9.0	12.0	6.7	7.2	80		3	
16	6	76	13	45	15.0	8.2	7.2	7.4	100		2	
10	8	76	13	45	20.0	6.5	6.4	7.2	90		15	

SAMPLE DATE			TIME AS		10501L RESIDUE FIXED NONFILTR	10551L RESIDUE FIXED FILTERABLE	07112L NITROGEN DISSOLVED NO3 E NO2	07103L NITRATE & NITRITE DISSOLVED	07012L NITROGEN TOTAL KJELDAHL	15365L PHOSPHORUS DISSOLVED INORG. PO4	15413L PHOSPHORUS TOTAL	06001L CARBON TOTAL ORGANIC
D	M	Y	H	M	MG/L	MG/L	N MG/L	NO3 MG/L	N MG/L	P MG/L	P MG/L	C MG/L
25	4	74			L10	45	1.6 10L				0.040 14L	8.5
14	5	74			31	37	0.20 10L				0.08 14L	
17	6	74					0.02 10L				0.015 14L	13.7
22	7	74					0.29 10L				0.028	14.5
22	8	74					0.51 10L				0.020	14.6
29	5	75	17	45				0.24	0.6	L.01		21.0
8	7	75	13	00				0.31	0.7	L.005		23.0
5	8	75	11	00				0.37		L.005		25.0
22	10	75	13	00				0.90		L.005		35.0
29	3	76	15	00				0.61	1.2	L.005		8.0
25	5	76	17	30			0.185		0.3	L.005		13.
16	6	76	13	45			0.2		0.6	L.005		15.
10	8	76	13	45			0.96		0.8	0.01		16.

WATER QUALITY SURVEILLANCE NETWORK

E.P.S. ATLANTIC REGION 1974-1976

STATION **01NB01AJ0004** LATITUDE **46** D **32** M **36** S LONGITUDE **67** D **40** M **16** S

SAINT JOHN RIVER, APPROX. 400 M. ABOVE BEECHWOOD DAM, AT RIGHT BANK OF BEECHWOOD HEADPOND, VIC NEW BRUNSWICK

SAMPLE DATE			TIME AS		20103L CALCIUM DISSOLVED	20003P CALCIUM TOTAL	12102L MAGNESIUM DISSOLVED	12002P MAGNESIUM TOTAL	10606L HARDNESS TOTAL LAB CALC.	10101L ALKALINITY TOTAL	16304L SULPHATE DISSOLVED	26302P IRON EXTRBLE.
					CA	CA	MG	MG	CACO3	CACO3	SO4	FE
D	M	Y	H	M	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L
25	4	74			13.3		1.5			29		0.44
14	5	74			10.4		1.2			26		0.90
17	6	74			16.0		1.7			34		
22	7	74			16.		1.6			32		0.16
22	8	74			18.0		1.9			40		0.27
29	5	75	17	45		13.7		1.2		33	9.0 03L	
8	7	75	13	00		16.7		1.5		1	6.0 03L	
5	8	75	11	00		16.5		1.4		35	10.0 03L	
22	10	75	13	00		18.0		1.6		35	15.0 03L	
29	3	76	15	00		18.0		1.5		30	10.0 03L	
25	5	76	17	30		11.		1.2	3.2	25	9.	
16	6	76	13	45		15.		1.6	45.	35	10.	
10	8	76	13	45		14.		1.6	42.	30	9.	

SAMPLE DATE			TIME AS		25304P MANGANESE EXTRBLE.	29305P COPPER EXTRBLE.	30305P ZINC EXTRBLE.	82302P LEAD EXTRBLE.	80311P MERCURY EXTRBLE.	48302P CADMIUM EXTRBLE.	24303P CHROMIUM EXTRBLE.	06581L HUMIC ACID
					MN	CU	ZN	PB	HG	CD	CR	
D	M	Y	H	M	MG/L	MG/L	MG/L	MG/L	UG/L	MG/L	MG/L	MG/L
25	4	74			0.05	0.003	L.002	0.002		L.001	0.0005	10
14	5	74			0.05	L.002	L.002	0.003		0.001	0.0007	12
17	6	74			0.03 04L			L.002 02L				8
22	7	74			0.04	0.015	L.002	0.002		L.001	0.0006	20
22	8	74			0.06	L.002	0.020	0.004		L.001	0.0005	13 82L
29	5	75	17	45		0.003			0.8			
8	7	75	13	00					L.10			
5	8	75	11	00					0.10			
22	10	75	13	00		0.003			L.10			
29	3	76	15	00		0.002			L.1			
25	5	76	17	30		L.001			L.1			
16	6	76	13	45		0.001			L.5			
10	8	76	13	45		L.001						

WATER QUALITY SURVEILLANCE NETWORK

E.P.S. ATLANTIC REGION 1974-1976

STATION **00NB01AJ0026** LATITUDE **46** D **25** M **36** S LONGITUDE **67** D **42** M **36** S

PRESQUILE RIVER AT HWY 560 BRIDGE, CENTREVILLE, CARLETON COUNTY,

SAMPLE DATE D	M	Y	TIME AS H	M	02061F TEMP. WATER DEG.C.	08102F OXYGEN DISSOLVED DO O2 MG/L	10301F PH PH UNITS	10301L PH PH UNITS	02041L SPECIFIC CONDUCTANCE USIE/CM	02073L TURBIDITY JTU	10401L RESIDUE NONFILTR. MG/L	10451L RESIDUE FILTERABLE MG/L
25	4	74			3.0 61S		6.7 01S	7.8	163	36.	17	69
14	5	74			7.0 61S		6.6 01S	7.4	54	2.0		
17	6	74				9.8 02S	7.8 01S	7.9	266	0.6		
11	7	74				9.0 02S		7.8	231	5.5	12	148
12	7	74			20.0 61S							
22	8	74			20.5 61S	10.5 02S		7.2	273	4.0		
29	5	75	18	30	12.0 62S	12.0 02S	8.0 01S	7.5	240		4	
8	7	75	14	00	24.0 62S	9.2 02S	8.1 01S	6.4	950		5	
5	8	75	12	00	19.0 62S	8.3 02S	7.7 01S	6.7	410		9	
22	10	75	14	00	8.0 62S	9.3 02S	7.9 01S	7.4	800		L2	
29	3	76	14	00	0.0 62S		6.7 01S	7.8	160		20	
25	5	76	15	20	9.5	11.6	7.0	7.9	220		5	
16	6	76	13	05	21.0	11.0	8.9	8.8	260		2	
10	8	76	12	30	19.0	8.4	7.1	7.8	260		25	

SAMPLE DATE D	M	Y	TIME AS H	M	10501L RESIDUE FIXED NONFILTR. MG/L	10551L RESIDUE FIXED FILTERABLE MG/L	07112L NITROGEN DISSOLVED NO3 E NO2 N MG/L	07103L NITRATE & NITRITE DISSOLVED NO3 MG/L	07012L NITROGEN TOTAL KJELDAHL N MG/L	15365L PHOSPHORUS DISSOLVED INORG. PO4 P MG/L	15413L PHOSPHORUS TOTAL P MG/L	06001L CARBON TOTAL ORGANIC C MG/L
25	4	74			L10	40	1.55 10L				0.155 14L	8.8
14	5	74					0.49 10L				0.02 14L	
17	6	74					0.42 10L				L.010 14L	6.9
11	7	74			L10	124	0.40 10L				0.100	29.9
22	8	74					0.02 10L				0.010	21.0
29	5	75	18	30				0.45	0.6	0.028		39.0
8	7	75	14	00				0.90	1.2	L.005		40.0
5	8	75	12	00				0.77		L.005		30.0
22	10	75	14	00				0.60		L.005		40.0
29	3	76	14	00				1.05	0.8	L.005		4.0
25	5	76	15	20			0.945		0.4	L.005		10.
16	6	76	13	05			0.760		0.5	L.005		8.
10	8	76	12	30			0.96		0.8	0.025		10.

WATER QUALITY SURVEILLANCE NETWORK

E.P.S. ATLANTIC REGION 1974-1976

STATION **00NB01AJ0026** LATITUDE **46** D **25** M **36** S LONGITUDE **67** D **42** M **36** S

PRESQUILE RIVER AT HWY 560 BRIDGE, CENTREVILLE, CARLETON COUNTY,

SAMPLE DATE			TIME AS		20103L CALCIUM DISSOLVED	20003P CALCIUM TOTAL	12102L MAGNESIUM DISSOLVED	12002P MAGNESIUM TOTAL	10606L HARDNESS TOTAL LAB CALC.	10101L ALKALINITY TOTAL	16304L SULPHATE DISSOLVED	26302P IRON EXTRBLE.
D	M	Y	H	M	CA MG/L	CA MG/L	MG MG/L	MG MG/L	CACO3 MG/L	CACO3 MG/L	SO4 MG/L	FE MG/L
25	4	74			30.0		2.2			65		0.82
14	5	74			29.0		2.0			64		0.15
17	6	74			48.5		3.6			105		
11	7	74			51.0		3.2			97		0.05
12	7	74										0.22
22	8	74			49.0		4.0			120		0.11
29	5	75	18	30		36.4		2.2		106	16.0 03L	
8	7	75	14	00		59.4		3.7		4	15.0 03L	
5	8	75	12	00		54.0		2.9		110	20.0 03L	
22	10	75	14	00		53.0		0.9		125	20.0 03L	
29	3	76	14	00		37.0		1.8		65	15.0 03L	
25	5	76	15	20	37.		2.6		100.	85	15.	
16	6	76	13	05	48.		3.2		130.	110	15.	
10	8	76	12	30	52.		3.4		140.	115	15.	

SAMPLE DATE			TIME AS		25304P MANGANESE EXTRBLE.	29305P COPPER EXTRBLE.	30305P ZINC EXTRBLE.	82302P LEAD EXTRBLE.	80311P MERCURY EXTRBLE.	48302P CADMIUM EXTRBLE.	24303P CHROMIUM EXTRBLE.	06581L HUMIC ACID
D	M	Y	H	M	MN MG/L	CU MG/L	ZN MG/L	PB MG/L	HG UG/L	CD MG/L	CR MG/L	MG/L
25	4	74			0.12	0.006	0.003	0.004		L.001	L.0005	5
14	5	74			0.03	L.002	L.002	0.003		0.001	0.004	8
17	6	74			0.03 04L			L.002 02L				4
11	7	74			L.01	L.002	0.004	0.002		L.001	0.0005	15
12	7	74			0.04	0.004	0.010	L.002		L.001	0.0006	
22	8	74			0.01	L.002	L.002	0.004		L.001	0.0005	12 82L
29	5	75	18	30		0.005			0.5			
8	7	75	14	00					L.10			
5	8	75	12	00					L.10			
22	10	75	14	00		0.002			L.10			
29	3	76	14	00		0.002			L.1			
25	5	76	15	20		0.001			L.1			
16	6	76	13	05		0.001			1.0			
10	8	76	12	30		0.001						

WATER QUALITY SURVEILLANCE NETWORK

E.P.S. ATLANTIC REGION 1974-1976

STATION **00NB01AJ0027** LATITUDE **46** D **28** M **8** S LONGITUDE **67** D **35** M **10** S

SAINT JOHN RIVER 600 M BELOW JUNCTION WITH LITTLE SHIKATEHAWK RIVER, BRISTOL CARLETON COUNTY

SAMPLE DATE			TIME AS		02061F TEMP. WATER	08102F OXYGEN DISSOLVED DO	10301F PH	10301L PH	02041L SPECIFIC CONDUCTANCE	02073L TURBIDITY	10401L RESIDUE NONFILTR.	10451L RESIDUE FILTERABLE
D	M	Y	H	M	DEG.C.	O2 MG/L	PH UNITS	PH UNITS	USIE/CM	JTU	MG/L	MG/L
25	4	74			2.0 61S		5.6 01S	7.3	72	11.	L10	54
14	5	74			6.0 61S		6.2 01S	7.1	54	20.	94	54
17	6	74			17.0 61S	9.8 01S		7.8	104	1.8		
22	7	74				10.0 02S		6.1	123	1.5		
22	8	74			23.0 61S	9.0 02S		7.4	132	1.4		
30	5	75	07	50	9.0 62S	12.0 02S	6.6 01S	7.0	80		2	
8	7	75	15	30	24.0 62S	7.8 02S	7.4 01S	6.4	420		2	
5	8	75	13	00	20.0 62S	6.3 02S	6.9 01S	6.9	180		2	
22	10	75	15	00	8.5 62S	8.1 02S	6.4 01S	6.8	300		L2	
29	3	76	13	00	0.0 62S	10.0 02S	6.6 01S	7.3	90		15	
25	5	76	16	10	10.5	10.2	6.6	7.2	70		5	
16	6	76	12	30	18.0	9.3	7.9	7.7	100		2	
10	8	76	13	20	19.0	7.6	6.6	6.9	0		35	

SAMPLE DATE			TIME AS		10501L RESIDUE FIXED NONFILTR.	10551L RESIDUE FIXED FILTERABLE	07112L NITROGEN DISSOLVED NO3 E NO2	07103L NITRATE & NITRITE DISSOLVED	07012L NITROGEN TOTAL KJELDAHL	15365L PHOSPHORUS DISSOLVED INORG. PO4	15413L PHOSPHORUS TOTAL	06001L CARBON TOTAL ORGANIC
D	M	Y	H	M	MG/L	MG/L	N MG/L	NO3 MG/L	N MG/L	P MG/L	P MG/L	C MG/L
25	4	74			L10	19	2.4 10L				0.050 14L	8.0
14	5	74			86	32	0.21 10L				0.10 14L	
17	6	74					0.28 10L				L.010 14L	8.1
22	7	74					0.46 10L				0.012	11.8
22	8	74					0.52 10L				0.010	12.5
30	5	75	07	50				0.27	0.4	L.01		34.0
8	7	75	15	30				0.23	0.8	L.005		20.0
5	8	75	13	00				0.55		L.005		20.0
22	10	75	15	00				0.58		L.005		25.0
29	3	76	13	00				0.66	0.8	L.005		10.0
25	5	76	16	10			0.290		0.5	L.005		10.
16	6	76	12	30			0.285		0.5	L.005		7.
10	8	76	13	20			0.345		1.1	L.005		21.

WATER QUALITY SURVEILLANCE NETWORK

E.P.S. ATLANTIC REGION 1974-1976

STATION **00NB01AJ0027** LATITUDE **46** D **28** M **8** S LONGITUDE **67** D **35** M **10** S

SAINT JOHN RIVER 600 M BELOW JUNCTION WITH LITTLE SHIKATEHAWK RIVER, BRISTOL CARLETON COUNTY

SAMPLE DATE			TIME AS		20103L CALCIUM DISSOLVED	20003P CALCIUM TOTAL	12102L MAGNESIUM DISSOLVED	12002P MAGNESIUM TOTAL	10606L HARDNESS TOTAL LAB CALC.	10101L ALKALINITY TOTAL	16304L SULPHATE DISSOLVED	26302P IRON EXTRBLE.
D	M	Y	H	M	CA MG/L	CA MG/L	MG MG/L	MG MG/L	CACO3 MG/L	CACO3 MG/L	SO4 MG/L	FE MG/L
25	4	74			10.8		1.3			24		0.45
14	5	74			7.8		1.0			20		0.01
17	6	74			17.5		1.8			40		
22	7	74			20.		2.1			44		0.16
22	8	74			23.0		2.3			51		0.17
30	5	75	07	50		12.4		1.2		31	7.0 03L	
8	7	75	15	30		20.0		1.6		2	25.0 03L	
5	8	75	13	00		19.1		1.5		40	10.0 03L	
22	10	75	15	00		20.0		1.6		45	10.0 03L	
29	3	76	13	00		17.0		1.4		30	8.0 03L	
25	5	76	16	10		10.		1.2	30.	25	6.	
16	6	76	12	30		15.5		1.6	45.	40	8.	
10	8	76	13	20		14.		1.4	41.	25	7.	

SAMPLE DATE			TIME AS		25304P MANGANESE EXTRBLE.	29305P COPPER EXTRBLE.	30305P ZINC EXTRBLE.	82302P LEAD EXTRBLE.	80311P MERCURY EXTRBLE.	48302P CADMIUM EXTRBLE.	24303P CHROMIUM EXTRBLE.	06581L HUMIC ACID
D	M	Y	H	M	MN MG/L	CU MG/L	ZN MG/L	PB MG/L	HG UG/L	CD MG/L	CR MG/L	MG/L
25	4	74			0.5	L.002	L.002	0.002		L.001	L.0005	7
14	5	74			L.01	L.002	L.002	0.003		L.001	0.001	9
17	6	74			0.03 04L			L.002 02L				6
22	7	74			0.03	0.002	L.002	L.002		L.001	0.0006	14
22	8	74			0.04	L.002	0.002	0.006		L.001	0.0005	8 82L
30	5	75	07	50		0.003			0.7			
8	7	75	15	30					L.10			
5	8	75	13	00					L.10			
22	10	75	15	00		0.001			L.10			
29	3	76	13	00		0.001			L.1			
25	5	76	16	10		0.004			L.1			
16	6	76	12	30		0.001						
10	8	76	13	20		0.001						

WATER QUALITY SURVEILLANCE NETWORK

E.P.S. ATLANTIC REGION 1974-1976

STATION **00NB01AJ0028** LATITUDE **46** D **26** M **29** S LONGITUDE **67** D **37** M **16** S

SAINT JOHN RIVER AT HWY 110 BRIDGE, FLORENCEVILLE, CARLETON COUNTY

SAMPLE DATE			TIME AS		02061F TEMP. WATER	08102F OXYGEN DISSOLVED DO	10301F PH	10301L PH	02041L SPECIFIC CONDUCTANCE	02073L TURBIDITY	10401L RESIDUE NONFILTR.	10451L RESIDUE FILTERABLE
D	M	Y	H	M	DEG.C.	O2 MG/L	PH UNITS	PH UNITS	USIE/CM	JTU	MG/L	MG/L
25	4	74			4.0 61S		5.8 01S	7.1	73	10.	24	55
14	5	74			6.0 61S		6.5 01S	7.0	61	15.	57	57
17	6	74				8.0 02S	8.0 01S	7.2	131	10.	64	83
12	7	74				9.0 02S		7.3	110	4.5	11	77
22	8	74			23.0 61S	9.5 02S		7.2	122	1.4		
30	5	75	08	30	9.0 62S	12.0 02S	6.8 01S	6.9	100		3	
8	7	75	15	00	25.0 62S	7.6 02S	7.5 01S	6.8	190		3	
5	8	75	12	30	20.0 62S	6.5 02S	7.0 01S	6.3	180		4	
22	10	75	14	30	8.5 62S	6.1 02S	6.4 01S	6.6	300		L2	
29	3	76	13	15	0.0 62S		6.6 01S	7.4	110		25	
25	5	76	16	45	8.5	12.0	6.6	7.2	70		7	
16	6	76	12	00	16.0	9.1	7.5	7.3	120		20	
10	8	76	12	10	20.0	7.2	6.6	6.8	80		35	

SAMPLE DATE			TIME AS		10501L RESIDUE FIXED NONFILTR.	10551L RESIDUE FIXED FILTERABLE	07112L NITROGEN DISSOLVED NO3 E NO2	07103L NITRATE & NITRITE DISSOLVED	07012L NITROGEN TOTAL KJELDAHL	15365L PHOSPHORUS DISSOLVED INORG. PO4	15413L PHOSPHORUS TOTAL	06001L CARBON TOTAL ORGANIC
D	M	Y	H	M	MG/L	MG/L	N MG/L	NO3 MG/L	N MG/L	P MG/L	P MG/L	C MG/L
25	4	74			L10	16	1.12 10L				0.035 14L	8.5
14	5	74			54	40	0.03 10L				0.080 14L	
17	6	74			11	61	0.86 10L				0.16 14L	11.2
12	7	74			L10	51	0.31 10L				0.048	10.2
22	8	74					0.48 10L				0.020	16.8
30	5	75	08	30				0.23	0.4	L.01		21.0
8	7	75	15	00				0.34	0.8	L.005		29.0
5	8	75	12	30				0.45		L.005		25.0
22	10	75	14	30				1.21		0.04		30.0
29	3	76	13	15				0.71	1.0	L.005		8.0
25	5	76	16	45			0.225		0.3	L.005		12.
16	6	76	12	00			0.465		0.7	L.005		8.
10	8	76	12	10			0.327		1.1	L.005		16.

WATER QUALITY SURVEILLANCE NETWORK

E.P.S. ATLANTIC REGION 1974-1976

STATION **00NB01AJ0028** LATITUDE **46** D **26** M **29** S LONGITUDE **67** D **37** M **16** S

SAINT JOHN RIVER AT HWY 110 BRIDGE, FLORENCEVILLE, CARLETON COUNTY

SAMPLE DATE			TIME AS		20103L CALCIUM DISSOLVED	20003P CALCIUM TOTAL	12102L MAGNESIUM DISSOLVED	12002P MAGNESIUM TOTAL	10606L HARDNESS TOTAL LAB CALC.	10101L ALKALINITY TOTAL	16304L SULPHATE DISSOLVED	26302P IRON EXTRBLE.
D	M	Y	H	M	CA MG/L	CA MG/L	MG MG/L	MG MG/L	CACO3 MG/L	CACO3 MG/L	SO4 MG/L	FE MG/L
25	4	74			11.3		1.3			23		0.37
14	5	74			8.0		1.1			19		0.95
17	6	74			17.5		1.7			48		
12	7	74			16.0		1.9			38		0.04
22	8	74			20.0		2.0			44		0.20
30	5	75	08	30		15.6		1.3		34	9.0 03L	
8	7	75	15	00		17.8		1.6		1	6.0 03L	
5	8	75	12	30		18.2		1.4		40	10.0 03L	
22	10	75	14	30		19.0		1.6		35	15.0 03L	
29	3	76	13	15		20.0		1.5		35	10.0 03L	
25	5	76	16	45		11.		1.2	32.	25	7.	
16	6	76	12	00		18.4		1.7	55.	45	8.	
10	8	76	12	10		14.		1.6	42.	30	8.	

SAMPLE DATE			TIME AS		25304P MANGANESE EXTRBLE.	29305P COPPER EXTRBLE.	30305P ZINC EXTRBLE.	82302P LEAD EXTRBLE.	80311P MERCURY EXTRBLE.	48302P CADMIUM EXTRBLE.	24303P CHROMIUM EXTRBLE.	06581L HUMIC ACID
D	M	Y	H	M	MN MG/L	CU MG/L	ZN MG/L	PB MG/L	HG UG/L	CD MG/L	CR MG/L	MG/L
25	4	74			0.05	L.002	L.002	0.005		L.001	0.0005	9
14	5	74			0.06	L.002	L.002	0.003		L.001	0.003	10
17	6	74			0.04 04L			0.002 02L				9
12	7	74			0.02	L.002	0.003	L.002		L.001	L.0005	9
22	8	74			0.05	L.002	L.002	0.004		L.001	L.0005	14 82L
30	5	75	08	30		0.004			1.3			
8	7	75	15	00					L.10			
5	8	75	12	30					0.5			
22	10	75	14	30		0.002			0.10			
29	3	76	13	15		0.002			L.1			
25	5	76	16	45		0.001			0.2			
16	6	76	12	00		0.001						
10	8	76	12	10		0.001						

WATER QUALITY SURVEILLANCE NETWORK

E.P.S. ATLANTIC REGION 1974-1976

STATION **00NB01AJ0029** LATITUDE **46** D **11** M **57** S LONGITUDE **67** D **42** M **0** S

MEDUXNEKEAG RIVER AT BRIDGE ABOVE JUNCTION WITH MILL STREAM, BELLEVILLE CARLETON COUNTY

SAMPLE DATE			TIME AS		02061F TEMP. WATER	08102F OXYGEN DISSOLVED DO	10301F PH	10301L PH	02041L SPECIFIC CONDUCTANCE	02073L TURBIDITY	10401L RESIDUE NONFILTR.	10451L RESIDUE FILTERABLE
D	M	Y	H	M	DEG.C.	O2 MG/L	PH UNITS	PH UNITS	USIE/CM	JTU	MG/L	MG/L
25	4	74			2.0 61S		6.2 01S	7.0	85	2.8		
14	5	74			8.0 61S		5.3 01S	7.5	83	2.8		
17	6	74				12.2 02S	8.0 01S	8.0	174	1.4		
11	7	74			20.0 61S	12.0 02S		7.4	127	2.0		
12	7	74			20.0 61S							
21	8	74			22.5 61S	10.0 02S		7.4	163	2.0		
30	5	75			10.		7.8	7.5	124	1.7		
8	7	75	16	00	24.	9.7	9.2	7.1	203	1.5 71L		
5	8	75	14	00	20.	8.4	7.7	7.3	193	0.6		
22	10	75	15	00	7.5	9.5	7.8	7.2	178	1.8		
29	3	76	11	50	0.0	10.1	6.8	6.9	124	2.6		
25	5	76	14	10	9.0	11.4	6.9	7.5	120		1	
16	6	76	11	00	21.5	9.9	8.4	8.1	150		L1	
10	8	76	11	15	19.0	7.6	6.4	7.2	150		85	

SAMPLE DATE			TIME AS		10501L RESIDUE FIXED NONFILTR.	10551L RESIDUE FIXED FILTERABLE	07112L NITROGEN DISSOLVED NO3 E NO2	07103L NITRATE & NITRITE DISSOLVED	07012L NITROGEN TOTAL KJELDAHL	15365L PHOSPHORUS DISSOLVED INORG. PO4	15413L PHOSPHORUS TOTAL	06001L CARBON TOTAL ORGANIC
D	M	Y	H	M	MG/L	MG/L	N MG/L	NO3 MG/L	N MG/L	P MG/L	P MG/L	C MG/L
25	4	74					0.30 10L				0.010 14L	6.5
14	5	74					0.20 10L				0.03 14L	
17	6	74					0.12 10L				L.010 14L	9.3
11	7	74					0.07 10L				0.055	15.3
21	8	74					0.02 10L				0.015	8.7
30	5	75					0.11 10L				0.015	6.5
8	7	75	16	00			0.13 10L				0.015	4.7
5	8	75	14	00			0.01 10L				0.025	3.7
22	10	75	15	00			0.19 10L				0.020	8.4
29	3	76	11	50			0.63 10L				0.13	4.8
25	5	76	14	10			0.135		0.3	L.005		11.
16	6	76	11	00			0.135		0.4	L.005		4.
10	8	76	11	15			0.370		0.8	0.01		14.

WATER QUALITY SURVEILLANCE NETWORK

E.P.S. ATLANTIC REGION 1974-1976

STATION **00NB01AJ0029** LATITUDE **46** D **11** M **57** S LONGITUDE **67** D **42** M **0** S

MEDUXNEKEAG RIVER AT BRIDGE ABOVE JUNCTION WITH MILL STREAM, BELLEVILLE CARLETON COUNTY

SAMPLE DATE			TIME AS		20103L CALCIUM DISSOLVED	20003P CALCIUM TOTAL	12102L MAGNESIUM DISSOLVED	12002P MAGNESIUM TOTAL	10606L HARDNESS TOTAL LAB CALC.	10101L ALKALINITY TOTAL	16304L SULPHATE DISSOLVED	26302P IRON EXTRBLE.
D	M	Y	H	M	CA MG/L	CA MG/L	MG MG/L	MG MG/L	CACO3 MG/L	CACO3 MG/L	SO4 MG/L	FE MG/L
25	4	74			14.5		1.4			31		0.11
14	5	74			14.5		1.2			31		0.19
17	6	74			31.0		2.6			70		
11	7	74			23.0		2.2			48		0.05
12	7	74										0.13
21	8	74			30.0		2.5			71		0.06
30	5	75			21.0		2.0			50	8.0	
8	7	75	16	00	31.5		2.9			83	8.0	
5	8	75	14	00	32.0		3.6 03L			76	7.0	
22	10	75	15	00	29.0		2.6			56	19.0	
29	3	76	11	50	17.0		2.1			40	10.0	
25	5	76	14	10		17.		1.5	49.	40	9.	
16	6	76	11	00		26.		2.1	75.	65	10.	
10	8	76	11	15		26.		2.0	73.	60	10.	

SAMPLE DATE			TIME AS		25304P MANGANESE EXTRBLE.	29305P COPPER EXTRBLE.	30305P ZINC EXTRBLE.	82302P LEAD EXTRBLE.	80311P MERCURY EXTRBLE.	48302P CADMIUM EXTRBLE.	24303P CHROMIUM EXTRBLE.	06581L HUMIC ACID
D	M	Y	H	M	MN MG/L	CU MG/L	ZN MG/L	PB MG/L	HG UG/L	CD MG/L	CR MG/L	MG/L
25	4	74			0.02	L.002	L.002	0.004		L.001	0.0005	6
14	5	74			0.02	L.002	L.002	L.002		L.001	L.0005	10
17	6	74			0.04 04L			L.002 02L				6
11	7	74			0.01	L.002	L.002	0.002		L.001	L.0005	19
12	7	74			0.02	0.002	L.002	0.002		L.001	L.0005	
21	8	74			0.02	L.002	L.002	0.005		L.001	L.0005	9 82L
30	5	75				L.002			0.20			
8	7	75	16	00		0.015			0.1			
5	8	75	14	00		0.03	0.06	L.002	0.05	0.002		
22	10	75	15	00		L.002			L.05			
29	3	76	11	50		0.006			L.05			
25	5	76	14	10		0.001			L.1			
16	6	76	11	00		0.003						
10	8	76	11	15		0.004						

WATER QUALITY SURVEILLANCE NETWORK
E.P.S. ATLANTIC REGION 1974-1976

STATION **00NB01AJ0014** LATITUDE **46** D **9** M **53** S LONGITUDE **67** D **34** M **11** S

SAINT JOHN RIVER AT GRAFTON BRIDGE AT WOODSTOCK (WSC GAUGE), CARLETON COUNTY

SAMPLE DATE			TIME AS		02061F TEMP. WATER	08102F OXYGEN DISSOLVED DO	10301F PH	10301L PH	02041L SPECIFIC CONDUCTANCE	02073L TURBIDITY	10401L RESIDUE NONFILTR.	10451L RESIDUE FILTERABLE
D	M	Y	H	M	DEG.C.	O2 MG/L	PH UNITS	PH UNITS	USIE/CM	JTU	MG/L	MG/L
25	4	74			2.0 61S		6.1 01S	6.7	97	9.4	10	39
14	5	74			6.0 61S		5.5 01S	6.7	60	6.0	25	50
17	6	74				10.4 02S	7.9 01S	7.5	97	1.7		
12	7	74			20.5 61S	11.0 02S		7.8	107			
21	8	74			25.0 61S	9.0 02S		7.4	113	8.5	41	97
30	5	75			11.		6.7	7.1	79	3.7		
8	7	75	16	30	23.	7.2	7.2	7.3	111	1.7 71L		
5	8	75	14	30	24.	6.4	7.0	6.9	111	1.2		
22	10	75	15	30	9.0	7.0	6.5	6.4	131	2.5		
29	3	76	11	15	0.0	7.2	6.1	6.6	182	2.1		
25	5	76	13	40	8.0	12.2	6.6	7.1	70		3	
16	6	76	10	30	24.5	7.9	8.9	8.4	150		1	
10	7	76	10	45	21.0	6.8	6.3	7.0	90		30	

SAMPLE DATE			TIME AS		10501L RESIDUE FIXED NONFILTR.	10551L RESIDUE FIXED FILTERABLE	07112L NITROGEN DISSOLVED NO3 E NO2	07103L NITRATE & NITRITE DISSOLVED	07012L NITROGEN TOTAL KJELDAHL	15365L PHOSPHORUS DISSOLVED INORG. PO4	15413L PHOSPHORUS TOTAL	06001L CARBON TOTAL ORGANIC
D	M	Y	H	M	MG/L	MG/L	N MG/L	NO3 MG/L	N MG/L	P MG/L	P MG/L	C MG/L
25	4	74			L10	18	1.78 10L				0.035 14L	8.5
14	5	74			23	31	0.12 10L				0.080 14L	
17	6	74					0.19 10L				L.010 14L	9.2
12	7	74					0.25 10L				0.080	13.4
21	8	74			21	64	0.54 10L				0.050	15.6
30	5	75					0.20 10L				0.015	12.5
8	7	75	16	30			0.57 10L				0.015	9.5
5	8	75	14	30			0.39 10L				0.015	12.2
22	10	75	15	30			0.66 10L				0.020	19.2
29	3	76	11	15			0.75 10L				0.050	6.9
25	5	76	13	40			0.200		0.4	L.005		19.
16	6	76	10	30			0.105		0.4	L.005		15.
10	7	76	10	45			0.450		0.7	L.005		15.

WATER QUALITY SURVEILLANCE NETWORK

E.P.S. ATLANTIC REGION 1974-1976

STATION **00NB01AJ0014** LATITUDE **46** D **9** M **53** S LONGITUDE **67** D **34** M **11** S

SAINT JOHN RIVER AT GRAFTON BRIDGE AT WOODSTOCK (WSC GAUGE), CARLETON COUNTY

SAMPLE DATE			TIME AS		20103L CALCIUM DISSOLVED	20003P CALCIUM TOTAL	12102L MAGNESIUM DISSOLVED	12002P MAGNESIUM TOTAL	10606L HARDNESS TOTAL LAB CALC.	10101L ALKALINITY TOTAL	16304L SULPHATE DISSOLVED	26302P IRON EXTRBLE.
D	M	Y	H	M	CA MG/L	CA MG/L	MG MG/L	MG MG/L	CACO3 MG/L	CACO3 MG/L	SO4 MG/L	FE MG/L
25	4	74			14.3		1.6			29		0.84
14	5	74			8.5		1.1			21		0.95
17	6	74			16.0		1.7			34		
12	7	74			17.0		1.9			37		0.06
21	8	74			20.0		1.9			39		0.53
30	5	75			12.7		1.5			25	8.0	
8	7	75	16	30	18.5		2.0			46	8.0	
5	8	75	14	30	18.5		1.9 03L			38	12.0	
22	10	75	15	30	15.5		2.0			12	30.0	
29	3	76	11	15	24.0		2.6			43	10.0	
25	5	76	13	40		10.		1.2	30.	25	7.	
16	6	76	10	30		26.2		2.1	75.	65	10.	
10	7	76	10	45		14.		1.8	42.	30	9.	

SAMPLE DATE			TIME AS		25304P MANGANESE EXTRBLE.	29305P COPPER EXTRBLE.	30305P ZINC EXTRBLE.	82302P LEAD EXTRBLE.	80311P MERCURY EXTRBLE.	48302P CADMIUM EXTRBLE.	24303P CHROMIUM EXTRBLE.	06581L HUMIC ACID
D	M	Y	H	M	MN MG/L	CU MG/L	ZN MG/L	PB MG/L	HG UG/L	CD MG/L	CR MG/L	MG/L
25	4	74			0.50	L.002	L.002	0.005		L.001	L.0005	
14	5	74			0.06 04L	0.002	0.004	0.005		L.001	0.006	9
17	6	74			0.03 04L			L.002 02L				8
12	7	74			0.04	L.002	L.002	L.002		L.001	0.0005	11
21	8	74			0.08	L.002	0.003	0.006		L.001	L.0005	11 82L
30	5	75				0.002			0.05			
8	7	75	16	30		0.015			0.05			
5	8	75	14	30		0.05	0.07	L.002	0.06	L.001		
22	10	75	15	30		L.002			L.05			
29	3	76	11	15		0.002			L.05			
25	5	76	13	40		0.001			L.1			
16	6	76	10	30		0.001						
10	7	76	10	45		0.001						

WATER QUALITY SURVEILLANCE NETWORK

E.P.S. ATLANTIC REGION 1974-1976

STATION **00NB01AK0020** LATITUDE **45** D **57** M **33** S LONGITUDE **67** D **14** M **54** S

POKIOK RIVER MOUTH AT TCH BRIDGE LGA-4, YORK COUNTY

SAMPLE DATE			TIME		02061F TEMP. WATER	08102F OXYGEN DISSOLVED DO	10301F PH	10301L PH	02041L SPECIFIC CONDUCTANCE	02073L TURBIDITY	10401L RESIDUE NONFILTR.	10451L RESIDUE FILTERABLE
			AS			O2						
D	M	Y	H	M	DEG C.	MG/L	PH UNITS	PH UNITS	USIE/CM	JTU	MG/L	MG/L
26	4	74			2.0 61S		6.2 01S	6.5	24	1.0		
15	5	74			9.0 61S		8.3 01S	6.2	24	2.0		
17	6	74	14	30				6.8		0.9		
11	7	74			20.5 61S			7.4		3.0	L10	84
12	7	74			21.0 61S							
21	8	74						7.4		1.2		
30	5	75			15.		6.0	6.5	29	0.6		
8	7	75	17	30	24.	7.6	7.1	7.1	59	L.5 71L		
22	10	75	16	30	7.0	8.1	6.3	6.2	45	1.5		
23	3	76	15	30	0.0	11.4	6.4	6.3	31	0.5		
22	5	76	09	10	10.0	10.6	5.5	6.5	30		L1	
16	6	76	09	50	27.0	9.1	7.6	7.3	40		1	
10	8	76	09	30	19.0	7.5	6.0	6.6	40		5	

SAMPLE DATE			TIME		10501L RESIDUE FIXED NONFILTR.	10551L RESIDUE FIXED FILTERABLE	20103L CALCIUM DISSOLVED	20003P CALCIUM TOTAL	12102L MAGNESIUM DISSOLVED	12002P MAGNESIUM TOTAL	10606L HARDNESS TOTAL LAB CALC.	10101L ALKALINITY TOTAL
			AS				CA	CA	MG	MG	CACO3	CACO3
D	M	Y	H	M	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L
26	4	74					2.7		0.5			
15	5	74					2.7		0.5			5
17	6	74	14	30			4.0		0.6			
11	7	74			L10	61	17.0		1.9			
21	8	74					17.0		2.0			
30	5	75					4.0		0.5			5
8	7	75	17	30			7.6		0.7			21
22	10	75	16	30			6.0		0.9			8
23	3	76	15	30			3.5		0.7			6
22	5	76	09	10				3.5		0.5	11.	6
16	6	76	09	50				5.7		0.6	15.	15
10	8	76	09	30				6.0		0.6	17.	10

WATER QUALITY SURVEILLANCE NETWORK

E.P.S. ATLANTIC REGION 1974-1976

STATION **00NB01AK0020** LATITUDE **45** D **57** M **33** S LONGITUDE **67** D **14** M **54** S

POKIOK RIVER MOUTH AT TCH BRIDGE LGA-4, YORK COUNTY

SAMPLE DATE			TIME		16304L SULPHATE DISSOLVED	26302P IRON EXTRBLE.	25304P MANGANESE EXTRBLE.	29305P COPPER EXTRBLE.	30305P ZINC EXTRBLE.	82302P LEAD EXTRBLE.	33003P ARSENIC TOTAL	33303P ARSENIC EXTRBLE.
			AS		SO4	FE	MN	CU	ZN	PB	AS	AS
D	M	Y	H	M	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L
26	4	74				0.12		L.002	L.002	0.002	0.010	
15	5	74				0.19		L.002	L.002	L.002	0.006	
17	6	74	14	30						L.002 02L		
11	7	74				0.08		L.002	L.002	0.002		
12	7	74				0.17	0.01 04L	L.002	L.002	L.002		
21	8	74				0.30		L.002	L.002	0.006		
30	5	75			8.0			L.002				
8	7	75	17	30	5.0			0.018				
22	10	75	16	30	12.0			L.002				
23	3	76	15	30	6.0			L.002			0.033	
22	5	76	09	10	6.0			L.001			0.003	
16	6	76	09	50	5.			L.001			L.003	
10	8	76	09	30	3.			L.001			L.003	

SAMPLE DATE			TIME		80311P MERCURY EXTRBLE.	51302P ANTIMONY EXTRBLE.	48302P CADMIUM EXTRBLE.	50301P TIN EXTRBLE.	06581L HUMIC ACID
			AS		HG	SB	CD	SN	
D	M	Y	H	M	UG/L	MG/L	MG/L	MG/L	MG/L
26	4	74				0.008		L1.0	10
15	5	74				0.04		L1.0	18
17	6	74	14	30					17
11	7	74				0.015		3.0 02P	10
12	7	74				0.015		L1.0	
21	8	74				0.03		L1.0	14 82L
30	5	75			0.10	0.04			8 82L
8	7	75	17	30	L.05	0.04			6 82L
22	10	75	16	30	0.07				25 82L
23	3	76	15	30	0.16	L.002			8 82L
22	5	76	09	10	L.1	0.01			24
16	6	76	09	50		L.01			15
10	8	76	09	30		L.01			13

WATER QUALITY SURVEILLANCE NETWORK
E.P.S. ATLANTIC REGION 1974-1976

STATION **01NB01AK0009** LATITUDE **45** D **57** M **40** S LONGITUDE **67** D **14** M **53** S

SAINT JOHN RIVER AT NEW NACKAWIC BRIDGE, POKIOK, YORK COUNTY, NEW BRUNSWICK

SAMPLE DATE D	M	Y	TIME AS H	M	02061F TEMP. WATER DEG.C.	08102F OXYGEN DISSOLVED DO O2 MG/L	10301F PH PH UNITS	10301L PH PH UNITS	02041L SPECIFIC CONDUCTANCE USIE/CM	02073L TURBIDITY JTU	10401L RESIDUE NONFILTR. MG/L	10451L RESIDUE FILTERABLE MG/L
26	4	74			2.0 61S		6.0 01S	6.8	74	9.0	L10	53
15	5	74			8.0 61S		8.0 01S	6.9	60	30.	70	49
17	6	74				10.4 02S	8.0 01S	7.3	93	3.5	11	64
11	7	74			21.0 61S	11. 02S		6.9	97	3.2	L10	72
21	8	74			24.0 61S	8.5 01S		7.0	109	1.8		
30	5	75			14.		6.6	7.1	76	1.3		
8	7	75	18	00	25.	7.7	7.0	7.2	101	1.2 71L		
5	8	75	16	00	24.	6.3	7.0	6.8	123	1.1		
22	10	75	17	00	9.0	6.5	6.5	6.8	114	2.7		
23	3	76	14	30	0.0	11.1	6.6	6.4	77	0.6		
25	5	76	12	10	8.0	11.4	6.6	7.0	50		3	
16	6	76	09	40	22.5	8.2	7.4	7.3	90		2	
10	8	76	09	15	20.0	6.6	6.2	6.9	80		15	

SAMPLE DATE D	M	Y	TIME AS H	M	10501L RESIDUE FIXED NONFILTR. MG/L	10551L RESIDUE FIXED FILTERABLE MG/L	07112L NITROGEN DISSOLVED NO3 E NO2 N MG/L	07103L NITRATE & NITRITE DISSOLVED NO3 MG/L	07012L NITROGEN TOTAL KJELDAHL N MG/L	15365L PHOSPHORUS DISSOLVED INORG. PO4 P MG/L	15413L PHOSPHORUS TOTAL P MG/L	06001L CARBON TOTAL ORGANIC C MG/L
26	4	74			L10	19	1.19 10L				0.030 14L	8.8
15	5	74			65	26	0.20 10L				0.080 14L	
17	6	74			L10	44	0.14 10L				0.025 14L	9.6
11	7	74			L10	52	0.20 10L				0.025	14.3
21	8	74					0.59 10L				0.025	14.8
30	5	75					0.17 10L				0.015	13.9
8	7	75	18	00			0.25 10L				0.020	8.6
5	8	75	16	00			0.31 10L				0.010	11.8
22	10	75	17	00			0.62 10L				0.020	18.3
23	3	76	14	30			0.27 10L				0.001	13.9
25	5	76	12	10			0.085		0.3	L.005		15.
16	6	76	09	40			0.242		0.4	L.005		15.
10	8	76	09	15			0.50		0.7	L.005		14.

WATER QUALITY SURVEILLANCE NETWORK

E.P.S. ATLANTIC REGION 1974-1976

STATION **01NB01AK0009** LATITUDE **45** D **57** M **40** S LONGITUDE **67** D **14** M **53** S

SAINT JOHN RIVER AT NEW NACKAWIC BRIDGE, POKIOK, YORK COUNTY, NEW BRUNSWICK

SAMPLE DATE			TIME AS		20103L CALCIUM DISSOLVED	20003P CALCIUM TOTAL	12102L MAGNESIUM DISSOLVED	12002P MAGNESIUM TOTAL	10606L HARDNESS TOTAL LAB CALC.	10101L ALKALINITY TOTAL	16304L SULPHATE DISSOLVED	26302P IRON EXTRBLE.
D	M	Y	H	M	CA MG/L	CA MG/L	MG MG/L	MG MG/L	CACO3 MG/L	CACO3 MG/L	SO4 MG/L	FE MG/L
26	4	74			11.1		1.3			24		0.38
15	5	74			8.7		1.1			20		0.74
17	6	74			14.5		1.6			33		
11	7	74			16.0		1.6			32		0.10
12	7	74										0.18
21	8	74			18.0		1.9			40		0.15
30	5	75			12.0		1.4			27	8.0	
8	7	75	18	00	17.2		1.7			39	10.0	
5	8	75	16	00	20.8		2.1 03L			42	7.0	
22	10	75	17	00	15.5		1.9			35	13.0	
23	3	76	14	30	8.7		1.2			19	8.0	
25	5	76	12	10		6.9		0.8	21.	15	6.	
16	6	76	09	40		14.2		1.4	40.	35	8.	
10	8	76	09	15		32.		4.0	96.	30	8.	

SAMPLE DATE			TIME AS		25304P MANGANESE EXTRBLE.	29305P COPPER EXTRBLE.	30305P ZINC EXTRBLE.	82302P LEAD EXTRBLE.	80311P MERCURY EXTRBLE.	48302P CADMIUM EXTRBLE.	24303P CHROMIUM EXTRBLE.	06581L HUMIC ACID
D	M	Y	H	M	MN MG/L	CU MG/L	ZN MG/L	PB MG/L	HG UG/L	CD MG/L	CR MG/L	MG/L
26	4	74			0.14	0.003	L.002	L.002		L.001	L.0005	
15	5	74			0.08	L.002	L.002	0.003		L.001	0.004	10
17	6	74			0.05 04L			L.002 02L				9
11	7	74			0.04	L.002	L.002	L.002		L.001	0.0010	14
12	7	74			0.01	0.002	L.002	L.002		L.001	L.0005	
21	8	74			0.04	L.002	0.003	0.004		L.001	0.0005	13 82L
30	5	75				L.002			0.14			
8	7	75	18	00		0.017			0.05			
5	8	75	16	00		0.06	0.07	0.004	0.1	L.001		
22	10	75	17	00		L.002			L.05			
23	3	76	14	30		0.003			0.05			
25	5	76	12	10		0.001			L.1			
16	6	76	09	40		0.001						
10	8	76	09	15		0.001						

WATER QUALITY SURVEILLANCE NETWORK
E.P.S. ATLANTIC REGION 1974-1976

STATION **00NB01AK0029** LATITUDE **45** D **50** M **6** S LONGITUDE **67** D **4** M **21** S

POKIOK RIVER AT OUTLET OF LAKE GEORGE NEAR MAGUNDY, YORK COUNTY, NEW BRUNSWICK

SAMPLE DATE D	M	Y	TIME AS H	M	02061F TEMP. WATER DEG.C.	08102F OXYGEN DISSOLVED DO O2 MG/L	10301F PH PH UNITS	10301L PH PH UNITS	02041L SPECIFIC CONDUCTANCE USIE/CM	02073L TURBIDITY JTU	10401L RESIDUE NONFILTR. MG/L	10451L RESIDUE FILTERABLE MG/L
26	4	74			3.0 61S		5.7 01S	6.3	26	1.3		
15	5	74			12.0 61S			6.3	26	2.8		
17	6	74	13	30				6.8		1.3		
11	7	74						6.4		0.7		
21	8	74				9.5 02S		6.2		0.5		
30	5	75	13	45	17.0 62S	11.0 02S	6.0 01S	6.7	30		2	
8	7	75	19	30	25.0 62S	8.1 02S	6.7 01S	6.5	80		L2	
5	8	75	17	00	22.0 62S	6.4 02S	6.9 01S	6.4	130		3	
23	10	75	09	00	4.0 62S		6.4 01S	6.8	200		L2	
23	3	76	13	00	2.0 62S		5.8 01S	7.0	40		3	
22	5	76	08	15	10.5	10.2	6.0	6.6	30		L1	
16	6	76	09	00	21.0	7.2	6.7	6.7	30		1	
10	7	76	08	20	21.0	6.7	6.5	6.2	20		L1	

SAMPLE DATE D	M	Y	TIME AS H	M	10501L RESIDUE FIXED NONFILTR. MG/L	10551L RESIDUE FIXED FILTERABLE MG/L	20103L CALCIUM DISSOLVED CA MG/L	20003P CALCIUM TOTAL CA MG/L	12102L MAGNESIUM DISSOLVED MG MG/L	12002P MAGNESIUM TOTAL MG MG/L	10606L HARDNESS TOTAL LAB CALC. CACO3 MG/L	10101L ALKALINITY TOTAL CACO3 MG/L
26	4	74					2.8		0.7			
15	5	74					2.7		0.6			5
17	6	74	13	30			3.2		0.7			
11	7	74					3.2		0.7			
21	8	74					2.9		0.7			
30	5	75	13	45				2.72		0.5		
8	7	75	19	30				4.76		0.8		
5	8	75	17	00				11.6		1.1		
23	10	75	09	00				1.8		1.4		10
23	3	76	13	00				5.2		0.6		6
22	5	76	08	15				2.9		0.6	10.	5
16	6	76	09	00				3.36		0.6	10.	7
10	7	76	08	20				2.8		0.6	9.	4

WATER QUALITY SURVEILLANCE NETWORK

E.P.S. ATLANTIC REGION 1974-1976

STATION **00NB01AK0029** LATITUDE **45** D **50** M **6** S LONGITUDE **67** D **4** M **21** S

POKIOK RIVER AT OUTLET OF LAKE GEORGE NEAR MAGUNDY, YORK COUNTY, NEW BRUNSWICK

SAMPLE DATE			TIME		16304L SULPHATE DISSOLVED	26302P IRON EXTRBLE.	25304P MANGANESE EXTRBLE.	29305P COPPER EXTRBLE.	30305P ZINC EXTRBLE.	82302P LEAD EXTRBLE.	33003P ARSENIC TOTAL	33303P ARSENIC EXTRBLE.
			AS									
					SO4	FE	MN	CU	ZN	PB	AS	AS
D	M	Y	H	M	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L
26	4	74				0.08		L.002	L.002	L.002	0.007	
15	5	74				0.07		L.002	0.002	0.002	0.008	
17	6	74	13	30						0.002 02L		
11	7	74				0.10		L.002	0.003	0.002		
12	7	74				0.22	0.04 04L	0.002	L.002	L.002		
21	8	74				0.10		L.002	0.002	0.006		
30	5	75	13	45	L5.0 03L			0.008				L.001
8	7	75	19	30	L5.0 03L							
5	8	75	17	00	9.0 03L							L.1
23	10	75	09	00	40.0 03L			0.002				
23	3	76	13	00	5.0 03L			0.001				L.005
22	5	76	08	15	5.			0.001			0.003	
16	6	76	09	00	4.			0.001			L.003	
10	7	76	08	20	4.			L.001			L.005	

SAMPLE DATE			TIME		80311P MERCURY EXTRBLE.	51302P ANTIMONY EXTRBLE.	48302P CADMIUM EXTRBLE.	50301P TIN EXTRBLE.	06581L HUMIC ACID
			AS						
					HG	SB	CD	SN	
D	M	Y	H	M	UG/L	MG/L	MG/L	MG/L	MG/L
26	4	74				0.05		L1.0	7
15	5	74				0.013		L1.0	14
17	6	74	13	30					8
11	7	74				0.015		2.0 02P	14
12	7	74				0.015		L1.0	
21	8	74				0.06		L1.0	8 82L
30	5	75	13	45	1.0	L.02			7
8	7	75	19	30	L.10				6
5	8	75	17	00	L.10				10
23	10	75	09	00	L.10	L.01			11
23	3	76	13	00	L.1	L.01			7
22	5	76	08	15	0.6	L.01			10
16	6	76	09	00		L.01			9
10	7	76	08	20		L.01			8

WATER QUALITY SURVEILLANCE NETWORK

E.P.S. ATLANTIC REGION 1974-1976

STATION **00NB01AK0028** LATITUDE **45** D **54** M **4** S LONGITUDE **67** D **1** M **30** S

JOCELYNE BROOK 2.5 KM NW OF LOWER PRINCE WILLIAM, AT TCH BRIDGE YORK COUNTY

SAMPLE DATE			TIME AS		02061F TEMP. WATER	08102F OXYGEN DISSOLVED DO	10301F PH	10301L PH	02041L SPECIFIC CONDUCTANCE	02073L TURBIDITY	10401L RESIDUE NONFILTR.	10451L RESIDUE FILTERABLE
D	M	Y	H	M	DEG.C.	O2 MG/L	PH UNITS	PH UNITS	USIE/CM	JTU	MG/L	MG/L
26	4	74			2.0 61S		5.8 01S	6.5	31	7.0	L10	30
15	5	74			10.0 61S			6.4	46	10.	L10	37
17	6	74				9.6 02S	7.7 01S	7.4	89	3.5	10	63
12	7	74			21.0 61S			7.3	96	2.0		
21	8	74			25.0 61S	8.5 02S		7.4	112	1.2		
30	5	75	13	30	16.0 62S	11.0 02S	6.1 01S	6.4	40		5	
8	7	75	18	30	25.0 62S	8.5 02S	7.3 01S	6.8	90		L2	
5	8	75	16	30	23.0 62S	8.1 02S	7.5 01S	6.4	80		3	
23	10	75	08	30	6.0 62S	7.0 02S	6.6 01S	6.7	200		2	
23	3	76	14	00	0.0 62S		6.5 01S	7.0	60		4	
22	5	76	09	50	10.0	9.9	6.1	6.5	40		4	
16	6	76	08	45	21.0	8.4	7.0	7.0	50		2	
10	8	76	08	50	22.0	7.3	6.2	6.7	60		10	

SAMPLE DATE			TIME AS		10501L RESIDUE FIXED NONFILTR.	10551L RESIDUE FIXED FILTERABLE	07112L NITROGEN DISSOLVED NO3 E NO2	07103L NITRATE & NITRITE DISSOLVED	07012L NITROGEN TOTAL KJELDAHL	15365L PHOSPHORUS DISSOLVED INORG. PO4	15413L PHOSPHORUS TOTAL	06001L CARBON TOTAL ORGANIC
							N	NO3	N	P	P	C
D	M	Y	H	M	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L
26	4	74			L10	18	1.32 10L				0.025 14L	9.0
15	5	74			L10	20	0.20 10L				0.050 14L	
17	6	74			L10	44	0.09 10L				0.025 14L	8.9
12	7	74					0.18 10L				0.010	11.2
21	8	74					0.43 10L				0.020	23.5
30	5	75	13	30				0.05	0.5	L.01		12.0
8	7	75	18	30				L.01	0.6	L.005		17.0
5	8	75	16	30				0.01		L.005		15.0
23	10	75	08	30				0.51		L.005		20.0
23	3	76	14	00				0.38	0.8	0.090		9.0
22	5	76	09	50			0.105		1.5	L.005		11.
16	6	76	08	45			0.01		0.4	L.005		1.0
10	8	76	08	50			0.040		0.5	L.005		16.

WATER QUALITY SURVEILLANCE NETWORK

E.P.S. ATLANTIC REGION 1974-1976

STATION **00NB01AK0028** LATITUDE **45** D **54** M **4** S LONGITUDE **67** D **1** M **30** S

JOCELYNE BROOK 2.5 KM NW OF LOWER PRINCE WILLIAM, AT TCH BRIDGE YORK COUNTY

SAMPLE DATE D	M	Y	TIME AS H	M	20103L CALCIUM DISSOLVED CA MG/L	20003P CALCIUM TOTAL CA MG/L	12102L MAGNESIUM DISSOLVED MG MG/L	12002P MAGNESIUM TOTAL MG MG/L	10606L HARDNESS TOTAL LAB CALC. CACO3 MG/L	10101L ALKALINITY TOTAL CACO3 MG/L	16304L SULPHATE DISSOLVED SO4 MG/L	26302P IRON EXTRBLE. FE MG/L
26	4	74			3.3		0.7			7		0.36
15	5	74			4.1		0.9			7		0.33
17	6	74			14.5		1.6			30		
12	7	74			14.0		1.7			33		0.13
21	8	74			18.0		1.8			40		0.14
30	5	75	13	30		3.92		0.6		6	7.0 03L	
8	7	75	18	30		7.7		0.9		1	L5.0 03L	
5	8	75	16	30		6.52		1.0		20	3.0 03L	
23	10	75	08	30		15.0		1.4		20	20.0 03L	
23	3	76	14	00		7.8		0.9		10	9.0 03L	
22	5	76	09	50		4.		0.8	13.	4	7.	
16	6	76	08	45		5.52		0.8	15.	10	7.	
10	8	76	08	50		7.6		1.2	24.	15	9.	

SAMPLE DATE D	M	Y	TIME AS H	M	25304P MANGANESE EXTRBLE. MN MG/L	29305P COPPER EXTRBLE. CU MG/L	30305P ZINC EXTRBLE. ZN MG/L	82302P LEAD EXTRBLE. PB MG/L	80311P MERCURY EXTRBLE. HG UG/L	48302P CADMIUM EXTRBLE. CD MG/L	24303P CHROMIUM EXTRBLE. CR MG/L	06581L HUMIC ACID MG/L
26	4	74			0.04	0.003	L.002	0.005		L.001	L.0005	9
15	5	74			0.08	L.002	L.002	0.002		L.001	0.005	9
17	6	74			0.06 04L			0.002 02L				9
12	7	74			0.02	L.002	L.002	L.002		L.001	L.0005	12
21	8	74			0.03	L.002	L.002	L.002		L.001	L.0005	13 82L
30	5	75	13	30		0.006			2.2			
8	7	75	18	30					L.10			
5	8	75	16	30					L.10			
23	10	75	08	30		0.003			L.10			
23	3	76	14	00		0.001			L.1			
22	5	76	09	50		0.003			L.1			
16	6	76	08	45		0.001						
10	8	76	08	50		L.001						

WATER QUALITY SURVEILLANCE NETWORK
E.P.S. ATLANTIC REGION 1974-1976

STATION **01NB01AK0011** LATITUDE **45** D **57** M **6** S LONGITUDE **66** D **52** M **12** S

SAINT JOHN RIVER APPROX. 150 M. ABOVE CONTROL GATES, MACTAQUAC HEADPOND, YORK COUNTY, NEW BRUN

SAMPLE DATE			TIME AS		02061F TEMP. WATER	08102F OXYGEN DISSOLVED DO	10301F PH	10301L PH	02041L SPECIFIC CONDUCTANCE	02073L TURBIDITY	10401L RESIDUE NONFILTR.	10451L RESIDUE FILTERABLE
D	M	Y	H	M	DEG.C.	O2 MG/L	PH UNITS	PH UNITS	USIE/CM	JTU	MG/L	MG/L
26	4	74			2.0 61S		6.2 01S	7.4	76	9.8	L10	63
16	5	74			9.0 61S		7.5 01S	6.9	61	20.	21	52
17	6	74				10.9 02S	7.7 01S	7.4	86	2.8		
11	7	74			21.0 61S	10. 02S		7.3	97	1.5		
12	7	74			21.0 61S							
21	8	74			25.0 61S	10.0 02S		7.0	104	2.8		
30	5	75	14	45	14.0 62S	11.0 02S	6.7 01S	7.3	80		7	
9	7	75	07	30	23.0 62S	7.8 02S	7.4 01S	6.3	160		L2	
6	8	75	08	30	21.0 62S	6.9 02S	7.0 01S	6.5	170		2	
23	10	75	09	30	9.0 62S	5.3 02S	6.6 01S	6.8	300		L2	
23	3	76	12	00	0.0 62S	9.2 02S	6.3 01S	7.3	100		2	
25	5	76			10.0	10.6	6.5	7.2	80		3	
16	6	76			16.5	8.7	7.3	7.7	90		1	
10	8	76	07	45	21.0	6.5	6.2	7.1	80		7	

SAMPLE DATE			TIME AS		10501L RESIDUE FIXED NONFILTR.	10551L RESIDUE FIXED FILTERABLE	07112L NITROGEN DISSOLVED NO3 E NO2	07103L NITRATE & NITRITE DISSOLVED	07012L NITROGEN TOTAL KJELDAHL	15365L PHOSPHORUS DISSOLVED INORG. PO4	15418L PHOSPHORUS TOTAL	06001L CARBON TOTAL ORGANIC
D	M	Y	H	M	MG/L	MG/L	N MG/L	NO3 MG/L	N MG/L	P MG/L	P MG/L	C MG/L
26	4	74			L10	26	4.70 10L				0.035 14L	9.5
16	5	74			12	32	0.11 10L				0.090 14L	
17	6	74					L.01 10L				0.030 14L	10.5
11	7	74					0.31 10L				0.020	12.4
21	8	74					0.33 10L				0.015	21.0
30	5	75	14	45				0.30	0.6	L.01		15.0
9	7	75	07	30				0.24	0.6			21.0
6	8	75	08	30				0.17		0.01		20.0
23	10	75	09	30				0.73		L.005		25.0
23	3	76	12	00				0.52	1.0	L.005		10.0
25	5	76					0.165		0.3	L.005		10.
16	6	76					0.225		0.4	L.005		1.5
10	8	76	07	45			0.312		0.6	L.005		17.

WATER QUALITY SURVEILLANCE NETWORK

E.P.S. ATLANTIC REGION 1974-1976

STATION **01NB01AK0011** LATITUDE **45** D **57** M **6** S LONGITUDE **66** D **52** M **12** S

SAINT JOHN RIVER APPROX. 150 M. ABOVE CONTROL GATES, MACTAQUAC HEADPOND, YORK COUNTY, NEW BRUN

SAMPLE DATE			TIME AS		20103L CALCIUM DISSOLVED	20003P CALCIUM TOTAL	12102L MAGNESIUM DISSOLVED	12002P MAGNESIUM TOTAL	10606L HARDNESS TOTAL LAB CALC.	10101L ALKALINITY TOTAL	16304L SULPHATE DISSOLVED	26302P IRON EXTRBLE.
D	M	Y	H	M	CA MG/L	CA MG/L	MG MG/L	MG MG/L	CACO3 MG/L	CACO3 MG/L	SO4 MG/L	FE MG/L
26	4	74			11.7		1.4			26		0.29
16	5	74			8.7		1.1			21		0.70
17	6	74			13.5		1.5			29		
11	7	74			16.0		1.7			31		0.12
12	7	74										0.12
21	8	74			17.5		1.9			39		0.11
30	5	75	14	45		11.0		1.0		26	7.0 03L	
9	7	75	07	30		14.4		1.3		L1	6.0 03L	
6	8	75	08	30		17.2		1.5		40	10.0 03L	
23	10	75	09	30		18.0		1.5		35	10.0 03L	
23	3	76	12	00		19.0		1.5		35	10.0 03L	
25	5	76				12.		1.3	35.	25	7.	
16	6	76				13.3		1.4	40.	30	8.	
10	8	76	07	45		12.		1.4	36.	25	8.	

SAMPLE DATE			TIME AS		25304P MANGANESE EXTRBLE.	29305P COPPER EXTRBLE.	30305P ZINC EXTRBLE.	82302P LEAD EXTRBLE.	80311P MERCURY EXTRBLE.	48302P CADMIUM EXTRBLE.	24303P CHROMIUM EXTRBLE.	06581L HUMIC ACID
D	M	Y	H	M	MN MG/L	CU MG/L	ZN MG/L	PB MG/L	HG UG/L	CD MG/L	CR MG/L	MG/L
26	4	74			0.05	0.003	0.003	0.002		L.001	L.0005	9
16	5	74			0.08	0.002	0.002	0.002		0.001	0.003	10
17	6	74			0.04 04L			L.002 02L				8
11	7	74			0.04	L.002	0.004	0.002		0.001	0.005	14
12	7	74			0.02	L.002	L.002	L.002		L.001	L.0005	
21	8	74			0.02	L.002	L.002	0.002		L.001	0.0005	13 82L
30	5	75	14	45		0.006			1.1			
9	7	75	07	30					L.10			
6	8	75	08	30					L.10			
23	10	75	09	30		0.003			L.10			
23	3	76	12	00		0.002			L.1			
25	5	76				0.001			L.1			
16	6	76				0.001						
10	8	76	07	45		L.001						

WATER QUALITY SURVEILLANCE NETWORK

E.P.S. ATLANTIC REGION 1974-1976

STATION **00NB01AK0030** LATITUDE **45** D **56** M **39** S LONGITUDE **66** D **37** M **39** S

SAINT JOHN RIVER AT TCH BRIDGE BELOW FREDERICTON, YORK COUNTY

SAMPLE DATE			TIME AS		02061F TEMP. WATER	08102F OXYGEN DISSOLVED DO	10301F PH	10301L PH	02041L SPECIFIC CONDUCTANCE	02073L TURBIDITY	10401L RESIDUE NONFILTR.	10451L RESIDUE FILTERABLE
D	M	Y	H	M	DEG.C.	O2 MG/L	PH UNITS	PH UNITS	USIE/CM	JTU	MG/L	MG/L
26	4	74			2.0 61S		6.3 01S	7.3	81	12.	L10	68
16	5	74			7.0 61S		8.3 01S	7.0	63	7.0	L10	46
17	6	74	12	00				7.2	80	3.6	L10	35
12	7	74			19.0 61S	9.0 02S		7.4	104	0.4		
21	8	74			23.0 61S	9.5 01S		7.2	107	1.2		
30	5	75			14.0 62S	11.0 02S	6.6 01S	6.9	140		89	
9	7	75	09	00	21.0 62S	8.5 02S	7.0 01S	7.1			L2	
6	8	75	09	30	21.0 62S	7.1 02S	6.4 01S	6.3	160		2	
23	10	75	10	00	10.0 62S	7.5 02S	6.6 01S	6.8	300		2	
23	3	76	11	00	1.0 62S		6.5 01S	7.5	100		3	
21	5	76			10.0	12.0	6.7	7.2	70		2	
16	6	76	07	30	17.0	8.1	7.1	7.2	90		1	
9	8	76	17	30	21.0	6.2	6.4	6.9	80		2	

SAMPLE DATE			TIME AS		10501L RESIDUE FIXED NONFILTR.	10551L RESIDUE FIXED FILTERABLE	07112L NITROGEN DISSOLVED NO3 E NO2	07103L NITRATE & NITRITE DISSOLVED	07012L NITROGEN TOTAL KJELDAHL	15365L PHOSPHORUS DISSOLVED INORG. PO4	15413L PHOSPHORUS TOTAL	06001I CARBON TOTAL ORGANIC
D	M	Y	H	M	MG/L	MG/L	N MG/L	NO3 MG/L	N MG/L	P MG/L	P MG/L	C MG/L
26	4	74			L10	15	1.34 10L				0.040 14L	9.3
16	5	74			L10	28	0.02 10L				0.020 14L	
17	6	74	12	00	L10	25	0.01 10L				0.025 14L	9.6
12	7	74					0.16 10L				0.015	14.8
21	8	74					0.33 10L				0.020	21.0
30	5	75						0.62	1.0	0.018		20.0
9	7	75	09	00				0.17	0.6	L.005		20.0
6	8	75	09	30				0.27		L.005		20.0
23	10	75	10	00				0.88		L.005		25.0
23	3	76	11	00				0.54	1.4	L.005		10.0
21	5	76					0.170		3.4	L.005		12.
16	6	76	07	30			0.260		0.4	L.005		15.
9	8	76	17	30			0.300		0.7	L.005		17.

WATER QUALITY SURVEILLANCE NETWORK

E.P.S. ATLANTIC REGION 1974-1976

STATION **00NB01AK0030** LATITUDE **45** D **56** M **39** S LONGITUDE **66** D **37** M **39** S

SAINT JOHN RIVER AT TCH BRIDGE BELOW FREDERICTON, YORK COUNTY

SAMPLE DATE			TIME AS		20103L CALCIUM DISSOLVED	20003P CALCIUM TOTAL	12102L MAGNESIUM DISSOLVED	12002P MAGNESIUM TOTAL	10606L HARDNESS TOTAL LAB CALC.	10101L ALKALINITY TOTAL	16304L SULPHATE DISSOLVED	26302P IRON EXTRBLE.
D	M	Y	H	M	CA MG/L	CA MG/L	MG MG/L	MG MG/L	CACO3 MG/L	CACO3 MG/L	SO4 MG/L	FE MG/L
26	4	74			12.5		1.6			26		0.42
16	5	74			9.0		1.1			22		0.60
17	6	74	12	00	12.0		1.4			26		0.43
12	7	74			17.0		1.8			32		0.07
21	8	74			17.0		1.8			42		0.13
30	5	75				16.0		1.9		35	9.0 03L	
9	7	75	09	00		13.6		1.3		L1	6.0 03L	
6	8	75	09	30		15.9		1.4		35	10.0 03L	
23	10	75	10	00		18.0		1.5		35	25.0 03L	
23	3	76	11	00		19.0		1.5		35	10.0 03L	
21	5	76				10.		1.3	30.	24	7.	
16	6	76	07	30		13.6		1.4	40.	35	8.	
9	8	76	17	30		17.		1.4	3.6	25	8.	

SAMPLE DATE			TIME AS		25304P MANGANESE EXTRBLE.	29305P COPPER EXTRBLE.	30305P ZINC EXTRBLE.	82302P LEAD EXTRBLE.	80311P MERCURY EXTRBLE.	48302P CADMIUM EXTRBLE.	24303P CHROMIUM EXTRBLE.	06581L HUMIC ACID
D	M	Y	H	M	MN MG/L	CU MG/L	ZN MG/L	PB MG/L	HG UG/L	CD MG/L	CR MG/L	MG/L
26	4	74			0.08	0.003	0.003	0.005		L.001	0.0005	
16	5	74			0.05	L.002	L.002	0.003		L.001	0.004	10
17	6	74	12	00	0.09	L.002	L.002	0.005		L.001		7
12	7	74			0.02	L.002	0.002	L.002		L.001	0.0027	13 82L
21	8	74			0.04	L.002	L.002	0.002		L.001	0.0005	14 82L
30	5	75				0.010			0.2			
9	7	75	09	00					L.10			
6	8	75	09	30					L.10			
23	10	75	10	00		0.003			L.10			
23	3	76	11	00		0.003			L.1			
21	5	76				0.004			L.1			
16	6	76	07	30		0.001						
9	8	76	17	30		0.001						

BIOLOGICAL RESULTS

STATION NB-2: St. John River - Clair

TAXA			SAMPLING PERIOD 1974 18/6-23/7	1974 23/7-27/8
Arthropoda				
Insecta				
Plecoptera	Perlidae	Neoperla		6
		Acroneura		1
		Neophasganophora	1	2
		Paragnetina	2	
Ephemeroptera	Heptageniidae	Stenonema	2	
Odonata	Libellulidae	Taeniogaster	1	
Diptera	Tendipedidae	-	1	
		Σ	7	9
		S	5	3
		DI	2.236	1.224

4.2.2 Iron Bound Cove Stream and Salmon River (NB 24, 23)

These two small waterways are located north of Grand Lake in New Brunswick. Iron Bound Cove Stream receives effluent from the New Brunswick Coal Corporation's Minto Coal wash plant.

The water in the Salmon River is soft, low in dissolved solids but has a relatively high amount of suspended solids. Levels of iron (~0.82 ppb), zinc (~40 ppb) and lead (~10 ppb) are high for background values.

Iron Bound Cove Stream, however, has a low pH (3.1-5.6), high conductivity (199-700 µsie/cm) and turbidity. The water is hard (~140 ppm), acidic (~ 70 ppm) and contains large amounts of dissolved solids (89~200 ppm). Iron levels can reach 8 ppm and copper 29 ppb. The coal wash plant at the head of Iron Bound Cove Stream has no waste treatment facilities whatsoever and the entire stream supports minimal life.

Biologically, only Iron Bound Cove Stream was sampled, twice in 1975. At the mouth of the river, insect diversities were low while actual numbers of organisms collected and species represented were very low.

WATER QUALITY SURVEILLANCE NETWORK
E.P.S. ATLANTIC REGION 1974-1976

STATION **00NB01AN0005** LATITUDE **46** D **10** M **33** S LONGITUDE **65** D **53** M **7** S

SALMON RIVER FROM HWY 10 BRIDGE AT CHIPMAN, QUEENS COUNTY

SAMPLE DATE			TIME AS		02061F TEMP. WATER	08102F OXYGEN DISSOLVED DO	10301F PH	10301L PH	02041L SPECIFIC CONDUCTANCE	02073L TURBIDITY	10401L RESIDUE NONFILTR.	10451L RESIDUE FILTERABLE
D	M	Y	H	M	DEG.C.	O2 MG/L	PH UNITS	PH UNITS	USIE/CM	JTU	MG/L	MG/L
26	4	74			2.0 61S		5.8 01S	6.3	30	20.	26	24
16	5	74			12.0 61S		8.7 01S	6.4	28	25.	30	39
21	6	74	11	05	18.5 61S			6.2				
4	6	75	10	00	11.0 62S		6.0 01S	7.3	50		2	
30	6	75	10	00	16.0 62S	12.5 02S	6.8 01S	6.9	100		L2	
2	8	75	11	00	27.0 62S	7.0 02S	5.5 01S	6.0	70		6	
28	10	75	11	30	7.0 62S		6.3 01S	6.8	100		7	
11	3	76	11	30	3.0 62S	11.5 02S	6.2 01S	6.7	40		3	
6	5	76	11	45	10.0	11.8	5.4	6.3	30		1	
12	8	76	18	00	22.0	6.7	6.6	6.3	30		7	

SAMPLE DATE			TIME AS		10501L RESIDUE FIXED NONFILTR.	10551L RESIDUE FIXED FILTERABLE	20103L CALCIUM DISSOLVED	20003P CALCIUM TOTAL	12102L MAGNESIUM DISSOLVED	12002P MAGNESIUM TOTAL	10606L HARDNESS TOTAL LAB CALC.	10101L ALKALINITY TOTAL
D	M	Y	H	M	MG/L	MG/L	CA MG/L	CA MG/L	MG MG/L	MG MG/L	CACO3 MG/L	CACO3 MG/L
26	4	74			L10	14	2.1		0.5			
16	5	74			26	16	2.3		0.5			
21	6	74	11	05			5.4		0.8			
4	6	75	10	00				3.56		0.5		
30	6	75	10	00				5.36		0.7		
2	8	75	11	00				3.18		0.5		
28	10	75	11	30				4.5		0.6		8
11	3	76	11	30				3.3		0.6		4
6	5	76	11	45				3.5		0.4	10.	5
12	8	76	18	00				4.0		0.6	13.	6

WATER QUALITY SURVEILLANCE NETWORK

E.P.S. ATLANTIC REGION 1974-1976

STATION **00NB01AN0005** LATITUDE **46** D **10** M **33** S LONGITUDE **65** D **53** M **7** S

SALMON RIVER FROM HWY 10 BRIDGE AT CHIPMAN, QUEENS COUNTY

SAMPLE DATE			TIME		16304L SULPHATE DISSOLVED AS	26302P IRON EXTRBLE.	25304P MANGANESE EXTRBLE.	29305P COPPER EXTRBLE.	30305P ZINC EXTRBLE.	82302P LEAD EXTRBLE.	33003P ARSENIC TOTAL	33303P ARSENIC EXTRBLE.
D	M	Y	H	M	SO4 MG/L	FE MG/L	MN MG/L	CU MG/L	ZN MG/L	PB MG/L	AS MG/L	AS MG/L
26	4	74				0.82		0.003	0.010	0.010	L.005	
16	5	74				0.64		L.002	0.002	0.005	L.005	
21	6	74	11	05		0.75		L.002	0.04	0.01	0.007	
4	8	75	10	00	5.0 03L			0.011				L.001
30	6	75	10	00	L5.0 03L							
2	8	75	11	00	5.0 03L							
28	10	75	11	30	7.0 03L			0.003				L.1
11	3	76	11	30	6.0 03L			0.002				L.005
6	5	76	11	45	8.			0.003			L.005	
12	8	76	18	00	2.			L.001			L.005	

SAMPLE DATE			TIME		80311P MERCURY EXTRBLE. AS HG	51302P ANTIMONY EXTRBLE. SB	48302P CADMIUM EXTRBLE. CD	50301P TIN EXTRBLE. SN		06581L HUMIC ACID
D	M	Y	H	M	UG/L	MG/L	MG/L	MG/L		MG/L
26	4	74				0.03		L1.0		16
16	5	74				0.013		L1.0		18
21	6	74	11	05		0.05		L1.0	02P	18
4	6	75	10	00	0.3	L.02				10
30	6	75	10	00	L.10					4
2	8	75	11	00	L.10					16
28	10	75	11	30	L.10	L.01				10
11	3	76	11	30	L.1	L.01				7
6	5	76	11	45	L.1	0.11				7
12	8	76	18	00		L.01				13

WATER QUALITY SURVEILLANCE NETWORK
E.P.S. ATLANTIC REGION 1974-1976

STATION **00NB01AN0003** LATITUDE **46** D **8** M **30** S LONGITUDE **65** D **57** M **3** S

IRON BOUND COVE STREAM AT LOWER CAUSEWAY, SUNBURY COUNTY

SAMPLE DATE			TIME		02061F TEMP. WATER	08102F OXYGEN DISSOLVED DO	10301F PH	10301L PH	02041L SPECIFIC CONDUCTANCE	02073L TURBIDITY	10401L RESIDUE NONFILTR	10451L RESIDUE FILTERABLE
			AS			O2						
D	M	Y	H	M	DEG.C.	MG/L	PH UNITS	PH UNITS	USIE/CM	JTU	MG/L	MG/L
26	4	74			2.0 61S		3.4 01S	3.8	269	35.	26	120
16	5	74			13.0 61S		4.5 01S	4.0	199	37.	34	92
21	7	74						5.9		5.0		
4	6	75	11	30	14.0 62S		4.6 01S	5.2	230		2	
30	6	75	11	00	24.0 62S	7.5 02S	5.4 01S	5.0	500		5	
2	8	75	10	00	25.0 62S	7.5 02S	4.1 01S	4.0	550		2	
28	10	75	12	00	8.0 62S		5.6 01S	6.2	700		L2	
11	3	76	12	30	3.0 62S	9.5 02S	5.9 01S	6.2	210		3	
6	5	76	10	00	11.0	12.0	4.9	5.4	240		2	
24	6	76	17	00	28.5	7.4	3.1	3.2	550		1	
12	8	76	17	30	25.0	7.4	3.1	3.2	550		1	

SAMPLE DATE			TIME		10501L RESIDUE FIXED NONFILTR	10551L RESIDUE FIXED FILTERABLE	20103L CALCIUM DISSOLVED	20003P CALCIUM TOTAL	12102L MAGNESIUM DISSOLVED	12002P MAGNESIUM TOTAL	10606L HARDNESS TOTAL LAB CALC.	10101L ALKALINITY TOTAL
			AS				CA	CA	MG	MG	CACO3	CACO3
D	M	Y	H	M	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L
26	4	74			L10	23	13.7		3.3			
16	5	74			24	74	10.5		2.5			
21	7	74					15.0		2.5			
4	6	75	11	30				20.0		4.1		
30	6	75	11	00				77.8		7.8		
2	8	75	10	00				45.2		8.2		
28	10	75	12	00				4.3		6.7		2
11	3	76	12	30				34.0		5.0		1
6	5	76	10	00				33.		4.7	25.	L1
24	6	76	17	00				38.		7.4	130.	
12	8	76	17	30				38.		7.4	130.	L1

WATER QUALITY SURVEILLANCE NETWORK

E.P.S. ATLANTIC REGION 1974-1976

STATION **00NB01AN0003** LATITUDE **46** D **8** M **30** S LONGITUDE **65** D **57** M **3** S

IRON BOUND COVE STREAM AT LOWER CAUSEWAY, SUNBURY COUNTY

SAMPLE DATE			TIME		16304L SULPHATE DISSOLVED	26302P IRON EXTRBLE.	25304P MANGANESE EXTRBLE.	29305P COPPER EXTRBLE.	30305P ZINC EXTRBLE.	82302P LEAD EXTRBLE.	33003P ARSENIC TOTAL	33303P ARSENIC EXTRBLE.
			AS									
					SO4	FE	MN	CU	ZN	PB	AS	AS
D	M	Y	H	M	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L
26	4	74				8.0		0.010	0.03	0.002	L.005	
16	5	74				4.8		0.008	0.04	0.003	0.017	
21	7	74				2.3		L.002	0.05	0.013	0.007	
4	6	75	11	30	89.0 03L			0.010				L.001
30	6	75	11	00	110.0 03L							
2	8	75	10	00	180.0 03L							L.1
28	10	75	12	00	150.0 03L			0.005				0.005
11	3	76	12	30	90.0 03L			0.002				
6	5	76	10	00	95.			0.001			L.003	
24	6	76	17	00	200.			0.029			L.003	
12	8	76	17	30	200.			0.001			L.005	

SAMPLE DATE			TIME		80311P MERCURY EXTRBLE.	51302P ANTIMONY EXTRBLE.	48302P CADMIUM EXTRBLE.	50301P TIN EXTRBLE.	06581L HUMIC ACID
			AS						
					HG	SB	CD	SN	
D	M	Y	H	M	UG/L	MG/L	MG/L	MG/L	MG/L
26	4	74				0.010		L1.0	1
16	5	74				0.013		L1.0	L1
21	7	74				0.06		L1.0 02P	20
4	6	75	11	30	0.2	L.02			1
30	6	75	11	00	L.10				1
2	8	75	10	00	L.10				1
28	10	75	12	00	0.10	0.01			2
11	3	76	12	30	L.1	L.01			L1
6	5	76	10	00	L.5	L.01			1
24	6	76	17	00		L.01			1
12	8	76	17	30		L.01			1

BIOLOGICAL RESULTS

STATION: NB-24: Iron Bound Cove Stream

TAXA			SAMPLING PERIOD 1975 4/6-30/6	1975 30/6-2/8
Arthropoda				
Crustacea				
Hydracarina			1	-
Insecta				
Tricoptera	Psychomyiidae	Polycentropus	1	1
Coleoptera	Dytiscidae	Hydropus	-	1
		Agabus	-	1
Diptera	Tendipedidae	-	-	14
		Σ	2	17
		S	2	4
		DI	2.0	0.95

4.2.3 Nepisiguit River and Tributaries

The Nepisiguit River Basin is one of the three major river systems in Northern New Brunswick. The river itself is about 150 kilometers (90 miles) long and drains approximately 2300 hectares (900 square miles) of forested, relatively unpopulated terrain.

Three major mining operations contribute effluent to the Nepisiguit River and its tributaries. These are, Anaconda Brass, at the head of Forty Mile Brook; Wedge Mines, on the Nepisiguit just above the confluence of Forty Mile Brook; and Brunswick Mining and Smelting #6 Mine, located between Austin and Knight Brooks. Ore mined at Brunswick #6 Mine is trucked to the milling facility at Brunswick #12 Mine, and the combined discharge from this milling facility and Brunswick # 12 Mine is discharged into the headwaters of the South Little River.

(a) Forty Mile Brook (NB 31, 33)

Water taken from the control station above the Anaconda Brass Mine is soft, low in suspended solids and contains a relatively high background copper level (6-32 ppb). Below the mine similar water quality exists, however, zinc (60-470 ppb) and copper (6-110 ppb) levels in the river show marked increases over levels noted at the upper station. No active mining has occurred at this site for a number of years.

No biological information was available for these stations.

WATER QUALITY SURVEILLANCE NETWORK
E.P.S. ATLANTIC REGION 1974-1976

STATION **00NB01BK0015** LATITUDE **47 D 23 M 39 S** LONGITUDE **66 D 7 M 15 S**

FORTYMILE BROOK JUST ABOVE CONFLUENCE WITH NEPISIGUIT RIVER, NORTHUMBERLAND COUNTY

SAMPLE DATE			TIME AS		02061F TEMP. WATER	08102F OXYGEN DISSOLVED DO O2	10301F PH	10301L PH	02041L SPECIFIC CONDUCTANCE	02073L TURBIDITY	10401L RESIDUE NONFILTR.	10451L RESIDUE FILTERABLE
D	M	Y	H	M	DEG.C.	MG/L	PH UNITS	PH UNITS	USIE/CM	JTU	MG/L	MG/L
20	5	74			4.0 61S		5.2 01S	6.5	32	L.5		
21	6	74			9.0 61S		7.4 01S	7.1	61	L.5		
24	7	74			16.0 61S		7.0 01S	6.3	79	0.2		
27	8	74			14.0 61S		7.3 01S	6.0	79	0.6		
27	9	74			10.0 61S		7.3 01S	6.9	94	0.5		
23	10	74			1.0 61S		6.9 01S	7.2	76	0.6		
20	5	75			7.0		6.2	6.1	31			
16	6	75			10.0		6.4	6.9	50			
29	7	75	12	30	17.	8.1	7.0	6.7	75			
19	8	75	13	30	14.	9.3	7.0	6.9	292			
25	9	75	10	00	9.0		6.9	7.7	160			
17	11	75	09	30	1.0	12.3	6.8	6.7	80			
20	5	76	09	15	8.0	11.0	6.3	6.9	40			
14	7	76	10	30	12.0	9.5	6.4	7.1	72			
26	8	76	11	20	13.5	6.8	7.4	6.9	75			

SAMPLE DATE			TIME AS		10501L RESIDUE FIXED NONFILTR.	10551L RESIDUE FIXED FILTERABLE	20103L CALCIUM DISSOLVED CA	20003P CALCIUM TOTAL CA	12102L MAGNESIUM DISSOLVED MG	12002P MAGNESIUM TOTAL MG	10606L HARDNESS TOTAL LAB CALC. CACO3	10101L ALKALINITY TOTAL CACO3
D	M	Y	H	M	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L
20	5	74					3.9		0.8			6
21	6	74					8.4		1.4			15
24	7	74					10.0		1.6			20
27	8	74					12.0		1.9			19
27	9	74					12.0		2.0			21
23	10	74					10.0		1.7			19
20	5	75					3.6		0.8			4
16	6	75					7.0		1.2			14
29	7	75	12	30			11.5		1.8 03L			22
19	8	75	13	30			12.5		2.1 03L			22
25	9	75	10	00				1.4		1.8		25
17	11	75	09	30			8.0		2.0			19
20	5	76	09	15				4.8		0.9	16.	7
14	7	76	10	30				9.2		1.6	30.	15
26	8	76	11	20				11.		1.8	35.	15

WATER QUALITY SURVEILLANCE NETWORK

E.P.S. ATLANTIC REGION 1974-1976

STATION **00NB01BK0015** LATITUDE **47** D **23** M **39** S LONGITUDE **66** D **7** M **15** S

FORTYMILE BROOK JUST ABOVE CONFLUENCE WITH NEPISIGUIT RIVER, NORTHUMBERLAND COUNTY

SAMPLE DATE			TIME AS		10251L ACIDITY PH = 8.3	16304L SULPHATE DISSOLVED	16502L THIOSULFATE TOTAL	16510L THIO-SALTS TOTAL	26302P IRON EXTRBLE.	29105P COPPER DISSOLVED	29305P COPPER EXTRBLE.	30105P ZINC DISSOLVED
					CACO3	SO4	S2O3	S2O3	FE	CU	CU	ZN
D	M	Y	H	M	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L
20	5	74				5.0			0.06	0.013	0.014	0.09
21	6	74				10.0			0.10	0.019	0.019	0.11
24	7	74				16.0			0.03	0.013	0.018	0.078
27	8	74				18.0			0.10	0.017	0.020	0.15 04P
27	9	74				21.0			0.07	0.006	0.008	0.10 04P
23	10	74				18.0			0.08	0.011	0.013	0.20 04P
20	5	75				5.0			0.09		0.02	
16	6	75				5.0			0.09		0.05	
29	7	75	12	30		15.0	L5.0		0.09		0.064	
19	8	75	13	30		17.0	L5.0		0.14		0.08	
25	9	75	10	00		25. 02L	L5.	L5.				
17	11	75	09	30		17.0	5.6		0.05		0.06	
20	5	76	09	15		8.	L5.	L5.	0.06		0.043	
14	7	76	10	30		16.	L5.	L5.	0.08		0.11	
26	8	76	11	20		15.	L5.	L5.	0.07		0.05	

SAMPLE DATE			TIME AS		30305P ZINC EXTRBLE.	82103P LEAD DISSOLVED	82302P LEAD EXTRBLE.	80311P MERCURY EXTRBLE.	48302P CADMIUM EXTRBLE.	06581L HUMIC ACID
					ZN	PB	PB	HG	CD	
D	M	Y	H	M	MG/L	MG/L	MG/L	UG/L	MG/L	MG/L
20	5	74			0.10	0.005	0.006			7
21	6	74			0.11 04P	L.002	L.002			8
24	7	74			0.094	L.002	L.002			7
27	8	74			0.20 04P	0.004 02P	0.006			12 82L
27	9	74			0.10 04P		0.005			5 82L
23	10	74			0.20 04P	0.009 02P	0.012	L.05		4 82L
20	5	75			0.14 04P		0.002	0.09	0.001	4 82L
16	6	75			0.30 04P		0.002	0.05	L.001	3 82L
29	7	75	12	30	0.06		L.002	L.05	L.001	3 82L
19	8	75	13	30	1.1 04P			0.1	L.001	2 82L
25	9	75	10	00				0.8		3
17	11	75	09	30	0.4		L.002	L.05	0.001	7 82L
20	5	76	09	15	0.18		0.008	0.2	0.002	11
14	7	76	10	30	0.47		0.018		0.001	10
26	8	76	11	20	0.3		0.001		0.002	4

WATER QUALITY SURVEILLANCE NETWORK
E.P.S. ATLANTIC REGION 1974-1976

STATION **00NB01BK0007** LATITUDE **47** D **23** M **44** S LONGITUDE **65** D **49** M **20** S

NEPISIGUIT RIVER 300M ABOVE CONFLUENCE WITH AUSTIN BROOK, BATHURST MINES GLOUCESTER COUNTY

SAMPLE DATE			TIME AS		02061F TEMP. WATER	08102F OXYGEN DISSOLVED DO	10301F PH	10301L PH	02041L SPECIFIC CONDUCTANCE	02073L TURBIDITY	10401L RESIDUE NONFILTR.	10451L RESIDUE FILTERABLE
D	M	Y	H	M	DEG.C.	O2 MG/L	PH UNITS	PH UNITS	USIE/CM	JTU	MG/L	MG/L
27	5	74			6.0 61S		7.5 01S	6.8	30	L.5		
30	6	74			17.0 61S		7.0 01S	6.0	44	0.6		
1	8	74			20.0 61S		6.7 01S	6.0	40	0.2		
7	9	74			14.0 61S		6.3 01S	6.2	48	L.5		
17	10	74			5.0 61S		6.9 01S	7.0	41			
19	5	75			7.0		6.1	6.3	27			
17	6	75			14.		6.5	6.9	34			
30	7	75	08	30	17.	7.6	6.4	6.5	42			
23	8	75	11	30	11.	9.0	6.5	6.8	56			
25	9	75	12	00	10.0		6.6	7.2	85			
17	11	75	11	30	0.0	11.0	6.4	6.6	45			
2	3	76	10	00	0.0	11.2	6.6	6.2	40			
1	6	76	14	10	10.0	10.4	6.8	6.8	30			
14	7	76	12	00	13.0	8.3	6.2	7.0	44			
26	8	76	10	15	17.5	5.9	7.0	6.6	50			

SAMPLE DATE			TIME AS		10501L RESIDUE FIXED NONFILTR.	10551L RESIDUE FIXED FILTERABLE	20103L CALCIUM DISSOLVED	20003P CALCIUM TOTAL	12102L MAGNESIUM DISSOLVED	12002P MAGNESIUM TOTAL	10606L HARDNESS TOTAL LAB CALC.	10101L ALKALINITY TOTAL
D	M	Y	H	M	MG/L	MG/L	CA MG/L	CA MG/L	MG MG/L	MG MG/L	CACO3 MG/L	CACO3 MG/L
27	5	74					3.4		0.7			7
30	6	74					5.0		1.0			11
1	8	74					5.1		1.1			15
7	9	74					6.0		1.2			16
17	10	74					5.0		1.1			17
19	5	75					2.9		0.7			6
17	6	75					4.0		0.8			8
30	7	75	08	30			5.3		1.1 03L			14
23	8	75	11	30			5.1		1.1 03L			15
25	9	75	12	00				6.4		1.0		15
17	11	75	11	30			5.4		1.0			13
2	3	76	10	00			5.4		1.2			12
1	6	76	14	10				3.8		0.8	13.	10
14	7	76	12	00				5.6		1.0	18.	15
26	8	76	10	15				6.8		1.2	22.	15

WATER QUALITY SURVEILLANCE NETWORK

E.P.S. ATLANTIC REGION 1974-1976

STATION **00NB01BK0007** LATITUDE **47** D **23** M **44** S LONGITUDE **65** D **49** M **20** S

NEPISIGUIT RIVER 300M ABOVE CONFLUENCE WITH AUSTIN BROOK, BATHURST MINES GLOUCESTER COUNTY

SAMPLE DATE			TIME AS		10251L ACIDITY PH = 8.3	16304L SULPHATE DISSOLVED	16502L THIOSULFATE TOTAL	16510L THIO-SALTS TOTAL	26302P IRON EXTRBLE.	29105P COPPER DISSOLVED	29305P COPPER EXTRBLE.	30105P ZINC DISSOLVED
					CACO3	SO4	S2O3	S2O3	FE	CU	CU	ZN
D	M	Y	H	M	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L
27	5	74							0.04	0.004	0.004	0.03
30	6	74							0.10	L.002	L.002	0.11
1	8	74							0.42	L.002	L.002	0.013
7	9	74							0.08	L.002	L.002	0.09
17	10	74							0.07	0.005	0.005	0.07
19	5	75				5.0			0.22		0.005	
17	6	75				5.0			0.18		0.03	
30	7	75	08	30		8.0	L5.0		0.12		0.039	
23	8	75	11	30		5.0	L5.0		0.18			
25	9	75	12	00		7.0 02L	L5.	L5.				
17	11	75	11	30		10.0	6.7		0.03		0.009	
2	3	76	10	00		9.0	5.6		0.10		0.006	
1	6	76	14	10		5.	L5.	L5.	0.04		0.008	
14	7	76	12	00		10.	L5.	L5.	0.09		0.005	
26	8	76	10	15		8.	L5.	L5.	0.09		0.006	

SAMPLE DATE			TIME AS		30305P ZINC EXTRBLE.	82103P LEAD DISSOLVED	82302P LEAD EXTRBLE.	80311P MERCURY EXTRBLE.	48302P CADMIUM EXTRBLE.	06581L HUMIC ACID
					ZN	PB	PB	HG	CD	
D	M	Y	H	M	MG/L	MG/L	MG/L	UG/L	MG/L	MG/L
27	5	74			0.03	0.006	0.006			5
30	6	74			0.11 04P	0.002	0.010			3
1	8	74			0.030	0.003 02P	0.010			3 82L
7	9	74			0.09		0.006			8 82L
17	10	74			0.09	0.02 02P	0.02			4 82L
19	5	75			0.08		0.003	L.05	L.001	3 82L
17	6	75			0.38 04P		0.005	0.07	L.001	2 82L
30	7	75	08	30	0.08		0.003	L.05	0.001	2 82L
23	8	75	11	30			0.006	0.05	L.001	1 82L
25	9	75	12	00				L.1		2
17	11	75	11	30	0.07		0.002	L.05	L.001	7 82L
2	3	76	10	00	0.007		0.011	L.05	0.001	6 82L
1	6	76	14	10	0.013		0.004		0.002	5
14	7	76	12	00	0.006		0.001		0.001	11
26	8	76	10	15	0.015		0.002		0.001	2

(b) Nepisiguit headwaters to Austin Brook (NB 27, 28, 31, 29)

At the control station above Portage Brook, the waters of the Nepisiguit River are quite soft and slightly alkaline. Levels of zinc (2-30 ppb), iron (50-230 ppb); and lead (2-17 ppb) are all quite low, while records show relatively high copper levels (up to 70 ppb) in 1975.

Samples of stream fauna taken during 1974 and 1975 indicate wide diversity of organisms, as shown by the presence of species of stoneflies, mayflies, caddisflies and chironomids. Mayflies and chironomids dominated the samples.

Similar conditions of water quality were noted for the station just above Wedge Mine. Biological samples taken in the area during May/June, 1974 show a smaller number of species present, possibly a result of the time of sampling.

At the sampling station immediately below the Wedge mine area the water is harder (~ 99 ppm), but amounts of copper, zinc and lead normally remain at levels close to those of the control stations. However, in July, 1976, large increases in trace metals (iron, 7.5 ppm; copper 200 ppb; zinc, 2.1 ppm) as well as increases in calcium, magnesium, and sulphates, were recorded. At this time, a mine dewatering program was being undertaken at Wedge mine, and treated effluent was being discharged into the Nepisiguit River.

Biological samples taken in this area during 1974 and 1975 show a relatively low species diversity which drops drastically during June/July, 1974. Chironomids are again the dominant organism in the samples.

Below the confluence of Forty Mile Brook, sustained increases in year round levels of copper and zinc are attributable to the high levels of these elements in waters from Forty Mile Brook. Although both copper and zinc have been observed to reach high levels in the Nepisiguit below the Wedge Mine, the increases have been sporadic and short-lived.

Species diversity in this area was low during both 1974 and 1975, with chironomids again dominating the fauna.

At the station above the Brunswick #6 Mine complex, these conditions continue. The water is still relatively soft and levels of copper (~39 ppb) and zinc (~30 ppb) remain high. Species diversity of a sample taken in 1975 is very low.

WATER QUALITY SURVEILLANCE NETWORK
E.P.S. ATLANTIC REGION 1974-1976

STATION **00NB01BK0035** LATITUDE **47** D **24** M **5** S LONGITUDE **66** D **31** M **20** S

NEPISIGUIT RIVER 400 M ABOVE CONFLUENCE WITH PORTAGE BROOK, R-6, NORTHUMBERLAND COUNTY

SAMPLE DATE			TIME AS		02061F TEMP. WATER	08102F OXYGEN DISSOLVED DO	10301F PH	10301L PH	02041L SPECIFIC CONDUCTANCE	02073L TURBIDITY	10401L RESIDUE NONFILTR	10451L RESIDUE FILTERABLE
D	M	Y	H	M	DEG.C.	O2 MG/L	PH UNITS	PH UNITS	USIE/CM	JTU	MG/L	MG/L
6	6	74			7.0 61S		7.0 01S	6.2	31	L5		
4	7	74			12.0 61S		7.1 01S	6.0	53	0.3		
8	7	74			13.0 61S		7.1 01S	7.1	102	L5		
6	8	74			15.0 61S		7.5 01S	6.0	37	0.2		
25	9	74			9.0 61S		7.2 01S	6.8	35	L5		
13	6	75			10.		6.3	7.0	32			
29	7	75	09	30	14.	9.1	6.8	6.8	36			
19	8	75	10	00	15.	9.1	6.9	6.8	42			
15	11	75	11	00	3.0	12.2	6.6	6.7	41			
1	6	76	17	00	9.0	10.1	6.6	6.9	30			
14	7	76	09	30	10.0	9.8	6.1	7.1	46			
26	8	76	12	50	16.0	6.2	7.1	6.8	40			

SAMPLE DATE			TIME AS		10501L RESIDUE FIXED NONFILTR	10551L RESIDUE FIXED FILTERABLE	20103L CALCIUM DISSOLVED	20003P CALCIUM TOTAL	12102L MAGNESIUM DISSOLVED	12002P MAGNESIUM TOTAL	10506L HARDNESS TOTAL LAB CALC.	10101L ALKALINITY TOTAL
D	M	Y	H	M	MG/L	MG/L	CA MG/L	CA MG/L	MG MG/L	MG MG/L	CACO3 MG/L	CACO3 MG/L
6	6	74					3.6		0.8			10
4	7	74					5.6		1.5			20
8	7	74					4.0		1.0			13
6	8	74					4.0		1.0			14
25	9	74					4.4		1.1			17
13	6	75					3.4		0.8			8
29	7	75	09	30			3.6		1.1 03L			17
19	8	75	10	00			4.5		1.1 03L			15
15	11	75	11	00			5.5		1.2			13
1	6	76	17	00				3.3		0.8	11.	10
14	7	76	09	30				4.0		0.9	14.	15
26	8	76	12	50				4.8		1.0	16.	50

WATER QUALITY SURVEILLANCE NETWORK

E.P.S. ATLANTIC REGION 1974-1976

STATION **00NB01BK0035** LATITUDE **47** D **24** M **5** S LONGITUDE **66** D **31** M **20** S

NEPISIGUIT RIVER 400 M ABOVE CONFLUENCE WITH PORTAGE BROOK, R-6, NORTHUMBERLAND COUNTY

SAMPLE DATE			TIME AS		10251L ACIDITY PH = 8.3	16304L SULPHATE DISSOLVED	16502L THIOSULFATE TOTAL	16510L THIO-SALTS TOTAL	26302P IRON EXTRBLE.	29105P COPPER DISSOLVED	29305P COPPER EXTRBLE.	30105P ZINC DISSOLVED
					CACO3	SO4	S2O3	S2O3	FE	CU	CU	ZN
D	M	Y	H	M	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L
6	6	74							0.10	L.002	L.002	
4	7	74								L.002	L.002	
8	7	74							0.08	L.002	L.002	0.002
6	8	74							0.15	L.002	L.002	0.002
25	9	74							0.04		L.002	
13	6	75				2.0			0.06		0.015	
29	7	75	09	30		2.0	L5.0		0.09		0.015	
19	8	75	10	00		L2.0	L5.0		0.23		0.07	
15	11	75	11	00		8.0	6.7		0.06		L.002	
1	6	76	17	00		6.	L5.	L5.	0.06		L.001	
14	7	76	09	30		8.	L5.	L5.	0.06		L.001	
26	8	76	12	50		2.	L5.	L5.	0.05		L.001	

SAMPLE DATE			TIME AS		30305P ZINC EXTRBLE.	82103P LEAD DISSOLVED	82302P LEAD EXTRBLE.	80311P MERCURY EXTRBLE.	48302P CADMIUM EXTRBLE.	06581L HUMIC ACID
					ZN	PB	PB	HG	CD	
D	M	Y	H	M	MG/L	MG/L	MG/L	UG/L	MG/L	MG/L
6	6	74			0.40 04P	L.002	0.017			4
4	7	74				L.002	L.002			2
8	7	74			0.002	0.002	0.005			3
6	8	74			0.003	0.004 02P	0.004			4 82L
25	9	74			0.002		0.005			3 82L
13	6	75			0.19 04P		0.002	0.07	L.001	2 82L
29	7	75	09	30	0.03		0.005	L.05	L.001	2 82L
19	8	75	10	00	1.1 04P		0.002	0.05	L.001	2 82L
15	11	75	11	00	0.007		0.005	L.05	L.001	8 82L
1	6	76	17	00	L.001		0.001		0.001	5
14	7	76	09	30	L.001		L.001		L.001	4
26	8	76	12	50	L.001		0.004		0.002	2

WATER QUALITY SURVEILLANCE NETWORK

E.P.S. ATLANTIC REGION 1974-1976

STATION **00NB01BK0017** LATITUDE **47 D 23 M 40 S** LONGITUDE **66 D 8 M 16 S**

NEPISIGUIT RIVER 1.3KM ABOVE FORTYMILE BROOK ABOVE WEDGE MINE, W-1 NORTHUMBERLAND COUNTY

SAMPLE DATE			TIME AS		02061F TEMP. WATER	08102F OXYGEN DISSOLVED DO	10301F PH	10301L PH	02041L SPECIFIC CONDUCTANCE	02073L TURBIDITY	10401L RESIDUE NONFILTR	10451L RESIDUE FILTERABLE
D	M	Y	H	M	DEG C	O2 MG/L	PH UNITS	PH UNITS	USIE/CM	JTU	MG/L	MG/L
20	5	74			4.0 61S		7.4 01S	6.4	26	L5		
21	6	74			10.0 61S		6.9 01S	6.0	33	L5		
24	7	74			15.0 61S		6.8 01S	6.3	35	0.2		
27	8	74			13.0 61S		7.1 01S	6.4	36	1.4		
27	9	74			10.0 61S		6.8 01S	6.8	37	0.5		
23	10	74			1.0 61S		6.8 01S	6.9	38	0.8		
13	5	75			3.0		5.5	7.2	28			
16	6	75			10.		6.2	7.1	31			
29	7	75	11	30	16.	8.7	6.9	6.7	41			
19	8	75	12	00	17.	8.4	6.8	6.9	51			
25	9	75	09	00	10.0		6.5	7.2	65			
15	11	75	12	01	4.0	12.0	6.6	6.7	45			
1	6	76	16	00	9.0	10.4	6.8	7.2	30			
14	7	76	10	20	11.0	9.8	6.5	7.1	41			
26	8	76	12	00	14.0	6.4	7.2	6.7	40			

SAMPLE DATE			TIME AS		10501L RESIDUE FIXED NONFILTR	10551L RESIDUE FIXED FILTERABLE	20103L CALCIUM DISSOLVED	20003P CALCIUM TOTAL	12102L MAGNESIUM DISSOLVED	12002P MAGNESIUM TOTAL	10606L HARDNESS TOTAL LAB CALC	10707L ALKALINITY TOTAL
D	M	Y	H	M	MG/L	MG/L	CA MG/L	CA MG/L	MG MG/L	MG MG/L	CACO3 MG/L	CACO3 MG/L
20	5	74					3.0		0.7			6
21	6	74					3.9		0.8			10
24	7	74					4.25		0.9			16
27	8	74					4.8		1.1			17
27	9	74					4.4		1.0			17
23	10	74					4.7		1.0			14
13	5	75					3.2		0.7			6
16	6	75					3.8		0.7			10
29	7	75	11	30			5.8		1.0 03L			18
19	8	75	12	00			5.3		1.0 03L			16
25	9	75	09	00				4.6		0.8		15
15	11	75	12	01			5.5		1.2			12
1	6	76	16	00				3.7		0.7	12.	9
14	7	76	10	20				5.2		0.9	17.	15
26	8	76	12	00				5.2		0.8	16.	15

WATER QUALITY SURVEILLANCE NETWORK

E.P.S. ATLANTIC REGION 1974-1976

STATION **00NB01BK0017** LATITUDE **47** D **23** M **40** S LONGITUDE **66** D **8** M **16** S

NEPISIGUIT RIVER 1.3KM ABOVE FORTYMILE BROOK ABOVE WEDGE MINE, W-1 NORTHUMBERLAND COUNTY

SAMPLE DATE			TIME AS		10251L ACIDITY PH = 8.3	16304L SULPHATE DISSOLVED	16502L THIOSULFATE TOTAL	16510L THIO-SALTS TOTAL	26302P IRON EXTRBLE.	29105P COPPER DISSOLVED	29305P COPPER EXTRBLE.	30105P ZINC DISSOLVED
					CACO3	SO4	S2O3	S2O3	FE	CU	CU	ZN
D	M	Y	H	M	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L
20	5	74				4.0			0.07	0.013	0.013	0.05
21	6	74				5.0			0.09	L.002	L.002	0.007
24	7	74				2.0			0.05			
27	8	74				5.0			0.08	L.002	L.002	0.02
27	9	74				4.0			0.06	L.002	L.002	
23	10	74				4.0			0.06	L.002	L.002	
13	5	75				L2.0			0.29		0.011	
16	6	75				2.0			0.14		0.02	
29	7	75	11	30		4.0	L5.0		0.06		0.039	
19	8	75	12	00		7.0	L5.0		0.12		0.06	
25	9	75	09	00		3.0 02L	L5.	L5.				
15	11	75	12	01		6.0	5.0		0.03		L.002	
1	6	76	16	00		4.	L5.	L5.	0.07		0.001	
14	7	76	10	20		10.	L5.	L5.	0.05		0.001	
26	8	76	12	00		2.	L5.	L5.	0.04		L.001	

SAMPLE DATE			TIME AS		30305P ZINC EXTRBLE.	82103P LEAD DISSOLVED	82302P LEAD EXTRBLE.	80311P MERCURY EXTRBLE.	48302P CADMIUM EXTRBLE.	06581L HUMIC ACID
					ZN	PB	PB	HG	CD	
D	M	Y	H	M	MG/L	MG/L	MG/L	UG/L	MG/L	MG/L
20	5	74			0.24 04P	0.005	0.006			5
21	6	74			0.007	L.002	L.002			6
24	7	74				L.002	0.002			4
27	8	74			0.02	0.004 02P	0.007			5 82L
27	9	74			0.02		0.011			3 82L
23	10	74			0.004		0.014	0.05		3 82L
13	5	75			0.05		0.005	0.05	0.001	4 82L
16	6	75			0.15 04P		0.008	0.05	L.001	2 82L
29	7	75	11	30	0.05		0.003	L.05	L.001	2 82L
19	8	75	12	00	0.09		L.002	L.05	0.001	1 82L
25	9	75	09	00				L.1		2
15	11	75	12	01	0.009		L.002	L.05	L.001	6 82L
1	6	76	16	00	0.002		0.005		0.002	4
14	7	76	10	20	L.001		0.001		L.001	9
26	8	76	12	00	0.002				L.001	2

WATER QUALITY SURVEILLANCE NETWORK
E.P.S. ATLANTIC REGION 1974-1976

STATION **00NB01BK0020** LATITUDE **47** D **23** M **34** S LONGITUDE **66** D **4** M **23** S

NEPISIGUIT RIVER 4 KM BELOW FORTYMILE BROOK AT HWY 430 BRIDGE, NORTHUMBERLAND COUNTY

SAMPLE DATE			TIME AS		02061F TEMP. WATER	08102F OXYGEN DISSOLVED DO	10301F PH	10301L PH	02041L SPECIFIC CONDUCTANCE	02073L TURBIDITY	10401L RESIDUE NONFILTR	10451L RESIDUE FILTERABLE
D	M	Y	H	M	DEG.C.	O2 MG/L	PH UNITS	PH UNITS	USIE/CM	JTU	MG/L	MG/L
20	5	74			4.0 61S		4.9 01S	6.4	29	L.5		
21	6	74			10.0 61S		6.8 01S	7.2	45	L.5		
24	7	74			17.0 61S		7.1 01S	6.5	57	0.3		
27	8	74			13.0 61S		7.2 01S	6.0	64	L.5		
27	9	74			10.0 61S		7.2 01S	7.1	69	L.5		
23	10	74			1.0 61S		6.7 01S	7.0	51	1.0		
13	5	75			3.0		5.4	6.4	30			
16	5	75			11.		6.5	6.7	37			
29	7	75	13	00	18.	8.2	7.0	6.5	51			
19	8	75	14	00	15.	9.3	7.0	7.0	57			
25	9	75	10	30	10.0		6.8	7.3	110			
26	3	76	14	30	2.0	13.2	6.7	6.6	39			
1	6	76	15	10	9.0	10.2	7.0	6.9	40			
14	7	76	11	00	12.0	9.6	6.2	7.1	60			
26	8	76	14	15	18.0	6.4	7.4	6.5	60			

SAMPLE DATE			TIME AS		10501L RESIDUE FIXED NONFILTR	10551L RESIDUE FIXED FILTERABLE	20103L CALCIUM DISSOLVED	20003P CALCIUM TOTAL	12102L MAGNESIUM DISSOLVED	12002P MAGNESIUM TOTAL	10606L HARDNESS TOTAL LAB CALC.	10101L ALKALINITY TOTAL
D	M	Y	H	M	MG/L	MG/L	CA MG/L	CA MG/L	MG MG/L	MG MG/L	CACO3 MG/L	CACO3 MG/L
20	5	74					3.4		0.7			6
21	6	74					5.8		1.0			12
24	7	74					7.8		1.2			17
27	8	74					7.8		1.5			16
27	9	74					8.8		1.5			19
23	10	74					7.9		1.4			15
13	5	75					3.4		0.7			8
16	5	75					12.7		1.0			14
29	7	75	13	00			6.4		1.2 03L			15
19	8	75	14	00			6.3		1.3 03L			17
25	9	75	10	30				8.2		1.1		15
26	3	76	14	30			4.3		1.2			14
1	6	76	15	10				4.1		0.8	14.	9
14	7	76	11	00				7.6		1.2	24.	15
26	8	76	14	15				8.4		1.5	27.	15

WATER QUALITY SURVEILLANCE NETWORK

E.P.S. ATLANTIC REGION 1974-1976

STATION **00NB01BK0020** LATITUDE **47** D **23** M **34** S LONGITUDE **66** D **4** M **23** S

NEPISIGUIT RIVER 4 KM BELOW FORTYMILE BROOK AT HWY 430 BRIDGE, NORTHUMBERLAND COUNTY

SAMPLE DATE			TIME AS		10251L ACIDITY PH = 8.3	16304L SULPHATE DISSOLVED	16502L THIOSULFATE TOTAL	16510L THIO-SALTS TOTAL	26302P IRON EXTRBLE.	29105P COPPER DISSOLVED	29305P COPPER EXTRBLE.	30105P ZINC DISSOLVED
D	M	Y	H	M	CACO3 MG/L	SO4 MG/L	S2O3 MG/L	S2O3 MG/L	FE MG/L	CU MG/L	CU MG/L	ZN MG/L
20	5	74				5.0			0.06	0.006	0.006	0.04
21	6	74				8.0			0.09	0.007	0.007	0.04
24	7	74				8.0			0.03	0.005	0.010	0.060
27	8	74				13.0			0.07	0.005	0.011	0.09
27	9	74				12.0			0.06		0.006	
23	10	74				11.0			0.07	0.007	0.008	0.10 04P
13	5	75				4.0			0.40		0.019	
16	5	75				4.0			0.08		0.05	
29	7	75	13	00		5.0	L5.0		0.08		0.042	
19	8	75	14	00		2.0	L5.0		0.15		0.07	
25	9	75	10	30		10.0 02L	L5.	L5.				
26	3	76	14	30		4.0			0.10		0.005	
1	6	76	15	10		6.	L5.	L5.	0.10		0.021	
14	7	76	11	00		17.	L5.	L5.	0.13		0.030	
26	8	76	14	15		15.	L5.	L5.	0.06		0.015	

SAMPLE DATE			TIME AS		30305P ZINC EXTRBLE.	82103P LEAD DISSOLVED	82302P LEAD EXTRBLE.	80311P MERCURY EXTRBLE.	48302P CADMIUM EXTRBLE.	06581L HUMIC ACID
D	M	Y	H	M	ZN MG/L	PB MG/L	PB MG/L	HG UG/L	CD MG/L	MG/L
20	5	74			0.04	0.002 02P	0.005			5
21	6	74			0.04	L.002	L.002			7
24	7	74			0.300 04P	L.002	0.025			5
27	8	74			0.10		0.004			9 82L
27	9	74			0.08		0.009			4 82L
23	10	74			0.15 04P	0.017 02P	0.017	L.05		3 82L
13	5	75			0.08		0.002	0.05	L.001	4 82L
16	5	75			0.38 04P		0.006	0.07	L.001	2 82L
29	7	75	13	00	0.06		L.002	L.05	L.001	2 82L
19	8	75	14	00	1.0 04P		0.002	0.1	L.001	1 82L
25	9	75	10	30				L.1		2
26	3	76	14	30	0.010		0.004		0.002	1 82L
1	6	76	15	10	0.033		0.001		0.003	5
14	7	76	11	00	0.072		0.002		L.001	9
26	8	76	14	15	0.084		L.001		L.001	2

WATER QUALITY SURVEILLANCE NETWORK
E.P.S. ATLANTIC REGION 1974-1976

STATION **00NB01BK0012** LATITUDE **47** D **34** M **10** S LONGITUDE **66** D **18** M **3** S

FORTYMILE BROOK AT PUMPSITE 800M ABOVE ANACONDA BRASS MINE PROPERTY, AB-1 NORTHUMBERLAND COUNT

SAMPLE DATE			TIME AS		02061F TEMP. WATER	08102F OXYGEN DISSOLVED DO	10301F PH	10301L PH	02041L SPECIFIC CONDUCTANCE	02073L TURBIDITY	10401L RESIDUE NONFILTR.	10451L RESIDUE FILTERABLE
D	M	Y	H	M	DEG.C.	O2 MG/L	PH UNITS	PH UNITS	USIE/CM	JTU	MG/L	MG/L
20	5	74			4.0 61S		7.2 01S	6.7	33	L.5		
21	6	74			10.0 61S		6.9 01S	7.3	55	L.5		
24	7	74			14.0 61S		7.2 01S	6.2	71	0.2		
27	8	74			12.0 61S		7.1 01S	6.0	74	L.5		
3	10	74			6.0 61S		6.9 01S	7.2	61	L.5		
31	10	74			1.0 61S		7.0 01S	6.6	63	L.5		
20	5	75			5.0		6.5	6.4	34			
12	6	75			10.0		6.3	7.0	50			
18	7	75	12	30	16.0	9.4	7.1	7.2	82			
27	8	75	11	00	13.	8.4	6.9	7.1	95			
18	11	75	13	00	2.0	10.2	6.8	6.9	69			
20	5	76	11	30	9.0	11.6	6.6	7.0	40			
15	7	76	09	40	11.0	9.5	6.4	7.5	73			
25	8	76	09	45	11.0	7.0	6.8	6.7	65			

SAMPLE DATE			TIME AS		10501L RESIDUE FIXED NONFILTR.	10551L RESIDUE FIXED FILTERABLE	20103L CALCIUM DISSOLVED	20003P CALCIUM TOTAL	12102L MAGNESIUM DISSOLVED	12002P MAGNESIUM TOTAL	10606L HARDNESS TOTAL LAB CALC.	10101L ALKALINITY TOTAL
D	M	Y	H	M	MG/L	MG/L	CA MG/L	CA MG/L	MG MG/L	MG MG/L	CACO3 MG/L	CACO3 MG/L
20	5	74					4.4		0.8			9
21	6	74					8.1		1.3			21
24	7	74					11.0		1.4			28
27	8	74					12.0		1.7			32
3	10	74					9.9		1.6			27
31	10	74					8.1		1.5			20
20	5	75					4.5		0.8			11
12	6	75					7.2		1.1			16
18	7	75	12	30			12.8		1.7 03L			35
27	8	75	11	00			15.0		1.9 03L			36
18	11	75	13	00			8.0		2.0			24
20	5	76	11	30				5.9		1.0	19.	12
15	7	76	09	40				10.		1.6	32.	25
25	8	76	09	45				12.		1.6	36.	25

WATER QUALITY SURVEILLANCE NETWORK

E.P.S. ATLANTIC REGION 1974-1976

STATION **00NB01BK0012** LATITUDE **47** D **34** M **10** S LONGITUDE **66** D **18** M **3** S

FORTYMILE BROOK AT PUMPSITE 800M ABOVE ANACONDA BRASS MINE PROPERTY, AB-1 NORTHUMBERLAND COUNT

SAMPLE DATE			TIME AS		10251L ACIDITY PH = 8.3	16304L SULPHATE DISSOLVED	16502L THIOSULFATE TOTAL	16510L THIO-SALTS TOTAL	26302P IRON EXTRBLE.	29105P COPPER DISSOLVED	29305P COPPER EXTRBLE.	30105P ZINC DISSOLVED
					CACO3	SO4	S2O3	S2O3	FE	CU	CU	ZN
D	M	Y	H	M	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L
20	5	74							0.08	0.004	0.009	0.002
21	6	74							0.13	L.002	L.002	0.002
24	7	74							0.04	L.002	L.002	0.002
27	8	74							0.10		L.002	
3	10	74							0.13		0.006	
31	10	74							0.06	0.002	0.003	0.002
20	5	75				2.0			0.11		0.015	
12	6	75				8.0			0.20		0.009	
18	7	75	12	30		7.0	L5.0		0.10		0.032	
27	8	75	11	00		5.0	L5.0		0.19			
18	11	75	13	00		10.0	4.5		0.03		L.002	
20	5	76	11	30		7.	L5.	L5.	0.09		0.006	
15	7	76	09	40		8.	L5.	L5.	0.06		0.003	
25	8	76	09	45		9.	L5.	L5.	0.15		0.013	

SAMPLE DATE			TIME AS		30305P ZINC EXTRBLE.	82103P LEAD DISSOLVED	82302P LEAD EXTRBLE.	80311P MERCURY EXTRBLE.	48302P CADMIUM EXTRBLE.	06581L HUMIC ACID
					ZN	PB	PB	HG	CD	
D	M	Y	H	M	MG/L	MG/L	MG/L	UG/L	MG/L	MG/L
20	5	74			0.007	L.002	0.006			6
21	6	74			0.008	L.002	L.002			6
24	7	74			0.004	0.00	0.007			5
27	8	74			L.002	0.004 02P	0.004			3 82L
3	10	74			L.002	0.008	0.010			5 82L
31	10	74			L.002	L.002 02P	0.002			3 82L
20	5	75			0.018		0.002	L.05	L.001	3 82L
12	6	75			0.12 04P		0.002	L.05	L.001	2 82L
18	7	75	12	30	0.04		0.004	L.05	L.001	2 82L
27	8	75	11	00			0.004	0.06	L.001	2 82L
18	11	75	13	00	0.003		L.002	L.05	L.001	4 82L
20	5	76	11	30	0.011			0.5	0.002	7
15	7	76	09	40	0.011		0.002		L.001	5
25	8	76	09	45	0.114		L.001		0.002	4

BIOLOGICAL RESULTS

STATION: NB-27: Nepisiguit, above Portage Brook

TAXA			SAMPLING PERIOD 1974 10/6-4/7	1974 4/7-15/8	1974 13/6-29/7
Arthropoda					
Crustacea					
Amphipoda			1		
Insecta					
Plecoptera	Pteronarcidae	Pteronarcys			1
		Allonarcys			2
	Perlidae	Acroneura	3	3	
	Perlodidae	Isoperla	2		
Ephemeroptera	Heptageniidae	Heptagenia			23
		Stenonema	5	20	
	Baetidae	Baetis			17
		Cloeon	6		
		Caenis		88	
	Ephemeridae	Ephemerella 3			8
		Ephemerella 4			58
	Leptophlebidae	Paraleptophlebia	6	16	2
Tricoptera	Brachycentridae	Brachycentrus			21
	Hydropsychidae	Hydropsyche	2	2	5
		Arctopsyche			
	Limnephilidae	Limnephilus		5	
	Philopotamidae	Wormaldia			10
	Psychomyiidae	Polycentropus	5	6	
	Rhyacophilidae	Rhyacophila			1
Diptera	Simulidae	Simulium	1	3	
	Tendipedidae	-	86	719	84
	Rhagionidae	Atherix	4	5	6
		Σ	121	867	238
		S	11	10	13
		DI	1.765	1.003	2.723

BIOLOGICAL RESULTS

STATION: NB-28: Nepisiguit River, above Wedge Mine

TAXA			SAMPLING PERIOD 1974 27/5-30/6
Annelida			
Oligochaeta			2
Arthropoda			
Insecta			
Ephemeroptera	Heptageniidae	Stenonema	20
	Leptophlebidae	Paraleptophlebia	3
Diptera	Tendipedidae	-	12
		Σ	37
		S	4
		DI	1.528

BIOLOGICAL RESULTS

STATION: NB-32: Nepisiguit River, above Forty Mile Brook

TAXA			SAMPLING PERIOD 1974 20/5-21/6	1974 21/6-4/7	1975 6/6-29/7
Arthropoda					
Arachnida			2		
Insecta					
Plecoptera	Perlidae	Acroneura	4		
Ephemeroptera	Heptageniidae	Heptagenia			1
		Stenonema	3		
	Baetidae	Cloeon	1		
		Habrophlebia		1	
	Ephemeridae	Ephemerella 4			2
Tricoptera	Leptoceridae	Mystacides	1		
Diptera	Tendipedidae	-	20	42	4
	Rhagionidae	Atherix	1		
		Σ	32	43	7
		S	7	2	3
		DI	1.84	0.16	1.38

BIOLOGICAL RESULTS

STATION: NB-29: Nepisiguit River, below Forty Mile Brook

TAXA			SAMPLING PERIOD 1974 20/5-21/6	1974 21/6-12/7	1975 16/6-29/7
Annelida					
Oligochaeta			2		
Arthropoda					
Insecta					
Plecoptera	Perlidae	Acroneura		3	
	Perlodidae	Isoperla	1		
Ephemeroptera	Heptageniidae	Stenonema	1	1	
	Baetidae	Habrophlebiodes	8		
		Caenis		1	
	Leptophlebidae	Paraleptophlebia	2	5	
Tricoptera	Hydropsychidae	Hydropsyche	4	26	
	Limnephilidae	Limnephilus	1		
	Psychomyiidae	Polycentropus	1	1	
	Odontoceridae	Psilotreta			1
Diptera	Tendipedidae	-	65	68	12
	Heleidae				2
		Σ	82	105	15
		S	9	7	3
		DI	1.145	1.45	0.91

BIOLOGICAL RESULTS

STATION: NB-33: Nepisiguit River, above Bathurst Mines

TAXA				SAMPLING PERIOD 1975 7/6-30/7
Annelida				
Hirudinea				1
Arthropoda				
Insecta				
Coleoptera	Dytiscidae	Hydroporus		1
Diptera	Tendipedidae	-		7
			Σ	9
			S	3
			DI	0.99

(c) Austin Brook and Knight Brook (NB 34, 36, 35)

On the Nepisiquit above the confluence of Austin Brook, little change in water quality is recorded, as compared to the higher station. Increases in turbidity during the summer is mainly due to algal blooms and the level of trace metals is lower.

Austin Brook, before entering the Nepisiquit has fairly low pH levels, (4.0-6.0), while fairly high concentrations were recorded for copper (~95 ppb), zinc (~4.6 ppm), lead (~30 ppb), iron (~1.1 ppm) and cadmium (~80 ppb).

Fortunately, little change in the waters of the Nepisiquit is observed after the confluence with Austin Brook, presumably due to the excellent dilution afforded the Austin Brook waters by the power dam headpond.

Knight Brook, which receives most of the effluent from the Brunswick #6 Mine waste water treatment system, has a very low pH (2.9-4.5), high conductivity (~1712 µsie/cm.) and is very hard (~390 ppm). Levels of sulphates (~680 ppm), thiosulphates (~10 ppm), iron (~21 ppm), lead (~80 ppb), and cadmium (~12 ppb) were recorded. Zinc and copper reached peaks of 87 ppm and 7 ppm, respectively. The entire length of Knight Brook is devoid of higher forms of life.

No biological information was available for these stations.

WATER QUALITY SURVEILLANCE NETWORK
E.P.S. ATLANTIC REGION 1974-1976

STATION **00NB01BK0006** LATITUDE **47** D **23** M **50** S LONGITUDE **65** D **49** M **10** S

AUSTIN BROOK AT CONFLUENCE WITH NEPISIGUIT RIVER, GLOUCESTER COUNTY,

SAMPLE DATE D	M	Y	TIME AS H	M	02061F TEMP. WATER DEG.C.	08102F OXYGEN DISSOLVED DO O2 MG/L	10301F PH PH UNITS	10301L PH PH UNITS	02041L SPECIFIC CONDUCTANCE USIE/CM	02073L TURBIDITY JTU	10401L RESIDUE NONFILTR. MG/L	10451L RESIDUE FILTERABLE MG/L
27	5	74			7.0 61S		5.4 01S	5.0	51	2.0		
30	6	74			16.0 61S		6.3 01S	6.4	74	2.2		
1	8	74			17.0 61S		6.1 01S	6.2	95	1.5		
7	9	74			10.0 61S		5.2 01S	4.2	94	2.8		
17	10	74			4.0 61S		4.8 01S	4.7	83	2.5		
19	5	75			6.0		5.3	5.1	34			
17	6	75			13.0		4.8	5.7	57			
30	7	75	11	00	15.	7.6	4.5	4.3	118			
23	8	75	11	00	11.	9.1	5.6	4.9	123			
25	9	75	12	30	9.0		5.2	4.9	210			
17	11	75	11	00	2.0	7.2	7.0	4.9	75			
2	3	76	13	30	2.0	9.2	5.6	5.8	62			
1	6	76	13	45	10.5	10.2	4.4	4.4	110			
14	7	76	11	50	12.0	9.0	4.0	4.3	155			
26	8	76	10	05	12.0	6.4	6.8	5.9	90			

SAMPLE DATE D	M	Y	TIME AS H	M	10501L RESIDUE FIXED NONFILTR. MG/L	10551L RESIDUE FIXED FILTERABLE MG/L	20103L CALCIUM DISSOLVED CA MG/L	20003P CALCIUM TOTAL CA MG/L	12102L MAGNESIUM DISSOLVED MG MG/L	12002P MAGNESIUM TOTAL MG MG/L	10606L HARDNESS TOTAL LAB CALC. CACO3 MG/L	10101L ALKALINITY TOTAL CACO3 MG/L
27	5	74					3.9		1.1			L1
30	6	74					7.0		1.6			1
1	8	74					7.3		1.8			2
7	9	74					7.0		2.0			L1
17	10	74					6.0		1.7			L1
19	5	75					2.7		0.8			L1
17	6	75					4.9		1.3			1
30	7	75	11	00			7.1		2.5 03L			L1
23	8	75	11	00			6.8		2.9 03L			L1
25	9	75	12	30				10.		1.0		L1
17	11	75	11	00			5.4		2.0			1
2	3	76	13	30			5.0		1.6			3
1	6	76	13	45				5.5		2.0	22.	
14	7	76	11	50				6.4		2.4	26.	
26	8	76	10	05				8.4		2.2	30.	4

WATER QUALITY SURVEILLANCE NETWORK

E.P.S. ATLANTIC REGION 1974-1976

STATION **00NB01BK0006** LATITUDE **47** D **23** M **50** S LONGITUDE **65** D **49** M **10** S

AUSTIN BROOK AT CONFLUENCE WITH NEPISIGUIT RIVER, GLOUCESTER COUNTY,

SAMPLE DATE			TIME AS		10251L ACIDITY PH = 8.3	16304L SULPHATE DISSOLVED	16502L THIOSULFATE TOTAL	16510L THIO-SALTS TOTAL	26302P IRON EXTRBLE.	29105P COPPER DISSOLVED	29305P COPPER EXTRBLE.	30105P ZINC DISSOLVED
D	M	Y	H	M	CACO3 MG/L	SO4 MG/L	S2O3 MG/L	S2O3 MG/L	FE MG/L	CU MG/L	CU MG/L	ZN MG/L
27	5	74				15.0			0.32	0.02	0.03	1.0 04P
30	6	74				27.0			0.26	0.017	0.02	1.3
1	8	74				28.0			0.18	0.007	0.010	0.95 04P
7	9	74			11.5	31.0			0.25	0.017	0.03	2.1 04P
17	10	74				31.0			0.39	0.04	0.04	2.0 04P
19	5	75				10.0			0.23		0.013	
17	6	75				16.0			0.33		0.05	
30	7	75	11	00		44.0	L5.0		1.1		0.2	
23	8	75	11	00		46.0	L5.0		0.61			
25	9	75	12	30		50.0 02L	L5.	L5.				
17	11	75	11	00		26.0	5.6		0.12		0.02	
2	3	76	13	30		20.0	5.6		0.24		0.016	
1	6	76	13	45	20.	38.	L5.	L5.	1.5		0.095	
14	7	76	11	50	20.	45.	L5.	L5.	1.5		0.098	
26	8	76	10	05		30.	L5.	L5.	0.56		0.022	

SAMPLE DATE			TIME AS		30305P ZINC EXTRBLE.	82103P LEAD DISSOLVED	82302P LEAD EXTRBLE.	80311P MERCURY EXTRBLE.	48302P CADMIUM EXTRBLE.	06581L HUMIC ACID
D	M	Y	H	M	ZN MG/L	PB MG/L	PB MG/L	HG UG/L	CD MG/L	MG/L
27	5	74			1.1 04P	0.008	0.012			11
30	6	74			1.3 04P	0.008	0.017			5
1	8	74			1.0 04P	0.006	0.020			5 82L
7	9	74			2.1 04P	0.02 02P	0.04			1 82L
17	10	74			2.0 04P	0.017 02P	0.03	L.05		7 82L
19	5	75			0.50 04P		0.009	0.05	0.001	5 82L
17	6	75			1.5 04P		0.017	0.07	0.004	4 82L
30	7	75	11	00	4.9		0.03	L.05	0.08	6 82L
23	8	75	11	00			0.03	0.05	0.007	2 82L
25	9	75	12	30				L.1		2
17	11	75	11	00	1.6 04P		0.010	L.05	0.004 03P	7 82L
2	3	76	13	30	1.1		0.008		0.002	4 82L
1	6	76	13	45	2.9		0.016		0.008	10
14	7	76	11	50	4.6		0.025		0.008	10
26	8	76	10	05	2.		0.011		0.006	8

WATER QUALITY SURVEILLANCE NETWORK

E.P.S. ATLANTIC REGION 1974-1976

STATION **01NB01BK0009** LATITUDE **47** D **24** M **16** S LONGITUDE **65** D **47** M **35** S

NEPISIQUIT RIVER AT POWER DAM HEADPOND NEPISIQUIT FALLS, GLOUCESTER COUNTY NEW BRUNSWICK

SAMPLE DATE			TIME AS		02061F TEMP. WATER	08102F OXYGEN DISSOLVED DO	10301F PH	10301L PH	02041L SPECIFIC CONDUCTANCE	02073L TURBIDITY	10401L RESIDUE NONFILTR.	10451L RESIDUE FILTERABLE
D	M	Y	H	M	DEG.C.	O2 MG/L	PH UNITS	PH UNITS	USIE/CM	JTU	MG/L	MG/L
27	5	74			5.0 61S		6.7 01S	6.6	29	0.5		
30	6	74			17.0 61S		6.9 01S	7.1	40	L.5		
22	7	74						7.4	138	2.0		
1	8	74			20.0 61S		6.7 01S	6.2	41	2.5		
7	9	74			14.0 61S		6.7 01S	6.2	53	0.5		
17	10	74			4.0 61S		6.5 01S	6.8	43			
19	5	75			7.0		5.7	6.2	26			
17	6	75						6.3	31			
30	7	75	07	30	17.	7.7	6.7	6.6	42			
23	8	75	10	30	12.	9.0	6.6	6.8	167			
25	9	75	11	30	10.0		6.6	7.2	90			
17	11	75	10	30	0.0	10.0	6.6	6.2	46			
1	6	76	11	45	9.0	9.8	6.6	6.8	40			
14	7	76	12	15	13.0	9.0	6.3	7.1	46			
26	8	76	09	45	18.0	5.4	6.8	6.7	60			

SAMPLE DATE			TIME AS		10501L RESIDUE FIXED NONFILTR.	10551L RESIDUE FIXED FILTERABLE	20103L CALCIUM DISSOLVED	20003P CALCIUM TOTAL	12102L MAGNESIUM DISSOLVED	12002P MAGNESIUM TOTAL	10606L HARDNESS TOTAL LAB CALC.	10101L ALKALINITY TOTAL
D	M	Y	H	M	MG/L	MG/L	CA MG/L	CA MG/L	MG MG/L	MG MG/L	CACO3 MG/L	CACO3 MG/L
27	5	74					3.3		0.8			7
30	6	74					4.8		1.0			12
22	7	74					24.		1.7			54
1	8	74					4.8		1.1			16
7	9	74					6.0		1.2			16
17	10	74					5.4		1.1			12
19	5	75					1.7		0.6			8
17	6	75					3.9		0.8			11
30	7	75	07	30			5.4		1.1 03L			16
23	8	75	10	30			5.8		1.1 03L			17
25	9	75	11	30				6.6		1.0		15
17	11	75	10	30			6.3		1.0			13
1	6	76	11	45				3.8		0.8	13.	20
14	7	76	12	15				4.8		1.0	16.	10
26	8	76	09	45				6.8		1.2	20.	15

WATER QUALITY SURVEILLANCE NETWORK

E.P.S. ATLANTIC REGION 1974-1976

STATION **01NB01BK0009** LATITUDE **47** D **24** M **16** S LONGITUDE **65** D **47** M **35** S

NEPISIQUIT RIVER AT POWER DAM HEADPOND NEPISIQUIT FALLS, GLOUCESTER COUNTY NEW BRUNSWICK

SAMPLE DATE			TIME AS		10251L ACIDITY PH = 8.3	16304L SULPHATE DISSOLVED	16502L THIOSULFATE TOTAL	16510L THIO-SALTS TOTAL	26302P IRON EXTRBLE.	29105P COPPER DISSOLVED	29305P COPPER EXTRBLE.	30105P ZINC DISSOLVED
D	M	Y	H	M	CACO3 MG/L	SO4 MG/L	S2O3 MG/L	S2O3 MG/L	FE MG/L	CU MG/L	CU MG/L	ZN MG/L
27	5	74							0.11	L.002	0.004	0.06
30	6	74							0.14	L.002	L.002	0.014
22	7	74							0.06		0.005	
1	8	74							1.20	0.002	0.003	0.02
7	9	74							0.12	L.002	L.002	0.04
17	10	74							0.17	0.005	0.005	0.06
19	5	75				2.0			0.35		0.009	
17	6	75				2.0			0.09		0.03	
30	7	75	07	30		2.0	L5.0		0.22		0.036	
23	8	75	10	30		7.0			0.30		0.09	
25	9	75	11	30		8.0 02L	L5.	L5.				
17	11	75	10	30		15.0	7.8		0.06		0.006	
1	6	76	11	45		6.	L5.	L5.	0.11		0.010	
14	7	76	12	15		7.	L5.	L5.	0.09		0.007	
26	8	76	09	45		0.4	L5.	L5.	0.05		0.01	

SAMPLE DATE			TIME AS		30305P ZINC EXTRBLE.	82103P LEAD DISSOLVED	82302P LEAD EXTRBLE.	80311P MERCURY EXTRBLE.	48302P CADMIUM EXTRBLE.	06581L HUMIC ACID
D	M	Y	H	M	ZN MG/L	PB MG/L	PB MG/L	HG UG/L	CD MG/L	MG/L
27	5	74			0.06	0.005	0.006			5
30	6	74			0.020	0.002	0.010			2
22	7	74			0.007		L.002		L.001	14
1	8	74			0.04	0.002 02P	0.006			2 82L
7	9	74			0.06	0.002 02P	0.004			L1 82L
17	10	74			0.06	0.014 02P	0.017			3 82L
19	5	75			0.07		0.005	0.05	0.001	3 82L
17	6	75			0.34 04P		0.005	0.07	0.001	2 82L
30	7	75	07	30	0.08		L.002	L.05	0.002	2 82L
23	8	75	10	30	1.0 04P		0.003 03P	0.1	L.001	1 82L
25	9	75	11	30				L.1		3
17	11	75	10	30	0.1		L.002	L.05	0.001	8 82L
1	6	76	11	45	0.060		L.001		L.001	5
14	7	76	12	15	0.80		0.005		0.001	8
26	8	76	09	45	0.05		L.001		0.002	3

WATER QUALITY SURVEILLANCE NETWORK

E.P.S. ATLANTIC REGION 1974-1976

STATION **00NB01BK0003** LATITUDE **47** D **24** M **12** S LONGITUDE **65** D **45** M **43** S

KNIGHT BROOK AT CONFLUENCE WITH NEPISIGUIT RIVER, GLOUCESTER COUNTY,

SAMPLE DATE D	M	Y	TIME AS H	M	02061F TEMP. WATER DEG.C.	08102F OXYGEN DISSOLVED DO O2 MG/L	10301F PH PH UNITS	10301L PH PH UNITS	02041L SPECIFIC CONDUCTANCE USIE/CM	02073L TURBIDITY JTU	10401L RESIDUE NONFILTR. MG/L	10451L RESIDUE FILTERABLE MG/L
27	5	74			7.0 61S		3.8 01S	3.7	499	16.0	13	284
30	6	74			17.0 61S		3.2 01S	3.2	1230	22.	20	810
1	8	74			17.0 61S		2.9 01S	3.0	1712	18.	28	1185
7	9	74			12.0 61S		3.3 01S	3.2	1265	7.0	25	874
17	10	74			4.0 61S		3.4 01S	3.5	1120	20.	13	872
19	5	75			7.0		3.9	4.2	306			
17	6	75			18.		3.4	4.1	584			
30	7	75	09	30	17.	7.5	3.7	3.5	425			
23	8	75	10	00	10.	9.2	3.9	3.7	1014			
25	9	75	13	00	9.0		3.9	3.5	1700			
17	11	75	11	30	2.0	6.2	4.8	4.5	90			
1	6	76	11	15	10.0	10.0	4.0	3.7	370			
14	7	76	12	45	13.0	9.5	3.7	3.6	500			
26	8	76	09	15	12.0	6.0	3.6	3.7	900			

SAMPLE DATE D	M	Y	TIME AS H	M	10501L RESIDUE FIXED NONFILTR. MG/L	10551L RESIDUE FIXED FILTERABLE MG/L	20103L CALCIUM DISSOLVED CA MG/L	20003P CALCIUM TOTAL CA MG/L	12102L MAGNESIUM DISSOLVED MG MG/L	12002P MAGNESIUM TOTAL MG MG/L	10606L HARDNESS TOTAL LAB CALC. CACO3 MG/L	10101L ALKALINITY TOTAL CACO3 MG/L
27	5	74			L10	212	23.0		6.0			0
30	6	74			15	663	84.0		16.0			L1
1	8	74			L10	950	83.0		27.0			L1
7	9	74			L10	775	100.		19.0			L1
17	10	74			12	789	130.		8.7			L1
19	5	75					36.5		2.2			
17	6	75					84.5		4.0			
30	7	75	09	30			38.5		6.5 03L			L1
23	8	75	10	00			175.		7.6 03L			L1
25	9	75	13	00				192.		4.8		
17	11	75	11	30			350.		7.5			L1
1	6	76	11	15				41.		3.0	110.	
14	7	76	12	45				50.		6.4	150.	
26	8	76	09	15				140.		9.8	390.	

WATER QUALITY SURVEILLANCE NETWORK

E.P.S. ATLANTIC REGION 1974-1976

STATION **00NB01BK0003** LATITUDE **47** D **24** M **12** S LONGITUDE **65** D **45** M **43** S

KNIGHT BROOK AT CONFLUENCE WITH NEPISIGUIT RIVER, GLOUCESTER COUNTY,

SAMPLE DATE			TIME AS		10251L ACIDITY PH = 8.3	16304L SULPHATE DISSOLVED	16502L THIOSULFATE TOTAL	16510L THIO-SALTS TOTAL	26302P IRON EXTRBLE.	29105P COPPER DISSOLVED	29305P COPPER EXTRBLE.	30105P ZINC DISSOLVED
D	M	Y	H	M	CACO3 MG/L	SO4 MG/L	S2O3 MG/L	S2O3 MG/L	FE MG/L	CU MG/L	CU MG/L	ZN MG/L
27	5	74			83.4	130.			6.4		1.5 06P	15.1 04P
30	6	74			170.	550.			11.6	3.00 06P	3.00 06P	49.0 04P
1	8	74			431.	680.			21.	7. 06P	7. 06P	87. 04P
7	9	74				620.			13.6	1.82 06P	1.82 06P	
17	10	74			98.8	600.			5.6	1.1 06P	1.1 06P	19.0 04P
19	5	75			26.0	112.			1.2		0.24 06P	
17	6	75			45.0	255.			2.4		0.31 06P	
30	7	75	09	30		163.	L5.0		4.4		0.4	
23	8	75	10	00		560.			7.9			
25	9	75	13	00		600.0 02L	L5.	L5.				
17	11	75	11	30		540.	5.6		1.0		0.3	
1	6	76	11	15	40.	130.	L5.	L5.	3.2		0.23	
14	7	76	12	45	55.	320.	L5.	L5.	4.1		0.24	
26	8	76	09	15	70.	460.	L5.	10.	4.6		0.13	

SAMPLE DATE			TIME AS		30305P ZINC EXTRBLE.	82103P LEAD DISSOLVED	82302P LEAD EXTRBLE.	80311P MERCURY EXTRBLE.	48302P CADMIUM EXTRBLE.	06581L HUMIC ACID
D	M	Y	H	M	ZN MG/L	PB MG/L	PB MG/L	HG UG/L	CD MG/L	MG/L
27	5	74			18.6 04P	0.03	0.03			
30	6	74			49.0 04P	0.07	0.08			L1
1	8	74			87. 04P	0.22 01P	0.27 01P			
7	9	74			47.5 04P	0.06 02P	0.06			2 82L
17	10	74			19.0 04P	0.04 02P	0.04	0.05		2 82L
19	5	75			3.0 04P		0.017	0.07	0.006	2 82L
17	6	75			6.8 04P		0.03	0.15	0.005	2 82L
30	7	75	09	30	11.0		0.023	L.05	0.002	4 82L
23	8	75	10	00			0.021	0.1	0.002	1 82L
25	9	75	13	00				L.1		2
17	11	75	11	30	12.0		0.010	L.05	0.002	5 82L
1	6	76	11	15	5.3		0.019		0.010	7
14	7	76	12	45	12.0		0.021		0.012	8
26	8	76	09	15	17.8		0.014		0.002	2

(d) Lower reaches of the Nepisiguit River (NB 32, 37, 38, 39)

Below the confluence of Knight's Brook and the Nepisiguit River, the water has a lower pH (5.2-6.8) and an increase in thiosulphate content. Increases in levels of iron (~1.5 ppm), copper (~90 ppb), and zinc (~4 ppm) were noted. Cadmium was present in measurable quantities.

Further downstream, the levels of trace metals drop, although they still remain high. The level of cadmium (~6 ppb) increased.

This significant deterioration in the quality of the Nepisiguit River at this point can be totally ascribed to effects of Knight Brook. Fortunately, the relative sizes of the Nepisiguit and Knight Brook are such that substantial initial dilution of Knight Brook occurs. Dye studies conducted by EPS in similar fast flowing stretches of the Nepisiguit have shown that substantial "streaming" of the river occurs, implying slow horizontal and vertical mixing, with the maintenance of a largely unaffected passage of water along the southern bank for some distance (estimates of up to 5 km).

The station at Bathurst is obviously affected by intrusion of the salt wedge. Consequently data obtained at this point must be viewed with caution.

Biological samples taken on the lower river during 1974 and 1975, showed diversity to be relatively low, with chironomids remaining the dominant organism.

WATER QUALITY SURVEILLANCE NETWORK

E.P.S. ATLANTIC REGION 1974-1976

STATION **00NB01BK0032** LATITUDE **47** D **23** M **32** S LONGITUDE **66** D **7** M **19** S

NEPISIGUIT RIVER JUST ABOVE CONFLUENCE OF FORTYMILE BROOK, NORTHUMBERLAND COUNTY

SAMPLE DATE			TIME AS		02061F TEMP. WATER	08102F OXYGEN DISSOLVED DO	10301F PH	10301L PH	02041L SPECIFIC CONDUCTANCE	02073L TURBIDITY	10401L RESIDUE NONFILTR.	10451L RESIDUE FILTERABLE
D	M	Y	H	M	DEG.C.	O2 MG/L	PH UNITS	PH UNITS	USIE/CM	JTU	MG/L	MG/L
20	5	74			4.0 61S		6.7 01S	6.7	24	L.5		
21	6	74			10.0 61S		6.5 01S	6.6	34	0.5		
24	7	74			16.0 61S		6.7 01S	6.2	37	0.1		
27	8	74			14.0 61S		7.1 01S	6.0	40	L.5		
27	9	74			10.0 61S		6.8 01S	7.0	41	L.5		
23	10	74			1.0 61S		7.0 01S	6.8	39	L.5		
13	5	75			3.0		5.2	6.0	29			
16	6	75			11.		6.2	7.2	29			
29	7	75	12	00	18.	8.1	6.6 02F	6.6	39			
19	8	75	13	00	15.	9.5	6.7	6.9	55			
25	9	75	09	30	10.0		7.1	7.8	170			
17	11	75	09	00	0.0	12.1	6.4	6.9	40			
1	6	76	15	45	9.0	10.6	6.8	7.0	30			
14	7	76	10	50	11.0	9.5	8.4	9.0	190			
26	8	76	11	35	17.0	6.0	6.2	6.5	110			

SAMPLE DATE			TIME AS		10501L RESIDUE FIXED NONFILTR.	10551L RESIDUE FIXED FILTERABLE	20103L CALCIUM DISSOLVED	20003P CALCIUM TOTAL	12102L MAGNESIUM DISSOLVED	12002P MAGNESIUM TOTAL	10606L HARDNESS TOTAL LAB CALC.	10101L ALKALINITY TOTAL
D	M	Y	H	M	MG/L	MG/L	CA MG/L	CA MG/L	MG MG/L	MG MG/L	CACO3 MG/L	CACO3 MG/L
20	5	74					2.8		0.7			6
21	6	74					3.9		0.8			11
24	7	74					4.50		0.9			14
27	8	74					4.8		1.1			16
27	9	74					4.9		1.2			15
23	10	74					4.5		1.0			11
13	5	75					3.2		0.9			8
16	6	75					3.5		0.8			9
29	7	75	12	00			4.6		1.1 03L			15
19	8	75	13	00			5.1		1.3 03L			14
25	9	75	09	30				16.		1.2		20
17	11	75	09	00			4.6		0.9			12
1	6	76	15	45				3.2		0.7	11.	10
14	7	76	10	50				34.		3.4	99.	30
26	8	76	11	35				17.		3.4	56.	10

WATER QUALITY SURVEILLANCE NETWORK

E.P.S. ATLANTIC REGION 1974-1976

STATION **00NB01BK0032** LATITUDE **47** D **23** M **32** S LONGITUDE **66** D **7** M **19** S

NEPISIGUIT RIVER JUST ABOVE CONFLUENCE OF FORTYMILE BROOK, NORTHUMBERLAND COUNTY

SAMPLE DATE			TIME AS		10251L ACIDITY PH = 8.3	16304L SULPHATE DISSOLVED	16502L THIOSULFATE TOTAL	16510L THIO-SALTS TOTAL	26302P IRON EXTRBLE.	29105P COPPER DISSOLVED	29305P COPPER EXTRBLE.	30105P ZINC DISSOLVED
D	M	Y	H	M	CACO3 MG/L	SO4 MG/L	S2O3 MG/L	S2O3 MG/L	FE MG/L	CU MG/L	CU MG/L	ZN MG/L
20	5	74				2.0			0.06	0.002	0.004	0.03
21	6	74				5.0			0.11	L.002	L.002	0.03
24	7	74				4.0			0.04	0.010	0.010	0.07
27	8	74				7.0			0.04	L.002	L.002	0.05
27	9	74				5.0			0.10		L.002	
23	10	74				4.0			0.05	L.002	L.002	0.06
13	5	75				5.0			0.54		0.013	
16	6	75				4.0			0.16		0.03	
29	7	75	12	00		5.0	L5.0		0.10		0.020	
19	8	75	13	00		5.0	L5.0		0.14		0.10	
25	9	75	09	30		30.0 02L	L5.	L5.				
17	11	75	09	00		8.0	6.7		0.07		0.004	
1	6	76	15	45		4.	L5.	L5.	0.06		0.006	
14	7	76	10	50		65.	L5.	L5.	7.5		0.20	
26	8	76	11	35		40.	L5.	L5.	0.16		0.004	

SAMPLE DATE			TIME AS		30305P ZINC EXTRBLE.	82103P LEAD DISSOLVED	82302P LEAD EXTRBLE.	80311P MERCURY EXTRBLE.	48302P CADMIUM EXTRBLE.	06581L HUMIC ACID
D	M	Y	H	M	ZN MG/L	PB MG/L	PB MG/L	HG UG/L	CD MG/L	MG/L
20	5	74			0.05	0.005	0.005			5
21	6	74			0.06	0.002	0.006			6
24	7	74			0.07	0.007	0.007			3
27	8	74			0.10	0.002 02P	0.002			1 82L
27	9	74			0.10	0.009 02P	0.011			3 82L
23	10	74			0.07		0.008	L.05		2 82L
13	5	75			0.15 04P		0.005	0.05	L.001	3 82L
16	6	75			0.34 04P		0.005	L.05	L.001	2 82L
29	7	75	12	00	0.04		L.002	L.05	0.002	1 82L
19	8	75	13	00	1.7 04P		0.003	0.1	L.001	L1 82L
25	9	75	09	30				L.1		2
17	11	75	09	00	0.04		L.002	L.05	L.001	5 82L
1	6	76	15	45	0.003		0.002		0.002	4
14	7	76	10	50	2.1		0.005		0.003	3
26	8	76	11	35	0.27		L.001		0.002	2

WATER QUALITY SURVEILLANCE NETWORK

E.P.S. ATLANTIC REGION 1974-1976

STATION **00NB01BK0050** LATITUDE **47** D **24** M **10** S LONGITUDE **65** D **45** M **39** S

NEPISIGUIT RIVER ABOUT 50 M BELOW CONFLUENCE WITH KNIGHT BROOK GLOUCESTER COUNTY

SAMPLE DATE D	M	Y	TIME AS H	M	02061F TEMP. WATER DEG.C.	08102F OXYGEN DISSOLVED DO O2 MG/L	10301F PH PH UNITS	10301L PH PH UNITS	02041L SPECIFIC CONDUCTANCE USIE/CM	02073L TURBIDITY JTU	10401L RESIDUE NONFILTR. MG/L	10451L RESIDUE FILTERABLE MG/L
27	5	74			5.0 61S		6.8 01S	6.5	38	1.3		
30	6	74			16.0 61S		6.5 01S	6.1	66	2.8		
1	8	74			20.0 61S		5.2 01S	5.4	110	5.0	L10	67
7	9	74			14.0 61S		5.5 01S	5.2	146	8.0	12	105
17	10	74			4.0 61S		6.1 01S	6.6	107	1.5		
19	5	75			7.		6.3	6.5	34			
17	6	75			13.		6.3	6.7	54			
30	7	75	10	30	19.	7.4	4.5	4.4	173			
23	8	75	09	30	12.	8.4	6.4	6.6	169			
25	9	75	13	30	10.0		6.0	6.7	290			
17	11	75	12	00	0.0	9.0	6.0	6.1	195			
1	6	76	11	00	10.0	11.4	6.7	6.5	50			
14	7	76	13	00	13.0	9.5	6.0	6.4	115			
26	8	76	09	00	17.0	5.7	6.7	6.5	10			

SAMPLE DATE D	M	Y	TIME AS H	M	10501L RESIDUE FIXED NONFILTR. MG/L	10551L RESIDUE FIXED FILTERABLE MG/L	20103L CALCIUM DISSOLVED CA MG/L	20003P CALCIUM TOTAL CA MG/L	12102L MAGNESIUM DISSOLVED MG MG/L	12002P MAGNESIUM TOTAL MG MG/L	10606L HARDNESS TOTAL LAB CALC. CACO3 MG/L	10101L ALKALINITY TOTAL CACO3 MG/L
27	5	74					3.9		0.9			5
30	6	74					8.1		1.5			7
1	8	74			L10	64	9.1		2.5			3
7	9	74			L10	92	15.0		2.6			2
17	10	74					14.0		1.4			8
19	5	75					3.4		0.7			2
17	6	75					6.5		0.9			4
30	7	75	10	30			18.8		3.1 03L			L1
23	8	75	09	30			27.5		1.9 03L			11
25	9	75	13	30				29.		1.3		10
17	11	75	12	00			35.0		2.2			9
1	6	76	11	00				6.3		0.9	20.	8
14	7	76	13	00				12.		1.8	37.	4
26	8	76	09	00				8.5		1.6	28.	10

WATER QUALITY SURVEILLANCE NETWORK
E.P.S. ATLANTIC REGION 1974-1976

STATION **00NB01BK0050** LATITUDE **47** D **24** M **10** S LONGITUDE **65** D **45** M **39** S

NEPISIGUIT RIVER ABOUT 50 M BELOW CONFLUENCE WITH KNIGHT BROOK GLOUCESTER COUNTY

SAMPLE DATE D	M	Y	TIME AS H	M	10251L ACIDITY PH = 8.3 CACO3 MG/L	16304L SULPHATE DISSOLVED SO4 MG/L	16502L THIOSULFATE TOTAL S2O3 MG/L	16510L THIO-SALTS TOTAL S2O3 MG/L	26302P IRON EXTRBLE. FE MG/L	29105P COPPER DISSOLVED CU MG/L	29305P COPPER EXTRBLE. CU MG/L	30105P ZINC DISSOLVED ZN MG/L
27	5	74				7.0			0.30	0.04	0.04	0.57 04P
30	6	74				28.0			0.53	0.06	0.09	1.8
1	8	74				46.			1.50	0.27 06P	0.30 06P	4.35 04P
7	9	74				68.0			0.95	0.20 06P	0.20 06P	4.32 04P
17	10	74				36.0			0.43	0.03	0.07	1.1 04P
19	5	75				8.0			0.28		0.007	
17	6	75				14.0			0.36		0.03	
30	7	75	10	30		72.0			1.5		0.05	
23	8	75	09	30		66.0	L5.0		0.69			
25	9	75	13	30		70.0 02L	L5.	L5.				
17	11	75	12	00		74.0	7.8		0.18		0.04	
1	6	76	11	00		13.	L5.	L5.	0.25		0.022	
14	7	76	13	00		45.	L5.	L5.	0.85		0.048	
26	8	76	09	00		30.	L5.	5.	0.38		0.014	

SAMPLE DATE D	M	Y	TIME AS H	M	30305P ZINC EXTRBLE. ZN MG/L	82103P LEAD DISSOLVED PB MG/L	82302P LEAD EXTRBLE. PB MG/L	80311P MERCURY EXTRBLE. HG UG/L	48302P CADMIUM EXTRBLE. CD MG/L	06581L HUMIC ACID MG/L
27	5	74			0.58 04P	0.010	0.013			5
30	6	74			1.8 04P	L.002	L.002			2
1	8	74			4.42 04P	0.004	0.010			L1 82L
7	9	74			4.40 04P	0.004 02P	0.006			4 82L
17	10	74			1.1 04P		0.009	L.05		3 82L
19	5	75			0.06		0.002	L.05	L.001	4 82L
17	6	75			0.38 04P		0.008	0.15	0.002	2 82L
30	7	75	10	30	4.7 04P		0.009 03P	L.05	0.001	3 82L
23	8	75	09	30			0.003	0.05	0.001	1 82L
25	9	75	13	30				0.2		3
17	11	75	12	00	1.7		0.004	L.05	0.003	7 82L
1	6	76	11	00	0.38		L.001		L.001	5
14	7	76	13	00	2.0		0.007		0.003	9
26	8	76	09	00	0.68		L.001		0.002	3

WATER QUALITY SURVEILLANCE NETWORK
E.P.S. ATLANTIC REGION 1974-1976

STATION **00NB01BK0026** LATITUDE **47** D **26** M **28** S LONGITUDE **65** D **42** M **22** S

NEPISIGUIT RIVER AT HWY 360 BRIDGE, NEAR NLU MINE B # 6-13 GLOUCESTER COUNTY

SAMPLE DATE			TIME AS		02061F TEMP. WATER	08102F OXYGEN DISSOLVED DO	10301F PH	10301L PH	02041L SPECIFIC CONDUCTANCE	02073L TURBIDITY	10401L RESIDUE NONFILTR.	10451L RESIDUE FILTERABLE
D	M	Y	H	M	DEG.C.	O2 MG/L	PH UNITS	PH UNITS	USIE/CM	JTU	MG/L	MG/L
27	5	74			6.0 61S		7.2 01S	6.2	39	L.5		
30	6	74			16.0 61S		6.6 01S	6.8	38	0.7		
1	8	74			19.0 61S		6.6 01S	6.0	43	0.4		
7	9	74			14.0 61S		6.3 01S	6.4	52	1.0		
17	10	74			5.0 61S		6.4 01S	6.3	36	1.8		
19	5	75			7.0		6.2	6.3	25			
17	6	75			13.0		6.4	6.4	35			
30	7	75	11	30	19.	8.2	6.5	6.1	43			
23	8	75	08	30	11.	9.1	6.6	6.9	68			
25	9	75	14	00	10.0		6.2	6.6	110			
17	11	75	12	30	0.0	12.0	6.0	6.4	55			
1	6	76	10	20	10.0	10.6	6.8	6.7	40			
14	7	76	13	20	14.0	9.5	6.2	7.0	50			
26	8	76	08	20	14.5	5.9	6.9	6.7	50			

SAMPLE DATE			TIME AS		10501L RESIDUE FIXED NONFILTR.	10551L RESIDUE FIXED FILTERABLE	20103L CALCIUM DISSOLVED	20003P CALCIUM TOTAL	12102L MAGNESIUM DISSOLVED	12002P MAGNESIUM TOTAL	10606L HARDNESS TOTAL LAB CALC.	10101L ALKALINITY TOTAL
D	M	Y	H	M	MG/L	MG/L	CA MG/L	CA MG/L	MG MG/L	MG MG/L	CACO3 MG/L	CACO3 MG/L
27	5	74					2.7		0.8			3
30	6	74					3.9		0.9			10
1	8	74					4.6		1.1			13
7	9	74					6.2		1.2			14
17	10	74					4.4		0.8			8
19	5	75					2.8		0.6			8
17	6	75					4.9		0.8			9
30	7	75	11	30			5.2		1.0 03L			10
23	8	75	08	30			7.3		1.2 03L			15
25	9	75	14	00				8.8		1.0		15
17	11	75	12	30			6.3		1.0			11
1	6	76	10	20				3.7		0.8	12.	10
14	7	76	13	20				5.2		1.0	17.	10
26	8	76	08	20				7.2		1.2	23.	15

WATER QUALITY SURVEILLANCE NETWORK
E.P.S. ATLANTIC REGION 1974-1976

STATION **00NB01BK0026** LATITUDE **47** D **26** M **28** S LONGITUDE **65** D **42** M **22** S

NEPISIGUIT RIVER AT HWY 360 BRIDGE, NEAR NLU MINE B#6-13 GLOUCESTER COUNTY

SAMPLE DATE D	M	Y	TIME AS H	M	10251L ACIDITY PH=8.3 CACO3 MG/L	16304L SULPHATE DISSOLVED SO4 MG/L	16502L THIOSULFATE TOTAL S2O3 MG/L	16510L THIO-SALTS TOTAL S2O3 MG/L	26302P IRON EXTRBLE. FE MG/L	29105P COPPER DISSOLVED CU MG/L	29305P COPPER EXTRBLE. CU MG/L	30105P ZINC DISSOLVED ZN MG/L
27	5	74				9.0			0.21	0.002	0.005	0.05
30	6	74				8.0			0.26	L.002	L.002	0.07
1	8	74				7.0			0.32	0.008	0.011	0.17 04P
7	9	74				11.0			0.23	0.004	0.005	0.32 04P
17	10	74				11.0			0.44	0.005	0.005	
19	5	75				2.0			0.21		0.005 06P	
17	6	75				4.0			0.11		0.017	
30	7	75	11	30		13.0	L5.0		0.49		0.049	
23	8	75	08	30		7.0	L5.0		0.26			
25	9	75	14	00		15.0 02L	L5.	L5.				
17	11	75	12	30		22.0	7.3		0.12		0.011	
1	6	76	10	20		5.	L5.	L5.	0.12		0.008	
14	7	76	13	20		11.	L5.	L5.	0.13		0.009	
26	8	76	08	20		9.	L5.	L5.	0.10		0.006	

SAMPLE DATE D	M	Y	TIME AS H	M	30305P ZINC EXTRBLE. ZN MG/L	82103P LEAD DISSOLVED PB MG/L	82302P LEAD EXTRBLE. PB MG/L	80311P MERCURY EXTRBLE. HG UG/L	48302P CADMIUM EXTRBLE. CD MG/L	06581L HUMIC ACID MG/L
27	5	74			0.05	0.013	0.019			18
30	6	74			0.07	L.002	L.002			8
1	8	74			0.20 04P	L.002	0.002			8 82L
7	9	74			0.32 04P	0.007 02P	0.007			6 82L
17	10	74			0.05		0.012	L.05		16 82L
19	5	75			0.04		0.002	L.05	L.001	3 82L
17	6	75			0.23 04P		0.002	L.05	L.001	3 82L
30	7	75	11	30	0.09		0.003	L.05	0.006	8 82L
23	8	75	08	30			0.02	0.05	L.001	2 82L
25	9	75	14	00				L.1		3
17	11	75	12	30	0.2		0.002	L.05	0.001 03P	10 82L
1	6	76	10	20	0.035		L.001		L.001	6
14	7	76	13	20	0.30		0.003		L.001	8
26	8	76	08	20	0.018		L.001		L.001	4

WATER QUALITY SURVEILLANCE NETWORK
E.P.S. ATLANTIC REGION 1974-1976

STATION **00NB01BK0030** LATITUDE **47** D **36** M **52** S LONGITUDE **65** D **38** M **24** S

NEPISIGUIT RIVER AT BATHURST AT IRVING PIER BELOW HWY 11 BRIDGE, GLOUCESTER COUNTY

SAMPLE DATE			TIME AS		02061F TEMP. WATER	08102F OXYGEN DISSOLVED DO	10301F PH	10301L PH	02041L SPECIFIC CONDUCTANCE	02073L TURBIDITY	10401L RESIDUE NONFILTR.	10451L RESIDUE FILTERABLE
D	M	Y	H	M	DEG.C.	O2 MG/L	PH UNITS	PH UNITS	USIE/CM	JTU	MG/L	MG/L
27	5	74			7.0 61S		7.0 01S	6.8	2860	L.5		
30	6	74			17.0 61S		7.1 01S	7.4	5500	L.5		
1	8	74			17.0 61S		6.6 01S	6.2	6174	0.3		
7	9	74			16.0 61S		6.6 01S	6.2	2606	1.5		
17	10	74			6.0 61S		6.7 01S	6.9	4780	L.5		
19	5	75			9.0		6.2	6.4	1820			
12	6	75			11.		6.5	6.6	2600			
24	7	75	08	30	20.0	7.9	7.0	6.5	6284			
12	8	75	11	30	17.	7.4	6.9	6.7	5651			
25	9	75	14	30	11.0		6.7	7.2	15500			
17	11	75	13	30	4.0	13.0	6.5	6.6	6140			
8	3	76	13	30	2.0	9.5	6.5	6.6	774			
1	6	76	19	30	11.0	10.0	7.2	6.7	1160			
14	7	76	21	20	15.0	8.8	6.7	7.2	7200			
25	8	76	21	00	18.0	5.8	7.1	6.8	5500			

SAMPLE DATE			TIME AS		10501L RESIDUE FIXED NONFILTR.	10551L RESIDUE FIXED FILTERABLE	20103L CALCIUM DISSOLVED	20003P CALCIUM TOTAL	12102L MAGNESIUM DISSOLVED	12002P MAGNESIUM TOTAL	10606L HARDNESS TOTAL LAB CALC.	10101L ALKALINITY TOTAL
D	M	Y	H	M	MG/L	MG/L	CA MG/L	CA MG/L	MG MG/L	MG MG/L	CACO3 MG/L	CACO3 MG/L
27	5	74					23.0		65.0			10
30	6	74					40.0		122.			24
1	8	74					50.0		130.			25
7	9	74					26.0		670.0			23
17	10	74					37.0		7.5			21
19	5	75					15.0		40.0			8
12	6	75					22.0		50.0		260.	12
24	7	75	08	30			46.0		130. 03L			28
12	8	75	11	30			49.0		125. 03L			30
25	9	75	14	30				76.		184.		35
17	11	75	13	30			61.0		130.			18
8	3	76	13	30			26.0		5.0			51
1	6	76	19	30				11.		23.	120.	10
14	7	76	21	20				54.		150.	750.	25
25	8	76	21	00				48.		110.	570.	25

WATER QUALITY SURVEILLANCE NETWORK

E.P.S. ATLANTIC REGION 1974-1976

STATION **00NB01BK0030** LATITUDE **47** D **36** M **52** S LONGITUDE **65** D **38** M **24** S

NEPISIGUIT RIVER AT BATHURST AT IRVING PIER BELOW HWY 11 BRIDGE, GLOUCESTER COUNTY

SAMPLE DATE			TIME AS		10251L ACIDITY PH = 8.3	16304L SULPHATE DISSOLVED	16502L THIOSULFATE TOTAL	16510L THIO-SALTS TOTAL	26302P IRON EXTRBLE.	29105P COPPER DISSOLVED	29305P COPPER EXTRBLE.	30105P ZINC DISSOLVED
					CACO3	SO4	S2O3	S2O3	FE	CU	CU	ZN
D	M	Y	H	M	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L
27	5	74							0.13	0.007	0.007	0.08
30	6	74							0.16	L.002	L.002	0.07
1	8	74							0.24	0.003	0.005	0.12 04P
7	9	74							0.20	0.002	0.002	0.17 04P
17	10	74							0.22	0.002	0.009	0.15 04P
19	5	75				80.0			0.22		0.004	
12	6	75				105.			0.17		0.02	
24	7	75	08	30		420.	L5.0		0.19		0.030	
12	8	75	11	30		350.	L5.0		0.49		0.06	
25	9	75	14	30		500.0 02L	L5.	L5.				
17	11	75	13	30		300.	5.0		0.13		0.009	
8	3	76	13	30		46.	4.2		0.38		0.03	
1	6	76	19	30		48.	L5.	L5.	0.16		0.007	
14	7	76	21	20		410.	L5.	L5.	0.15		0.006	
25	8	76	21	00		260.	L5.	5.	0.15		0.004	

SAMPLE DATE			TIME AS		30305P ZINC EXTRBLE.	82103P LEAD DISSOLVED	82302P LEAD EXTRBLE.	80311P MERCURY EXTRBLE.	48302P CADMIUM EXTRBLE.	06581L HUMIC ACID
					ZN	PB	PB	HG	CD	
D	M	Y	H	M	MG/L	MG/L	MG/L	UG/L	MG/L	MG/L
27	5	74			0.08	0.005	0.010			7
30	6	74			0.08	0.002	0.010			4
1	8	74			0.15 04P	L.002 02P	0.004			4 82L
7	9	74			0.25 04P	L.002 02P	0.007			2 82L
17	10	74			0.15 04P	0.02 02P	0.02			6 82L
19	5	75			0.03		0.002		L.001	4 82L
12	6	75			0.46 04P		0.003		L.001	3 82L
24	7	75	08	30	0.05		0.003		0.001	2 82L
12	8	75	11	30	0.09		0.004		0.002	3 82L
25	9	75	14	30				L.1		5
17	11	75	13	30	0.2		0.004	L.05	L.001	11 82L
8	3	76	13	30	0.05		0.014	0.13	0.001	7 82L
1	6	76	19	30	0.017		L.001		L.001	6
14	7	76	21	20	0.065		0.006		L.001	5
25	8	76	21	00	0.06		L.001		L.001	8

BIOLOGICAL RESULTS

STATION: NB-37: Nepisiguit River, below Knight's Brook

TAXA			SAMPLING PERIOD 1974 27/5-30/6	SAMPLING PERIOD 1975 17/6-30/7
Arthropoda				
Insecta				
Ephemeroptera	Heptageniidae	Stenonema	1	
	Baetidae	Parleptophlebia	3	
Coleoptera	Gyrinidae	Gyrinus		2
Diptera	Tendipedidae	-	14	22
		Σ	18	24
		S	3	2
		DI	0.94	0.41

BIOLOGICAL RESULTS

STATION: NB-38: Nepisiquit River, near NLU mine

TAXA			SAMPLING PERIOD 1974 30/6-1/8	1974 1/8-7/9	1974 7/9-17/10
Annelida					
Oligochaeta					3
Hirudinea			1		
Arthropoda					
Crustacea					
Amphipoda					1
Insecta					
Plecoptera	Perlidae	Isoperla		1	
Ephemeroptera	Heptageniidae	Stenonema		1	
	Baetidae	Caenis	14		
	Leptophlebidae	Paraleptophlebia		3	7
Tricoptera	Hydropsychidae	Hydropsyche		1	
	Leptoceridae	Leptocerus		2	
	Limnophilidae	Limnephilus	20		
Diptera	Tendipedidae	-	37	46	8
		Σ	72	54	19
		S	4	6	4
		DI	1.55	0.92	1.7

4.2.4 South Little River and Little River (NB 40, 42, 41)

All stations on the South Little River and Little River have very low pH (2.3-6.5), high conductivity (~3380 µsie/cm.), hardness (97-820 ppm) and sulphates (~1800 ppm). Thiosulphates and thiosalts occur at measurable levels along the concourse. As well, levels of iron (0.3-28 ppm), zinc (490-18,000 ppb) and lead (150-1300 ppb) are very high. Sodium and chloride levels on both the Little River and South Little River reached peaks of 415 ppm and 31 ppm respectively. Highest amounts of sodium and chloride were found in the Little River.

Biological samples taken at these stations in 1974 and 1975 had diversities near or at zero. In 1974 chironomids were once again the dominant organism, and in samples taken in 1975 they were occasionally the only fauna present.

For all intents and purposes, life in the South Little River has been virtually obliterated by the effects of the effluent from the Brunswick #1.2 Mine site. Interestingly though, this effluent normally meets the federal regulations for Base Metal Mining operations, and the reason for its potency is the presence in the effluent of large concentrations (up to 1000 ppm) of various species of reduced oxyanions of sulphur (generally referred to as "thiosalts"). These materials, upon oxidisation to sulphates, generate acidity which cannot be buffered or diluted by the soft waters and low flows of the South Little River, leading to depressed pH levels. This can be

clearly seen by observing a decrease in pH in South Little River on proceeding downstream. This question of thiosalt oxidisation and pH depression in the South Little River has been dealt with in greater detail in an EPS report "Thiosalts and their measurement in mine mill effluents of Northeastern New Brunswick" (Pollock, 1977).

WATER QUALITY SURVEILLANCE NETWORK

E.P.S. ATLANTIC REGION 1974-1976

STATION **00NB01BJ0009** LATITUDE **47** D **31** M **10** S LONGITUDE **65** D **48** M **24** S

SOUTH LITTLE RIVER AT THERIAULT ROAD BRIDGE (WSC GAUGE), GLOUCESTER COUNTY

SAMPLE DATE			TIME AS		02061F TEMP. WATER	08102F OXYGEN DISSOLVED DO	10301F PH	10301L PH	02041L SPECIFIC CONDUCTANCE	02073L TURBIDITY	10401L RESIDUE NONFILTR.	10451L RESIDUE FILTERABLE
D	M	Y	H	M	DEG.C.	O2 MG/L	PH UNITS	PH UNITS	USIE/CM	JTU	MG/L	MG/L
23	5	74			5.0 61S		4.0 01S	3.5	435	2.7		
24	6	74			14.0 61S		3.4 01S	3.0	907	14.	14	540
3	8	74			21.0 61S		3.2 01S	3.2	2315	6.0	12	1762
28	8	74			16.0 61S		3.3 01S	3.2	2311	6.0	L10	1910
24	10	74			1.0 61S		4.5	2.3	3200	1.3		
21	5	75			9.0		4.2	4.3	402			
18	6	75			15.		2.8	3.9	1580			
24	7	75	12	00	20.	4.5	3.5	2.5	4367			
27	8	75	13	00	16.	6.5	4.6	3.0	3633			
18	11	75	11	30	3.0	6.1	5.1	3.1	2620			
2	3	76	12	00	1.0	13.5	6.5	3.3	3380			
19	5	76	15	10	12.0	9.8	5.1	3.7	1080			
15	7	76	11	00	14.0	8.2	3.7	3.6	1080			
25	8	76	14	00	20.0	5.0	4.2	4.6	1600			

SAMPLE DATE			TIME AS		10501L RESIDUE FIXED NONFILTR.	10551L RESIDUE FIXED FILTERABLE	20103L CALCIUM DISSOLVED	20003P CALCIUM TOTAL	12102L MAGNESIUM DISSOLVED	12002P MAGNESIUM TOTAL	10606L HARDNESS TOTAL LAB CALC.	10101L ALKALINITY TOTAL
D	M	Y	H	M	MG/L	MG/L	CA MG/L	CA MG/L	MG MG/L	MG MG/L	CACO3 MG/L	CACO3 MG/L
23	5	74					31.0		4.4			0
24	6	74			9	482	65.0		1.0			L1
3	8	74			L10	1615	300.		11.0			L1
28	8	74			L10	1740	340.		19.0			L1
24	10	74					230.		16.0			L1
21	5	75					26.0		3.4			
18	6	75					145.		16.0			L1
24	7	75	12	00					11.5 03L			L1
27	8	75	13	00			440.		10.0 03L			
18	11	75	11	30			125.		7.7			
2	3	76	12	00			310.		25.			L1
19	5	76	15	10				120.		12.	350.	
15	7	76	11	00				120.		15.	360.	
25	8	76	14	00				320.		6.0	820.	

WATER QUALITY SURVEILLANCE NETWORK

E.P.S. ATLANTIC REGION 1974-1976

STATION **00NB01BJ0009** LATITUDE **47** D **31** M **10** S LONGITUDE **65** D **48** M **24** S

SOUTH LITTLE RIVER AT THERIAULT ROAD BRIDGE (WSC GAUGE), GLOUCESTER COUNTY

SAMPLE DATE			TIME AS		10251L ACIDITY PH = 8.3	16304L SULPHATE DISSOLVED	16502L THIOSULFATE TOTAL	16510L THIO-SALTS TOTAL	26302P IRON EXTRBLE.	29105P COPPER DISSOLVED	29305P COPPER EXTRBLE.	30105P ZINC DISSOLVED
D	M	Y	H	M	CACO3 MG/L	SO4 MG/L	S2O3 MG/L	S2O3 MG/L	FE MG/L	CU MG/L	CU MG/L	ZN MG/L
23	5	74			16.5	123.			1.7	0.02	0.03	4.5 04P
24	6	74			40.3	400.			5.5	0.015	0.017	7.1
3	8	74			118.	1200.			10.0	0.011	0.011	4.2 04P
28	8	74				1210.			11.0	0.02	0.02	15. 04P
24	10	74			309.	1160.			4.9	0.019	0.019	10.0 04P
21	5	75			25.	129.			1.5		0.017	
18	6	75			149.	760.			9.0		0.02	
24	7	75	12	00		2520.			9.8		0.02	
27	8	75	13	00		2120.			18.0		0.10 06P	
18	11	75	11	30		1440.	7.8		1.2		L.002	
2	3	76	12	00		1800.			12.0		0.01	
19	5	76	15	10	28.	500.	7.	50.	4.1		0.015	
15	7	76	11	00	6.5	690.	L5.	L5.	6.5		0.052	
25	8	76	14	00	11.	1000.	L5.	5.	1.1		0.007	

SAMPLE DATE			TIME AS		30305P ZINC EXTRBLE.	82103P LEAD DISSOLVED	82302P LEAD EXTRBLE.	80311P MERCURY EXTRBLE.	48302P CADMIUM EXTRBLE.	06581L HUMIC ACID
D	M	Y	H	M	ZN MG/L	PB MG/L	PB MG/L	HG UG/L	CD MG/L	MG/L
23	5	74			4.6 04P	0.31 01P	0.36 01P			1
24	6	74			7.1 04P	0.550 01P	0.680 01P			2
3	8	74			4.3 04P	0.72 01P	1.0 01P			
28	8	74			15. 04P	1.3 01P	1.3 01P			
24	10	74			10.0 04P	0.9 01P	1.1 01P	0.17		4 82L
21	5	75			3.4 04P		0.06	L.05	0.005	2 82L
18	6	75			15.2 04P		0.20 01P	L.05	L.001	2 82L
24	7	75	12	00	0.70		0.30 01P	0.1	L.001	4 82L
27	8	75	13	00	7.3 04P		0.08 03P	0.1	0.003	2 82L
18	11	75	11	30	1.6		0.04	0.16	0.003	4 82L
2	3	76	12	00	18.		0.55		0.002	L1
19	5	76	15	10	9.90		0.157	0.4	0.010	24
15	7	76	11	00	18.				0.006	5
25	8	76	14	00	0.49		0.036		L.001	4

WATER QUALITY SURVEILLANCE NETWORK

E.P.S. ATLANTIC REGION 1974-1976

STATION **00NB01BJ0051** LATITUDE **47** D **31** M **28** S LONGITUDE **65** D **47** M **53** S

LITTLE RIVER ABOUT 100 M BELOW CONFLUENCE WITH SOUTH LITTLE RIVER GLOUCESTER COUNTY

SAMPLE DATE D	M	Y	TIME AS H	M	02061F TEMP. WATER DEG.C.	08102F OXYGEN DISSOLVED DO O2 MG/L	10301F PH PH UNITS	10301L PH PH UNITS	02041L SPECIFIC CONDUCTANCE USIE/CM	02073L TURBIDITY JTU	10401L RESIDUE NONFILTR MG/L	10451L RESIDUE FILTERABLE MG/L
23	5	74			6.0 61S		5.2 01S	5.0	129	0.9		
24	6	74			15.0 61S		4.0 01S	4.5	376	6.0	10	236
3	8	74			20.0 61S		3.4 01S	3.4	1549	5.0	13	1064
28	8	74			16.0 61S		3.3 01S	3.2	1767	28.0	26	1310
24	10	74			1.0 61S		5.5	2.8	1870	1.6		
21	5	75			9.0		5.4	5.2	74			
18	6	75			15.		3.3	4.0	647			
24	7	75	11	00	19.	5.3	3.5	2.7	3081			
27	8	75	12	30	15.	6.4	3.9	2.9	2974			
18	11	75	12	00	3.0	8.0	5.8	3.0	1650			
19	5	76	16	00	11.0	10.4	6.2	4.0	400			
15	7	76	12	00	14.0	9.5	4.4	4.4	540			
25	8	76	14	40	18.0	5.7	6.3	6.3	900			

SAMPLE DATE D	M	Y	TIME AS H	M	10501L RESIDUE FIXED NONFILTR MG/L	10551L RESIDUE FIXED FILTERABLE MG/L	20103L CALCIUM DISSOLVED CA MG/L	20003P CALCIUM TOTAL CA MG/L	12102L MAGNESIUM DISSOLVED MG MG/L	12002P MAGNESIUM TOTAL MG MG/L	10606L HARDNESS TOTAL LAB CALC. CACO3 MG/L	10101L ALKALINITY TOTAL CACO3 MG/L
23	5	74					12.0		1.7			L1
24	6	74			L10	214	32.0		4.5			L1
3	8	74			L10	1064	190.		7.0			L1
28	8	74			L10	1210	230.		14.0			L1
24	10	74					135.		9.5			L1
21	5	75					7.3		1.0			2
18	6	75					53.0		6.2			
24	7	75	11	00			238.		7.0 03L			L1
27	8	75	12	30			250.		7.2 03L			L1
18	11	75	12	00			149.		3.3			L1
19	5	76	16	00				37.		3.7	70.	
15	7	76	12	00				52.		7.0	160.	
25	8	76	14	40				150.		4.0	390.	6

WATER QUALITY SURVEILLANCE NETWORK

E.P.S. ATLANTIC REGION 1974-1976

STATION **00NB01BJ0051** LATITUDE **47** D **31** M **28** S LONGITUDE **65** D **47** M **53** S

LITTLE RIVER ABOUT 100 M BELOW CONFLUENCE WITH SOUTH LITTLE RIVER GLOUCESTER COUNTY

SAMPLE DATE			TIME AS		10251L ACIDITY PH = 8.3	16304L SULPHATE DISSOLVED	16502L THIOSULFATE TOTAL	16510L THIO-SALTS TOTAL	26302P IRON EXTRBLE.	29105P COPPER DISSOLVED	29305P COPPER EXTRBLE.	30105P ZINC DISSOLVED
D	M	Y	H	M	CACO3 MG/L	SO4 MG/L	S2O3 MG/L	S2O3 MG/L	FE MG/L	CU MG/L	CU MG/L	ZN MG/L
23	5	74				48.0			0.78	0.004	0.009	1.2 04P
24	6	74				147.			2.4	0.007	0.007	4.0
3	8	74			66.3	560.			9.3	0.010	0.013	2.8 04P
28	8	74				900.			11.5	0.011	0.011	9.7 04P
24	10	74			162.8	680.			3.4	0.011	0.013	5.1 04P
21	5	75				31.0			0.80		0.004	
18	6	75			43.0	260.			3.5		0.03	
24	7	75	11	00		1090.	L5.0		7.6		0.034	
27	8	75	12	30		1360.	L5.0		12.4			
18	11	75	12	00		580.	6.7		0.5		0.009	
19	5	76	16	00	1.5	150.	L5.	L5.	1.3		0.007	
15	7	76	12	00	25.	320.	L5.	L5.	1.9		0.026	
25	8	76	14	40		500.	L5.	5.	1.1		0.004	

SAMPLE DATE			TIME AS		30305P ZINC EXTRBLE.	82103P LEAD DISSOLVED	82302P LEAD EXTRBLE.	80311P MERCURY EXTRBLE.	48302P CADMIUM EXTRBLE.	06581L HUMIC ACID
D	M	Y	H	M	ZN MG/L	PB MG/L	PB MG/L	HG UG/L	CD MG/L	MG/L
23	5	74			1.2 04P	0.12 01P	0.19 01P			11
24	6	74			4.0 04P	0.100 01P	0.100 01P			4
3	8	74			2.9 04P	0.47 01P	0.47 01P			
28	8	74			9.7 04P	1.0 01P	1.0 01P			7 82L
24	10	74			6.0 04P			L.05		4 82L
21	5	75			0.61 04P		0.014	L.05	0.001	5 82L
18	6	75					0.09	L.05	0.007	1 82L
24	7	75	11	00	4.2		0.1	L.05	0.003	6 82L
27	8	75	12	30			0.05	L.05	0.002	4 82L
18	11	75	12	00	0.7		0.016	0.5	0.001	8 82L
19	5	76	16	00	2.50		0.053	0.6	0.006	15
15	7	76	12	00			0.18		0.011	8
25	8	76	14	40	0.004		0.027		0.004	6

WATER QUALITY SURVEILLANCE NETWORK

E.P.S. ATLANTIC REGION 1974-1976

STATION **00NB01BJ0010** LATITUDE **47** D **34** M **2** S LONGITUDE **65** D **42** M **9** S

LITTLE RIVER ABOUT 6.4 KM SW OF BATHURST (WSC GAUGE), AT CARROLLS FARM GLOUCESTER COUNTY

SAMPLE DATE			TIME AS		02061F TEMP. WATER	08102F OXYGEN DISSOLVED DO	10301F PH	10301L PH	02041L SPECIFIC CONDUCTANCE	02073L TURBIDITY	10401L RESIDUE NONFILTR.	10451L RESIDUE FILTERABLE
D	M	Y	H	M	DEG.C.	O2 MG/L	PH UNITS	PH UNITS	USIE/CM	JTU	MG/L	MG/L
23	5	74			7.0 61S		5.2 01S	5.0	115	0.9		
24	6	74			15.0 61S		4.2 01S	4.7	277	4.5	L10	176
3	8	74			20.0 61S		3.4 01S	3.4	1447	0.9		
28	8	74			17.0 61S		3.6 01S	3.4	1243	2.0		
24	10	74			1.0 61S		4.6	2.7	1700	2.0		
21	5	75			8.0		5.1	5.3	88			
18	6	75			16.		3.5	4.5	469			
24	7	75	09	30	19.0	7.4	3.2	2.9	2364			
27	8	75	08	30	15.	6.5	3.4	3.2	1945			
18	11	75	14	00	4.0	8.2	4.1	3.2	1170			
18	5	76	17	00	11.0	10.2	4.5	3.6	470			
15	7	76	14	30	14.0	9.6	4.1	4.4	430			
25	8	76	15	45	19.0	5.5	5.3	4.8	600			

SAMPLE DATE			TIME AS		10501L RESIDUE FIXED NONFILTR.	10551L RESIDUE FIXED FILTERABLE	20103L CALCIUM DISSOLVED	20003P CALCIUM TOTAL	12102L MAGNESIUM DISSOLVED	12002P MAGNESIUM TOTAL	10606L HARDNESS TOTAL LAB CALC.	10101L ALKALINITY TOTAL
D	M	Y	H	M	MG/L	MG/L	CA MG/L	CA MG/L	MG MG/L	MG MG/L	CACO3 MG/L	CACO3 MG/L
23	5	74					10.5		1.6			L1
24	6	74			L10	156	20.0		3.5			L1
3	8	74					170.		9.0			L1
28	8	74					160.		11.0			L1
24	10	74					125.		8.7			L1
21	5	75					7.4		1.0			L1
18	6	75					38.0		4.8			
24	7	75	09	30			193.		6.5 03L			L1
27	8	75	08	30			175.		6.6 03L			L1
18	11	75	14	00			124.		3.3			L1
18	5	76	17	00				34.		3.0	97.	
15	7	76	14	30				42.		5.6	130.	
25	8	76	15	45				100.		4.4	270.	

WATER QUALITY SURVEILLANCE NETWORK

E.P.S. ATLANTIC REGION 1974-1976

STATION **00NB01BJ0010** LATITUDE **47** D **34** M **2** S LONGITUDE **65** D **42** M **9** S

LITTLE RIVER ABOUT 6.4 KM SW OF BATHURST (WSC GAUGE), AT CARROLLS FARM GLOUCESTER COUNTY

SAMPLE DATE			TIME AS		10251L ACIDITY PH = 8.3	16304L SULPHATE DISSOLVED	16502L THIOSULFATE TOTAL	16510L THIO-SALTS TOTAL	26302P IRON EXTRBLE.	29105P COPPER DISSOLVED	29305P COPPER EXTRBLE.	30105P ZINC DISSOLVED
D	M	Y	H	M	CACO3 MG/L	SO4 MG/L	S2O3 MG/L	S2O3 MG/L	FE MG/L	CU MG/L	CU MG/L	ZN MG/L
23	5	74				43.0			0.46	0.004	0.005	0.90 04P
24	6	74				107.			1.5	0.005	0.005	3.0
3	8	74			72.5	700.			6.0	0.010	0.010	4.4 04P
28	8	74			64.0	565.			4.1	0.013	0.015	6.5 04P
24	10	74			151.3	640.			3.4			3.7 04P
21	5	75				2.0			0.33		0.002	
18	6	75			35.0	180.			2.3		0.02	
24	7	75	09	30		1000.	L5.0		15.8		0.036	
27	8	75	08	30		910.	L5.0		28.0			
18	11	75	14	00		440.	6.7		0.8		0.002	
18	5	76	17	00	22.	140.	L5.	L5.	1.4		0.006	
15	7	76	14	30	20.	200.	L5.	L5.	2.4		0.021	
25	8	76	15	45	9.	320.	L5.	5.	1.1		0.002	

SAMPLE DATE			TIME AS		30305P ZINC EXTRBLE.	82103P LEAD DISSOLVED	82302P LEAD EXTRBLE.	80311P MERCURY EXTRBLE.	48302P CADMIUM EXTRBLE.	06581L HUMIC ACID
D	M	Y	H	M	ZN MG/L	PB MG/L	PB MG/L	HG UG/L	CD MG/L	MG/L
23	5	74			0.93 04P	0.05	0.05			17
24	6	74			3.0 04P	0.100 01P	0.100 01P			8
3	8	74			4.5 04P	0.60 01P	0.60 01P			
28	8	74			6.7 04P	0.50 01P	0.50 01P			1 82L
24	10	74			3.7 04P	0.07 02P	0.07	0.22		5 82L
21	5	75			0.65 04P		0.012	L.05	0.001	5 82L
18	6	75			4.2 04P		0.07	0.05	0.006	2 82L
24	7	75	09	30	3.9		0.3	L.05	0.003	8 82L
27	8	75	08	30			0.08	L.05	0.002	5 82L
18	11	75	14	00	0.7		0.02	L.05	0.002	11 82L
18	5	76	17	00	1.93		0.040	0.1	0.004	15
15	7	76	14	30	5.0		0.098		0.008	10
25	8	76	15	45	0.7		0.01		0.005	10

BIOLOGICAL RESULTS

STATION: NB-40: South Little River, above Little River

TAXA			SAMPLING PERIOD 1974 23/5-24/6	1975 21/5-18/6	1975 21/6-24/7
Annelida					
Oligochaeta			3		
Arthropoda					
Insecta					
Coleoptera				1	
Diptera	Tendipedidae	-	3		551
		Σ	6	1	551
		S	2	1	1
		DI	1.0	0	0

BIOLOGICAL RESULTS

STATION: NB-42: Little River, below South Little River

TAXA			SAMPLING PERIOD 1974 23/5-24/6	1974 24/6-8/7	1975 21/5-18/6
Annelida					
Oligochaeta			4		
Arthropoda					
Insecta					
Plecoptera	Perlidae	Acroneura		2	
		Isoperla		4	
Ephemeroptera	Baetidae	Cloeon		1	
	Leptophlebidae	Paraleptophlebia		10	
Megaloptera	Sialidae	Sialis	1		
Tricoptera	Hydropsychidae	Hydropsyche		3	
	Limnephilidae	Limnephilus		2	
Diptera	Tipulidae	Antocha		1	
	Tendipedidae	-	3	5	
	Rhagionidae	Atherix		5	
		Σ	8	33	0
		S	3	9	0
		DI	1.41	2.89	0

BIOLOGICAL RESULTS

STATION: NB-41: Little River, Carroll's Farm

TAXA			SAMPLING PERIOD 1974 23/5-24/6	1975 21/5-18/6	1975 21/6-24/7
Arthropoda					
Insecta					
Neuroptera	Sialidae	Sialis	-	-	3
Coleoptera	Dytiscidae	Hydroporus	-	-	1
		Bidessus	-	1	-
Diptera	Tendipedidae	-	3	-	16
		Σ	3	1	20
		S	1	1	3
		DI	0	0	0.88

4.2.5 Nigadoo River: (NB 58, 59); Elmtree River: (NB53)

The Nigadoo and Elmtree Rivers are two small rivers in Gloucester County, Northern New Brunswick. The industries which contributed effluents to these systems are the Nigadoo River Mines Ltd., on the Nigadoo River and Keeway Mines (closed since 1956) on the Elmtree River.

The bulk of northern New Brunswick Mines extract a massive sulphidic type ore, leading to typical acid mine drainage problems. In the case of Nigadoo River Mines and Keeway Mines, however, ore bodies are found in basic host rock, while limestone deposits in the area maintain stream water alkalinity. As a result, few deleterious effects have been observed due to discharges from these mines.

i) The water of the Nigadoo River system is hard, alkaline, low in dissolved salts, and contains measurable quantities of sulphates. The levels of trace metals in the system are all relatively high for background levels, especially iron (0.45 ppm) in the lower river.

No biological samples were taken on this river system.

ii) The Elmtree River has similar water quality. The pH is slightly lower than the Nigadoo (5.4-7.1), and the water is softer. Trace metal levels, particularly Fe (0.1-0.8 ppm) were at the same relatively high ranges as were observed on the Nigadoo system.

No biological data was collected for this station.

WATER QUALITY SURVEILLANCE NETWORK

E.P.S. ATLANTIC REGION 1974-1976

STATION **00NB01BJ0012** LATITUDE **47** D **44** M **15** S LONGITUDE **65** D **48** M **13** S

NIGADOO RIVER 400 M ABOVE MINE AREA, NIG-3, GLOUCESTER COUNTY

SAMPLE DATE D	M	Y	TIME AS H	M	02061F TEMP. WATER DEG.C.	08102F OXYGEN DISSOLVED DO O2 MG/L	10301F PH PH UNITS	10301L PH PH UNITS	02041L SPECIFIC CONDUCTANCE USIE/CM	02073L TURBIDITY JTU	10401L RESIDUE NONFILTR. MG/L	10451L RESIDUE FILTERABLE MG/L
21	5	74			6.0 61S		7.5 01S	7.1	60	0.7		
23	6	74			13.0 61S		7.3 01S	7.7	74	0.7		
29	7	74			17.0 61S		7.5 01S	7.2	119	0.1		
30	8	74			14.0 61S		7.6 01S	7.2	120	L.5		
3	10	74			7.0 61S		6.9 01S	7.2	97	1.3		
18	10	74			5.0 61S		7.5 01S	7.9	91			
20	5	75			8.0		6.7	6.9	46			
12	6	75			12.		6.7	6.9	70			
18	7	75	09	30	19.	8.5	7.4	7.2	94			
15	8	75	09	30	16.	8.2	7.0	7.2	93			
20	11	75	13	30	0.0	11.1	6.6	6.9	87			
8	3	76	12	00	0.0	14.2	6.7	6.9	99			
5	5	76	13	30	6.0	12.8	6.5	7.2	60			
15	7	76	08	00	12.0	9.7	6.6	7.6	82			
25	8	76	13	00	18.0	5.6	7.7	7.4	110			

SAMPLE DATE D	M	Y	TIME AS H	M	10501L RESIDUE FIXED NONFILTR. MG/L	10551L RESIDUE FIXED FILTERABLE MG/L	20103L CALCIUM DISSOLVED CA MG/L	20003P CALCIUM TOTAL CA MG/L	12102L MAGNESIUM DISSOLVED MG MG/L	12002P MAGNESIUM TOTAL MG MG/L	10606L HARDNESS TOTAL LAB CALC. CACO3 MG/L	10101L ALKALINITY TOTAL CACO3 MG/L
21	5	74					9.0		0.9			23
23	6	74					12.0		1.1			31
29	7	74					21.0		1.6			53
30	8	74					21.0		1.7			57
3	10	74					14.0		1.8			43
18	10	74					15.0		1.4			37
20	5	75					7.5		0.7			19
12	6	75					12.0		1.0			29
18	7	75	09	30			14.5		1.3 03L			44
15	8	75	09	30			15.0		1.3 03L			35
20	11	75	13	30			15.		1.4			33
8	3	76	12	00			15.0		1.5			42
5	5	76	13	30				12.		0.7	35.	10
15	7	76	08	00				12.		1.2	35.	35
25	8	76	13	00				20.		1.6	57.	45

WATER QUALITY SURVEILLANCE NETWORK

E.P.S. ATLANTIC REGION 1974-1976

STATION **00NB01BJ0012** LATITUDE **47** D **44** M **15** S LONGITUDE **65** D **48** M **13** S

NIGADOO RIVER 400 M ABOVE MINE AREA, NIG-3, GLOUCESTER COUNTY

SAMPLE DATE			TIME AS		10251L ACIDITY PH = 8.3	16304L SULPHATE DISSOLVED	16502L THIOSULFATE TOTAL	16510L THIO-SALTS TOTAL	26302P IRON EXTRBLE.	29105P COPPER DISSOLVED	29305P COPPER EXTRBLE.	30105P ZINC DISSOLVED
D	M	Y	H	M	CACO3 MG/L	SO4 MG/L	S2O3 MG/L	S2O3 MG/L	FE MG/L	CU MG/L	CU MG/L	ZN MG/L
21	5	74							0.09	L.002	L.002	L.002
23	6	74							0.09	L.002	L.002	0.005
29	7	74							0.07	L.002	L.002	0.011
30	8	74							0.01		L.002	
3	10	74							0.10		L.002	
18	10	74							0.05	L.002	L.002	0.002
20	5	75				4.0			0.11		L.002	
12	6	75				4.0			0.07		0.008	
18	7	75	09	30		5.0	L5.0		0.06		0.032	
15	8	75	09	30		2.0	L5.0		0.60		0.07	
20	11	75	13	30		11.0	6.2		0.05		L.002	
8	3	76	12	00		6.6	4.2		0.17		0.003	
5	5	76	13	30		8.	L5.	L5.	0.08		L.001	
15	7	76	08	00		13.	L5.	L5.	0.06		0.001	
25	8	76	13	00		3.	L5.	L5.	L.04		L.001	

SAMPLE DATE			TIME AS		30305P ZINC EXTRBLE.	82103P LEAD DISSOLVED	82302P LEAD EXTRBLE.	80311P MERCURY EXTRBLE.	48302P CADMIUM EXTRBLE.	06581L HUMIC ACID
D	M	Y	H	M	ZN MG/L	PB MG/L	PB MG/L	HG UG/L	CD MG/L	MG/L
21	5	74			0.004	0.005	0.006			6
23	6	74			0.11 04P	0.002	0.013			9
29	7	74			0.011	0.005 02P	0.016			3 82L
30	8	74			L.002	0.004 02P	0.007			3 82L
3	10	74			L.002	0.007	0.010			5 82L
18	10	74			0.002	0.009 02P	0.009			6 82L
20	5	75			0.002		0.003	L.05	L.001	3 82L
12	6	75			0.12 04P		0.006	0.07	L.001	3 82L
18	7	75	09	30	0.04		L.002	L.05	L.001	3 82L
15	8	75	09	30	0.83 04P		0.003	0.05	L.001	5 82L
20	11	75	13	30	0.007		0.007	L.05	L.001	5 82L
8	3	76	12	00	L.002		0.007	L.05	0.001	2 82L
5	5	76	13	30	L.001		L.001	L.1	L.001	6
15	7	76	08	00	L.001		L.001		L.001	8
25	8	76	13	00	L.001		L.001		L.001	4

WATER QUALITY SURVEILLANCE NETWORK

E.P.S. ATLANTIC REGION 1974-1976

STATION **00NB01BJ0013** LATITUDE **47** D **43** M **54** S LONGITUDE **65** D **45** M **30** S

NIGADOO RIVER 1.6 KM BELOW MINE AT BRIDGE AT TREMBLAY SETTLEMENT, NIG-4 GLOUCESTER COUNTY

SAMPLE DATE			TIME AS		02061F TEMP. WATER	08102F OXYGEN DISSOLVED DO	10301F PH	10301L PH	02041L SPECIFIC CONDUCTANCE	02073L TURBIDITY	10401L RESIDUE NONFILTR.	10451L RESIDUE FILTERABLE
D	M	Y	H	M	DEG.C.	O2 MG/L	PH UNITS	PH UNITS	USIE/CM	JTU	MG/L	MG/L
21	5	74			7.0 61S		7.5 01S	6.9	68	0.6		
23	6	74			13.0 61S		7.4 01S	7.4	91	L.5		
29	7	74			18.0 61S		7.5 01S	7.0	204	0.1		
30	8	74			14.0 61S		7.1 01S	7.4	232	L.5		
3	10	74			7.0 61S		7.1 01S	7.1	169	L.5		
18	10	74			5.0 61S		7.0 01S	7.6	133			
20	5	75			8.0		6.8	7.1	59			
12	6	75			12.		6.2	6.9	81			
18	7	75	09	00	20.0	9.3	7.2	7.1	140			
15	8	75	09	00	17.	8.2	6.7	7.0	146			
20	11	75	13	00	0.0	11.0	6.8	7.1	163			
8	3	76	11	00	4.0	11.2	6.5	6.9	176			
5	5	76	14	00	6.0	12.6	6.6	7.2	70			
15	7	76	08	15	12.0	9.5	6.5	7.6	135			
25	8	76	12	35	17.5	5.8	7.6	8.0	170			

SAMPLE DATE			TIME AS		10501L RESIDUE FIXED NONFILTR.	10551L RESIDUE FIXED FILTERABLE	20103L CALCIUM DISSOLVED	20003P CALCIUM TOTAL	12102L MAGNESIUM DISSOLVED	12002P MAGNESIUM TOTAL	10606L HARDNESS TOTAL LAB CALC.	10101L ALKALINITY TOTAL
D	M	Y	H	M	MG/L	MG/L	CA MG/L	CA MG/L	MG MG/L	MG MG/L	CACO3 MG/L	CACO3 MG/L
21	5	74					11.0		0.9			25
23	6	74					12.0		1.2			33
29	7	74					29.0		2.2			56
30	8	74					35.0		2.4			56
3	10	74					22.5		1.9			43
18	10	74					20.0		1.7			39
20	5	75					8.6		0.9			18
12	6	75					13.2		1.1			28
18	7	75	09	00			23.0		1.7 03L			47
15	8	75	09	00			22.3		1.6 03L			35
20	11	75	13	00			23.0		2.0			34
8	3	76	11	00			23.0		2.0			48
5	5	76	14	00				13.		0.7	35.	20
15	7	76	08	15				18.		1.5	51.	35
25	8	76	12	35				28.		2.0	78.	50

WATER QUALITY SURVEILLANCE NETWORK
E.P.S. ATLANTIC REGION 1974-1976

STATION **00NB01BJ0013** LATITUDE **47** D **43** M **54** S LONGITUDE **65** D **45** M **30** S

NIGADOO RIVER 1.6 KM BELOW MINE AT BRIDGE AT TREMBLAY SETTLEMENT, NIG-4 GLOUCESTER COUNTY

SAMPLE DATE			TIME AS		10251L ACIDITY PH = 8.3	16304L SULPHATE DISSOLVED	16502L THIOSULFATE TOTAL	16510L THIO-SALTS TOTAL	26302P IRON EXTRBLE.	29105P COPPER DISSOLVED	29305P COPPER EXTRBLE.	30105P ZINC DISSOLVED
D	M	Y	H	M	CACO3 MG/L	SO4 MG/L	S2O3 MG/L	S2O3 MG/L	FE MG/L	CU MG/L	CU MG/L	ZN MG/L
21	5	74							0.07	0.003	0.004	
23	6	74							0.12	L.002	L.002	
29	7	74							0.04	L.002	L.002	0.02
30	8	74							0.02	L.002	L.002	
3	10	74							0.10		L.002	
18	10	74							0.08	L.002	L.002	0.011
20	5	75				5.0			0.15		L.002	
12	6	75				10.0			0.12		0.005	
18	7	75	09	00		16.0	L5.0		0.07		0.030	
15	8	75	09	00		25.0	L5.0		0.45		0.07	
20	11	75	13	00		26.0	5.6		0.12		L.002	
8	3	76	11	00		19.0			0.15		0.003	
5	5	76	14	00		9.	L5.	L5.	0.11		L.001	
15	7	76	08	15		22.	L5.	L5.	0.08		0.002	
25	8	76	12	35		20.	L5.	L5.	0.04		L.001	

SAMPLE DATE			TIME AS		30305P ZINC EXTRBLE.	82103P LEAD DISSOLVED	82302P LEAD EXTRBLE.	80311P MERCURY EXTRBLE.	48302P CADMIUM EXTRBLE.	06581L HUMIC ACID
D	M	Y	H	M	ZN MG/L	PB MG/L	PB MG/L	HG UG/L	CD MG/L	MG/L
21	5	74			0.011 04P	0.010	0.012			6
23	6	74				0.008	0.01			9
29	7	74			0.02	0.002 02P	0.010			3 82L
30	8	74			0.008		0.006			4 82L
3	10	74			0.02	0.011	0.011			5 82L
18	10	74			0.02	0.009 02P	0.014			5 82L
20	5	75			0.004		0.003	0.05	L.001	3 82L
12	6	75			0.12 04P		0.005	0.15	L.001	3 82L
18	7	75	09	00	0.04		0.005	L.05	L.001	3 82L
15	8	75	09	00	1.03 04P		0.013	0.09	L.001	5 82L
20	11	75	13	00	0.03		0.02	L.05	L.001	5 82L
8	3	76	11	00	0.04		0.04	L.05	0.002	1 82L
5	5	76	14	00	0.001		L.001	L.1	L.001	7
15	7	76	08	15	0.002		0.001		L.001	7
25	8	76	12	35	0.003				L.001	3

WATER QUALITY SURVEILLANCE NETWORK

E.P.S. ATLANTIC REGION 1974-1976

STATION **00NB01BJ0052** LATITUDE **47** D **48** M **31** S LONGITUDE **65** D **45** M **1** S

ELMTREE RIVER 200 M ABOVE R.R. BRIDGE PETIT ROCHER NORD, GLOUCESTER COUNTY

SAMPLE DATE D	M	Y	TIME AS H	M	02061F TEMP. WATER DEG.C.	08102F OXYGEN DISSOLVED DO O2 MG/L	10301F PH PH UNITS	10301L PH PH UNITS	02041L SPECIFIC CONDUCTANCE USIE/CM	02073L TURBIDITY JTU	10401L RESIDUE NONFILTR. MG/L	10451L RESIDUE FILTERABLE MG/L
21	5	74			7.0 61S		6.5 01S	6.4	26	L.5		
23	6	74			16.0 61S		6.9 01S	6.0	41	L.5		
24	7	74			22.0 61S		6.8 01S	6.0	57	0.2		
30	8	74			15.0 61S		7.1 01S	6.0	63	L.5		
3	10	74			7.0 61S		6.2 01S	6.3	43	0.8		
18	10	74			5.0 61S		6.5 01S	7.0	45			
20	5	75			7.0		5.9	6.2	24			
12	6	75			14.0		6.3	6.5	33			
18	7	75	10	30	21.0	9.4	7.3	6.1	78			
15	8	75	10	30	17.	7.5	6.6	6.5	60			
20	11	75	14	00	0.0	11.0	6.7	6.1	56			
5	5	76	12	00	6.0	13.4	5.4	6.4	30			
14	7	76	15	15	13.0	9.6	6.4	7.1	70			
25	8	76	11	55	18.0	5.8	6.8	6.8	60			

SAMPLE DATE D	M	Y	TIME * AS H	M	10501L RESIDUE FIXED NONFILTR. MG/L	10551L RESIDUE FIXED FILTERABLE MG/L	20103L CALCIUM DISSOLVED CA MG/L	20003P CALCIUM TOTAL CA MG/L	12102L MAGNESIUM DISSOLVED MG MG/L	12002P MAGNESIUM TOTAL MG MG/L	10606L HARDNESS TOTAL LAB CALC. CACO3 MG/L	10101L ALKALINITY TOTAL CACO3 MG/L
21	5	74					2.7		0.5			4
23	6	74					5.1		0.8			10
24	7	74					7.7		0.9			12
30	8	74					7.5		1.0			15
3	10	74					5.0		0.8			9
18	10	74					5.8		1.0			8
20	5	75					2.4		0.5			2
12	6	75					3.8		0.6			7
18	7	75	10	30			9.0		1.2 03L			14
15	8	75	10	30			6.3		0.9 03L			10
20	11	75	14	00			5.4		0.8			7
5	5	76	12	00				3.7		0.4	10.	5
14	7	76	15	15				8.4		1.1	26.	15
25	8	76	11	55				7.6		1.0	23.	10

WATER QUALITY SURVEILLANCE NETWORK
E.P.S. ATLANTIC REGION 1974-1976

STATION **00NB01BJ0052** LATITUDE **47** D **48** M **31** S LONGITUDE **65** D **45** M **1** S

ELMTREE RIVER 200 M ABOVE R.R. BRIDGE PETIT ROCHER NORD, GLOUCESTER COUNTY

SAMPLE DATE D	M	Y	TIME AS H	M	10251L ACIDITY PH = 8.3 CACO3 MG/L	16304L SULPHATE DISSOLVED SO4 MG/L	16502L THIOSULFATE TOTAL S2O3 MG/L	16510L THIO-SALTS TOTAL S2O3 MG/L	26302P IRON EXTRBLE. FE MG/L	29105P COPPER DISSOLVED CU MG/L	29305P COPPER EXTRBLE. CU MG/L	30105P ZINC DISSOLVED ZN MG/L
21	5	74							0.10	0.002	0.004	0.03
23	6	74							0.20	L.002	L.002	0.08
24	7	74							0.52	0.005	0.010	0.012
30	8	74							0.20	L.002	L.002	0.018
3	10	74							0.30	L.002	0.006	0.03
18	10	74							0.33	0.002	0.002	0.02
20	5	75				5.0			0.12		L.002	
12	6	75				5.0			0.23		0.017	
18	7	75	10	30		15.0	L5.0		0.11		0.036	
15	8	75	10	30		7.0	L5.0		0.80		0.07	
20	11	75	14	00		14.0	5.0		0.09		L.002	
5	5	76	12	00		6.	L5.	L5.	0.15		0.004	
14	7	76	15	15		13.	L5.	L5.	0.50		0.008	
25	8	76	11	55		7.	L5.	L5.	0.23		0.005	

SAMPLE DATE D	M	Y	TIME AS H	M	30305P ZINC EXTRBLE. ZN MG/L	82103P LEAD DISSOLVED PB MG/L	82302P LEAD EXTRBLE. PB MG/L	80311P MERCURY EXTRBLE. HG UG/L	48302P CADMIUM EXTRBLE. CD MG/L	06581L HUMIC ACID MG/L
21	5	74			0.03	0.012	0.013			15
23	6	74			0.08	0.010	0.015			16
24	7	74			0.020	0.002	0.006			17
30	8	74			0.030	0.007 02P	0.013			3 82L
3	10	74			0.03	0.011	0.02			16 82L
18	10	74			0.02	0.017 02P	0.017			13 82L
20	5	75			0.006		0.005	0.05	L.001	5 82L
12	6	75			0.19 04P		0.012	0.07	0.001	6 82L
18	7	75	10	30	0.03		0.005	L.05	L.01	5 82L
15	8	75	10	30	0.90 04P		0.009	L.05	L.001	8 82L
20	11	75	14	00	0.02		L.002	L.05	L.001	10 82L
5	5	76	12	00	0.003		L.001	L.1	L.001	10
14	7	76	15	15	0.021		0.007		0.001	7
25	8	76	11	55	L.001		L.001		L.001	15

4.2.6 Miramichi River and Tributaries

The Miramichi River Basin is the largest river basin lying entirely within the Province of New Brunswick. The basin itself is some 12,000 hectares (4,500 square miles) and is largely composed of forested, unpopulated terrain. Base metal mining wastes, forest spraying, pulp and paper mill effluents and sewage are the major pollutants of the Miramichi. Mining wastes are added to the river at a number of locations: Heath Steele Mines Ltd., North Branch, Tomogonops River; Chester Mines Ltd., Clearwater Stream, South Sevogle River; Texas Gulf Sulphur Co., Northwest Miramichi; and Burnt Hill Tungsten and Metallurgical Ltd., Burnt Hill Brook, Southwest Miramichi.

(a) Tomogonops and Northwest Miramichi Rivers: (NB 52, 48, 49, 60, 50, 51)

Above the Heath Steele Mine on the Tomogonops River, the water is soft, low in dissolved solids and slightly alkaline. Levels of the trace metals, lead (~10 ppb), zinc (~36 ppb) and copper (~60 ppb) are relatively high. Similar conditions for water quality were observed on the Northwest Miramichi River, above the old Texas Gulf deposits. At this station, cadmium was present in measurable quantities (up to 3 ppb). Biological samples taken here during 1974 and 1975 had a relatively high diversity and a fauna composed mostly of chironomids, mayflies, stoneflies, caddisflies, and oligochaetes.

Water quality below the Heath Steele mine on the Little South Tomogonops River drops sharply. The pH is low (3.5-5.4), turbidity high (~49 ppm) and high levels of sulphates, thiosulphates, iron (~11.0 ppm), copper (~750 ppb); zinc (~3.5 ppm), lead (~30 ppb), cadmium (~11 ppb)

and nickel (~40 ppb) were noted. Assimilation and dilution occurs quite rapidly as further downstream the pH and turbidity levels approach those of the control station, but the water is harder (~ 130 ppm). Trace metal levels have also dropped to near normal, with the exception of iron (~1.4 ppm).

Biological samples taken on the lower Tomogonops River in 1974 and 1975 indicate a reduction in the species diversity as compared with the upper station. Chironomids are again the dominant organism but representative mayflies and caddisflies were also noted.

On the Northwest Miramichi, below Texas Gulf, the water quality is very similar to the control station located above the mine. However, in August, 1975, high levels of dissolved salts, conductivity, sodium and chloride were noted at this station.

Biological samples taken at this station showed a lower diversity in 1974 as compared to 1975.

Nine miles below the confluence of the Tomogonops/ Northwest Miramichi River, the water quality is comparable to that of the control stations on both these rivers. Conductivity, sulphates, and hardness are all higher than at the controls but the trace metal levels have returned to normal.

A sample of the fauna taken in May/June, 1974, was relatively low in diversity but contained mayflies, caddisflies, beetles and chironomids, with the latter being the dominant organism.

WATER QUALITY SURVEILLANCE NETWORK
E.P.S. ATLANTIC REGION 1974-1976

STATION **00NB01BQ0045** LATITUDE **47** D **19** M **40** S LONGITUDE **66** D **4** M **9** S

TOMOGONOPS RIVER NORTH BRANCH AT WATER SUPPLY DAM BY HWY 430, H-22 (CONTROL) NORTHUMBERLAND CO

SAMPLE DATE			TIME AS		02061F TEMP. WATER	08102F OXYGEN DISSOLVED DO	10301F PH	10301L PH	02041L SPECIFIC CONDUCTANCE	02073L TURBIDITY	10401L RESIDUE NONFILTR.	10451L RESIDUE FILTERABLE
D	M	Y	H	M	DEG.C.	O2 MG/L	PH UNITS	PH UNITS	USIE/CM	JTU	MG/L	MG/L
30	5	74			5.0 61S		6.8 01S	6.5	20	L.5		
29	6	74			17.0 61S		6.7 01S	6.7	27	L.5		
26	7	74			19.0 61S		6.4 01S	5.3	28	0.4		
4	9	74			10.0 61S		6.5 01S	6.2	28	0.5		
2	10	74			7.0 61S		6.3 01S	6.4	29	L.5		
21	10	74			0.0 61S		6.2 01S	7.1	41			
14	5	75			4.0		5.1	6.2	19			
16	6	75			11.0		6.0	6.3	20			
22	7	75	07	30	18.	7.5	7.4	6.4	31			
21	8	75	07	00	13.	8.5	6.8	6.5	36			
10	11	75	10	30	3.0	8.0	6.6	6.8	32			
26	3	76	14	00	1.0	9.5	5.9	6.3	27			
19	5	76	13	15	11.0	10.2	5.5	6.4	20			
13	7	76	10	15	16.0	8.0	6.3	6.6	32			
23	8	76	18	55	21.5	7.2	6.5	6.5	30			

SAMPLE DATE			TIME AS		10501L RESIDUE FIXED NONFILTR.	10551L RESIDUE FIXED FILTERABLE	20103L CALCIUM DISSOLVED	20003P CALCIUM TOTAL	12102L MAGNESIUM DISSOLVED	12002P MAGNESIUM TOTAL	10606L HARDNESS TOTAL LAB CALC.	10101L ALKALINITY TOTAL
D	M	Y	H	M	MG/L	MG/L	CA MG/L	CA MG/L	MG MG/L	MG MG/L	CACO3 MG/L	CACO3 MG/L
30	5	74					1.7		0.5			4
29	6	74					2.5		0.9			8
26	7	74					2.7		0.9			10
4	9	74					3.0		1.1			11
2	10	74					3.0		1.0			8
21	10	74					6.2		0.8			16
14	5	75					1.1		0.4			4
16	6	75					1.9		0.6			4
22	7	75	07	30			4.9		1.0 03L			10
21	8	75	07	00			3.1		0.9 03L			10
10	11	75	10	30			2.8		1.0			9
26	3	76	14	00			2.4		1.0			5
19	5	76	13	15				1.8		0.6	7.	6
13	7	76	10	15				2.6		0.9	10.	7
23	8	76	18	55				2.8		0.8	10.	4

WATER QUALITY SURVEILLANCE NETWORK

E.P.S. ATLANTIC REGION 1974-1976

STATION **00NB01BQ0045** LATITUDE **47** D **19** M **40** S LONGITUDE **66** D **4** M **9** S

TOMOGONOPS RIVER NORTH BRANCH AT WATER SUPPLY DAM BY HWY 430, H-22 (CONTROL) NORTHUMBERLAND CO

SAMPLE DATE			TIME AS		10251L ACIDITY PH = 8.3	16304L SULPHATE DISSOLVED	16502L THIOSULFATE TOTAL	16510L THIO-SALTS TOTAL	26302P IRON EXTRBLE.	29105P COPPER DISSOLVED	29305P COPPER EXTRBLE.	30105P ZINC DISSOLVED
					CACO3	SO4	S2O3	S2O3	FE	CU	CU	ZN
D	M	Y	H	M	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L
30	5	74							0.05	L.002	0.009	0.10 04P
29	6	74							0.13	0.007	0.009	0.005
26	7	74							0.10	L.002	L.002	0.005
4	9	74							0.18	L.002	L.002	0.004
2	10	74							0.19	L.002	0.012	0.004
21	10	74							0.08	L.002	L.002	
14	5	75				4.0			0.06		0.002	
16	6	75				4.0			0.12		0.015	
22	7	75	07	30		8.0	L5.0		0.18		0.036	
21	8	75	07	00		2.0	L5.0		0.30			
10	11	75	10	30		4.0	6.3		0.05		L.002	
26	3	76	14	00		4.0			0.07		0.004	
19	5	76	13	15		7.	L5.	L5.	0.04		0.003	
13	7	76	10	15		5.	L5.	L5.	0.15		0.004	
23	8	76	18	55		2.	L5.	L5.	0.17		L.001	

SAMPLE DATE			TIME AS		30305P ZINC EXTRBLE.	82103P LEAD DISSOLVED	82302P LEAD EXTRBLE.	80311P MERCURY EXTRBLE.	48302P CADMIUM EXTRBLE.	06581L HUMIC ACID
					ZN	PB	PB	HG	CD	
D	M	Y	H	M	MG/L	MG/L	MG/L	UG/L	MG/L	MG/L
30	5	74			0.60 04P	0.012	0.02			6
29	6	74			0.005	0.002	0.005			8
26	7	74			0.016	L.002	L.002			9
4	9	74			0.004	0.006 02P	0.006			10 82L
2	10	74			0.25 04P	0.007 02P	0.011			14 82L
21	10	74			L.002	0.014 02P	0.017			5 82L
14	5	75			0.03		0.003	0.19	L.001	6 82L
16	6	75			0.15 04P		0.006	0.07	0.005	4 82L
22	7	75	07	30	1.0		0.007	L.05	0.001	4 82L
21	8	75	07	00			0.005	L.05	L.001	6 82L
10	11	75	10	30	0.003		0.002	L.05	L.001	5 82L
26	3	76	14	00	L.002		0.007	0.05	L.001	3 82L
19	5	76	13	15	0.004		0.004	0.3	0.001	9
13	7	76	10	15	0.002		L.001		L.001	10
23	8	76	18	55	L.001		L.001		L.001	15

WATER QUALITY SURVEILLANCE NETWORK

E.P.S. ATLANTIC REGION 1974-1976

STATION **00NB01BQ0017** LATITUDE **47** D **17** M **21** S LONGITUDE **66** D **1** M **40** S

LITTLE SOUTH TOMOGONOPS RIVER 3 KM ABOVE TOMOGONOPS RIVER H-16 (O'BRIENS) NORTHUMBERLAND COUNT

SAMPLE DATE D	M	Y	TIME AS H	M	02061F TEMP. WATER DEG.C.	08102F OXYGEN DISSOLVED DO O2 MG/L	10301F PH PH UNITS	10301L PH PH UNITS	02041L SPECIFIC CONDUCTANCE USIE/CM	02073L TURBIDITY JTU	10401L RESIDUE NONFILTR. MG/L	10451L RESIDUE FILTERABLE MG/L
30	5	74			5.0 61S		5.1 01S	4.8	97	2.4		
29	6	74			17.0 61S		4.9 01S	5.1	94	2.8		
26	7	74			21.0 61S		4.0 01S	3.2	617	49.	403	430
4	9	74			10.0 61S		4.5 01S	4.4	83	14.	28	64
2	10	74			7.0 61S		3.9 01S	4.2	236	7.0	L10	158
21	10	74			0.0 61S		3.5 01S	4.0	364	8.0	L10	233
14	5	75			5.0		3.7	4.3	127			
16	6	75			13.		4.1	5.2	77			
22	7	75	08	00	17.	8.4	6.2	5.9	54			
21	8	75	07	30	11.	9.0	6.1	5.8	77			
10	11	75	11	00	2.0	5.0	5.0	4.5	183			
19	3	76	13	30	2.0	9.2	5.4	4.8	116			
19	5	76	12	45	10.5	11.2	4.5	5.0	50			
13	7	76	09	50	13.0	8.7	3.5	3.7	210			
23	8	76	19	20	17.0	7.8	4.6	4.7	130			

SAMPLE DATE D	M	Y	TIME AS H	M	10501L RESIDUE FIXED NONFILTR. MG/L	10551L RESIDUE FIXED FILTERABLE MG/L	20103L CALCIUM DISSOLVED CA MG/L	20003P CALCIUM TOTAL CA MG/L	12102L MAGNESIUM DISSOLVED MG MG/L	12002P MAGNESIUM TOTAL MG MG/L	10606L HARDNESS TOTAL LAB CALC. CACO3 MG/L	10101L ALKALINITY TOTAL CACO3 MG/L
30	5	74					6.5		1.7			L1
29	6	74					8.0		2.2			L1
26	7	74			381	302	65.0		4.9			L1
4	9	74			11	49	5.7		2.0			L1
2	10	74			L10	138	17.0		4.5			L1
21	10	74			L10	208	30.0		10.0			L1
14	5	75					5.4		1.8			
16	6	75					5.6		1.6			L1
22	7	75	08	00			2.9		1.4 03L			1
21	8	75	07	30			5.3		1.6 03L			1
10	11	75	11	00			11.5		3.9			L1
19	3	76	13	30			9.7		2.5			L1
19	5	76	12	45				3.7		1.1	14.	6
13	7	76	09	50				8.4		2.4	31.	
23	8	76	19	20				13.		2.8	44.	

WATER QUALITY SURVEILLANCE NETWORK

E.P.S. ATLANTIC REGION 1974-1976

STATION **00NB01BQ0017** LATITUDE **47** D **17** M **21** S LONGITUDE **66** D **1** M **40** S

LITTLE SOUTH TOMOGONOPS RIVER 3 KM ABOVE TOMOGONOPS RIVER H-16 (O'BRIENS) NORTHUMBERLAND COUNT

SAMPLE DATE			TIME AS		10251L ACIDITY PH = 8.3	16304L SULPHATE DISSOLVED	16502L THIOSULFATE TOTAL	16510L THIO-SALTS TOTAL	26302P IRON EXTRBLE.	29105P COPPER DISSOLVED	29305P COPPER EXTRBLE.	30105P ZINC DISSOLVED
D	M	Y	H	M	CACO3 MG/L	SO4 MG/L	S2O3 MG/L	S2O3 MG/L	FE MG/L	CU MG/L	CU MG/L	ZN MG/L
30	5	74				32.0			0.54	0.11 06P	0.12 06P	1.2 04P
29	6	74				33.0			0.65	0.09	0.09	1.8
26	7	74			66.0	121.			11.	0.55 06P	0.75 06P	12. 04P
4	9	74				33.0			2.8	0.20 06P	0.20 06P	2.10 04P
2	10	74				90.0			2.8	0.35 06P	0.35 06P	4.5 04P
21	10	74			52.5	143.			2.4	0.52 06P	0.52 06P	6.0 04P
14	5	75			27.0	49.0			1.1		0.31 06P	
16	6	75				29.0			0.53		0.14 06P	
22	7	75	08	00		18.0	L5.0		0.92		0.085	
21	8	75	07	30		28.0	L5.0		2.2			
10	11	75	11	00		78.0	20.7		0.71		0.3	
19	3	76	13	30		44.0	4.2		0.72		0.10	
19	5	76	12	45	6.1	4.	L5.	L5.	0.30		0.053	
13	7	76	09	50	40.	80.	L5.	L5.	4.9		0.38	
23	8	76	19	20	15.	60.	L5.	5.	1.0		0.001	

SAMPLE DATE			TIME AS		30305P ZINC EXTRBLE.	82103P LEAD DISSOLVED	82302P LEAD EXTRBLE.	80311P MERCURY EXTRBLE.	48302P CADMIUM EXTRBLE.	06581L HUMIC ACID
D	M	Y	H	M	ZN MG/L	PB MG/L	PB MG/L	HG UG/L	CD MG/L	MG/L
30	5	74			1.2 04P	0.012	0.013			3
29	6	74			1.8 04P	0.008	0.008			3
26	7	74			13. 04P	0.10 01P	0.23 01P			4
4	9	74			2.17 04P	0.015 02P	0.02			6 82L
2	10	74			4.5 04P	0.016 02P	0.018	L.05		2 82L
21	10	74			6.5 04P	0.03 02P	0.03	L.05		2 82L
14	5	75			2.9 04P		0.016	L.05	0.006	1 82L
16	6	75			1.2 04P		0.008	0.05	0.002	3 82L
22	7	75	08	00	1.6		0.007	L.05	0.002	5 82L
21	8	75	07	30				0.06	0.004	5 82L
10	11	75	11	00	60.0		0.005	L.05	0.011 03P	L1 82L
19	3	76	13	30	1.6		0.010	L.05	0.004	1 82L
19	5	76	12	45	0.60		0.009	L.1	0.003	7
13	7	76	09	50	3.0		0.039		0.008	2
23	8	76	19	20	0.001		0.004		0.002	3

WATER QUALITY SURVEILLANCE NETWORK

E.P.S. ATLANTIC REGION 1974-1976

STATION **00NB01BQ0018** LATITUDE **47** D **13** M **57** S LONGITUDE **65** D **50** M **5** S

TOMOGONOPS RIVER AT CONFLUENCE WITH NORTHWEST MIRAMICHI RIVER 9 MILES ABOVE WAYERTON BRIDGE, NORTHUMBERLAND COUNTY, NEW BRUNSWICK

SAMPLE DATE			TIME AS		02061F TEMP. WATER	08102F OXYGEN DISSOLVED DO	10301F PH	10301L PH	02041L SPECIFIC CONDUCTANCE	02073L TURBIDITY	10401L RESIDUE NONFILTR.	10451L RESIDUE FILTERABLE
D	M	Y	H	M	DEG.C.	O2 MG/L	PH UNITS	PH UNITS	USIE/CM	JTU	MG/L	MG/L
30	5	74			6.0 61S		7.0 01S	6.6	100	0.8		
29	6	74			18.0 61S		7.1 01S	7.2	222	L.5		
26	7	74			19.0 61S		6.9 01S	6.3	340	0.2		
4	9	74			10.0 61S		6.5 01S	7.2	241	0.7		
2	10	74			8.0 61S		6.2 01S	6.5	222	0.9		
21	10	74			0.0 61S		6.4 01S	7.2	244	L.5		
14	5	75			5.0		5.2	7.0	73			
16	6	75			12.		6.7	6.3	149			
22	7	75	09	00	19.	8.5	6.8	6.6	300			
21	8	75	09	00	14.	9.2	6.7	7.1	60			
10	11	75	11	30	3.0	7.0	6.5	6.7	409			
19	5	76	11	00	10.0	11.0	6.3	6.8	90			
13	7	76	08	10	16.0	8.6	6.5	7.0	230			
23	8	76	17	05	21.0	8.0	7.1	6.8	230			

SAMPLE DATE			TIME AS		10501L RESIDUE FIXED NONFILTR.	10551L RESIDUE FIXED FILTERABLE	20103L CALCIUM DISSOLVED	20003P CALCIUM TOTAL	12102L MAGNESIUM DISSOLVED	12002P MAGNESIUM TOTAL	10606L HARDNESS TOTAL LAB CALC.	10101L ALKALINITY TOTAL
D	M	Y	H	M	MG/L	MG/L	CA MG/L	CA MG/L	MG MG/L	MG MG/L	CACO3 MG/L	CACO3 MG/L
30	5	74					15.0		0.8			6
29	6	74					34.0		1.2			16
26	7	74					66.0		1.6			12
4	9	74					46.0		1.5			20
2	10	74					37.5		1.3			10
21	10	74					44.0		1.3			11
14	5	75					9.0		0.7			6
16	6	75					25.2		0.8			12
22	7	75	09	00			53.0		1.4 03L			17
21	8	75	09	00			6.8		1.0 03L			20
10	11	75	11	30			70.0		1.9			15
19	5	76	11	00				14.		0.7	38.	9
13	7	76	08	10				36.		1.6	97.	10
23	8	76	17	05				49.		1.2	130.	15

WATER QUALITY SURVEILLANCE NETWORK

E.P.S. ATLANTIC REGION 1974-1976

STATION **00NB01BQ0018** LATITUDE **47** D **13** M **57** S LONGITUDE **65** D **50** M **5** S

TOMOGONOPS RIVER AT CONFLUENCE WITH NORTHWEST MIRAMICHI RIVER 9 MILES ABOVE WAYERTON BRIDGE, NORTHUMBERLAND COUNTY, NEW BRUNSWICK

SAMPLE DATE			TIME AS		10251L ACIDITY PH = 8.3	16304L SULPHATE DISSOLVED	16502L THIOSULFATE TOTAL	16510L THIO-SALTS TOTAL	26302P IRON EXTRBLE.	29105P COPPER DISSOLVED	29305P COPPER EXTRBLE.	30105P ZINC DISSOLVED
					CACO3	SO4	S2O3	S2O3	FE	CU	CU	ZN
D	M	Y	H	M	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L
30	5	74				32.0			0.07	0.010	0.014	0.17 04P
29	6	74				77.0			0.08	0.002	0.08	0.05
26	7	74				143.0			0.16	0.005	0.010	0.300 04P
4	9	74				14.0			0.28	L.002	L.002	0.10 04P
2	10	74				95.0			0.20	L.002	0.010	
21	10	74				87.0			0.12	0.007	0.009	0.15 04P
14	5	75				22.0			1.3		0.04	
16	6	75				57.0			0.16		0.04	
22	7	75	09	00		16.0	L5.0		0.13		0.020	
21	8	75	09	00		2.0	L5.0		0.34			
10	11	75	11	30		190.	5.0		0.01		0.005	
19	5	76	11	00		33.	L5.	L5.	0.09		0.013	
13	7	76	08	10		90.	L5.	L5.	1.4		0.086	
23	8	76	17	05		100.	L5.	L5.	0.14		0.010	

SAMPLE DATE			TIME AS		30305P ZINC EXTRBLE.	82103P LEAD DISSOLVED	82302P LEAD EXTRBLE.	80311P MERCURY EXTRBLE.	48302P CADMIUM EXTRBLE.	06581L HUMIC ACID
					ZN	PB	PB	HG	CD	
D	M	Y	H	M	MG/L	MG/L	MG/L	UG/L	MG/L	MG/L
30	5	74			0.17 04P	0.010	0.010			6
29	6	74			0.06	L.002	L.002			5
26	7	74			0.400 04P	L.002	L.002			5
4	9	74			0.17 04P	0.002 02P	0.006			4 82L
2	10	74			0.25 04P	0.010 02P	0.010	L.05		7 82L
21	10	74			0.15 04P	0.017 02P	0.017	L.05		5 82L
14	5	75			0.40 04P		0.008	0.05	0.001	3 82L
16	6	75			0.30 04P		0.006	0.07	L.001	3 82L
22	7	75	09	00	0.03		0.003	L.05	L.001	2 82L
21	8	75	09	00			0.004	L.05	L.001	2 82L
10	11	75	11	30	0.2		0.004	L.05	L.001	2 82L
19	5	76	11	00	0.065		0.005	0.1	0.001	7
13	7	76	08	10	0.88		0.018		0.003	4
23	8	76	17	05	0.048		L.001		L.001	5

WATER QUALITY SURVEILLANCE NETWORK

E.P.S. ATLANTIC REGION 1974-1976

STATION **00NB01BQ0026** LATITUDE **47** D **16** M **41** S LONGITUDE **66** D **19** M **30** S

NW MIRAMICHI RIVER NORTH BRANCH 1 KM ABOVE JUNCTION WITH SOUTH BRANCH, T-2 NORTHUMBERLAND COUN

SAMPLE DATE			TIME AS		02061F TEMP. WATER	08102F OXYGEN DISSOLVED DO	10301F PH	10301L PH	02041L SPECIFIC CONDUCTANCE	02073L TURBIDITY	10401L RESIDUE NONFILTR.	10451L RESIDUE FILTERABLE
D	M	Y	H	M	DEG.C.	O2 MG/L	PH UNITS	PH UNITS	USIE/CM	JTU	MG/L	MG/L
16	6	74			12.0 61S		7.1 01S	6.9	32	L.5		
12	7	74			14.0 61S		7.3 01S	6.9	33	0.3		
8	8	74			14.0 61S		7.0 01S	6.2	37	L.5		
4	10	74			5.0 61S		6.4 01S	6.7	32	L.5		

SAMPLE DATE			TIME AS		10501L RESIDUE FIXED NONFILTR.	10551L RESIDUE FIXED FILTERABLE	20103L CALCIUM DISSOLVED	20003P CALCIUM TOTAL	12102L MAGNESIUM DISSOLVED	12002P MAGNESIUM TOTAL	10606L HARDNESS TOTAL LAB CALC.	10101L ALKALINITY TOTAL
D	M	Y	H	M	MG/L	MG/L	CA MG/L	CA MG/L	MG MG/L	MG MG/L	CACO3 MG/L	CACO3 MG/L
16	6	74					3.6		0.8			12
12	7	74					3.4		0.9			14
8	8	74					4.0		1.0			16
4	10	74					4.1		1.1			11

WATER QUALITY SURVEILLANCE NETWORK
E.P.S. ATLANTIC REGION 1974-1976

STATION **00NB01BQ0026** LATITUDE **47** D **16** M **41** S LONGITUDE **66** D **19** M **30** S

NW MIRAMICHI RIVER NORTH BRANCH 1 KM ABOVE JUNCTION WITH SOUTH BRANCH, T-2 NORTHUMBERLAND COUN

SAMPLE DATE			TIME	10251L ACIDITY PH = 8.3	16304L SULPHATE DISSOLVED	16502L THIOSULFATE TOTAL	16510L THIO-SALTS TOTAL	26302P IRON EXTRBLE.	29105P COPPER DISSOLVED	29305P COPPER EXTRBLE.	30105P ZINC DISSOLVED
			AS								
				CACO3	SO4	S2O3	S2O3	FE	CU	CU	ZN
D	M	Y	H M	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L
16	6	74						0.10	L.002	L.002	L.002
8	8	74						0.08	L.002	L.002	
4	10	74						0.20	L.002	L.002	

SAMPLE DATE			TIME	30305P ZINC EXTRBLE.	82103P LEAD DISSOLVED	82302P LEAD EXTRBLE.	80311P MERCURY EXTRBLE.	48302P CADMIUM EXTRBLE.	06581L HUMIC ACID
			AS						
				ZN	PB	PB	HG	CD	
D	M	Y	H M	MG/L	MG/L	MG/L	UG/L	MG/L	MG/L
16	6	74		L.002	0.005	0.005			4
12	7	74							4
8	8	74		L.002	L.002 02P	L.002			3 82L
4	10	74		0.002	0.010	0.007			13 82L

WATER QUALITY SURVEILLANCE NETWORK

E.P.S. ATLANTIC REGION 1974-1976

STATION **00NB01BQ0056** LATITUDE **47** D **11** M **16** S LONGITUDE **65** D **53** M **35** S

NORTHWEST MIRAMICHI RIVER AT HWY 430 BRIDGE, NORTHUMBERLAND COUNTY, NEW BRUNSWICK

SAMPLE DATE D	M	Y	TIME AS H	M	02061F TEMP. WATER DEG.C.	08102F OXYGEN DISSOLVED DO O2 MG/L	10301F PH PH UNITS	10301L PH PH UNITS	02041L SPECIFIC CONDUCTANCE USIE/CM	02073L TURBIDITY JTU	10401L RESIDUE NONFILTR. MG/L	10451L RESIDUE FILTERABLE MG/L
22	10	74			0.0 61S		6.9 01S	7.3	32			
5	6	75			9.		6.3	6.4	25			
2	7	75	11	30	13.	13.5	6.9	7.3	33			
28	8	75	11	00	1.0	8.4	6.9	7.1	43			
6	11	75	12	00	0.0	8.0	6.8	7.2	39			
16	6	76	18	30	19.0	8.9	6.5	7.1	30			
16	7	76	10	20	16.0	9.4	6.6	7.1	35			
24	8	76	15	00	15.0	6.8	7.3	6.9	40			

SAMPLE DATE D	M	Y	TIME AS H	M	10501L RESIDUE FIXED NONFILTR. MG/L	10551L RESIDUE FIXED FILTERABLE MG/L	20103L CALCIUM DISSOLVED CA MG/L	20003P CALCIUM TOTAL CA MG/L	12102L MAGNESIUM DISSOLVED MG MG/L	12002P MAGNESIUM TOTAL MG MG/L	10606L HARDNESS TOTAL LAB CALC. CACO3 MG/L	10101L ALKALINITY TOTAL CACO3 MG/L
22	10	74					3.9		1.0			15
5	6	75					2.7		0.7			10
2	7	75	11	30			3.5		0.9			16
28	8	75	11	00			4.1		1.0 03L			17
6	11	75	12	00			4.7		1.0			17
16	6	76	18	30				3.2		0.8	11.	10
16	7	76	10	20				3.6		0.9	13.	10
24	8	76	15	00				4.2		1.0	14.	15

WATER QUALITY SURVEILLANCE NETWORK
E.P.S. ATLANTIC REGION 1974-1976

STATION **00NB01BQ0056** LATITUDE **47** D **11** M **16** S LONGITUDE **65** D **53** M **35** S

NORTHWEST MIRAMICHI RIVER AT HWY 430 BRIDGE, NORTHUMBERLAND COUNTY, NEW BRUNSWICK

SAMPLE DATE			TIME AS		10251L ACIDITY PH = 8.3	16304L SULPHATE DISSOLVED	16502L THIOSULFATE TOTAL	16510L THIO-SALTS TOTAL	26302P IRON EXTRBLE.	29105P COPPER DISSOLVED	29305P COPPER EXTRBLE.	30105P ZINC DISSOLVED
D	M	Y	H	M	CACO3 MG/L	SO4 MG/L	S2O3 MG/L	S2O3 MG/L	FE MG/L	CU MG/L	CU MG/L	ZN MG/L
22	10	74							0.06	L.002	L.002	0.005
5	6	75				2.0			0.09		0.004	
2	7	75	11	30		4.0	L5.0		0.11		0.016	
28	8	75	11	00		2.0	L5.0		0.21			
6	11	75	12	00		4.0	7.8		0.01		L.002	
16	6	76	18	30		7.	L5.	L5.	0.06		L.001	
16	7	76	10	20		4.	L5.	L5.	0.07		0.001	
24	8	76	15	00		2.	L5.	L5.	0.08		L.001	

SAMPLE DATE			TIME AS		30305P ZINC EXTRBLE.	82103P LEAD DISSOLVED	82302P LEAD EXTRBLE.	80311P MERCURY EXTRBLE.	48302P CADMIUM EXTRBLE.	06581L HUMIC ACID
D	M	Y	H	M	ZN MG/L	PB MG/L	PB MG/L	HG UG/L	CD MG/L	MG/L
22	10	74			0.015	0.014 02P	0.014			2 82L
5	6	75			0.05		0.003	L.05	0.001	3 82L
2	7	75	11	30	0.30 04P		L.002	L.05	L.001	2 82L
28	8	75	11	00				0.05	L.001	1 82L
6	11	75	12	00	L.002		0.002	L.05	L.001	2 82L
16	6	76	18	30	L.001		L.001		L.001	6
16	7	76	10	20	L.001		L.001		L.001	9
24	8	76	15	00	L.001		L.001		L.001	3

WATER QUALITY SURVEILLANCE NETWORK

E.P.S. ATLANTIC REGION 1974-1976

STATION **00NB01BQ0019** LATITUDE **47** D **13** M **57** S LONGITUDE **65** D **50** M **10** S

NORTHWEST MIRAMICHI RIVER JUST ABOVE JUNCTION WITH TOMOGONOPS RIVER, H-18 NORTHUMBERLAND COUNT

SAMPLE DATE			TIME AS		02061F TEMP. WATER	08102F OXYGEN DISSOLVED DO	10301F PH	10301L PH	02041L SPECIFIC CONDUCTANCE	02073L TURBIDITY	10401L RESIDUE NONFILTR.	10451L RESIDUE FILTERABLE
D	M	Y	H	M	DEG.C.	O2 MG/L	PH UNITS	PH UNITS	USIE/CM	JTU	MG/L	MG/L
30	5	74			6.0 61S		7.1 01S	6.6	30	L.5		
29	6	74			18.0 61S		7.3 01S	7.3	40	L.5		
26	7	74			20.0 61S		7.1 01S	6.3	48	0.2		
4	9	74			11.0 61S		6.9 01S	7.2	45	L.5		
2	10	74			8.0 61S		6.8 01S	7.0	46	L.5		
21	10	74			0.0 61S		6.7 01S	7.0	27			
14	5	75			5.0		5.5	6.3	24			
16	6	75			12.		6.4	7.2	31			
22	7	75	10	00	20.	8.6	7.0	7.0	46			
21	8	75	10	30	1.5	9.0	7.0	6.8	376			
10	11	75	12	00	4.0	8.0	6.5	7.0	47			
19	5	76			10.0	11.6	6.3	7.1	40			
13	7	76	18	30	16.0	8.6	6.4	7.3	48			
23	8	76	17	20	23.0	7.7	6.8	6.8	450			

SAMPLE DATE			TIME AS		10501L RESIDUE FIXED NONFILTR.	10551L RESIDUE FIXED FILTERABLE	20103L CALCIUM DISSOLVED	20003P CALCIUM TOTAL	12102L MAGNESIUM DISSOLVED	12002P MAGNESIUM TOTAL	10606L HARDNESS TOTAL LAB CALC.	10101L ALKALINITY TOTAL
D	M	Y	H	M	MG/L	MG/L	CA MG/L	CA MG/L	MG MG/L	MG MG/L	CACO3 MG/L	CACO3 MG/L
30	5	74					3.9		0.6			8
29	6	74					6.0		0.8			16
26	7	74					6.1		0.8			19
4	9	74					7.0		0.9			23
2	10	74					6.3		0.9			20
21	10	74					2.8		0.9			8
14	5	75					2.7		0.4			6
16	6	75					4.4		0.6			13
22	7	75	10	00			10.0		1.0 03L			19
21	8	75	10	30			64.0		1.4 03L			13
10	11	75	12	00			6.9		1.0			20
19	5	76						3.8		0.5	12.	11
13	7	76	18	30				6.0		0.8	18.	15
23	8	76	17	20				7.2		0.8	21.	20

WATER QUALITY SURVEILLANCE NETWORK
E.P.S. ATLANTIC REGION 1974-1976

STATION **00NB01BQ0019** LATITUDE **47** D **13** M **57** S LONGITUDE **65** D **50** M **10** S

NORTHWEST MIRAMICHI RIVER JUST ABOVE JUNCTION WITH TOMOGONOPS RIVER, H-18 NORTHUMBERLAND COUNT

SAMPLE DATE			TIME AS		10251L ACIDITY PH = 8.3	16304L SULPHATE DISSOLVED	16502L THIOSULFATE TOTAL	16510L THIO-SALTS TOTAL	26302P IRON EXTRBLE.	29105P COPPER DISSOLVED	29305P COPPER EXTRBLE.	30105P ZINC DISSOLVED
					CACO3	SO4	S2O3	S2O3	FE	CU	CU	ZN
D	M	Y	H	M	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L
30	5	74							0.06	L.002	L.002	
29	6	74							0.08	L.002	L.002	L.002
26	7	74							0.05	L.002	0.002	L.002
4	9	74							0.09	L.002	L.002	0.002
2	10	74							0.09	L.002	L.002	L.002
21	10	74							0.10	L.002	L.002	
14	5	75				2.0			0.29		0.004	
16	6	75				5.0			0.11		0.02	
22	7	75	10	00		5.0	L5.0		0.10		0.023	
21	8	75	10	30		180.	L5.0		0.14			
10	11	75	12	00		6.0	6.2		L.01		L.002	
19	5	76				19.	L5.	L5.	0.10		0.003	
13	7	76	18	30		13.	L5.	L5.	0.09		0.002	
23	8	76	17	20		4.	L5.	L5.	0.12		0.001	

SAMPLE DATE			TIME AS		30305P ZINC EXTRBLE.	82103P LEAD DISSOLVED	82302P LEAD EXTRBLE.	80311P MERCURY EXTRBLE.	48302P CADMIUM EXTRBLE.	06581L HUMIC ACID
					ZN	PB	PB	HG	CD	
D	M	Y	H	M	MG/L	MG/L	MG/L	UG/L	MG/L	MG/L
30	5	74			L.002	0.006	0.006			5
29	6	74			L.002	0.002	0.002			4
26	7	74			0.003	0.006	0.007			4
4	9	74			0.002	L.002 02P	0.002			2 82L
2	10	74			0.002	0.008	0.010			6 82L
21	10	74			0.005	0.017 02P	0.017			8 82L
14	5	75			0.05		0.005	0.05	L.001	4 82L
16	6	75			0.40		0.003	L.05	L.001	3 82L
22	7	75	10	00	0.06		0.003	L.05	L.001	2 82L
21	8	75	10	30			0.002	0.05	L.001	2 82L
10	11	75	12	00	0.003		0.004	L.05	0.001	1 82L
19	5	76			0.002		0.003	0.1	L.001	8
13	7	76	18	30	0.001		0.003		L.001	3
23	8	76	17	20	L.001		L.001		L.001	5

WATER QUALITY SURVEILLANCE NETWORK

E.P.S. ATLANTIC REGION 1974-1976

STATION **00NB01BQ0044** LATITUDE **47** D **8** M **5** S LONGITUDE **65** D **50** M **5** S

NORTHWEST MIRAMICHI RIVER AT WAYERTON BRIDGE, H-21, NORTHUMBERLAND COUNTY

SAMPLE DATE D	M	Y	TIME AS H	M	02061F TEMP. WATER DEG.C.	08102F OXYGEN DISSOLVED DO O2 MG/L	10301F PH PH UNITS	10301L PH PH UNITS	02041L SPECIFIC CONDUCTANCE USIE/CM	02073L TURBIDITY JTU	10401L RESIDUE NONFILTR. MG/L	10451L RESIDUE FILTERABLE MG/L
30	5	74			6.0 61S		7.2 01S	6.6	40	0.5		
29	6	74			19.0 61S		7.2 01S	7.5	76	L.5		
26	7	74			21.0 61S		6.9 01S	6.2	84	0.3		
4	9	74			12.0 61S		6.9 01S	6.0	105	0.6		
2	10	74			8.0 61S		6.6 01S	6.5	82	L.5		
21	10	74			0.0 61S		6.6 01S	7.1	80	0.5		
14	5	75			6.0		5.5	6.2	28			
16	6	75			12.		6.3	6.7	52			
22	7	75	11	30	22.	8.4	6.9	6.9	115			
21	8	75	12	00	20.	8.9	6.6	7.0	127			
10	11	75	13	00	5.0	6.5	6.7	6.6	121			
26	3	76	16	00	0.0	11.1	6.0	6.4	75			
19	5	76	11	40	11.0	11.2	6.2	6.8	40			
13	7	76	09	15	17.0	8.4	6.5	7.5	110			
23	8	76	18	10	23.0	7.5	7.6	7.2	90			

SAMPLE DATE D	M	Y	TIME AS H	M	10501L RESIDUE FIXED NONFILTR. MG/L	10551L RESIDUE FIXED FILTERABLE MG/L	20103L CALCIUM DISSOLVED CA MG/L	20003P CALCIUM TOTAL CA MG/L	12102L MAGNESIUM DISSOLVED MG MG/L	12002P MAGNESIUM TOTAL MG MG/L	10606L HARDNESS TOTAL LAB CALC. CACO3 MG/L	10101L ALKALINITY TOTAL CACO3 MG/L
30	5	74					5.5		0.6			7
29	6	74					11.0		0.9			15
26	7	74					14.0		0.9			17
4	9	74					15.0		1.1			18
2	10	74					10.0		1.0			13
21	10	74					12.0		1.0			12
14	5	75					3.5		0.5			5
16	6	75					7.2		0.7			11
22	7	75	11	30			15.8		1.6 03L			18
21	8	75	12	00			20.3		1.0 03L			17
10	11	75	13	00			14.0		1.2		39.9	16
26	3	76	16	00			9.8		1.1			16
19	5	76	11	40				5.		0.6	15.	7
13	7	76	09	15				13.		1.0	36.	5
23	8	76	18	10				18.		0.9	49.	15

WATER QUALITY SURVEILLANCE NETWORK

E.P.S. ATLANTIC REGION 1974-1976

STATION **00NB01BQ0044** LATITUDE **47** D **8** M **5** S LONGITUDE **65** D **50** M **5** S

NORTHWEST MIRAMICHI RIVER AT WAYERTON BRIDGE, H-21, NORTHUMBERLAND COUNTY

SAMPLE DATE			TIME AS		10251L ACIDITY PH = 8.3	16304L SULPHATE DISSOLVED	16502L THIOSULFATE TOTAL	16510L THIO-SALTS TOTAL	26302P IRON EXTRBLE.	29105P COPPER DISSOLVED	29305P COPPER EXTRBLE.	30105P ZINC DISSOLVED
					CACO3	SO4	S2O3	S2O3	FE	CU	CU	ZN
D	M	Y	H	M	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L
30	5	74				7.0			0.08	L.002	0.002	0.03
29	6	74				15.0			0.12	L.002	L.002	0.008
26	7	74				24.0			0.12	0.002	0.004	0.150 04P
4	9	74				30.0			0.22	L.002	L.002	0.02
2	10	74				22.0			0.19	L.002	L.002	0.04
21	10	74				22.0			0.13		L.002	0.03
14	5	75				5.0			0.34		0.008	
16	6	75				12.0			0.18		0.019	
22	7	75	11	30		29.0	L5.0		0.12		0.032	
21	8	75	12	00		40.0	L5.0		0.16			
10	11	75	13	00		37.0	7.3		0.03		L.002	
26	3	76	16	00		20.0			0.09		0.003	
19	5	76	11	40		9.	L5.	L5.	0.11		0.005	
13	7	76	09	15		26.	L5.	L5.	0.11		0.005	
23	8	76	18	10		25.	L5.	L5.	0.17		0.002	

SAMPLE DATE			TIME AS		30305P ZINC EXTRBLE.	82103P LEAD DISSOLVED	82302P LEAD EXTRBLE.	80311P MERCURY EXTRBLE.	48302P CADMIUM EXTRBLE.	06581L HUMIC ACID
					ZN	PB	PB	HG	CD	
D	M	Y	H	M	MG/L	MG/L	MG/L	UG/L	MG/L	MG/L
30	5	74			0.04	0.008	0.010			7
29	6	74			0.008	0.002	0.002			5
26	7	74			0.60 04P	L.002	0.010			8
4	9	74			0.03	0.002 02P	0.002			4 82L
2	10	74			0.04	0.008 02P	0.010	L.05		11 82L
21	10	74			0.03	0.014 02P	0.02	L.05		8 82L
14	5	75			0.03		0.002	L.05	L.001	4 82L
16	6	75			0.19 04P		0.03	L.05	L.001	4 82L
22	7	75	11	30	0.05		L.002	L.05	L.001	2 82L
21	8	75	12	00				0.05	L.001	2 82L
10	11	75	13	00	0.03		L.002	L.05	L.001	3 82L
26	3	76	16	00	0.010		0.005	0.05	L.001	3 82L
19	5	76	11	40	0.009		0.008	L.1	0.001	9
13	7	76	09	15	0.006		0.004		0.001	3
23	8	76	18	10	0.003		L.001		L.001	8

BIOLOGICAL RESULTS

STATION: NB-60: N. W. Miramichi River, HWY 430 Bridge

TAXA			SAMPLING PERIOD 1974 16/6-12/7	1975
Annelida				
Oligochaeta	Lumbriculidae	-		7
Arthropoda				
Insecta				
Plecoptera	Perlidae	Acroneura	2	
		Neophasaganophora	1	
Ephemeroptera	Heptageniidae	Stenonema	9	1
	Baetidae	Isonychia		1
		Ameletus		1
	Ephemeridae	Ephemerella		15
	Leptophlebidae	Paraleptophlebia	10	24
Tricoptera	Leptoceridae	Leptocerus	2	
	Limnephilidae	Limnephilus	6	
		Neoperla	3	
Diptera	Psychomyiidae	-	32	1
	Tendipedidae	-		23
	Heleidae	-		3
	Rhagionidae	Atherix		4
		Σ	65	80
		S	8	10
		DI	2.24	2.51

BIOLOGICAL RESULTS

STATION: NB-49: Tomogonops River, at confluence of N.W. Miramichi

TAXA			SAMPLING PERIOD 1974 30/5-29/6	SAMPLING PERIOD 1975 16/6-22/7
Mollusca				
Gastropoda			1	
Arthropoda				
Insecta				
Plecoptera	Perlidae	Isoperla	1	
Ephemeroptera	Heptageniidae	Stenonema		1
	Baetidae	Pseudocloeon		1
	Leptophlebidae	Parleptophebia	6	
Tricoptera	Hydropsychidae	Hydropsyche		1
	Lepidostomatidae	Lepidostoma		1
	Leptoceridae	Leptocerus	2	
	Psychomyiidae	-		
		Polycentropus	1	
Coleoptera	Dytisidae	Oreodytes		1
Diptera	Tipulidae	-	2	
	Tendipedidae	-	14	32
	Rhagionidae	Atherix		1
		Σ	27	38
		S	7	7
		DI	2.06	1.04

BIOLOGICAL RESULTS

STATION: NB-50: N.W. Miramichi River, above Tomogonops River

TAXA			SAMPLING PERIOD 1974 30/5-29/6	1974 29/6-26/7	1975 16/6-22/7
Mollusca					
Gastropoda	Physidae	Physa	1		9
Arthropoda					
Arachnida			1		
Insecta					
Ephemeroptera	Heptageniidae	Stenonema	44	28	45
	Baetidae	Baetis			14
		Caenis		1	
		Habrophlebiodes		6	
	Ephemeridae	Ephemerella			2
	Leptophlebidae	Paraleptophlebia	1		3
Tricoptera	Hydropsychidae	Hydropsyche	10		
	Limnephilidae	Limnephilus	1		
		Drusinus			7
	Psychomyiidae	Polycentropus	1		
Diptera	Simulidae	Simulium	1		
	Tendipedidae	-	19	226	9
	Rhagionidae	Atherix		2	
		Σ	79	263	89
		S	9	5	7
		DI	1.82	0.74	2.16

BIOLOGICAL RESULTS

STATION: NB-51: N.W. Miramichi River, Wayerton Brook

TAXA			SAMPLING PERIOD 1974 30/5-29/6
Arthropoda			
Insecta			
Ephemeroptera	Heptageniidae	Stenonema	16
	Baetidae	Habrophebia	3
	Leptophlebidae	Paraleptophlebia	13
Tricoptera	Hydropsychidae	Hydropsyche	3
	Limnephilidae	Limnephilus	1
	Psychomyiidae	Polycentropus	3
Coleoptera	Elmidae	Stenelmis	1
Diptera	Tendipedidae	-	163
		Σ	203
		S	8
		DI	1.14

(b) South Sevogle River and Clearwater Stream: (NB 45, 46, 46A, 47)

Both the control station located above the Chester mine on Clearwater Stream, and the control located on the South Sevogle River had soft, slightly alkaline water. Trace metal levels were again high for background levels.

Biological samples taken at the Clearwater Station in 1974 showed a diverse fauna, predominated by chironomids and mayflies.

Below the mine, water quality in Clearwater Stream did not show any drastic changes. The pH occasionally went to 9.0 and one sample taken in August, 1975 recorded high levels of sulphates and calcium. Levels of iron, copper and cadmium had increased slightly.

Biological samples taken at this station during 1974 showed a marked decrease in diversity, probably due to the large number of chironomids in the samples.

Downstream, on the South Sevogle, the water quality of the stream was similar to the controls. Cadmium and thiosulphates continue to be present in just measurable levels.

Biological samples taken in 1974 and 1975 show an increase in diversity and a wide range of species present.

WATER QUALITY SURVEILLANCE NETWORK

E.P.S. ATLANTIC REGION 1974-1976

STATION **00NB01BQ0020** LATITUDE **47** D **6** M **36** S LONGITUDE **66** D **14** M **8** S

CLEARWATER STREAM AT BRIDGE 300 M ABOVE CHESTER MINE PROPERTY, C-1 NORTHUMBERLAND COUNTY

SAMPLE DATE			TIME AS		C2061F TEMP. WATER	08102F OXYGEN DISSOLVED DO	10301F PH	10301L PH	C2041L SPECIFIC CONDUCTANCE	C2073L TURBIDITY	10401L RESIDUE NONFILTR	10451L RESIDUE FILTERABLE
D	M	Y	H	M	DEG.C.	O2 MG/L	PH UNITS	PH UNITS	USE-CM	JTU	MG/L	MG/L
11	6	74			10.0 61S		7.3 01S	6.0	44	L5		
8	7	74			11.0 61S		7.4 01S	7.3	53	L5		
13	8	74			18.0 61S		7.3 01S	7.0	64	L5		
8	9	74			11.0 61S		7.2 01S	6.0	84	L5		
13	10	74			4.0 61S		7.3 01S	7.4	53			
16	5	75			6.0		6.1	7.2	25			
19	6	75			9.0		6.7	7.2	39			
26	7	75	10	00	15.	8.4	7.0	6.8	68			
18	8	75	11	00	16.	8.7	6.9	7.2	74			
5	11	75	11	30	4.0	7.5	6.7	6.7	66			
19	3	76	13	00	1.0	9.2	6.5	6.4	58			
13	7	76	14	50	12.0	9.1	6.6	6.9	43			
24	8	76	10	15	9.5	8.9	7.1	7.1	850			

SAMPLE DATE			TIME AS		10501L RESIDUE FIXED NONFILTR	10551L RESIDUE FIXED FILTERABLE	20103L CALCIUM DISSOLVED	20003P CALCIUM TOTAL	12102L MAGNESIUM DISSOLVED		12002P MAGNESIUM TOTAL	10606L HARDNESS TOTAL LAB CALC.	10101L ALKALINITY TOTAL
D	M	Y	H	M	MG/L	MG/L	CA MG/L	CA MG/L	MG MG/L		MG MG/L	CACO3 MG/L	CACO3 MG/L
11	6	74					6.8		0.6				16
8	7	74					8.5		0.8				20
13	8	74					10.0		0.9				25
8	9	74					10.0		1.0				27
13	10	74					8.2		0.9				20
16	5	75					3.4		0.4				6
19	6	75					6.3		0.6				15
26	7	75	10	00			9.3		0.9	03L			26
18	8	75	11	00			11.0		0.8	03L			27
5	11	75	11	30			9.8		0.8				25
19	3	76	13	00			8.2		1.0				22
13	7	76	14	50				6.4			0.6	19.	10
24	8	76	10	15				8.8			0.7	25.	20

WATER QUALITY SURVEILLANCE NETWORK

E.P.S. ATLANTIC REGION 1974-1976

STATION **00NB01BQ0020** LATITUDE **47** D **6** M **36** S LONGITUDE **66** D **14** M **8** S

CLEARWATER STREAM AT BRIDGE 300 M ABOVE CHESTER MINE PROPERTY, C-1 NORTHUMBERLAND COUNTY

SAMPLE DATE			TIME AS		10251L ACIDITY PH=8.3	16304L SULPHATE DISSOLVED	16502L THIOSULFATE TOTAL	16510L THIO-SALTS TOTAL	26302P IRON EXTRBLE.	29105P COPPER DISSOLVED	29305P COPPER EXTRBLE.	30105P ZINC DISSOLVED
D	M	Y	H	M	CACO3 MG/L	SO4 MG/L	S2O3 MG/L	S2O3 MG/L	FE MG/L	CU MG/L	CU MG/L	ZN MG/L
11	6	74							0.10	L.002	L.002	L.002
8	7	74							0.09	L.002	L.002	L.002
13	8	74							0.03	L.002	L.002	
8	9	74							0.05	L.002	L.002	0.006
13	10	74							0.05	L.002	L.002	
16	5	75				4.0			0.16		L.002	
19	6	75				2.0			0.11		0.019	
26	7	75	10	00		5.0	L5.0		0.08		0.017	
18	8	75	11	00		5.0	L5.0		0.10		0.07	
5	11	75	11	30		6.0	5.6		L.01		L.002	
19	3	76	13	00		4.0			0.070		L.002	
13	7	76	14	50		25.	L5.	L5.	0.12		L.001	
24	8	76	10	15		4.	L5.	5.	0.06		L.001	

SAMPLE DATE			TIME AS		30305P ZINC EXTRBLE.	82103P LEAD DISSOLVED	82302P LEAD EXTRBLE.	80311P MERCURY EXTRBLE.	48302P CADMIUM EXTRBLE.	06581L HUMIC ACID
D	M	Y	H	M	ZN MG/L	PB MG/L	PB MG/L	HG UG/L	CD MG/L	MG/L
11	6	74			L.002	0.002	0.003			4
8	7	74			L.002	L.002	L.002			4
13	8	74			L.002	L.002 02P	L.002			L1 82L
8	9	74			0.011		0.004			2 82L
13	10	74			0.002	0.014 02P	0.014			3 82L
16	5	75			0.008		0.002	0.05	L.001	3 82L
19	6	75			0.19 04P		0.003	0.15	L.001	2 82L
26	7	75	10	00	0.02		L.002	L.05	L.001	2 82L
18	8	75	11	00	0.93 04P		0.004	L.05	0.001	L1 82L
5	11	75	11	30	0.007		0.005	L.05	L.001	L1 82L
19	3	76	13	00	L.002		0.002		L.001	1
13	7	76	14	50	L.001		0.003		L.001	15
24	8	76	10	15	0.005		L.001		0.002	2

WATER QUALITY SURVEILLANCE NETWORK

E.P.S. ATLANTIC REGION 1974-1976

STATION **00NB01BQ0021** LATITUDE **47** D **4** M **46** S LONGITUDE **66** D **12** M **55** S

CLEARWATER STREAM 800 M BELOW MINE 4 KM ABOVE SOUTH SEVOGLE RIVER, C-2 NORTHUMBERLAND COUNTY

SAMPLE DATE			TIME AS		02061F TEMP. WATER	08102F OXYGEN DISSOLVED DO	10301F PH	10301L PH	02041L SPECIFIC CONDUCTANCE	02073L TURBIDITY	10401L RESIDUE NONFILTR.	10451L RESIDUE FILTERABLE
D	M	Y	H	M	DEG.C.	O2 MG/L	PH UNITS	PH UNITS	USIE/CM	JTU	MG/L	MG/L
11	6	74			10.0 61S		7.2 01S	7.2	41	13.		
8	7	74			13.0 61S		7.3 01S	7.4	50	2.2		
13	8	74			18.0 61S		7.1 01S	7.0	41	L.5		
8	9	74			11.0 61S		7.0 01S	7.0	57	0.6		
13	10	74			5.0 61S		7.1 01S	7.0	52			
16	5	75			6.0		5.5	6.0	27			
19	6	75			10.		6.6	7.2	41			
26	7	75	11	00	16.	8.2	6.9	6.8	61			
18	8	75	12	30	16.	8.5	6.8	7.3	73			
5	11	75	12	00	4.0	6.0	6.6	7.0	66			
19	3	76	11	30	1.0	12.2	6.9	6.4	45			
20	5	76	17	15	7.0	9.8	6.3	6.8	30			
13	7	76	13	30	13.0	6.4	9.0	6.8	40			
24	8	76	09	15	10.5	8.8	6.8	6.9	30			

SAMPLE DATE			TIME AS		10501L RESIDUE FIXED NONFILTR.	10551L RESIDUE FIXED FILTERABLE	20103L CALCIUM DISSOLVED	20003P CALCIUM TOTAL	12102L MAGNESIUM DISSOLVED	12002P MAGNESIUM TOTAL	10606L HARDNESS TOTAL LAB CALC.	10101L ALKALINITY TOTAL
D	M	Y	H	M	MG/L	MG/L	CA MG/L	CA MG/L	MG MG/L	MG MG/L	CACO3 MG/L	CACO3 MG/L
11	6	74					6.1		0.6			13
8	7	74					7.9		0.9			16
13	8	74					5.4		0.6			15
8	9	74					9.2		1.0			24
13	10	74					7.7		0.9			17
16	5	75					3.2		0.5			5
19	6	75					6.0		0.7			13
26	7	75	11	00			9.3		0.9 03L			24
18	8	75	12	30			70.8		0.9 03L			25
5	11	75	12	00			9.2		1.0			24
19	3	76	11	30			6.6		0.9			16
20	5	76	17	15				3.6		0.5	11.	7
13	7	76	13	30				5.2		0.6	16.	8
24	8	76	09	15				3.8		0.5	12.	7

WATER QUALITY SURVEILLANCE NETWORK

E.P.S. ATLANTIC REGION 1974-1976

STATION **00NB01BQ0021** LATITUDE **47** D **4** M **46** S LONGITUDE **66** D **12** M **55** S

CLEARWATER STREAM 800 M BELOW MINE 4 KM ABOVE SOUTH SEVOGLE RIVER, C-2 NORTHUMBERLAND COUNTY

SAMPLE DATE			TIME AS		10251L ACIDITY PH = 8.3	16304L SULPHATE DISSOLVED	16502L THIOSULFATE TOTAL	16510L THIO-SALTS TOTAL	26302P IRON EXTRBLE.	29105P COPPER DISSOLVED	29305P COPPER EXTRBLE.	30105P ZINC DISSOLVED
D	M	Y	H	M	CACO3 MG/L	SO4 MG/L	S2O3 MG/L	S2O3 MG/L	FE MG/L	CU MG/L	CU MG/L	ZN MG/L
11	6	74							0.85	L.002	0.013	0.017
8	7	74							0.25	0.03	0.03	0.04
13	8	74							0.10	L.002	L.002	L.002
8	9	74							0.11	0.007	0.010	0.08
13	10	74							0.13	0.02	0.03	0.08
16	5	75				4.0			0.23		0.002	
19	6	75				4.0			0.09		0.015	
26	7	75	11	00		310.	L5.0		0.12		0.017	
18	8	75	12	30		5.0	L5.0		0.09		0.06	
5	11	75	12	00		12.0	5.6		L.01		L.002	
19	3	76	11	30		6.0	4.2		0.04		0.003	
20	5	76	17	15		7.	L5.	L5.	0.08		0.005	
13	7	76	13	30		14.	L5.	L5.	0.62		0.008	
24	8	76	09	15		3.	L5.	5.	0.12		L.001	

SAMPLE DATE			TIME AS		30305P ZINC EXTRBLE.	82103P LEAD DISSOLVED	82302P LEAD EXTRBLE.	80311P MERCURY EXTRBLE.	48302P CADMIUM EXTRBLE.	06581L HUMIC ACID
D	M	Y	H	M	ZN MG/L	PB MG/L	PB MG/L	HG UG/L	CD MG/L	MG/L
11	6	74			0.017	0.004	0.03			4
8	7	74			0.04	0.006	0.02			4
13	8	74			0.002	L.002 02P	L.002			L1 82L
8	9	74			0.09	0.006 02P	0.011			2 82L
13	10	74			0.08	0.02 02P	0.02			2 82L
16	5	75			0.008		0.003	L.05	L.001	3 82L
19	6	75			0.15 04P		0.005	L.05	L.001	2 82L
26	7	75	11	00	0.02		L.002	L.05	L.001	2 82L
18	8	75	12	30			0.002	0.05	L.001	L1 82L
5	11	75	12	00	0.01		0.005	L.05	L.001	1 82L
19	3	76	11	30	0.008		0.002	L.05	L.001	L1 82L
20	5	76	17	15	0.005		0.010	L.1	0.002	6
13	7	76	13	30	0.011		0.008		L.001	15
24	8	76	09	15	0.003		L.001		0.003	3

WATER QUALITY SURVEILLANCE NETWORK
E.P.S. ATLANTIC REGION 1974-1976

STATION **00NB01BQ0054** LATITUDE **47** D **4** M **7** S LONGITUDE **66** D **15** M **30** S

SOUTH SEVOGLE RIVER AT BRIDGE 6 KM ABOVE JUNCTION WITH CLEARWATER STREAM NORTHUMBERLAND COUNTY

SAMPLE DATE			TIME AS		02061F TEMP. WATER	08102F OXYGEN DISSOLVED DO	10301F PH	10301L PH	02041L SPECIFIC CONDUCTANCE	02073L TURBIDITY	10401L RESIDUE NONFILTR.	10451L RESIDUE FILTERABLE
D	M	Y	H	M	DEG.C.	O2 MG/L	PH UNITS	PH UNITS	USIE/CM	JTU	MG/L	MG/L
11	6	74			10.0 61S		6.7 01S	7.1	28	L.5		
8	7	74			17.0 61S		7.1 01S	6.7	34	L.5		
13	8	74			21.0 61S		7.5 01S	7.0	54	0.5		
8	9	74			11.0 61S		6.8 01S	7.0	41	L.5		
13	10	74			5.0 61S		6.7 01S	6.9	29			
16	5	75			6.0		5.1	6.3	18			
19	6	75			13.		6.2	6.1	24			
26	6	75	08	30	15.0	8.5	7.1	6.7	36			
18	8	75	10	30	16.	8.7	6.6	6.6	48			
5	11	75	11	00	3.0	7.0	6.6	7.0	40			
15	3	76	14	30	1.0	10.5	6.7	6.5	34			
20	5	76	18	15	6.0	12.0	6.1	6.4	20			
13	7	76	14	20	12.0	9.2	6.4	6.0	30			
24	8	76	10	00	10.0	9.6	6.8	6.6	35			

SAMPLE DATE			TIME AS		10501L RESIDUE FIXED NONFILTR.	10551L RESIDUE FIXED FILTERABLE	20103L CALCIUM DISSOLVED	20003P CALCIUM TOTAL	12102L MAGNESIUM DISSOLVED	12002P MAGNESIUM TOTAL	10606L HARDNESS TOTAL LAB CALC.	10101L ALKALINITY TOTAL
D	M	Y	H	M	MG/L	MG/L	CA MG/L	CA MG/L	MG MG/L	MG MG/L	CACO3 MG/L	CACO3 MG/L
11	6	74					3.8		0.5			8
8	7	74					4.8		0.6			10
13	8	74					9.3		0.9			22
8	9	74					4.8		0.6			14
13	10	74					3.9		0.6			9
16	5	75					1.8		0.4			2
19	6	75					2.6		0.5			6
26	6	75	08	30			4.9		0.6 03L			15
18	8	75	10	30			4.0		0.7 03L			11
5	11	75	11	00			5.4		0.7			14
15	3	76	14	30			5.0		0.7			9
20	5	76	18	15				2.		0.3	6.	3
13	7	76	14	20				3.4		0.5	11.	2
24	8	76	10	00				4.6		0.5	14.	9

WATER QUALITY SURVEILLANCE NETWORK

E.P.S. ATLANTIC REGION 1974-1976

STATION **00NB01BQ0054** LATITUDE **47** D **4** M **7** S LONGITUDE **66** D **15** M **30** S

SOUTH SEVOGLE RIVER AT BRIDGE 6 KM ABOVE JUNCTION WITH CLEARWATER STREAM NORTHUMBERLAND COUNTY

SAMPLE DATE			TIME AS		10251L ACIDITY PH = 8.3	16304L SULPHATE DISSOLVED	16502L THIOSULFATE TOTAL	16510L THIO-SALTS TOTAL	26302P IRON EXTRBLE.	29105P COPPER DISSOLVED	29305P COPPER EXTRBLE.	30105P ZINC DISSOLVED
D	M	Y	H	M	CACO3 MG/L	SO4 MG/L	S2O3 MG/L	S2O3 MG/L	FE MG/L	CU MG/L	CU MG/L	ZN MG/L
11	6	74							0.21	L.002	L.002	L.002
8	7	74							0.14	0.009	0.009	0.003
13	8	74							0.09	0.002	0.005	0.014
8	9	74							0.10	L.002	L.002	
13	10	74							0.18	L.002	0.002	0.02
16	5	75				4.0			0.25		L.002	
19	6	75				5.0			0.13		0.015	
26	6	75	08	30		5.0	L5.0		0.16		0.025	
18	8	75	10	30		10.0	L5.0		0.18		0.08	
5	11	75	11	00		8.0	6.7		0.04		L.002	
15	3	76	14	30		4.0	5.6		0.10		0.002	
20	5	76	18	15		6.	L5.	L5.	0.13		0.003	
13	7	76	14	20		22.	L5.	L5.	0.54		0.001	
24	8	76	10	00		3.	L5.	L5.	0.17		L.001	

SAMPLE DATE			TIME AS		30305P ZINC EXTRBLE.	82103P LEAD DISSOLVED	82302P LEAD EXTRBLE.	80311P MERCURY EXTRBLE.	48302P CADMIUM EXTRBLE.	06581L HUMIC ACID
D	M	Y	H	M	ZN MG/L	PB MG/L	PB MG/L	HG UG/L	CD MG/L	MG/L
11	6	74			L.002	0.002	0.002			4
8	7	74			0.003	L.002	0.005			5
13	8	74			0.020	L.002 02P	0.002			3 82L
8	9	74			0.006	0.004 02P	0.006			3 82L
13	10	74			0.03	0.014 02P	0.030			3 82L
16	5	75			0.004		0.002	L.05	0.001	4 82L
19	6	75			0.15 04P		0.005	2.9	L.001	2 82L
26	6	75	08	30	0.04		L.002	L.05	L.001	2 82L
18	8	75	10	30			0.008	0.05	0.002	1 82L
5	11	75	11	00	0.003		0.005	L.05	L.001	3 82L
15	3	76	14	30	0.002		0.011	L.05	L.001	1 82L
20	5	76	18	15	0.002		0.009	0.3	0.002	8
13	7	76	14	20	L.001		0.002		0.001	15
24	8	76	10	00	0.004		0.001		0.002	4

WATER QUALITY SURVEILLANCE NETWORK
E.P.S. ATLANTIC REGION 1974-1976

STATION **00NB01BQ0055** LATITUDE **47** D **3** M **49** S LONGITUDE **66** D **1** M **16** S

SOUTH SEVOGLE RIVER ABOUT 3 KM ABOVE CONFLUENCE OF SHEEPHOUSE BROOK NORTHUMBERLAND COUNTY

SAMPLE DATE			TIME		02061F TEMP. WATER	08102F OXYGEN DISSOLVED DO	10301F PH	10301L PH	02041L SPECIFIC CONDUCTANCE	02073L TURBIDITY	10401L RESIDUE NONFILTR	10451L RESIDUE FILTERABLE
			AS			O2						
D	M	Y	H	M	DEG.C.	MG/L	PH UNITS	PH UNITS	USIE/CM	JTU	MG/L	MG/L
11	6	74			10.0 61S		7.1 01S	6.6	27	L.5		
8	7	74			18.0 61S		7.3 01S	7.1	30	0.5		
13	8	74			21.0 61S		7.2 01S	6.0	34	L.5		
8	9	74			11.0 61S		6.8 01S	6.0	35	0.6		
13	10	74			5.0 61S		6.8 01S	6.6	27			
16	5	75			6.0		5.3	6.4	16			
19	6	75			13.		6.6	7.3	26			
26	7	75	12	00	17.	8.3	7.0	6.8	34			
18	8	75	09	30	18.	8.5	6.8	6.9	42			
5	11	75	10	00	3.0	5.0	6.5	6.7	36			
19	3	76	12	00	1.0	9.4	6.7	6.9	40			
20	5	76	16	30	8.5	11.7	6.3	6.4	20			
13	7	76	13	45	13.0	9.2	6.6	6.5	30			
24	8	76	12	00	15.0	7.4	6.6	6.4	30			

SAMPLE DATE			TIME		10501L RESIDUE FIXED NONFILTR.	10551L RESIDUE FIXED FILTERABLE	20103L CALCIUM DISSOLVED	20003P CALCIUM TOTAL	12102L MAGNESIUM DISSOLVED	12002P MAGNESIUM TOTAL	10606L HARDNESS TOTAL LAB CALC.	10101L ALKALINITY TOTAL
			AS				CA	CA	MG	MG	CACO3	CACO3
D	M	Y	H	M	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L
11	6	74					3.3		0.5			7
8	7	74					4.2		0.6			9
13	8	74					4.8		0.6			14
8	9	74					3.4		0.6			11
13	10	74					3.1		0.6			8
16	5	75					1.5		0.4			1
19	6	75					3.2		0.5			7
26	7	75	12	00			4.3		0.6 03L			11
18	8	75	09	30			5.0		0.6 03L			13
5	11	75	10	00			4.2		0.6			10
19	3	76	12	00			5.4		0.8			14
20	5	76	16	30				2.1		0.3	7.	3
13	7	76	13	45				3.8		0.6	12.	4
24	8	76	12	00				4.6		0.6	14.	9

WATER QUALITY SURVEILLANCE NETWORK

E.P.S. ATLANTIC REGION 1974-1976

STATION **00NB01BQ0055** LATITUDE **47** D **3** M **49** S LONGITUDE **66** D **1** M **16** S

SOUTH SEVOGLE RIVER ABOUT 3 KM ABOVE CONFLUENCE OF SHEEPHOUSE BROOK NORTHUMBERLAND COUNTY

SAMPLE DATE			TIME AS		10251L ACIDITY PH = 8.3	16304L SULPHATE DISSOLVED	16502L THIOSULFATE TOTAL	16510L THIO-SALTS TOTAL	26302P IRON EXTRBLE.	29105P COPPER DISSOLVED	29305P COPPER EXTRBLE.	30105P ZINC DISSOLVED
					CACO3	SO4	S2O3	S2O3	FE	CU	CU	ZN
D	M	Y	H	M	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L
11	6	74							0.09	L.002	L.002	
8	7	74							0.13	0.009	0.009	0.004
13	8	74							0.16	L.002	L.002	0.005
8	9	74							0.10	L.002	L.002	
13	10	74							0.12	L.002	L.002	
16	5	75				4.0			0.26		L.002	
19	6	75				4.0			0.11		0.017	
26	7	75	12	00		2.0	L5.0		0.11		0.017	
18	8	75	09	30		2.0	L5.0		0.15		0.07	
5	11	75	10	00		12.0	6.7		0.02		L.002	
19	3	76	12	00		7.0	5.6		0.04		0.002	
20	5	76	16	30		5.	L5.	L5.	0.23		0.003	
13	7	76	13	45		45.	L5.	L5.	0.59		0.005	
24	8	76	12	00		3.	L5.	L5.	0.13		L.001	

SAMPLE DATE			TIME AS		30305P ZINC EXTRBLE.	82103P LEAD DISSOLVED	82302P LEAD EXTRBLE.	80311P MERCURY EXTRBLE.	48302P CADMIUM EXTRBLE.	06581L HUMIC ACID
					ZN	PB	PB	HG	CD	
D	M	Y	H	M	MG/L	MG/L	MG/L	UG/L	MG/L	MG/L
11	6	74				0.002	0.002			4
8	7	74			0.004	0.005	0.005			5
13	8	74			0.005		L.002			3 82L
8	9	74			0.008		0.004			3 82L
13	10	74			0.004	0.017 02P	0.017			3 82L
16	5	75			L.002		0.002	0.05	L.001	3 82L
19	6	75			0.15 04P		0.005	0.07	L.001	2 82L
26	7	75	12	00	0.02		L.002	L.05	L.001	2 82L
18	8	75	09	30	1.0 04P		0.005	L.05	0.001	1 82L
5	11	75	10	00	0.007		0.004	L.05	L.001	2 82L
19	3	76	12	00	0.002		0.005	L.05	L.001	1 82L
20	5	76	16	30	0.003		0.007	L.1	0.001	9
13	7	76	13	45	0.004		0.005		0.001	10
24	8	76	12	00	0.006		0.001		0.003	5

BIOLOGICAL RESULTS

STATION: NB-45: Clearwater St., above Chester Mines

TAXA			SAMPLING PERIOD 1974 11/6-8/7
Arthropoda			
Insecta			
Plecoptera	Perlidae	Neophasganophora	2
Ephemeroptera	Heptageniidae	Stenonema	3
	Leptophlebidae	Paraleptophlebia	27
Tricoptera	Hydropsychidae	Hydropsyche	3
	Psychomyiidae	Polycentropus	3
Diptera	Simulidae	Simulium	7
	Tendipedidae	-	36
	Rhagionidae	Atherix	2
		Σ	83
		S	8
		DI	2.13

BIOLOGICAL RESULTS

STATION: NB-46: Clearwater St., below Chester Mines

TAXA			SAMPLING PERIOD 1974 11/6-8/7
Arthropoda			
Insecta			
Ephemeroptera	Baetidae	Cloeon	3
	Leptophlebidae	Paraleptophlebia	1
Tricoptera	Hydropsychidae	Hydropsyche	1
	Psychomyiidae	Polycentropus	1
Diptera	Tipulidae	Antocha	2
	Simulidae	Simulium	3
	Tendipedidae	-	197
		Σ	208
		S	7
		DI	0.43

BIOLOGICAL RESULTS

STATION: NB-47: South Sevogle River, above Sheephouse Brook

TAXA			SAMPLING PERIOD 1974 11/6-8/7	1974 8/7-13/9	1975 19/6-19/7
Annelida					
Oligochaeta			3		
Arthropoda					
Insecta					
Plecoptera	Pteronarcidae	Allonarcys			2
		Phasganophora			1
	Nemouridae	Nemoura			1
	Perlidae	Neophasganophora	1		
Ephemeroptera	Heptageniidae	Heptagenia			1
		Stenonema	26	17	
	Baetidae	Baetis			5
		Habrophebia	23		1
		Caenis	1		
	Ephemeridae	Ephemerella			6
	Leptophlebidae	Paraleptophebia		16	9
Tricoptera	Hydropsychidae	Hydropsyche		2	
		Arctopsyche			3
	Hydroptilidae	Ochrotrichia			1
		Limnephilus		1	
		Pycnopsyche			1
	Psychomyiidae	Polycentropus	1	4	
	Rhyacophilidae	Agapetus		3	
Diptera	Tendipedidae	-	126	75	6
	Rhagionidae	Atherix			67
		Σ	181	118	104
		S	7	7	13
		DI	1.37	1.67	2.04

(c) Southwest Miramichi (NB 43, 44)

Both stations monitored on the Southwest Miramichi River had soft water, low in dissolved solids, and with levels of trace metals common to this system. Thiosulphates and thiosalts were present in measurable quantities at both stations, as was cadmium.

Biological monitoring of the river in 1974 and 1975 showed a diverse fauna containing representative species of snails, oligochaetes, mayflies, caddisflies, chironomids, dobson and dragonflies.

WATER QUALITY SURVEILLANCE NETWORK

E.P.S. ATLANTIC REGION 1974-1976

STATION **00NB01BM0002** LATITUDE **46** D **33** M **25** S LONGITUDE **66** D **49** M **53** S

SOUTHWEST MIRAMICHI RIVER 2.4 KM ABOVE BURNTHILL BROOK AT WARDENS CAMP, BT-1 YORK COUNTY

SAMPLE DATE			TIME AS		02061F TEMP. WATER	08102F OXYGEN DISSOLVED DO	10301F PH	10301L PH	02041L SPECIFIC CONDUCTANCE	02073L TURBIDITY	10401L RESIDUE NONFILTR.	10451L RESIDUE FILTERABLE
D	M	Y	H	M	DEG.C.	O2 MG/L	PH UNITS	PH UNITS	USIE/CM	JTU	MG/L	MG/L
17	6	74			14.0 61S		6.9 01S	6.8	31	L.5		
23	7	74			18.0 61S		6.4 01S	5.1	30	0.4		
23	8	74			20.0 61S		7.1 01S	6.4	63	L.5		
1	10	74			7.0 61S		6.5 01S	6.9	32	0.6		
25	10	74			1.0 61S		6.9 01S	6.4	35	0.7		
3	6	75			12.		6.4	6.1	27			
14	7	75	10	30	20.	9.0	7.1	6.7	37			
16	8	75	10	30	20.	8.2	6.9	7.1	44			
29	10	75	12	00	9.0	7.3	6.9	6.6	36			
2	6	76	14	00	12.5	10.2	6.5	6.4	30			
16	7	76	15	40	20.0	8.7	6.5	6.6	50			
27	8	76	11	00	13.0	6.2	6.1	6.5	350			

SAMPLE DATE			TIME AS		10501L RESIDUE FIXED NONFILTR.	10551L RESIDUE FIXED FILTERABLE	20103L CALCIUM DISSOLVED	20003P CALCIUM TOTAL	12102L MAGNESIUM DISSOLVED	12002P MAGNESIUM TOTAL	10606L HARDNESS TOTAL LAB CALC.	10101L ALKALINITY TOTAL
D	M	Y	H	M	MG/L	MG/L	CA MG/L	CA MG/L	MG MG/L	MG MG/L	CACO3 MG/L	CACO3 MG/L
17	6	74					3.7		0.7			8
23	7	74					3.6		0.7			8
23	8	74					4.5		0.8			11
1	10	74					4.5		0.9			11
25	10	74					4.1		0.8			10
3	6	75					3.3		0.6			7
14	7	75	10	30			4.6		0.9 03L			15
16	8	75	10	30			5.0		1.0 03L			15
29	10	75	12	00			4.4		0.9			11
2	6	76	14	00				3.3		0.6	11.	5
16	7	76	15	40				3.8		0.7	12.	5
27	8	76	11	00				4.6		0.7	15.	2

WATER QUALITY SURVEILLANCE NETWORK

E.P.S. ATLANTIC REGION 1974-1976

STATION **00NB01BM0002** LATITUDE **46** D **33** M **25** S LONGITUDE **66** D **49** M **53** S

SOUTHWEST MIRAMICHI RIVER 2.4 KM ABOVE BURNTHILL BROOK AT WARDENS CAMP, BT-1 YORK COUNTY

SAMPLE DATE			TIME AS		10251L ACIDITY PH = 8.3	16304L SULPHATE DISSOLVED	16502L THIOSULFATE TOTAL	16510L THIO-SALTS TOTAL	26302P IRON EXTRBLE.	29105P COPPER DISSOLVED	29305P COPPER EXTRBLE.	30105P ZINC DISSOLVED
					CACO3	SO4	S2O3	S2O3	FE	CU	CU	ZN
D	M	Y	H	M	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L
17	6	74							0.17	L.002	L.002	0.002
23	7	74							0.18	L.002	L.002	L.002
23	8	74							0.15	L.002	L.002	0.003
1	10	74							0.28		L.002	
25	10	74							0.12	L.002	L.002	0.009
3	6	75				4.0			0.22		0.004	
14	7	75	10	30		8.0	L5.0		0.24		0.027	
16	8	75	10	30		5.0			0.24		0.07	
29	10	75	12	00		6.0	5.6		0.08		L.002	
2	6	76	14	00		4.	L5.	L5.	0.21		L.001	
16	7	76	15	40		1.4	L5.	L5.	0.21		0.001	
27	8	76	11	00		4.	L5.	5.	0.12		L.001	

SAMPLE DATE			TIME AS		30305P ZINC EXTRBLE.	82103P LEAD DISSOLVED	82302P LEAD EXTRBLE.	80311P MERCURY EXTRBLE.	48302P CADMIUM EXTRBLE.	06581L HUMIC ACID
					ZN	PB	PB	HG	CD	
D	M	Y	H	M	MG/L	MG/L	MG/L	UG/L	MG/L	MG/L
17	6	74			0.003	0.002	0.013			7
23	7	74			L.002	L.002	L.002			17
23	8	74			0.005	0.004 02P	0.004			7 82L
1	10	74			0.005	0.003	0.007			15 82L
25	10	74			0.009	0.010 02P	0.010			5 82L
3	6	75			0.07		0.002	L.05	L.001	4 82L
14	7	75	10	30	0.04		0.003	L.05	L.001	5 82L
16	8	75	10	30	1.2 04P		0.002	0.05	0.002	2 82L
29	10	75	12	00	0.007		0.004	L.05	L.001	9 82L
2	6	76	14	00	L.001		L.001		L.001	15
16	7	76	15	40	L.001		0.002		L.001	15
27	8	76	11	00	0.003		L.001		0.003	7

WATER QUALITY SURVEILLANCE NETWORK

E.P.S. ATLANTIC REGION 1974-1976

STATION **00NB01BM0003** LATITUDE **46** D **34** M **22** S LONGITUDE **66** D **47** M **40** S

SOUTHWEST MIRAMICHI RIVER 1 KM BELOW BURNTHILL BROOK, YORK COUNTY

SAMPLE DATE D	M	Y	TIME AS H	M	02061F TEMP. WATER DEG.C.	08102F OXYGEN DISSOLVED DO O2 MG/L	10301F PH PH UNITS	10301L PH PH UNITS	02041L SPECIFIC CONDUCTANCE USIE/CM	02073L TURBIDITY JTU	10401L RESIDUE NONFILTR. MG/L	10451L RESIDUE FILTERABLE MG/L
17	6	74			14.0 61S		7.0 01S	6.2	33	L.5		
23	7	74			18.0 61S		6.3 01S	5.4	29	0.3		
23	8	74			20.0 61S		7.1 01S	6.2	33	0.8		
1	10	74			7.0 61S		6.3 01S	6.2	32	0.7		
25	10	74			1.0 61S		6.8 01S	4.3	58	1.1		
3	6	75			12.		6.1	6.5	27			
14	7	75	11	00	20.0	9.5	7.0	6.5	33			
16	8	75	11	00	21.	8.1	6.8	6.9	40			
29	10	75	12	30	6.0	7.5	6.7	6.6	37			
2	6	76	15	00	12.5	9.9	6.8	6.4	30			
16	7	76	16	00	20.0	8.7	6.7	6.7	37			
27	8	76	11	15	13.5	6.3	6.7	6.6	30			

SAMPLE DATE D	M	Y	TIME AS H	M	10501L RESIDUE FIXED NONFILTR. MG/L	10551L RESIDUE FIXED FILTERABLE MG/L	20103L CALCIUM DISSOLVED CA MG/L	20003P CALCIUM TOTAL CA MG/L	12102L MAGNESIUM DISSOLVED MG MG/L	12002P MAGNESIUM TOTAL MG MG/L	10606L HARDNESS TOTAL LAB CALC. CACO3 MG/L	10101L ALKALINITY TOTAL CACO3 MG/L
17	6	74					4.0		0.7			8
23	7	74					3.8		0.6			7
23	8	74					4.1		0.8			13
1	10	74					4.3		0.9			8
25	10	74					4.2		0.9			L1
3	6	75					3.3		0.6			8
14	7	75	11	00			4.0		0.7 03L			14
16	8	75	11	00			4.8		0.8 03L			14
29	10	75	12	30			4.5		0.8			9
2	6	76	15	00				3.3		0.6	11.	5
16	7	76	16	00				3.8		0.6	12.	5
27	8	76	11	15				4.4		0.7	14.	10

WATER QUALITY SURVEILLANCE NETWORK

E.P.S. ATLANTIC REGION 1974-1976

STATION **00NB01BM0003** LATITUDE **46 D 34 M 22 S** LONGITUDE **66 D 47 M 40 S**

SOUTHWEST MIRAMICHI RIVER 1 KM BELOW BURNTHILL BROOK, YORK COUNTY

SAMPLE DATE			TIME AS		10251L ACIDITY PH=8.3	16304L SULPHATE DISSOLVED	16502L THIOSULFATE TOTAL	16510L THIO-SALTS TOTAL	26302P IRON EXTRBLE.	29105P COPPER DISSOLVED	29305P COPPER EXTRBLE.	30105P ZINC DISSOLVED
					CACO3	SO4	S2O3	S2O3	FE	CU	CU	ZN
D	M	Y	H	M	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L
17	6	74							0.13	L.002	L.002	0.003
23	7	74							0.21	L.002	L.002	
23	8	74							0.35	L.002	L.002	0.002
1	10	74							0.33		L.002	
25	10	74			7.3				0.24	L.002	L.002	0.004
3	6	75				4.0			0.23		0.002	
14	7	75	11	00		8.0	L5.0		0.11		0.025	
16	8	75	11	00		5.0	L5.0		0.21		0.07	
29	10	75	12	30		6.0	7.3		0.07		L.002	
2	6	76	15	00		4.	L5.	L5.	0.18		0.001	
16	7	76	16	00		14.	L5.	L5.	0.13		L.001	
27	8	76	11	15		3.	L5.	5.	0.14		L.001	

SAMPLE DATE			TIME AS		30305P ZINC EXTRBLE.	82103P LEAD DISSOLVED	82302P LEAD EXTRBLE.	80311P MERCURY EXTRBLE.	48302P CADMIUM EXTRBLE.	D6581L HUMIC ACID
					ZN	PB	PB	HG	CD	
D	M	Y	H	M	MG/L	MG/L	MG/L	UG/L	MG/L	MG/L
17	6	74			0.003	0.003	0.003			6
23	7	74				L.002	L.002			17
23	8	74			0.005	0.004 02P	0.004			7 821
1	10	74			0.010	0.005	0.007			16 821
25	10	74			0.008	0.007 02P	0.010			6 821
3	6	75			0.02		0.003	L.05	L.001	4 821
14	7	75	11	00	0.04		0.003	L.05	L.001	3 821
16	8	75	11	00	0.83 04P		0.005	0.1	0.001	2 821
29	10	75	12	30	0.009		0.002	L.05	L.001	8 821
2	6	76	15	00	L.001		L.001		L.001	15
16	7	76	16	00	L.001		0.002		0.001	15
27	8	76	11	15	0.002		L.001		0.004	7

BIOLOGICAL RESULTS

STATION: NB-43: S. W. Miramichi, above Burnt Hill Brook

	TAXA		SAMPLING PERIOD 1974 17/6-23/7	1975 4/6-14/7	1975 14/7-16/8
Annelida					
Oligochaeta	Lumbriculidae	-		36	
Mollusca					
Gastropoda	Amnicolidae	Amnicola		2	
	Ancyclidae	Ferrissia		6	
	Physidae	Physa		1	4
Arthropoda					
Arachnoida					
Hydracarina				6	
Insecta					
Ephemeroptera	Heptageniidae	Heptagenia			17
		Stenonema	12	8	15
	Baetidae	Caenis	1		
		Tricorythodes			3
	Ephemeridae	Ephemerella		34	
		Ephemerella 1			5
	Leptophlebidae	Paraleptophlebia	16		
Odonata	Aeshnidae	Boyeria			6
Megaloptera	Corydalidae	Nigronia			3
Tricoptera	Brachycentridae	Brachycentrus			2
	Hydropsychidae	Hydropsche	3		
	Leptoceridae	Oecetis		1	
	Psychomyiidae	Polycentropus			1
Coleoptera	Elmidae	Stenelmis			1
Diptera	Tipulidae	Antocha	10		
	Tendipedidae	-	7	49	6
	Rhagionidae	Atherix	4	4	3
		Σ	53	148	66
		S	7	10	12
		DI	2.47	2.48	3.09

4.2.7 Piskahegan Magaquadavic Rivers (NB 57, 54, 55, 55A, 56)

The Magaquadavic River Basin encompasses a drainage area of some 1800 hectares (710 square miles) in the southwestern part of New Brunswick. The basin is situated in the heavily forested St. Croix Highlands, and has a low population density. The major source of effluent to the Magaquadavic System is the Brunswick Tin mine (Mount Pleasant Mine) located on the Piskahegan River, a tributary of the Magaquadavic.

At the Hatch Brook and Piskahegan Stations the water is soft, low in dissolved solids, and experiences high summer temperatures. The levels of most trace metals, although slightly high, are not unusual for New Brunswick rivers. Antimony and tin were present in measurable quantities and arsenic levels reached as high as 25 ppb.

Conditions on the Magaquadavic River were similar. Throughout the river, the high summer temperatures prevailed, as did the arsenic levels.

Biological samples taken in late summer, 1974, showed diverse fauna, although total numbers of organisms collected were low.

In 1977, mining activity at Mount Pleasant Mine ceased, and the main shaft was allowed to flood. No further mining is planned at this site in the near future.

WATER QUALITY SURVEILLANCE NETWORK
E.P.S. ATLANTIC REGION 1974-1976

STATION **00NB01AQ0016** LATITUDE **45** D **26** M **10** S LONGITUDE **66** D **51** M **2** S

HATCH BROOK AT BRIDGE 2.3 KM ABOVE PISKHEGAN RIVER, CHARLOTTE COUNTY CHARLOTTE COUNTY NEW BRUN

SAMPLE DATE D	M	Y	TIME AS H	M	02061F TEMP. WATER DEG.C.	08102F OXYGEN DISSOLVED DO O2 MG/L	10301F PH PH UNITS	10301L PH PH UNITS	02041L SPECIFIC CONDUCTANCE USIE/CM	02073L TURBIDITY JTU	10401L RESIDUE NONFILTR. MG/L	10451L RESIDUE FILTERABLE MG/L
27	6	74	19	00	16.0 61S			6.2		0.5		
10	9	74				11.2 02S	7.5 01S					
10	6	75	15	00	14.0 62S		5.9 01S	6.3	90		2	
16	7	75	13	00	19.0 62S	9.5 02S	6.5 01S	6.7	140		L2	
12	8	75	11	30	18.0 62S	7.3 02S	6.4 01S	6.0	110		3	
3	11	75	12	00	6.0 62S		6.3 01S	6.8	110		L2	
24	6	76			25.5	7.6	5.8	6.9	50		L1	
12	8	76	11	00	19.0	8.0	6.6	6.2	30		2	
25	8	76	10	20	16.0	8.5	6.6	6.5	50		9	

SAMPLE DATE D	M	Y	TIME AS H	M	10501L RESIDUE FIXED NONFILTR. MG/L	10551L RESIDUE FIXED FILTERABLE MG/L	20103L CALCIUM DISSOLVED CA MG/L	20003P CALCIUM TOTAL CA MG/L	12102L MAGNESIUM DISSOLVED MG MG/L	12002P MAGNESIUM TOTAL MG MG/L	10606L HARDNESS TOTAL LAB CALC. CACO3 MG/L	10101L ALKALINITY TOTAL CACO3 MG/L
27	6	74	19	00			2.9		0.6			
10	9	74					5.2		1.0			
10	6	75	15	00				2.92		0.4		
16	7	75	13	00				4.91		0.6		
12	8	75	11	30				8.40		0.8		
3	11	75	12	00				6.3		0.8		5
24	6	76						5.6		0.7	17.	15
12	8	76	11	00				4.0		0.6	13.	4
25	8	76	10	20				6.4		0.8	19.	8

WATER QUALITY SURVEILLANCE NETWORK
E.P.S. ATLANTIC REGION 1974-1976

STATION **00NB01AQ0016** LATITUDE **45** D **26** M **10** S LONGITUDE **66** D **51** M **2** S

HATCH BROOK AT BRIDGE 2.3 KM ABOVE PISKHEGAN RIVER, CHARLOTTE COUNTY CHARLOTTE COUNTY NEW BRUN

SAMPLE DATE D	M	Y	TIME H	M	16304L SULPHATE DISSOLVED AS SO4 MG/L	26302P IRON EXTRBLE. FE MG/L	25304P MANGANESE EXTRBLE. MN MG/L	29305P COPPER EXTRBLE. CU MG/L	30305P ZINC EXTRBLE. ZN MG/L	82302P LEAD EXTRBLE. PB MG/L	33003P ARSENIC TOTAL AS MG/L	33303P ARSENIC EXTRBLE. AS MG/L
27	6	74	19	00						L.002 02L		L.001
10	6	75	15	00	5.0 03L			0.024				
16	7	75	13	00	5.0 03L							
12	8	75	11	30	10.0 03L			0.004				L.1
3	11	75	12	00	10.0 03L						0.004	
24	6	76			7.			0.002			L.005	
12	8	76	11	00	5.			0.001			L.005	
25	8	76	10	20	5.			0.001				

SAMPLE DATE D	M	Y	TIME H	M	80311P MERCURY EXTRBLE. AS HG UG/L	51302P ANTIMONY EXTRBLE. SB MG/L	48302P CADMIUM EXTRBLE. CD MG/L	50301P TIN EXTRBLE. SN MG/L	06581L HUMIC ACID MG/L
27	6	74	19	00					11
10	9	74				0.03		1.5	7 82L
10	6	75	15	00		L.02			13
16	7	75	13	00	L.10				7
12	8	75	11	30	L.10				4
3	11	75	12	00	L.10	L.01			10
24	6	76				L.01			10
12	8	76	11	00		L.01			8
25	8	76	10	20		L.001			15

WATER QUALITY SURVEILLANCE NETWORK
E.P.S. ATLANTIC REGION 1974-1976

STATION **00NB01AQ0011** LATITUDE **45** D **25** M **8** S LONGITUDE **66** D **53** M **13** S

PISKAHEGAN RIVER AT BRIDGE, 3 KM BELOW CONFLUENCE WITH HATCH BROOK, MP-2 CHARLOTTE COUNTY

SAMPLE DATE			TIME AS		02061F TEMP. WATER	08102F OXYGEN DISSOLVED DO	10301F PH	10301L PH	02041L SPECIFIC CONDUCTANCE	02073L TURBIDITY	10401L RESIDUE NONFILTR.	10451L RESIDUE FILTERABLE
D	M	Y	H	M	DEG.C.	O2 MG/L	PH UNITS	PH UNITS	USIE/CM	JTU	MG/L	MG/L
15	5	74			13.0 61S			6.2	24	1.5		
27	6	74				10.2 02S	8.0 01S	6.2		1.6		
10	9	74				10.8 02S	7.2 01S	6.6		L.5		
10	6	75	14	30	13.0 62S		5.6 01S	6.1	80		1	
16	7	75	12	30	25.0 62S	9.0 02S	6.6 01S	6.6	80		L2	
12	8	75	11	00	20.0 62S	7.9 02S	6.8 01S	5.8	80		L2	
3	11	75	11	30	5.0 62S		6.1 01S	6.4	100		L2	
24	6	76	15	10	31.0	6.8	6.7	6.9	40		L1	
12	8	76	10	40	21.0	8.4	6.7	6.2	30		3	
25	8	76	10	05	17.0	8.6	6.2	6.2	350		2	

SAMPLE DATE			TIME AS		10501L RESIDUE FIXED NONFILTR.	10551L RESIDUE FIXED FILTERABLE	20103L CALCIUM DISSOLVED	20003P CALCIUM TOTAL	12102L MAGNESIUM DISSOLVED	12002P MAGNESIUM TOTAL	10606L HARDNESS TOTAL LAB CALC.	10101L ALKALINITY TOTAL
D	M	Y	H	M	MG/L	MG/L	CA MG/L	CA MG/L	MG MG/L	MG MG/L	CACO3 MG/L	CACO3 MG/L
15	5	74					2.1		0.4			3
27	6	74					3.5		0.6			
10	9	74					4.7		0.9			
10	6	75	14	30				2.60		0.4		
16	7	75	12	30				5.04		0.6		
12	8	75	11	00				7.24		0.9		
3	11	75	11	30				5.9		0.8		3
24	6	76	15	10				5.0		0.7	15.	10
12	8	76	10	40				4.0		0.6	13.	4
25	8	76	10	05				4.4		0.7	14.	5

WATER QUALITY SURVEILLANCE NETWORK

E.P.S. ATLANTIC REGION 1974-1976

STATION **00NB01AQ0011** LATITUDE **45** D **25** M **8** S LONGITUDE **66** D **53** M **13** S

PISKAHEGAN RIVER AT BRIDGE, 3 KM BELOW CONFLUENCE WITH HATCH BROOK, MP-2 CHARLOTTE COUNTY

SAMPLE DATE			TIME		16304L SULPHATE DISSOLVED	26302P IRON EXTRBLE.	25304P MANGANESE EXTRBLE.	29305P COPPER EXTRBLE.	30305P ZINC EXTRBLE.	82302P LEAD EXTRBLE.	33003P ARSENIC TOTAL	33303P ARSENIC EXTRBLE.
			AS									
					SO4	FE	MN	CU	ZN	PB	AS	AS
D	M	Y	H	M	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L
15	5	74				0.17		L.002	0.008	0.005	0.025	
27	6	74								L.002 02L		
10	9	74				0.12		L.002	0.03	0.014		L.001
10	6	75	14	30	L5.0 03L			0.026				
16	7	75	12	30	5.0 03L							L.1
12	8	75	11	00	5.0 03L			0.002			0.006	
3	11	75	11	30	10.0 03L			0.002			L.005	
24	6	76	15	10	7.			L.001			L.005	
12	8	76	10	40	2.			L.001				
25	8	76	10	05	3.							

SAMPLE DATE			TIME		80311P MERCURY EXTRBLE.	51302P ANTIMONY EXTRBLE.	48302P CADMIUM EXTRBLE.	50301P TIN EXTRBLE.	06581L HUMIC ACID
			AS						
					HG	SB	CD	SN	
D	M	Y	H	M	UG/L	MG/L	MG/L	MG/L	MG/L
15	5	74				0.04		L1.0	19
27	6	74							13
10	9	74				0.03		L1.0	11 82L
10	6	75	14	30	0.4	L.02			13
16	7	75	12	30	L.10				8
12	8	75	11	00	L.10				5
3	11	75	11	30	L.10	L.01			19
24	6	76	15	10		L.01			15
12	8	76	10	40		L.01			13
25	8	76	10	05		L.01			35

WATER QUALITY SURVEILLANCE NETWORK
E.P.S. ATLANTIC REGION 1974-1976

STATION **00NB01AQ0012** LATITUDE **45** D **23** M **48** S LONGITUDE **66** D **55** M **15** S

MAGAGUADAVIC RIVER AT POMEROY BRIDGE, 1.75 KM ABOVE PISKAHEGAN RIVER, MP-3 CHARLOTTE COUNTY

SAMPLE DATE			TIME		02061F TEMP. WATER	08102F OXYGEN DISSOLVED DO	10301F PH	10301L PH	02041L SPECIFIC CONDUCTANCE	02073L TURBIDITY	10401L RESIDUE NONFILTR.	10451L RESIDUE FILTERABLE
			AS			O2						
D	M	Y	H	M	DEG.C.	MG/L	PH UNITS	PH UNITS	USIE/CM	JTU	MG/L	MG/L
15	5	74			12.0 61S			6.4	27	1.4		
27	6	74	17	30	19.5 61S			6.3		0.6		
10	9	74				11.0 02S	7.1 01S	7.1		0.6		
10	6	75	14	00	13.0 62S		6.1 01S	6.7	100		6	
16	7	75	12	00	22.0 62S	8.5 02S	7.1 01S	6.8	80		L2	
12	8	75	10	30	20.0 62S	8.1 02S	6.7 01S	5.9	70		5	
3	11	75	11	00	4.0 62S		6.3 01S	6.4	100		L2	
24	3	76	10	30	1.0 62S	10.0 02S	6.3 01S	6.8	30		2	
24	6	76	15	30	31.0	6.5	6.6	7.0	40		L1	
12	8	76	10	15	22.0	8.2	6.7	6.8	40		5	
25	8	76	09	40	17.0	8.4	6.4	6.9	40		L2	

SAMPLE DATE			TIME		10501L RESIDUE FIXED NONFILTR.	10551L RESIDUE FIXED FILTERABLE	20103L CALCIUM DISSOLVED	20003P CALCIUM TOTAL	12102L MAGNESIUM DISSOLVED	12002P MAGNESIUM TOTAL	10606L HARDNESS TOTAL LAB CALC.	10101L ALKALINITY TOTAL
			AS				CA	CA	MG	MG	CACO3	CACO3
D	M	Y	H	M	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L
15	5	74					3.0		0.5			
27	6	74	17	30			4.1		0.6			
10	9	74					9.7		1.0			
10	6	75	14	00				3.80		0.5		
16	7	75	12	00				4.84		0.5		
12	8	75	10	30				6.16		0.6		
3	11	75	11	00				6.0		0.6		10
24	3	76	10	30				5.3		0.5		6
24	6	76	15	30				6.3		0.6	18.	15
12	8	76	10	15				4.8		0.6	14.	10
25	8	76	09	40				6.0		0.7	18.	

WATER QUALITY SURVEILLANCE NETWORK

E.P.S. ATLANTIC REGION 1974-1976

STATION **00NB01AQ0012** LATITUDE **45** D **23** M **48** S LONGITUDE **66** D **55** M **15** S

MAGAGUADAVIC RIVER AT POMEROY BRIDGE, 1.75 KM ABOVE PISKAHEGAN RIVER, MP-3 CHARLOTTE COUNTY

SAMPLE DATE D	M	Y	TIME AS H	M	16304L SULPHATE DISSOLVED SO4 MG/L	26302P IRON EXTRBLE. FE MG/L	25304P MANGANESE EXTRBLE. MN MG/L	29305P COPPER EXTRBLE. CU MG/L	30305P ZINC EXTRBLE. ZN MG/L	82302P LEAD EXTRBLE. PB MG/L	33003P ARSENIC TOTAL AS MG/L	33303P ARSENIC EXTRBLE. AS MG/L
15	5	74				0.12		L.002	L.002	0.003	0.037	
27	6	74	17	30						L.002 02L		
10	9	74				0.10		L.002	0.007	0.012		
10	6	75	14	00	L5.0 03L			0.024				L.001
16	7	75	12	00	L5.0 03L							
12	8	75	10	30	5.0 03L							L.1
3	11	75	11	00	8.0 03L			0.003				L.005
24	3	76	10	30	4.0 03L			0.001				
24	6	76	15	30	4.			0.001			0.003	
12	8	76	10	15	4.			L.001			L.005	
25	8	76	09	40	4.						L.005	

SAMPLE DATE D	M	Y	TIME* AS* H	M	80311P MERCURY EXTRBLE. HG UG/L	51302P ANTIMONY EXTRBLE. SB MG/L	48302P CADMIUM EXTRBLE. CD MG/L	50301P TIN EXTRBLE. SN MG/L	06581L HUMIC ACID MG/L
15	5	74				0.03		L1.0	16
27	6	74	17	30					13
10	9	74				0.02		L1.0	10 82L
10	6	75	14	00	0.4	L.02			11
16	7	75	12	00	L.10				8
12	8	75	10	30	L.10				9
3	11	75	11	00	L.10	L.01			15
24	3	76	10	30	L.1	L.01			10
24	6	76	15	30		L.01			9
12	8	76	10	15		L.01			15
25	8	76	09	40		L.01			10

WATER QUALITY SURVEILLANCE NETWORK
E.P.S. ATLANTIC REGION 1974-1976

STATION **00NB01AQ0013** LATITUDE **45** D **21** M **38** S LONGITUDE **66** D **53** M **25** S

MAGAGUADAVIC RIVER 2.75 KM BELOW PISKAHEGAN RIVER AT LITTLE FALLS, MP-4 CHARLOTTE COUNTY

SAMPLE DATE D	M	Y	TIME AS H	M	02061F TEMP. WATER DEG.C.	08102F OXYGEN DISSOLVED DO O2 MG/L	10301F PH PH UNITS	10301L PH PH UNITS	02041L SPECIFIC CONDUCTANCE USIE/CM	02073L TURBIDITY JTU	10401L RESIDUE NONFILTR. MG/L	10451L RESIDUE FILTERABLE MG/L
15	5	74			13.0 61S			6.4	26	2.2		
27	6	74	16	30	19.0 61S			6.5	33	0.7		
10	9	74				10.4 02S	7.2 01S	6.9		L.5		
10	6	75	16	00	14.0 62S		6.3 01S	6.6	90		7	
16	7	75	13	30	25.0 62S	8.5 02S	7.5 01S	6.4	60		L2	
12	8	75	12	30	23.0 62S	7.3 02S	6.5 01S	6.0	60		2	
3	11	75	12	30	5.0 62S		6.2 01S	7.4	100		L2	
24	3	76	09	30	1.0 62S	10.1 02S	6.5 01S	6.6	30		3	
24	6	76	15	55	30.0	6.4	6.7	7.0	40		L1	
12	8	76	12	10	22.0	8.1	6.2	6.6	30		7	
25	8	76	09	15	19.0	8.2	6.4	6.6	40		2	

SAMPLE DATE D	M	Y	TIME AS H	M	10501L RESIDUE FIXED NONFILTR. MG/L	10551L RESIDUE FIXED FILTERABLE MG/L	20103L CALCIUM DISSOLVED CA MG/L	20003P CALCIUM TOTAL CA MG/L	12102L MAGNESIUM DISSOLVED MG MG/L	12002P MAGNESIUM TOTAL MG MG/L	10606L HARDNESS TOTAL LAB CALC. CACO3 MG/L	10101L ALKALINITY TOTAL CACO3 MG/L
15	5	74					2.9		0.5			
27	6	74	16	30			4.1		0.6			7
10	9	74					7.3		0.9			
10	6	75	16	00				3.40		0.4		
16	7	75	13	30				4.72		0.5		
12	8	75	12	30				5.16		0.5		
3	11	75	12	30				6.1		0.7		8
24	3	76	09	30				4.8		0.5		5
24	6	76	15	55				5.9		0.7	18.	15
12	8	76	12	10				4.4		0.6	13.	8
25	8	76	09	15				5.2		0.7	16.	8

WATER QUALITY SURVEILLANCE NETWORK

E.P.S. ATLANTIC REGION 1974-1976

STATION **00NB01AQ0013** LATITUDE **45** D **21** M **38** S LONGITUDE **66** D **53** M **25** S

MAGAGUADAVIC RIVER 2.75 KM BELOW PISKAHEGAN RIVER AT LITTLE FALLS, MP-4 CHARLOTTE COUNTY

SAMPLE DATE			TIME AS		16304L SULPHATE DISSOLVED	26302P IRON EXTRBLE.	25304P MANGANESE EXTRBLE.	29305P COPPER EXTRBLE.	30305P ZINC EXTRBLE.	82302P LEAD EXTRBLE.	33003P ARSENIC TOTAL	33303P ARSENIC EXTRBLE.
D	M	Y	H	M	SO4 MG/L	FE MG/L	MN MG/L	CU MG/L	ZN MG/L	PB MG/L	AS MG/L	AS MG/L
15	5	74				0.14		L.002	L.002	0.005	0.021	
27	6	74	16	30			0.02 04L			0.002 02L		
10	9	74				0.10		0.011	0.01	0.009		L.001
10	6	75	16	00	5.0 03L			0.039				
16	7	75	13	30	L5.0 03L							
12	8	75	12	30	4.0 03L							L.1
3	11	75	12	30	9.0 03L			0.002				L.005
24	3	76	09	30	5.0 03L			0.002				
24	6	76	15	55	4.			0.001			L.003	
12	8	76	12	10	2.			L.001			L.005	
25	8	76	09	15	0.3			L.001			L.005	

SAMPLE DATE			TIME AS		80311P MERCURY EXTRBLE.	51302P ANTIMONY EXTRBLE.	48302P CADMIUM EXTRBLE.	50301P TIN EXTRBLE.	06581L HUMIC ACID
D	M	Y	H	M	HG UG/L	SB MG/L	CD MG/L	SN MG/L	MG/L
15	5	74				0.013		L1.0	16
27	6	74	16	30					14
10	9	74				0.03		L1.0	10 82L
10	6	75	16	00	0.6	L.02			12
16	7	75	13	30	0.10				8
12	8	75	12	30	0.10				6
3	11	75	12	30	L.10	L.01			14
24	3	76	09	30	0.1	L.01			8
24	6	76	15	55		L.01			8
12	8	76	12	10		L.01			10
25	8	76	09	15		L.01			10

WATER QUALITY SURVEILLANCE NETWORK
E.P.S. ATLANTIC REGION 1974-1976

STATION **00NB01AQ0002** LATITUDE **45** D **13** M **55** S LONGITUDE **66** D **50** M **42** S

MAGAGUADAVIC RIVER AT COVERED BRIDGE AT SECOND FALLS, (WSC GAUGE) CHARLOTTE COUNTY

SAMPLE DATE			TIME		02061F TEMP. WATER	08102F OXYGEN DISSOLVED DO	10301F PH	10301L PH	02041L SPECIFIC CONDUCTANCE	02073L TURBIDITY	10401L RESIDUE NONFILTR.	10451L RESIDUE FILTERABLE
			AS			O2						
D	M	Y	H	M	DEG.C.	MG/L	PH UNITS	PH UNITS	USIE/CM	JTU	MG/L	MG/L
15	5	74			12.0 61S			6.0	26	5.0	L10	35
27	6	74				10.8 02S	7.9 01S	6.5		1.2		
10	9	74				10.2 02S	7.2 01S	6.5		0.8		
10	6	75			14.		6.2	6.4	27	0.7		
16	7	75	14	00	23.0	8.4	6.8	6.5	35	1.0		
12	8	75	13	00	23.	7.4	6.5	6.6	44	0.8		
3	11	75	13	00	7.0	5.5	6.5	6.8	46	1.0		
24	3	76	08	30	0.0	11.4	6.5	6.0	33	0.6		
24	6	76	16	25	31.0	6.8	6.7	7.0	40		L1	
12	8	76	12	40	25.0	8.0	6.5	6.5	30		3	
25	8	76	08	50	20.0	7.8	6.4	7.1	450		L2	

SAMPLE DATE			TIME		10501L RESIDUE FIXED NONFILTR.	10551L RESIDUE FIXED FILTERABLE	20103L CALCIUM DISSOLVED	20003P CALCIUM TOTAL	12102L MAGNESIUM DISSOLVED	12002P MAGNESIUM TOTAL	10606L HARDNESS TOTAL LAB CALC.	10101L ALKALINITY TOTAL
			AS				CA	CA	MG	MG	CACO3	CACO3
D	M	Y	H	M	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L
15	5	74			L10	11	2.5		0.5 03L			
27	6	74					4.1		0.6			
10	9	74					4.8		0.7			
10	6	75					3.4		0.5			5
16	7	75	14	00			4.6		0.6 03L			13
12	8	75	13	00			5.0		0.6 03L			12
3	11	75	13	00			5.6		0.9			7
24	3	76	08	30			2.7		0.7			5
24	6	76	16	25				5.8		6.4	17.	10
12	8	76	12	40				4.4		0.6	13.	10
25	8	76	08	50				5.2		0.6	16.	9

WATER QUALITY SURVEILLANCE NETWORK

E.P.S. ATLANTIC REGION 1974-1976

STATION **00NB01AQ0002** LATITUDE **45** D **13** M **55** S LONGITUDE **66** D **50** M **42** S

MAGAGUADAVIC RIVER AT COVERED BRIDGE AT SECOND FALLS, (WSC GAUGE) CHARLOTTE COUNTY

SAMPLE DATE			TIME AS		16304L SULPHATE DISSOLVED	26302P IRON EXTRBLE.	25304P MANGANESE EXTRBLE.	29305P COPPER EXTRBLE.	30305P ZINC EXTRBLE.	82302P LEAD EXTRBLE.	33003P ARSENIC TOTAL	33303P ARSENIC EXTRBLE.
D	M	Y	H	M	SO4 MG/L	FE MG/L	MN MG/L	CU MG/L	ZN MG/L	PB MG/L	AS MG/L	AS MG/L
15	5	74				0.15		0.002	0.007	0.003	0.033	
27	6	74								0.015 02L		
10	9	74				0.15		L.002	0.006	0.012		
10	6	75			5.0	0.23		0.009				
16	7	75	14	00	3.0			0.027	0.04	L.002		
								0.05	0.83 04P			
12	8	75	13	00	2.0			L.002				
3	11	75	13	00	11.0			L.002			0.014	
24	3	76	08	30	4.0			0.001			L.003	
24	6	76	16	25	4.			L.001			L.005	
12	8	76	12	40	4.						L.005	
25	8	76	08	50	4.			L.001				

SAMPLE DATE			TIME AS		80311P MERCURY EXTRBLE.	51302P ANTIMONY EXTRBLE.	48302P CADMIUM EXTRBLE.	50301P TIN EXTRBLE.	06581L HUMIC ACID
D	M	Y	H	M	HG UG/L	SB MG/L	CD MG/L	SN MG/L	MG/L
15	5	74				0.03		L1.0	15
27	6	74							13
10	9	74				0.03		L1.0	9 82L
10	6	75			L.05	0.04			8 82L
16	7	75	14	00	0.05	0.15	L.001 03P		5 82L
12	8	75	13	00	0.05	0.04			4 82L
3	11	75	13	00	L.05				14 82L
24	3	76	08	30	0.05	L.002			6 82L
24	6	76	16	25		L.01			8
12	8	76	12	40		L.01			9
25	8	76	08	50		L.01			15

BIOLOGICAL RESULTS

STATION: NB-55: Magaguadavic River, above Piskahegan River

TAXA			SAMPLING PERIOD 1974 27/6-10/9
Annelida			
Oligochaeta			6
Arthropoda			
Insecta			
Plecoptera	Perlidae	Acroneura	7
Ephemeroptera	Heptageniidae	Heptagenia	5
	Leptophlebidae	Paraleptophlebia	1
Tricoptera	Brachycentridae	Brachycentrus	3
	Ryacophilidae	Agapetus	3
Diptera	Tendipedidae	-	20
		Σ	45
		S	7
		DI	2.32

BIOLOGICAL RESULTS

STATION: NB-56: Magaguadavic River, 2nd Falls

TAXA			SAMPLING PERIOD 1974 27/6-10/9
Mollusca			4
Gastropoda			
Arthropoda			
Insecta			
Ephemeroptera	Heptageniidae	Stenonema	12
	Baetidae	Habrophlebia	15
Odonata	Aeshnidae	Boyeria	2
	Coenagrionidae	Argia	2
Tricoptera	Psychomyiidae	Polycentropus	5
Coleoptera	Elmidae	Stenelmis	3
Diptera	Tendipedidae	-	40
		Σ	83
		S	8
		DI	2.24

4.2.8 St. Croix River (NB 26, 25)

The St. Croix River Basin is an international basin located in the southwestern corner of New Brunswick. The River Basin has a drainage area of 4,000 hectares (1600 square miles) and is mostly composed of forested rolling terrain with many lakes and swamps. The major source of effluent to the St. Croix River is the Georgia Pacific Corporation's pulp and paper mill at Woodland.

The water at the sampling stations on the St. Croix River was soft, alkaline and highly coloured. At the St. Croix International Bridge, occasional records of high conductivity (~3260 µsie/cm), magnesium (~70 ppm), sulphates (~162 ppm), sodium (~600 ppm) and chloride (~1000 ppm) were noted. Copper (~60 ppb) and zinc (~80 ppb) levels were also quite high. Further downstream, below the pulp and paper mill, dissolved oxygen dropped to lows of 2.3 ppm, and high levels of total nitrogen and organic carbon were noted.

Biological samples taken of the river in 1974 above the pulp mill showed a diverse fauna dominated by amphipods, isopods and annelid worms.

In 1977, Georgia-Pacific completed the installation of an effluent treatment system designed to meet N.P.D.E.S. requirements, which would result in approximately an 80% decrease in suspended solids and oxygen demand loading to the river.

WATER QUALITY SURVEILLANCE NETWORK

E.P.S. ATLANTIC REGION 1974-1976

STATION **00NB01AR0002** LATITUDE **45** D **34** M **5** S LONGITUDE **67** D **25** M **45** S

ST. CROIX RIVER AT INTERNATIONAL BRIDGE (WSC GAUGE), YORK COUNTY

SAMPLE DATE			TIME AS		02061F TEMP. WATER	08102F OXYGEN DISSOLVED DO	10301F PH	10301L PH	02041L SPECIFIC CONDUCTANCE	02073L TURBIDITY	10401L RESIDUE NONFILTR	10451L RESIDUE FILTERABLE
D	M	Y	H	M	DEG.C.	O2 MG/L	PH UNITS	PH UNITS	USIE/CM	JTU	MG/L	MG/L
15	5	74			12.0 61S			6.6	24	1.0		
3	7	74			21.0 61S			6.5	27	0.6		
15	8	74			23.0 61S	10.0 02S		6.4	30	2.0		
10	6	75			1.5		6.4	6.9	1070	3.4	L10	
16	7	75	16	00	24.0	6.5	6.9	6.3	774	4.6	L10	
12	8	75	14	30	26.	6.2	6.1	6.3	371	3.7	L10	
3	11	75	14	30	9.0	7.5	6.6	6.3	3260	4.0	L10	
23	3	76	17	00	2.0	10.1	6.1	6.1	835	0.5		
27	5	76	08	45	10.5	10.2	6.0	6.5	30		1	
24	6	76	12	30	26.5	7.5	5.7	6.6	30		L1	
11	8	76	16	15	22.0	7.8	6.9	6.6	30		L1	

SAMPLE DATE			TIME AS		10501L RESIDUE FIXED NONFILTR.	10551L RESIDUE FIXED FILTERABLE	07112L NITROGEN DISSOLVED NO3 E NO2	07103L NITRATE & NITRITE DISSOLVED	07012L NITROGEN TOTAL KJELDAHL	15365L PHOSPHORUS DISSOLVED INORG. PO4	15413L PHOSPHORUS TOTAL	06001L CARBON TOTAL ORGANIC
D	M	Y	H	M	MG/L	MG/L	N MG/L	NO3 MG/L	N MG/L	P MG/L	P MG/L	C MG/L
15	5	74					0.02 10L				0.010 14L	
3	7	74					0.01 10L				L.010	11.0
15	8	74					0.01 10L				0.020	7.9
10	6	75					L.01 10L				0.025	11.2
16	7	75	16	00			0.30 10L				0.035	9.4
12	8	75	14	30			0.01 10L				0.055	9.7
3	11	75	14	30			0.01 10L				0.035	12.6
23	3	76	17	00			0.02 10L				0.010	9.8
27	5	76	08	45			L.005		0.3	L.005		9.
24	6	76	12	30			L.005		0.4	L.005		7.
11	8	76	16	15			L.005		0.4	L.005		6.

WATER QUALITY SURVEILLANCE NETWORK

E.P.S. ATLANTIC REGION 1974-1976

STATION **00NB01AR0002** LATITUDE **45** D **34** M **5** S LONGITUDE **67** D **25** M **45** S

ST. CROIX RIVER AT INTERNATIONAL BRIDGE (WSC GAUGE), YORK COUNTY

SAMPLE DATE			TIME AS		20103L CALCIUM DISSOLVED	20003P CALCIUM TOTAL	12102L MAGNESIUM DISSOLVED	12002P MAGNESIUM TOTAL	10606L HARDNESS TOTAL LAB CALC.	10101L ALKALINITY TOTAL	16304L SULPHATE DISSOLVED	26302P IRON EXTRBLE.
					CA	CA	MG	MG	CACO3	CACO3	SO4	FE
D	M	Y	H	M	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L
15	5	74			2.4		0.4			4		0.07
3	7	74			3.2		0.5			4		0.08
15	8	74			3.0		0.6			7		0.11
10	6	75			11.0		22.0			10	49.0	
16	7	75	16	00	9.4		15.0 03L			12	40.0	
12	8	75	14	30	8.3		8.9 03L			16	21.0	
3	11	75	14	30	25.0		70.0			20	162.	
23	3	76	17	00	8.7		17.0			9	32.0	
27	5	76	08	45		3.0		0.5	9.	5	4.	
24	6	76	12	30		3.3		0.5	10.	6	5.	
11	8	76	16	15		3.1		0.5	10.	4	4.	

SAMPLE DATE			TIME AS		25304P MANGANESE EXTRBLE.	29305P COPPER EXTRBLE.	30305P ZINC EXTRBLE.	82302P LEAD EXTRBLE.	80311P MERCURY EXTRBLE.	48302P CADMIUM EXTRBLE.	24303P CHROMIUM EXTRBLE.	06581L HUMIC ACID
					MN	CU	ZN	PB	HG	CD	CR	
D	M	Y	H	M	MG/L	MG/L	MG/L	MG/L	UG/L	MG/L	MG/L	MG/L
15	5	74			0.02	L.002	L.002	0.005		0.001	0.002	8
3	7	74			L.01	L.002	L.002	0.005		L.001	0.0005	8 82L
15	8	74			0.07	L.002	0.003	0.007		L.001	0.0005	8 82L
10	6	75				0.05						
16	7	75	16	00		0.034	0.04	0.005		L.001		
12	8	75	14	30		0.06	0.08	0.003		0.002		
3	11	75	14	30		L.002						
23	3	76	17	00		0.004			0.10			
27	5	76	08	45		L.001			0.10			
24	6	76	12	30		L.001						
11	8	76	16	15		L.001						

WATER QUALITY SURVEILLANCE NETWORK

E.P.S. ATLANTIC REGION 1974-1976

STATION **00NB01AR0001** LATITUDE **45** D **10** M **10** S LONGITUDE **67** D **17** M **50** S

ST. CROIX RIVER AT INTERNATIONAL BRIDGE, MILLTOWN, CHARLOTTE COUNTY,

SAMPLE DATE D	M	Y	TIME AS H	M	02061F TEMP. WATER DEG.C.	08102F OXYGEN DISSOLVED DO O2 MG/L	10301F PH PH UNITS	10301L PH PH UNITS	02041L SPECIFIC CONDUCTANCE USIE/CM	02073L TURBIDITY JTU	10401L RESIDUE NONFILTR. MG/L	10451L RESIDUE FILTERABLE MG/L
15	5	74			12.0 61S			6.3	34	2.8		
28	6	74	08	30				7.0	60	2.9		
10	6	75			14.		5.9	6.9	56	2.8		
16	7	75	15	30	25.	7.4	6.6	6.1	60	3.0		
12	8	75	14	00	25.	2.3	5.9	6.0	102	2.9		
3	11	75	14	00	10.0	4.5	6.0	6.8	92	2.0		
23	3	76	16	00	2.0	11.1	6.0	6.2	50	0.6		
27	5	76	07	00	10.0	9.6	6.0	6.5	40		2	
24	6	76	13	30	26.0	5.0	6.7	7.0	70		2	
11	8	76	17	15	24.0	6.5	6.6	6.6	60		4	

SAMPLE DATE D	M	Y	TIME AS H	M	10501L RESIDUE FIXED NONFILTR. MG/L	10551L RESIDUE FIXED FILTERABLE MG/L	07112L NITROGEN DISSOLVED NO3 E NO2 N MG/L	07103L NITRATE & NITRITE DISSOLVED NO3 MG/L	07012L NITROGEN TOTAL KJELDAHL N MG/L	15365L PHOSPHORUS DISSOLVED INORG. PO4 P MG/L	15413L PHOSPHORUS TOTAL P MG/L	06001L CARBON TOTAL ORGANIC C MG/L
15	5	74					0.02 10L				0.020 14L	
28	6	74	08	30			0.01 10L				0.015 14L	12.7
10	6	75					0.01 10L				0.030	12.3
16	7	75	15	30			0.08 10L				0.035	10.3
12	8	75	14	00			0.62 10L				0.14	14.2
3	11	75	14	00			0.01 10L				0.035	14.0
23	3	76	16	00			0.06 10L				0.005	7.5
27	5	76	07	00			L.005		0.3	L.005		13.
24	6	76	13	30			L.005		0.5	L.005		15.
11	8	76	17	15			L.005		1.0	L.005		15.

WATER QUALITY SURVEILLANCE NETWORK

E.P.S. ATLANTIC REGION 1974-1976

STATION **00NB01AR0001** LATITUDE **45** D **10** M **10** S LONGITUDE **67** D **17** M **50** S

ST. CROIX RIVER AT INTERNATIONAL BRIDGE, MILLTOWN, CHARLOTTE COUNTY,

SAMPLE DATE			TIME AS		20103L CALCIUM DISSOLVED	20003P CALCIUM TOTAL	12102L MAGNESIUM DISSOLVED	12002P MAGNESIUM TOTAL	10606L HARDNESS TOTAL LAB CALC.	10101L ALKALINITY TOTAL	16304L SULPHATE DISSOLVED	26302P IRON EXTRBLE.
					CA	CA	MG	MG	CACO3	CACO3	SO4	FE
D	M	Y	H	M	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L
15	5	74			2.9		0.6			6		0.20
28	6	74	08	30	4.4		0.8			9		
10	6	75			4.0		0.7			8	5.0	
16	7	75	15	30	4.6		0.7 03L			12	5.0	
12	8	75	14	00	5.0		0.8 03L			12	5.0	
3	11	75	14	00	3.8		0.8			13	12.0	
23	3	76	16	00	3.7		0.9			7	5.3	
27	5	76	07	00		3.4		0.6	11.	5	5.	
24	6	76	13	30		4.6		0.7	14.	20	10.	
11	8	76	17	15		6.0		0.8	18.	4	6.	

SAMPLE DATE			TIME AS		25304P MANGANESE EXTRBLE.	29305P COPPER EXTRBLE.	30305P ZINC EXTRBLE.	82302P LEAD EXTRBLE.	80311P MERCURY EXTRBLE.	48302P CADMIUM EXTRBLE.	24303P CHROMIUM EXTRBLE.	06581L HUMIC ACID
					MN	CU	ZN	PB	HG	CD	CR	
D	M	Y	H	M	MG/L	MG/L	MG/L	MG/L	UG/L	MG/L	MG/L	MG/L
15	5	74			0.04	0.002	L.002	0.003		0.001	L.0005	10 82L
28	6	74	08	30	0.06 04L			L.002 02L	0.14			13
10	6	75				0.011			L.05	0.001		
16	7	75	15	30		0.027	0.04	0.004	0.07	L.001		
12	8	75	14	00		0.07	0.08	0.003				
3	11	75	14	00		L.002			0.29			
23	3	76	16	00		0.006			0.05			
27	5	76	07	00		0.001			L.1			
24	6	76	13	30		0.002						
11	8	76	17	15		L.001						

BIOLOGICAL RESULTS

STATION: NB -26: St. Croix River - St. Croix

TAXA			SAMPLING PERIOD 1974 4/7-15/8
Colenterate			1
Hydrozoa			
Platyhelminthes			
Turbellaria	Planaridae	Planaria	1
Annelida			4
Oligochaeta			2
Hirudinea			
Mollusca			8
Gastropoda			
Arthropoda			
Crustacea			11
Isopoda	Asellidae	-	6
Amphipoda			
Insecta			
Ephemeroptera	Baetidae	Habrophlebiodes	1
		Caenis	4
Odonata	Coenagrionidae	Teleallagma	1
Tricoptera	Hydropsychidae	Hydropsyche	1
		Σ	40
		S	11
		DI	2.93

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APPENDIX I

TABLE 1 ANALYTICAL SCHEDULE, 1974-1976

	PARAMETER NAME	ANALYSIS SCHEDULE GROUPS A,B,C,K	GROUP D	GROUP E	NAQUADAT ANALYSIS CODES*
1.	Temperature, water (field)	X	X	X	02061, 062
2.	Oxygen, dissolved (field)	X	X	X	08102, 101
3.	pH (field)	X	X	X	10301, 302
4.	pH (laboratory)	X	X	X	10301, 302
5.	Specific conductance	X	X	X	02041
6.	Turbidity	X	X	X	02073, 071
7.	Residue, non filterable	X	X	X	10401
8.	Residue, filterable	X	X	X	10451
9.	Residue, fixed, non filterable	X	X	X	10501
10.	Residue, fixed, filterable	X	X	X	10551
11.	Nitrogen, dissolved (N)	X			07112, 110
12.	Nitrate & Nitrite, dissolved (NO_3)	X			07103
13.	Nitrogen, total, Kjeldahl (N)	X			07012
14.	Phosphorus, dissolved, inorganic (P)	X			15365, 363, 364
15.	Phosphorus, total (P)	X			15413, 414
16.	Carbon, total (C)	X			06001
17.	Calcium, dissolved	X	X	X	20103, 104
18.	Calcium, total	X	X	X	20003
19.	Magnesium, dissolved	X	X	X	12102, 103
20.	Magnesium, total	X	X	X	12002
21.	Hardness, total, calculated	X	X	X	10606
22.	Alkalinity, total	X	X	X	10101
23.	Acidity			X	10251
24.	Sulphate, dissolved	X	X	X	16304, 302, 303
25.	Thiosulphate, total			X	16502
26.	Thio-salts, total			X	16510
27.	Iron, extractable	X	X	X	26302, 305
28.	Manganese,	X	X		25304
29.	Copper, dissolved			X	29105, 106
30.	Copper, extractable	X	X	X	29305, 306
31.	Zinc, dissolved			X	30105, 104
32.	Zinc, extractable	X	X	X	30305, 304
33.	Lead, dissolved			X	82103, 102, 101
34.	Lead, extractable	X	X	X	82302, 301, 303
35.	Arsenic, total		X		33003
36.	Arsenic, extractable		X		33303
37.	Mercury, extractable	X	X	X	80311
38.	Antimony, extractable		X		51302
39.	Cadmium, extractable	X	X	X	48302, 303
40.	Chromium, extractable	X			24303
41.	Tin, extractable		X		50301, 302
42.	Humic acid	X	X	X	06581, 582

* Detailed descriptions of analytical methods can be found in the NAQUADAT DICTIONARY, NOVEMBER, 1976" provided by the Data and Instrumentation Section, Water Quality Branch, Ottawa, Ontario.

TABLE 1 KEY TO SAMPLING SCHEDULE AND SAMPLES REQUIRED

SAMPLES REQ'D \ SAMPLING SCHEDULE	AA	BB	CC	DD	EE	KK	PENTACHLORO-PHENOL
BOTTLE 1 2L water sample, plastic bottle - no preservation	✓	✓	✓	✓	✓	✓	
BOTTLE 2 500 ml water sample; plastic (metals) bottle; no filtration and preserve with 2ml HNO_3	✓	✓	✓	✓	✓	✓	
BOTTLE 3 500 ml water sample; plastic (metals) bottle; no filtration and preserve with 1ml H_2SO_4	✓	✓	✓	✓	✓	✓	
BOTTLE 4 1L water sample; preserve with 2gNaOH		✓					
BOTTLE 5 40 oz. water sample in glass bottle; preserve with $1gCuSO_4$ and adjust pH to 4 with phosphoric acid							✓