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Newfoundland
Labrador

CANADA – NEWFOUNDLAND AND LABRADOR

MEMORANDUM OF AGREEMENT
FOR
WATER QUANTITY SURVEYS

REPORT FOR FISCAL YEAR
2023-2024

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LETTER OF TRANSMITTAL

TO: Colin Angus
Administrator for Canada

Haseen Khan
Administrator for the Department of Environment, Conservation and Climate Change, Newfoundland and Labrador

We hereby submit an annual report for the fiscal year 2023-2024 covering activities under the Memorandum of Agreement for Water Quantity Surveys for Newfoundland and Labrador.

Members
Coordinating Committee

Government of Canada

DeVries, Timothy

Digitally signed by: DeVries, Timothy
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Tim DeVries
Environment Canada and Climate Change

Government of Newfoundland and Labrador

Paula Dawe

Digitally signed by Paula Dawe
Date: 2025.11.18 14:50:49 -03'30'

Paula V Dawe
Dept. of Environment, Conservation and Climate Change, Newfoundland and Labrador

EXECUTIVE SUMMARY

In 1975, Canada and its provincial partners signed Memoranda of Agreement for Water Quantity Surveys. The purpose of the Agreement is to provide a mechanism to harmonize the hydrometric data collection, processing and distribution, as well as a procedure to cost-share the activities of the program.

During this reporting period, Water Survey of Canada operated 105 hydrometric stations in partnership with Newfoundland and Labrador. In 2022-23, four stations were mothballed:

- 02ZC002 Grandy Brook below Top Pond Brook
- 02YQ005 Salmon River near Glenwood
- 02ZM016 South River near Holywood
- 02ZK004 Little Salmonier River near North Harbour

These stations were reactivated in 2023-24 for operation by WSC.

In addition, in 2023-24 the Newfoundland and Labrador Water Resources Management Division took over operation of 4 stations from WSC:

- 02YO015 East Pond Brook Below East Pond
- 02YO014 Tributary to Gill's Pond Brook
- 02ZG008 John Fitzpatrick Pond near Outlet
- 02ZG007 Outflow of Unnamed Pond South of Long Pond

The full station classification and network change summary can be seen in section 4.

In addition to the regular hydrometric activities, several construction projects have taken place during fiscal year 2023-2024 as described in section 6.

Currently all stations with the exception of 1 are equipped with satellite telemetry, which means that 99% of the network is reporting in near real-time.

The actual share of the province for operational expenditures **($1,157,036)** was 4% lower than the amount invoiced and paid by the province **($1,205,338)**. Financial details are given in section 5 of this report.

A summary of cumulative annual costs from the year 1975-76 to the year 2023-2024 is located in Appendix C.

1. INTRODUCTION

This report covers the activities under the Canada/Newfoundland and Labrador Memorandum of Agreement for Water Quantity Surveys for the fiscal year 2023-2024.

The operation of an integrated network of hydrometric stations in Newfoundland and Labrador is cost-shared between National Hydrological Services (NHS) - Meteorological Service of Canada -Environment and Climate Change Canada, and Newfoundland and Labrador, Department of Environment, Conservation and Climate Change under a Memorandum of Agreement (MOA).

The core of this report has been divided in 5 main sections:

The *Hydrologic Conditions* section provides a brief description of any regionally significant hydrologic conditions that were encountered during 2023-2024.

The *Coordinators Meeting* section highlights the discussions that were undertaken during the year.

The *Network Characteristics* section includes a brief summary of the network including any changes from the previous year.

The *Operations* section outlines financial details including partner shares and invoices issued, as agreed to in Schedule D Estimates (Appendix B).

The report also includes a section on *Construction and Projects* which contains a brief description of the special projects.

2.0 HYDROLOGIC CONDITIONS

Regional Highlights

Newfoundland and Labrador followed a similar hydrologic pattern seen across the Atlantic Provinces. This consisted of a very dry spring followed by well above average wet conditions in June, which resulted in one significant high-flow event (see Figures 2.1 and 2.2). A wet fall also contributed to a significant high-flow event on December 22, 2023, that affected Central Newfoundland (see Figures 2.3 and 2.4).

The winter months of 2024 continued to produce relatively mild temperatures and lower than average snowpack, leading into a relatively uneventful spring freshet period.

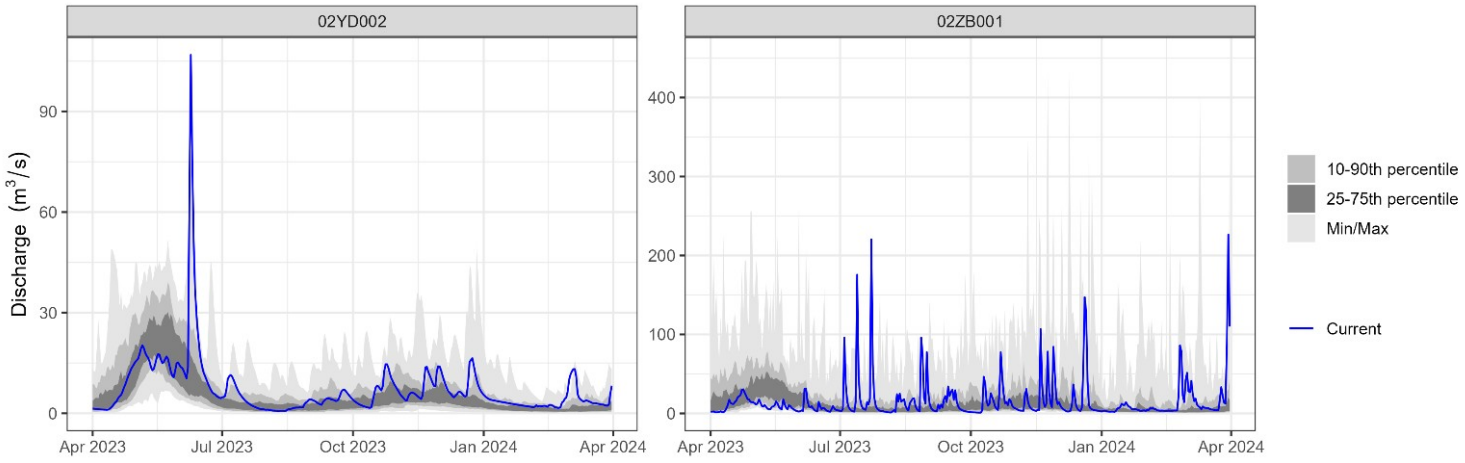


Figure 2.1

- Flow Station 02YD002, Northeast River at Roddicton: Above average wet conditions early summer reflected at a gauge on the Great Northern Peninsula, illustrating the resulting high-flow event
- Flow Station 02ZB001, Isle Aux Morts River Below Highway Bridge: Conditions in southwest Newfoundland, with high flow events in early summy, as well as mid-winter melt in December 2023.

Figure 2.2 Road washout on the Northern Peninsula – Roddickton on June 10th, 2023. (Photo Credit: Government of Newfoundland and Labrador Staff)

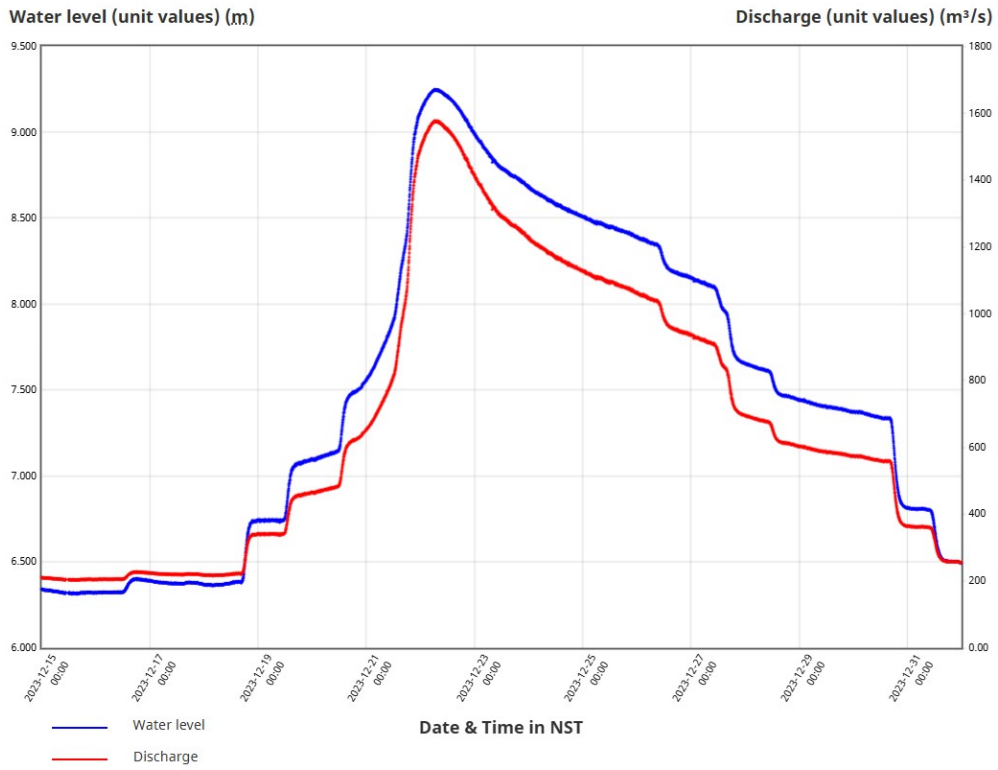


Figure 2.3 - Flow Station 02YO011 Exploits River Below Noel Paul's Brook: High-flow event from December 2023.

Figure 2.4 - Rushy Pond Brook Bridge in the Exploits River watershed, at capacity on Dec 22, 2023. Photo Credit : Government of Newfoundland and Labrador Staff

3.0 COORDINATORS MEETINGS

The coordinators met in person and virtually four times throughout the course of the year. Discussions ranged from operational items, to cost estimates for future years, to new station planning, and review of capital plan items.

Operating costs increases and availability of funding for construction continued to be a significant topic of discussion within the fiscal year. Human resources changes within the Newfoundland NHS team were also developed and implemented.

4.0 NETWORK CHARACTERISTICS

Water Survey of Canada operated 105 hydrometric stations in Newfoundland and Labrador in the 2023-24 fiscal year.

In 2022-23, four stations were mothballed:

- 02ZC002 Grandy Brook below Top Pond Brook
- 02YQ005 Salmon River near Glenwood
- 02ZM016 South River near Holywood
- 02ZK004 Little Salmonier River near North Harbour

These stations were reactivated in 2023-24 for operation by WSC.

Also in 2023-24, four stations were transferred to NL, with operation by NHS ceasing on March 31, 2023:

- 02YO015 East Pond Brook Below East Pond
- 02YO014 Tributary to Gill's Pond Brook
- 02ZG008 John Fitzpatrick Pond near Outlet (note this site had only initiated operation in 2022-23 following transfer of equipment from 02ZG006 Outflow of Grebes Nest Pond)
- 02ZG007 Outflow of Unnamed Pond South of Long Pond

Currently all NHS stations with the exception of 1 are equipped with satellite telemetry, which means that 99% of the network is reporting in real-time.

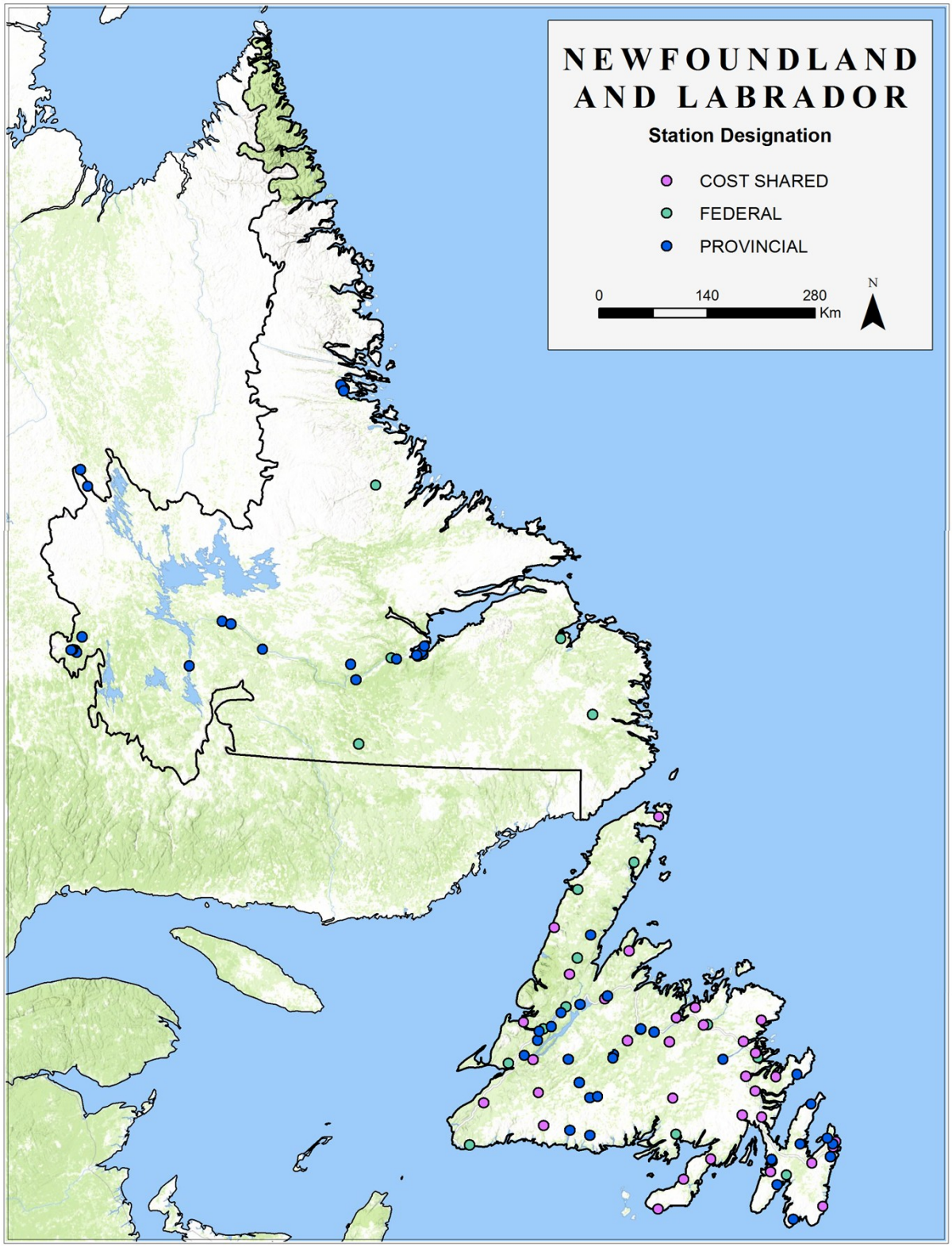
The stations classification, including distribution between Newfoundland and Labrador, is as outlined in Table 3.1. Further, Figure 3.1 illustrates the locations and designations of these stations.

Table 3.1: Station classification within Newfoundland and Labrador

CLASSIFICATION	ISLAND	LABRADOR	TOTAL
FEDERAL	11	5	**16**
FED-PROV	32	0	**32**
PROVINCIAL	31	26	**57**
TOTAL	**74**	**31**	**105**

Note that NHS also takes water samples at several sites for water quality purposes on behalf of the Newfoundland and Labrador Department of Environment, Conservation and Climate Change. These sites are converted into station units in order to have their cost calculated under this agreement.

Figure 3.1: Location and designations of hydrometric network in Newfoundland and Labrador



5.0 OPERATIONS

A true costing approach has been utilized to derive the station costs for this fiscal year in accordance with the agreement. The costs were apportioned based on the station classification and then totaled to determine each parties share. Employee benefit costs on salary, and data management costs have been included and attributed to all parties.

The Newfoundland and Labrador Department of Environment, Conservation and Climate Change was credited with the total amount of $30,650 for their contribution to the Partnership.

Table 5.1 summarizes the estimated and the actual costs to operate the provincial share of the stream gauging network in Newfoundland and Labrador for 2023-2024. Table 5.2 identifies the provincially completed Special Project Work. Finally, Table 5.3 details the Operations and Maintenance expenditures attributable to the Province.

The signed version of the Schedule D for fiscal year 2023-24 can be found in the Appendix B.

Table 5.1: Hydrometric network operation costs and construction costs attributable to the Province of Newfoundland and Labrador.

	Provincial		**Federal**
Item	**Planned Schedule D**	**Actuals**	**Actuals**
Salaries (Including benefits 27%)	$ 793,563	$676,902	$391,290
Operations and Maintenance	$ 450,108	$402,878	$186,900
Capital	$62,061	$48,971	$23,324
Construction	$35,000	$58,935	$144,801
Special Project Work (Fed share)	-$30,650	-$30,650	$30,650
TOTALS	**$1,310,082**	**$1,157,036**	**$776,965**

The $1,310,082 Schedule D amount, which was estimated at the beginning of the 2023-24 fiscal year, was reviewed at the beginning of the fourth quarter of the fiscal year in order to determine the final amount to invoice the Province. Based on that review, a reduced amount of $1,205,338 was invoiced. The difference between the total actual cost ($1,157,036) and the final payment amount ($1,205,338) has been added to the Summary of Cumulative Annual Costs, which can be found in Appendix C.

Table 5.2: Details of Special Project Work completed by the Province

Item	Amount
Height Modernization	$500
Third Party Agreement Maintenance	$8,370
Real Property Management	$6,330
Operational Monitoring Equipment Purchase	$15,450
TOTALS	**$30,650**

Table 5.3: Provincial Operations and Maintenance expenditure details

ITEM	EXPENDITURE	
020 - TRAVEL	$	42,480
022 - POSTAGE,FREIGHT,EXPR	$	5,384
023 - TELECOMMUNICATIONS	$	2,586
040 - TRAINING	$	1,411
041 - PROF.& SPECIAL SRVS	$	16,296
042 - OTHER BUSINESS SERV	$	1,116
051 - OTHER RENTALS	$	218,723
062 - REPAIR & MAINT-EQUIP	$	14,172
070 - ENERGY -TRANSPORTATI	$	14,192
071 - PUBLIC UTILITIES	$	1,264
072 - MATERIALS & SUPPLIES	$	85,254
TOTAL	**$**	**402,878**

6.0 CONSTRUCTION & SPECIAL PROJECTS

The coordinators meet near the beginning of the fiscal year to review planned construction projects.

Infrastructure projects completed in Newfoundland and Labrador in 2023-24 were focused on legacy issues. One major project included the decommissioning of an old hydrometric station and associated stilling well, with environmental clean up and replacement with a new galvanized look in style shelter. There were also several environmental investigations completed at future legacy infrastructure (cableways/stations) decommissioning sites.

Details of these projects can be found in a report titled “Hydrometric Infrastructure and Construction in Atlantic Canada Project Summary Report 2023 – 2024” which is attached to this report in Appendix D.

The province also undertook GNSS surveys for CVGD2013 datum conversion at the following sites in 2023-24:

02ZK006	RATTLING BROOK BELOW BRIDGE
02ZK008	RATTLING BROOK BELOW PLANT DISCHARGE
02ZK007	RATTLING BROOK BIG POND
02YL005	RATTLER BROOK NEAR MCIVERS
02ZD002	GREY RIVER NEAR GREY RIVER
02ZC003	WHITE BEAR RIVER ABOVE BIG INDIAN BROOK
03OB007	ELROSS CREEK BELOW PINETTE LAKE INFLOW
03OB009	JOAN BROOK BELOW OUTLET OF JOAN LAKE
02YN005	VICTORIA LAKE AT NORTHEAST CONTROL STRUCTURE

Appendix A

SCHEDULE "C" NEWFOUNDLAND AND LABRADOR 2023-2024

H -water level data
Q - flow data
M - manual gauge
R - automatic recording gauge

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

Status	Station No	Station Name	Class	fed	prov	com	Stn units	fed	prov	com	Operator
	FEDERAL										
ACTIVE	02ZF001	BAY DU NORD RIVER AT BIG FALLS	Federal 4	1.2	0	0	1.2	1.2	0	0	WSC
ACTIVE	02YQ001	GANDER RIVER AT BIG CHUTE	Federal 4	1	0	0	1	1	0	0	WSC
ACTIVE	02YJ001	HARRYS RIVER BELOW HIGHWAY BRIDGE	Federal 4	1	0	0	1	1	0	0	WSC
ACTIVE	02YL003	HUMBER RIVER AT HUMBER VILLAGE BRIDGE	Federal 4	1	0	0	1	1	0	0	WSC
ACTIVE	02ZB001	ISLE AUX MORTS RIVER BELOW HIGHWAY BRIDGE	Federal 1	1	0	0	1	1	0	0	WSC
ACTIVE	02YG001	MAIN RIVER AT PARADISE POOL	Federal 4	1.2	0	0	1.2	1.2	0	0	WSC
ACTIVE	02YD002	NORTHEAST BROOK NEAR RODDICKTON	Federal 4	1	0	0	1	1	0	0	WSC
ACTIVE	02ZK001	ROCKY RIVER NEAR COLINET	Federal 1	1	0	0	1	1	0	0	WSC
ACTIVE	02YS003	SOUTHWEST BROOK AT TERRA NOVA NATIONAL PARK	Federal 1	1	0	0	1	1	0	0	WSC
ACTIVE	02YL001	UPPER HUMBER RIVER NEAR REIDVILLE	Federal 1	1	0	0	1	1	0	0	WSC
ACTIVE	02YC001	TORRENT RIVER AT BRISTOL'S POOL	Federal 4	1	0	0	1	1	0	0	WSC
ACTIVE	03QC002	ALEXIS RIVER NEAR PORT HOPE SIMPSON	Federal 4	1.2	0	0	1.2	1.2	0	0	WSC
ACTIVE	03OE001	CHURCHILL RIVER ABOVE UPPER MUSKRAT FALLS	Federal 4	0.6	0	0	0.6	0.6	0	0	WSC
ACTIVE	03QC001	EAGLE RIVER ABOVE FALLS	Federal 4	1.2	0	0	1.2	1.2	0	0	WSC
ACTIVE	02XA003	LITTLE MECATINA RIVER ABOVE LAC FOURMONT	Federal 2	1.2	0	0	1.2	1.2	0	0	WSC
ACTIVE	03NF001	UGJOKTOK RIVER BELOW HARP LAKE	Federal 4	1.2	0	0	1.2	1.2	0	0	WSC
				0	0	0					
	Total Federal Newfoundland						**11.4**	**11.4**	**0.0**	**0.0**	**11.0**
	Total Federal Labrador						**5.4**	**5.4**	**0.0**	**0.0**	**5.0**
	Total Federal Newfoundland & Labrador						**16.8**	**16.8**	**0.0**	**0.0**	**16.0**
	FEDERAL - PROVINCIAL										
ACTIVE	02YA002	BARTLETTS RIVER NEAR ST. ANTHONY	Fed-Prov 3	0.5	0.5	0	1.00	0.50	0.50	0	WSC
ACTIVE	02ZH002	COME-BY-CHANCE RIVER NEAR GOOBIES	Fed-Prov 3	0.5	0.5	0	1.00	0.50	0.50	0	WSC
ACTIVE	02ZE004	CONNE RIVER AT OUTLET OF CONNE POND	Fed-Prov 3	0.5	0.5	0	1.00	0.50	0.50	0	WSC
ACTIVE	02YO011	EXPLOITS RIVER BELOW NOEL PAULS BROOK	Fed-Prov 3	0.5	0.5	0	1.00	0.50	0.50	0	WSC
ACTIVE	02ZG001	GARNISH RIVER NEAR GARNISH	Fed-Prov 3	0.5	0.5	0	1.00	0.50	0.50	0	WSC
ACTIVE	02ZC002	GRANDY BROOK BELOW TOP POND BROOK	Fed-Prov 3	0.6	0.6	0	1.20	0.60	0.60	0	WSC
ACTIVE	02YO008	GREAT RATTLING BROOK ABOVE TOTE RIVER CONFLUENCE	Fed-Prov 3	0.5	0.5	0	1.00	0.50	0.50	0	WSC
ACTIVE	02YE001	GREAVETT BROOK ABOVE PORTLAND CREEK POND	Fed-Prov 3	0.6	0.6	0	1.20	0.60	0.60	0	WSC
ACTIVE	02ZA002	HIGHLANDS RIVER AT TRANS CANADA HIGHWAY	Fed-Prov 3	0.5	0.5	0	1.00	0.50	0.50	0	WSC
ACTIVE	02YR003	INDIAN BAY BROOK NEAR NORTHWEST ARM	Fed-Prov 3	0.5	0.5	0	1.00	0.50	0.50	0	WSC
ACTIVE	02YK002	LEWASSEECHJEECH BROOK AT LITTLE GRAND LAKE	Fed-Prov 3	0.6	0.6	0	1.20	0.60	0.60	0	WSC
ACTIVE	02YN002	LLOYDS RIVER BELOW KING GEORGE IV LAKE	Fed-Prov 3	0.6	0.6	0	1.20	0.60	0.60	0	WSC
ACTIVE	02YR001	MIDDLE BROOK NEAR GAMBO	Fed-Prov 3	0.5	0.5	0	1.00	0.50	0.50	0	WSC
ACTIVE	02ZK002	NORTHEAST RIVER NEAR PLACENTIA	Fed-Prov 3	0.5	0.5	0	1.00	0.50	0.50	0	WSC
ACTIVE	02YO006	PETERS RIVER NEAR BOTWOOD	Fed-Prov 3	0.5	0.5	0	1.00	0.50	0.50	0	WSC
ACTIVE	02ZH001	PIPERS HOLE RIVER AT MOTHERS BROOK	Fed-Prov 3	0.5	0.5	0	1.00	0.50	0.50	0	WSC
ACTIVE	02ZG004	RATTLE BROOK NEAR BOAT HARBOUR	Fed-Prov 3	0.5	0.5	0	1.00	0.50	0.50	0	WSC
ACTIVE	02YL005	RATTLER BROOK NEAR MCIVERS	Fed-Prov 3	0.5	0.5	0	1.00	0.50	0.50	0	WSC
ACTIVE	02YQ005	SALMON RIVER NEAR GLENWOOD	Fed-Prov 3	0.5	0.5	0	1.00	0.50	0.50	0	WSC
ACTIVE	02ZG003	SALMONIER RIVER NEAR LAMALINE	Fed-Prov 3	0.5	0.5	0	1.00	0.50	0.50	0	WSC
ACTIVE	02ZM009	SEAL COVE BROOK NEAR CAPPAHAYDEN	Fed-Prov 3	0.5	0.5	0	1.00	0.50	0.50	0	WSC
ACTIVE	02YK005	SHEFFIELD BROOK NEAR TRANS CANADA HIGHWAY	Fed-Prov 3	0.5	0.5	0	1.00	0.50	0.50	0	WSC
ACTIVE	02ZJ003	SHOAL HARBOUR RIVER NEAR CLARENVILLE	Fed-Prov 3	0.5	0.5	0	1.00	0.50	0.50	0	WSC
ACTIVE	02ZM016	SOUTH RIVER NEAR HOLYWOOD	Fed-Prov 3	0.5	0.5	0	1.00	0.50	0.50	0	WSC
ACTIVE	02ZJ001	SOUTHERN BAY RIVER NEAR SOUTHERN BAY	Fed-Prov 3	0.5	0.5	0	1.00	0.50	0.50	0	WSC
ACTIVE	02YO012	SOUTHWEST BROOK AT LEWISPORTE	Fed-Prov 3	0.5	0.5	0	1.00	0.50	0.50	0	WSC
ACTIVE	02YM003	SOUTH WEST BROOK NEAR BAIE VERTE	Fed-Prov 3	0.5	0.5	0	1.00	0.50	0.50	0	WSC
ACTIVE	02YS005	TERRA NOVA RIVER AT GLOVERTOWN	Fed-Prov 3	0.5	0.5	0	1.00	0.50	0.50	0	WSC
ACTIVE	02YL008	UPPER HUMBER RIVER ABOVE BLACK BROOK	Fed-Prov 3	0.6	0.6	0	1.20	0.60	0.60	0	WSC
ACTIVE	02ZM018	VIRGINIA RIVER AT PLEASANTVILLE	Fed-Prov 3	0.5	0.5	0	1.00	0.50	0.50	0	WSC
ACTIVE	02YS006	NORTHWEST RIVER AT TERRA NOVA NATIONAL PARK	Fed-Prov 3	0.5	0.5	0	1.00	0.50	0.50	0	WSC
ACTIVE	02ZM008	WATERFORD RIVER AT KILBRIDE	Fed-Prov 3	0.5	0.5	0	1.00	0.50	0.50	0	WSC
	Total Federal - Provincial Newfoundland						**33.0**	**16.5**	**16.5**	**0.0**	**32.0**
	Total Federal - Provincial Labrador						**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
	Total Federal - Provincial Newfoundland & Labrador						**33.0**	**16.5**	**16.5**	**0.0**	**32.0**
	PROVINCIAL										
ACTIVE	02ZL005	BIG BROOK AT LEAD COVE	Prov 1	0	1	0	1	0	1	0	WSC
ACTIVE	02YK008	BOOT BROOK AT TRANS-CANADA HIGHWAY	Prov 1	0	1	0	1	0	1	0	WSC
ACTIVE	02YL009	CORNER BROOK LAKE AT LAKE OUTLET	Prov 1	0	0.4	0	0.4	0	0.4	0	WSC
ACTIVE	02YL007	DEER LAKE NEAR GENERATING STATION	Prov 1	0	0.4	0	0.4	0	0.4	0	WSC
ACTIVE	02YK010	GRAND LAKE EAST OF GRAND LAKE BROOK	Prov 1	0	0.6	0	0.6	0	0.6	0	WSC
ACTIVE	02YO013	EXPLOITS RIVER AT BADGER	Prov 1	0	1	0	1	0	1	0	WSC

Status	Station No	Station Name	Class	fed	prov	com	Stn units	fed	prov	com	Operator
ACTIVE	02YO016	EXPLOITS RIVER NEAR MILLERTOWN	Prov 1	0	1	0	1	0	1	0	WSC
ACTIVE	02YO018	EXPLOITS RIVER at Charlie Edwards Point	Prov1	0	1	0	1	0	1	0	WSC
ACTIVE	02YO017	Red Indian Lake at Indian Point	Prov1	0	0.4	0	0.4	0	0.4	0	WSC
ACTIVE	02ZC004	GRANITE LAKE AT EAST END	Prov2	0	0.6	0	0.6	0	0.6	0	WSC
ACTIVE	02ZD002	GREY RIVER NEAR GREY RIVER	Prov2	0	1.2	0	1.2	0	1.2	0	WSC
ACTIVE	02YM004	INDIAN BROOK DIVERSION ABOVE BIRCHY LAKE	Prov 1	0	1	0	1	0	1	0	WSC
ACTIVE	02ZM020	LEARYS BROOK AT PRINCE PHILIP DRIVE	Prov 1	0	1	0	1	0	1	0	WSC
ACTIVE	02ZK004	LITTLE SALMONIER RIVER NEAR NORTH HARBOUR	Prov 1	0	1	0	1	0	1	0	WSC
ACTIVE	02ZK007	RATTLING BROOK BIG POND	Prov2	0	0.4	0	0.4	0	0.4	0	WSC
ACTIVE	02ZK006	RATTLING BROOK BELOW BRIDGE	Prov2	0	1	0	1	0	1	0	WSC
ACTIVE	02ZK008	Rattling Brook below Plant Discharge	Prov1	0	1	0	1	0	1	0	WSC
ACTIVE	02ZM006	NORTHEAST POND RIVER AT NORTHEAST POND	Prov 1	0	1	0	1	0	1	0	WSC
ACTIVE	02ZM022	RAYMOND BROOK AT OUTLET OF BAY BULLS BIG POND	Prov 1	0	1	0	1	0	1	0	WSC
ACTIVE	02ZJ002	SALMON COVE RIVER NEAR CHAMPNEYS	Prov 1	0	1	0	1	0	1	0	WSC
ACTIVE	02ZL004	SHEARSTOWN BROOK AT SHEARSTOWN	Prov 1	0	1	0	1	0	1	0	WSC
ACTIVE	02YL004	SOUTH BROOK AT PASADENA	Prov 1	0	1	0	1	0	1	0	WSC
ACTIVE	02YL012	Steady Book above Confluence of Humber river	Prov 1	0	1	0	1	0	1	0	WSC
ACTIVE	02ZN002	ST. SHOTTS RIVER NEAR TREPASSEY	Prov 1	0	1	0	1	0	1	0	WSC
ACTIVE	02YN004	STAR BROOK ABOVE STAR LAKE	Prov 2	0	1.2	0	1.2	0	1.2	0	WSC
ACTIVE	02YR004	TRITON BROOK ABOVE GAMBO POND	Prov 1	0	1	0	1	0	1	0	WSC
ACTIVE	02YN005	VICTORIA LAKE AT NORTHEAST CONTROL STRUCTURE	Prov2	0	0.6	0	0.6	0	0.6	0	WSC
ACTIVE	02ZD003	R.R. POND NEAR GRANITE LAKE	Prov2	0	0.6	0	0.6	0	0.6	0	WSC
ACTIVE	02YF002	CAT ARM RESERVOIR NEAR SPILLWAY	Prov2	0	0.4	0	0.4	0	0.4	0	WSC
ACTIVE	02ZC003	WHITE BEAR RIVER ABOVE BIG INDIAN BROOK	Prov2	0	0.9	0	0.9	0	0.9	0	WSC
ACTIVE	02YO019	Badger Brook Below Foot Bridge	Prov 1	0	0.4	0	0.4	0	0.4	0	WSC
ACTIVE	03OC003	ATIKONAK RIVER ABOVE PANCHIA LAKE	Prov2	0	1.2	0	1.2	0	1.2	0	WSC
ACTIVE	03NE003	CAMP POND AT SOUTHWEST END	Prov 2	0	0.6	0	0.6	0	0.6	0	WSC
ACTIVE	03NE002	CAMP POND BROOK BELOW CAMP POND	Prov 2	0	1.2	0	1.2	0	1.2	0	WSC
ACTIVE	03OA012	Luce Brook below Tinto Pond	Prov 2	0	1.2	0	1.2	0	1.2	0	WSC
ACTIVE	03OA014	Wabush Lake at Dolamite Rd	Prov 2	0	0.4	0	0.4	0	0.4	0	WSC
ACTIVE	03OA005	Wabush Lake at Lake Outlet	Prov 2	0	1.2	0	1.2	0	1.2	0	WSC
ACTIVE	03OE011	PINUS RIVER	Prov 1	0	1.2	0	1.2	0	1.2	0	WSC
ACTIVE	03NE011	REID BROOK Below Tributary	Prov 2	0	1.2	0	1.2	0	1.2	0	WSC
ACTIVE	03NE001	REID BROOK AT OUTLET OF REID POND	Prov 2	0	1.2	0	1.2	0	1.2	0	WSC
ACTIVE	03NE012	TRIBUTARY to Reid Brook	Prov 2	0	1.2	0	1.2	0	1.2	0	WSC
ACTIVE	03OE013	CHURCHILL RIVER ABOVE GRIZZLE RAPIDS	Prov 1	0	0.6	0	0.6	0	0.6	0	WSC
ACTIVE	03OE014	CHURCHILL RIVER 6.15KMS BELOW MUSKRAT FALLS	Prov 1	0	1.2	0	1.2	0	1.2	0	WSC
ACTIVE	03PC001	Churchill River at English Point	Prov1	0	0.6	0	0.6	0	0.6	0	WSC
ACTIVE	03OB007	Elross Creek below Pinette Lake Inflow	Prov2	0	1.2	0	1.2	0	1.2	0	WSC
ACTIVE	03OA015	Flora Creek below Trans Labrador Highway	Prov 1	0	1.2	0	1.2	0	1.2	0	WSC
ACTIVE	03OB009	Joan Brook below outlet of Joan Lake	Prov 1	0	1.2	0	1.2	0	1.2	0	WSC
ACTIVE	03OA016	Dumbell stream above Dumbell Lake	Prov 2	0	1	0	1	0	1	0	WSC
ACTIVE	03OD008	Churchill River Above Churchill Falls Tailrace	Prov 1	0	1.2	0	1.2	0	1.2	0	WSC
ACTIVE	03OD009	Churchill River below Metchin River	Prov 1	0	1.2	0	1.2	0	1.2	0	WSC
ACTIVE	03OD010	Churchill River Below Churchill Falls Tailrace	Prov 1	0	1.2	0	1.2	0	1.2	0	WSC
ACTIVE	03OE017	Mud Lake at outlet tributary at Mud Lake	Prov 1	0	0.6	0	0.6	0	0.6	0	WSC
ACTIVE	03OA017	Pumphouse Stream above Drum Lake	Prov 2	0	1	0	1	0	1	0	WSC
ACTIVE	03OE019	Churchill River Below Outlet of Traverspine River	Prov 1	0	0.6	0	0.6	0	0.6	0	WSC
ACTIVE	03OE018	Churchill River at End of Mud Lake Road	Prov 1	0	0.6	0	0.6	0	0.6	0	WSC
ACTIVE	03PD002	CHURCHILL RIVER OUTLET AT RABBIT ISLAND	Prov 1	0	0.6	0	0.6	0	0.6	0	WSC
ACTIVE	03OE016	Churchill River at Happy Valley	Prov 1	0	0.6	0	0.6	0	0.6	0	WSC
ACTIVE	TBD	Goose River at Bridge	Contributed	0	0	0	0	0	0	0	WRMD
	Total Provincial Newfoundland						**26.1**	**0.0**	**26.1**	**0.0**	**31.0**
	Total Provincial Labrador						**25.2**	**0.0**	**25.2**	**0.0**	**26.0**
	Total Provincial Newfoundland & Labrador						**51.3**	**0.0**	**51.3**	**0.0**	**57.0**
	Grand Total Newfoundland						**70.5**	**27.9**	**42.6**	**0.0**	**74.0**
	Grand Total Labrador						**30.6**	**5.4**	**25.2**	**0.0**	**31.0**
	Grand Total Newfoundland and Labrador						**101.1**	**33.3**	**67.8**	**0.0**	**105.0**
	ASHKUI WATER QUALITY SAMPLING SITES										
ACTIVE		CAPE CARIBOU RIVER		0	0.1	0	0.10	0	0.10	0	WSC
ACTIVE		Dominion Lake		0	0.1	0	0.10	0	0.10	0	WSC
ACTIVE		Seal Lake Narrows		0	0.1	0	0.10	0	0.10	0	WSC
ACTIVE		Susan River		0	0.1	0	0.10	0	0.10	0	WSC
ACTIVE		Wuchusk lake		0	0.1	0	0.10	0	0.10	0	WSC
ACTIVE		NASKAUPI RIVER BELOW NASKAUPI LAKE		0	0.1	0	0.10	0	0.10	0	WSC
	Total Water Quality Sampling Sites Labrador						**0.60**	**0.00**	**0.60**	**0.00**	**6.00**

Appendix B SIGNED SCHEDULE D 2023-2024

NEWFOUNDLAND AND LABRADOR 2023-2024

SCHEDULE D

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

ANNUAL PAYMENT FOR 2023-2024 TO BE PAID TO THE RECEIVER GENERAL FOR CANADA BY THE PROVINCE OF NEWFOUNDLAND AND LABRADOR

NEWFOUNDLAND and LABRADOR SHARE

	O&M	Salary	Capital	Total
a) Streamflow and Water Level Installations - Island	$177,240.21	$550,109.78	$38,651.93	$766,001.92
b) Streamflow and Water Level Installations - Labrador	$272,868.03	$243,452.84	$23,408.92	$539,729.79
c) Construction/Major Maintenance/Decommissioning	$35,000.00	$0.00	$0.00	$35,000.00
d) Height Modernization Project*	($500.00)	$0.00	$0.00	($500.00)
e) Third-Party Agreement Maintenance Project*	($8,370.00)	$0.00	$0.00	($8,370.00)
f) Real Property Management Project*	($6,330.00)	$0.00	$0.00	($6,330.00)
g) Operational Monitoring Equipment Purchase Project*	($15,450.00)	$0.00	$0.00	($15,450.00)
TOTAL	$454,458.23	$793,562.63	$62,060.85	$1,310,081.71

July 19/23

Haseen Khan, P.Eng. Date
Director
Water Resources Management Division
Department of Environment and Climate Change
Administrator for Province of Newfoundland and Labrador

Jenkinson, Wayne
Digitally signed by Jenkinson, Wayne
Date: 2023.07.04 14:34:43 -04'00'

Wayne Jenkinson, PhD, P.Eng. Date
Executive Director
National Hydrological Service
Meteorological Service of Canada
Environment and Climate Change Canada

* Amounts indicate federal share of Special Projects agreed upon by both parties, that directly contribute to the operation of the program.

Appendix C Summary of Cumulative Annual Costs 1975-76 to 2023-2024

SUMMARY OF ACTUAL ANNUAL COSTS AND PAYMENTS 1975-76 TO 2023-2024													
	SCHEDULE "D" PAYMENTS BY PROVINCE OF NEWFOUNDLAND							ACTUAL PROVINCIAL SHARE				PROVINCIAL +CREDIT	
YEAR	Hydrometric Op.	Umber River Met Station	Inkind Equipment Purchased by the province	In kind Equipment Credit	SEDIMENT	CONSTR'N	TOTAL	HYDROMET	SEDIMENT	CONSTR'N	TOTAL	-DEBIT	Curent Balance
1975-76	$ 37,800				$ -	$ 3,600	$ 41,400	$ 36,238	$ -	$ 2,177	$ 38,415	$ 2,985	$ 2,985.00
1976-77	$ 32,340				$ -	$ 12,000	$ 44,340	$ 37,840	$ -	$ 1,573	$ 39,413	$ 4,927	$ 7,912.00
1977-78	$ 35,520				$ -	$ 24,480	$ 60,000	$ 38,700	$ -	$ 13,963	$ 52,663	$ 7,337	$ 15,249.00
1978-79	$ 56,775				$ 1,400	$ 11,825	$ 70,000	$ 51,371	$ 679	$ 26,000	$ 78,050	-$ 8,050	$ 7,199.00
1979-80	$ 68,338				$ 933	$ 25,729	$ 95,000	$ 62,256	$ 896	$ 22,476	$ 85,628	$ 9,372	$ 16,571.00
1980-81	$ 78,639				$ 1,475	$ 6,000	$ 86,114	$ 83,518	$ 1,064	$ 7,703	$ 92,285	-$ 6,171	$ 10,400.00
1981-82	$ 83,523				$ 3,750	$ 14,000	$ 101,273	$ 100,726	$ 3,114	$ 16,560	$ 120,400	-$ 19,127	-$ 8,727.00
1982-83	$ 96,542				$ 3,744	$ 55,000	$ 155,286	$ 102,735	$ 5,886	$ 47,224	$ 155,845	-$ 559	-$ 9,286.00
1983-84	$ 141,457				$ 4,470	$ 38,000	$ 183,927	$ 136,917	$ 6,906	$ 37,864	$ 181,687	$ 2,240	-$ 7,046.00
1984-85	$ 168,244				$ 7,350	$ 52,000	$ 227,594	$ 168,247	$ 5,295	$ 48,662	$ 222,204	$ 5,390	-$ 1,656.00
1985-86	$ 195,563				$ 7,650	$ 36,787	$ 240,000	$ 191,580	$ 6,324	$ 39,203	$ 237,107	$ 2,893	$ 1,237.00
1986-87	$ 211,706				$ 6,975	$ 34,641	$ 253,322	$ 222,843	$ 4,413	$ 35,136	$ 262,392	-$ 9,070	-$ 7,833.00
1987-88	$ 213,634				$ 6,975	$ 42,000	$ 262,609	$ 220,934	$ 3,597	$ 47,957	$ 272,488	-$ 9,879	-$ 17,712.00
1988-89	$ 245,221				$ 6,300	$ 15,000	$ 266,521	$ 237,249	$ 4,683	$ 16,148	$ 258,080	$ 8,441	-$ 9,271.00
1989-90	$ 253,392				$ 5,173	$ 30,000	$ 288,565	$ 274,004	$ 5,571	$ 21,264	$ 300,839	-$ 12,274	-$ 21,545.00
1990-91	$ 260,691				$ 5,925	$ -	$ 266,616	$ 266,058	$ 4,809	$ 2,532	$ 273,399	-$ 6,783	-$ 28,328.00
1991-92	$ 264,591				$ 6,450	$ -	$ 271,041	$ 234,222	$ 5,649	$ -	$ 239,871	$ 31,170	$ 2,842.00
1992-93	$ 276,655	-$ 3,173			$ 3,825	$ -	$ 277,307	$ 254,430	$ 4,713	$ -	$ 259,143	$ 18,164	$ 21,006.00
1993-94	$ 274,156	-$ 3,173			$ 3,700	$ 21,000	$ 295,683	$ 276,163	$ 3,505	$ 20,496	$ 300,164	-$ 4,481	$ 16,525.00
1994-95	$ 303,700	-$ 8,200			$ 3,200	$ -	$ 298,700	$ 288,835	$ 3,220	$ -	$ 292,055	$ 6,645	$ 23,170.00
1995-96	$ 310,272	-$ 16,232			$ 1,375	$ -	$ 295,415	$ 292,860	$ 1,180	$ -	$ 294,040	$ 1,375	$ 24,545.00
1996-97	$ 236,427	-$ 6,784			$ -	$ -	$ 229,643	$ 229,643	$ -	$ -	$ 229,643	$ -	$ 24,545.00
1997-98	$ 172,334	-$ 5,165			$ -	$ -	$ 167,169	$ 175,042			$ 175,042	-$ 7,873	$ 16,672.00
1998-99	$ 151,439	-$ 4,808			$ -	$ -	$ 146,631	$ 154,159	$ -	$ -	$ 154,159	-$ 7,528	$ 9,144.24
1998-99		Adjustment credit to modernization				$ -		$ -	$ -	$ -		-$ 24,677	-$ 15,532.76
1999-00	$ 147,934	-$ 4,686			$ -	$ -	$ 143,248	$ 152,829	$ -	$ -	$ 152,829	-$ 9,581	-$ 25,113.89
2000-01	$ 165,270	-$ 5,231			$ -	$ -	$ 160,039	$ 158,561	$ -	$ -	$ 158,561	$1,477.67	-$ 23,636.22
2001-02	$ 166,997	-$ 5,119			$ -	$ -	$ 161,878	$ 158,634	$ -	$ -	$ 158,634	$3,244.05	-$ 20,392.17
2002-03	$ 172,639	-$ 5,369			$ -	$ -	$ 167,270	$ 169,865	$ -	$ -	$ 169,865	-$2,595.38	-$ 22,987.55
2003-04	$ 178,699	-$ 4,924			$ -	$ -	$ 173,775	$ 175,735	$ -	$ -	$ 175,735	-$1,960.00	-$ 24,947.55
2004-05	$ 420,834	-$ 5,395			$ -	$ -	$ 415,439	$ 407,849	$ -	$ -	$ 407,849	$7,590.00	-$ 17,357.55
2005-06	$ 425,082	-$ 5,395	$ 5,077	$ 1,523	$ -	$ -	$ 421,210	$ 393,104	$ -	$ -	$ 393,104	$28,105.88	$ 10,748.33
2006-07	$ 477,365	-$ 5,395	$ 20,400	$ 6,120	$ -	$ 1,500	$ 479,590	$ 445,337	$ -	$ 1,144	$ 446,481	$33,108.73	$ 43,857.06
2007-08	$ 548,813	-$ 6,697	$ 67,600	$ 20,280	$ -	$ 1,368	$ 563,764	$ 537,469	$ -	$ 3,663	$ 541,131	$22,632.70	$ 66,489.75
2008-09	$ 605,612	-$ 8,258	$ 56,400	$ 16,900	$ -	$ 14,404	$ 628,658	$ 622,512	$ -	$ 8,998	$ 631,510	-$2,852.00	$ 63,637.75
2009-10	$ 647,777	-$ 8,125	$ 11,000	$ 3,300	$ -	$ 20,500	$ 663,452	$ 669,641	$ -	$ 21,068	$ 690,709	-$27,257.00	$ 36,380.75
2010-11	$ 677,540	-$ 8,110	$ 35,663	$ 10,699	$ -	$ 15,000	$ 695,129	$ 692,904	$ -	$ 34,502	$ 727,406	-$32,277.00	$ 4,103.75
2011-12	$ 694,839	$ 9,291	$ 57,837	$ 17,351			$ 721,481	$ 826,078			$ 826,078	-$104,597.00	-$ 100,493.25
2012-13	$ 806,826	-$ 9,983	$ 18,040	$ 5,412			$ 802,255	$ 804,546			$ 804,546	-$2,291.00	-$ 102,784.25
2013-14	$ 832,689	-$ 9,983	$ 16,821	$ 5,046			$ 827,752	$ 806,657			$ 806,657	$21,095.30	-$ 81,688.95
2014-15	$ 861,167	-$ 10,133	$ 44,046	$ 13,214			$ 864,248	$ 806,396			$ 806,396	$57,851.80	-$ 23,837.15
2015-16	$ 803,974	-$ 10,133	$ 3,343	$ 1,003			$ 794,844	$ 785,933			$ 785,933	$8,911.00	-$ 14,926.15
2016-17	$ 750,644	-$ 10,133	$ 15,551	$ 4,665			$ 745,176	$ 817,843			$ 817,843	-$72,666.70	-$ 87,592.84
2017-18	$ 987,293	-$ 10,133	$ 9,255	$ 2,777			$ 979,937	$ 929,538			$ 929,538	$50,398.50	-$ 37,194.34
2018-19	$ 981,142		$ 18,594	$ 5,578			$ 986,720	$ 988,310			$ 988,310	-$1,589.80	-$ 38,784.15
2019-20	$ 977,768		$ 20,437	$ 6,131			$ 983,899	$ 1,001,763			$ 1,001,763	-$17,863.90	-$ 56,648.05
2020-21	$ 975,240		$ 39,509	$ 11,853			$ 987,093	$ 934,810			$ 934,810	$52,282.70	-$ 4,365.35
2021-22	$ 999,226		$ 43,554	$ 13,066			$ 1,012,292	$ 1,040,083			$ 1,040,083	-$27,791.00	-$ 32,156.35
2022-23	$ 1,017,431					$ 29,180	$ 1,046,611	$ 1,021,690		$ 27,462	$ 1,049,152	-$2,541.00	-$ 34,697.35
2023-24	$ 1,170,338					$ 35,000	$ 1,205,338	$ 1,098,101		$ 58,935	$ 1,157,036	$48,302.00	$ 13,604.65
											Net total		$ 13,604.65
NOTES.	A positive net total indicates funds owed to the Province.												

APPENDIX D

ATLANTIC REGION INFRASTRUCTURE REPORT 2023-24

Hydrometric Infrastructure and Construction in Atlantic Canada

Project Summary Report 2023 - 2024

Prepared for: Internal Use and Provincial Partners

Prepared by:

Jordi Eagleson & Megan Campbell

Environment and Climate Change Canada (ECCC), National Hydrological Service East, Engineering, Technical and Data Services (ETDS)

Prepared on:

June 3rd, 2024

Table of Contents

1. Introduction

This report provides a summary of the infrastructure and construction projects that were initiated and/or completed in Atlantic Canada in 2023 – 2024. In addition, outstanding project tasks are outlined herein. Projects were selected based on their alignment with priorities for Treasury Board infrastructure renewal spending. Where possible, an approach was taken to renew stations that have multiple Treasury Board eligible issues. Efforts were made to group similar projects together to reduce overall project costs. These Treasury Board priorities include the following:

- Decommission inactive cableways;
- Retrofit cableways where they are still needed;
- Assess and remediate/risk assess environmental liabilities (e.g., creosote, total petroleum hydrocarbons (PHC), mercury, lead);
- Replace/repair shelters that are in unsafe/unusable condition; and
- Decommission inactive wells with shelters in poor condition.

1.1. Environmental Liabilities

Federal funding for contaminated sites may be leveraged for our stations through the Federal Contaminated Site Action Program (FCSAP). National Contaminated Sites Classification System (NCSCS) scoring is required for each candidate station to be able to access this funding. This funding may be used beyond the planning horizon of the Treasury Board renewal funds to help tackle outstanding environmental contamination in the longer term.

2. New Brunswick

2.1. Petitcodiac River Near Petitcodiac (01BU002)

This site consisted of an inactive well decommissioning, and an installation of a new well shelter. The new well shelter was postponed to FY 2024-2025, but decommissioning of the inactive well took place in FY 2023-2024. The well was located on private property, and permission to perform the decommissioning was provided by property owner Kevin Murray on August 14th, 2023. A Watercourse and Wetland Alteration Permit was also obtained on August 16th, 2023, for the purposes of decommissioning the well.

The well was decommissioned in accordance with the New Brunswick Department of Environment and Local Government (NBDELG) Guidelines for Decommissioning (Abandonment) of Water Wells. A Contractor was hired for decommissioning due to their ability to handle

contaminated water and materials independently. The well decommission took place on September 6th, 2023 (Figure 1).

Figure 1. Topsoil overlaid on the decommissioned well at 01BU002 Petitcodiac River near Petitcodiac (photograph taken on September 9th, 2023).

2.2. Parlee Brook Below Arnolds Bridge (01AP009)

This stilling well had been abandoned since 1992, and therefore decommissioning was a priority. The site was located on private property owned by Randy Donald Arsenault. As a result, the well was decommissioned in accordance with the New Brunswick Department of Environment and Local Government (NBDELG) Guidelines for Decommissioning (Abandonment) of Water Wells. The site was contaminated with lead paint with concentrations of 9,250 mg/kg, and a leachable lead concentration of 0.68 mg/L. These levels required the lead containing paint be disposed of at a sanitary landfill disposal site approved by the NBDELG.

Decommissioning had a deadline of September 30th, 2023, due to strict timeframes on permits administered by the NBDELG. The decommissioning was performed by a local Contractor bundled with the Petitcodiac well for cost saving efficiencies. The well was decommissioned on September 25th, 2023. Photographs of the decommissioning are included in Figures 2 – 5.

Figure 2. Restoration of the site at 01AP009 Parlee Brook below Arnolds Bridge (photograph taken on September 26th, 2023)

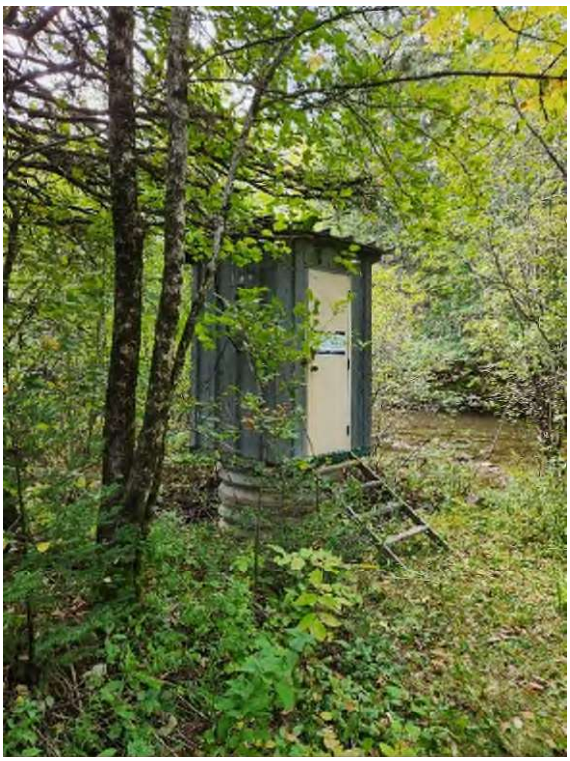


Figure 3. The unused shelter located at 01AP009 Parlee Brook Below Arnolds Bridge (photograph taken on September 25th, 2023).

Figure 4. The deconstruction of the shelter located at 01AP009 Parlee Brook Below Arnolds Bridge (photograph taken on September 25th, 2023).

Figure 5. The result of the decommissioning at 01AP009 Parlee Brook Below Arnolds Bridge (photograph taken on September 26th, 2023).

2.3. Point Wolfe at Fundy National Park (01BV006)

This site consists of an inactive corrugated steel stilling well, a small walk-in shelter and a cableway which have reached the end of their design lives and require decommissioning and replacement (Figures 6 & 7). The cableway, which had an affixed solar panel, required emergency decommissioning due to a fallen tree (Figure 8). The tree was removed by the Fundy National Park of Canada in June 2023 (Figure 9). The station's life cycle maintenance is planned for the 2025-26 fiscal year. Through Public Services and Procurement Canada (PSPC), environmental consultants were hired to complete an environmental site assessment (ESA) report in fiscal year 2021/22 which confirmed soil samples exceeding CCME criteria for lead (Pb), mercury (Hg), and polycyclic aromatic hydrocarbons (PAHs), as well as petroleum hydrocarbons (PHCs) in the stilling well exceeded applicable regulatory criteria. Further investigation is required prior to remediation and decommissioning. A Project Description has been submitted to Parks Canada including the soil and water contamination impacts which is in the reviewing process.

Figure 6. View of wooden walk-in shelter at 01BV006 Point Wolfe at Fundy National Park (Photograph taken in June 2023).

Figure 7. Stilling well and surrounding groundcover at 01BV006 Point Wolfe at Fundy National Park (Photograph taken mid November 2021).

Figure 8. View of cableway with fallen tree overtop at 01BV006 Point Wolfe at Fundy National Park (Photograph taken in March 2023).

Figure 9. View of cableway post tree removal at 01BV006 Point Wolfe at Fundy National Park (Photograph taken in June 2023)

3. Nova Scotia

3.1. MacAskill's Brook Near Birch Grove (01FJ002)

This station had an inactive stilling well in poor condition in need of lifecycle replacement. PSPC was used to retain the services of an environmental consultant to conduct the ESA work. The ESA report was completed on March 27, 2023. The results of the report indicated that the site was not contaminated; however, the well water required special handling and disposal at the time of decommissioning. On October 21st, 2023, a Contractor decommissioned the existing shelter shelter, filled the inactive stilling well, restored the site, and installed a concrete pad for the new

station. The old shelter is shown in Figure 10. The new station was installed in December of 2023; it is shown in Figure 11.

Figure 10. Old station that was decommissioned at 01FJ002 MacAskill's Brook Near Birch Grove (photograph was taken on November 20th, 2023).

Figure 11. New shelter installed at 01FJ002 MacAskill's Brook Near Birch Grove (photograph was taken on December 13th, 2023).

3.2 New Gauging Stations

Two new gauging stations were requested to be installed by Halifax Water, with the purpose of collecting water level and stream flow information. The two stations, discussed further below, are identified as 01EJ009 Tomahawk Lake near Hammonds Plains, 01EJ010 Tomahawk Lake Outlet near Hammonds Plains, and 01DG004 Bennery Lake Outlet near Enfield. The two Tomahawk Lake sites have the same infrastructure on site, so they are considered as one new station effectively.

These stations were funded by Halifax Water and developed collaboratively with Halifax Water, ECCC and Nova Scotia Department of Environment and Climate Change (NSDECC). Consultation, reconnaissance, construction, and initial monitoring were embarked and completed by the end of September of 2024. Ongoing monitoring is in place and will require approximately 12-18 months before a rating curve can be developed from the collected data.

3.2.1 01EJ009 and 01EJ010

Tomahawk Lake was one of the sites of interest for installation of a new hydrometric station by Halifax Water. It was constructed on property owned by Halifax Water and required no additional land leases or permissions. A tilting mast for a look-in equipment box was installed on site in November 2023. Initially, a concrete pad was proposed for the site, but a temporary wooden cribbing foundation was constructed instead, seen below in Figure 12, with gravel underset for drainage purposes.

Figure 12. New station installed at Tomahawk Lake outlet (photograph was taken on November 1st, 2023).

3.2.2 01DG004 Bennery Lake Outlet near Enfield

The Bennery Lake location was one of the sites requested by Halifax Water. Site reconnaissance was conducted on February 2nd and August 22nd of 2023. It was constructed on Crown Lands with permission granted via Letter of Authority issued by the Nova Scotia Department of Natural Resources and Renewables on September 5th, 2023. A look-in shelter mounted on a galvanized pipe anchored into bedrock was installed in October 2023, shown below in Figure 13.

Figure 13. The new look-in style shelter installed at Bennery Lake (photograph taken on October 5th, 2023).

3.3 Mersey River Below Mill Falls (01ED007)

The cableway at this site had minor renovations including reapplication of galvanizing spray, and application of Rustoleum metal paint on the A-frames.

4 Prince Edward Island

4.1 Carruthers Brook Near St. Anthony (01CA003)

Environmental site assessment and remediation were conducted at this site to prepare for the decommissioning of an inactive stilling well, and the construction of a new gauge on site. The decommissioning of the stilling well was completed on January 23rd and 24th, 2024 and a new look-in style gauge was installed on a galvanized steel pipe inset in a sonotube in July of 2023, as seen in Figure 14 below.

Figure 14. New look-in shelter installed at 01CA003 Carruthers Brook Near Saint Anthony (photograph taken on July 12th, 2023).

5 Newfoundland & Labrador

5.1 Indian Bay Brook Near Northeast Arm (02YR003)

This station had an inactive stilling well and wooden walk-in, that required decommissioning and remediation (Figure 15). The site also had remnants of a former cableway structure including concrete mass anchors and a creosote-treated timber base that required assessment for PAHs (Figures 16 & 17). PSPC was used to commission an environmental consultant to conduct a

Phase II ESA and NCSCS scoring to assess the site which was received on March 30, 2023. The site was scored as NCSCS class 2 and was found to be eligible for FCSAP remediation funding. The report indicated that the soil around the shelter and cableway were contaminated with PAHs and PHCs were found to be present inside the stilling well which required re-sampling. The Consultant completed re-sampling of the stilling well and three monitoring wells in August 2023 which found that the groundwater in the wells was below the discharge guidelines and therefore did not require off-site disposal.

A Contractor was commissioned by PSPC under the supervision of an environmental consultant to complete the decommissioning, installation, and remediation of the station. The decommissioning work was completed between February 21st and 22nd, 2024 and consisted of the removal of the wooden shelter, cutting down and back filling the metal stilling well, and the removal of the creosote-treated timber debris which were disposed of at the Central Newfoundland Waste Management Facility. Remediation of the site was completed on February 22nd, 2024, by the Contractor under the supervision of the environmental consultant. The PAH impacted soil was excavated from the north side of the site and backfilled with clean imported silty sand material (Figures 18 & 19). The new aluminum doghouse look-in style shelter was installed on February 21st and 22nd, 2024, by the Contractor which included a new corrugated metal standpipe at the base of the former stilling well and a new doghouse style look-in shelter with metal stairs/platform (Figure 20). Following the installation, post-remedial groundwater samples of the monitoring wells were collected on March 5th, 2024, by the environmental consultant and reported PAH and PHC concentrations below the applicable guidelines. The monitoring wells were decommissioned on March 21st, 2024. Final reinstatement of the site included placement of gravel along the trailway, and topsoil and seed mix over the decommissioning/remediation areas (Figure 21). The FCSAP site closure report was received on March 31st, 2024. The report finding state that with the remedial excavation and backfilling, no additional assessment or remediation is warranted for the station.

Figure 15. View of former wooden walk-in shelter and stilling well at 02YR003 (Photograph taken September 16, 2022).

Figure 16. Concrete mass anchor from former cableway at 02YR003 (Photograph taken September 16, 2022).

Figure 17. View of creosote timber of the former cableway at 02YR003 (Photograph taken September 16, 2022).

Figure 18. View of the cutdown stilling well during decommissioning at 02YR003 (Photograph taken on February 21, 2024)

Figure 19. View following the removal of the PAH impacted soil on the northside of the site at 02YR003 (Photograph taken on February 22, 2024)

Figure 20. New corrugated metal standpipe and dog-house style look-in shelter with metal stairs/platform at 02YR003.

Figure 21. New gravel trailway to the station at 02YR003

5.2 Great Rattling Brook Above Tote River Confluence (02YO008)

This site consists of a cableway that contained a wooden walk-in shelter with four creosote-treated timbers and A-Frame cableway structures (Figures 22 & 23). PAH staining was identified in the soil along the base of the cableway structure (Figure 24) and paint chipping potentially containing lead and mercury was found on the wooden structure. The station required an ESA for the potential site contamination of the soil, creosote-treated timbers, and paint, therefore, PSPC was used to commission an environmental consultant to complete an ESA of the site. Soil samples were collected on October 11th, 2023, adjacent to the cableway structure and near the shelter for PAHs analysis which were found to be in exceedance of applicable regulatory criteria which required further assessment. Soil samples found no issues with mercury contamination, however samples exceedances for lead contamination were identified. The paint samples from the shelter contained concentrations of lead and mercury below the applicable guidelines as well as the treated wood timbers from the cableway and shelter supports. The site was classified as a Class 2 Site based on the NCSCS Site Classification. Further sampling was identified as required prior to decommissioning and remediation of the site planned in FY 2024-25.

Figure 22. View of cableway structure on the east side with the platform and cable car and creosote-treated A-Frame (October 2023).

Figure 23. View of A-Frame structure on the west bank side (Photograph taken on October 24, 2023).

Figure 24. View showing the PAH staining along the base of the cableway structure (Photograph taken on October 11, 2023).

5.3 Lewasseechjeech Brook at Little Grand Lake (02YK002)

The field work at the Lewasseechjeech Brook site was conducted on Sept 6, 2023. The existing cable(which had been dropped during a previous site visit) was coiled and left on the riverbank

and the wooden cableway structure cut into manageable pieces, stockpiled and wrapped in a tarp. All material was brought to the left bank where it remains for future disposal. One representative sample of the creosote-treated wood was submitted for TCLP leachate analysis.

At the Lewasseechjeech Brook location, one bulk wood sample was submitted to AGAT Laboratories for TCLP analysis for inorganic preservatives (arsenic and chromium), creosote formulations (m Cresol, o Cresol, p Cresol, Total Cresol, and Benzo(a)Pyrene), and chlorophenolic formulation (Pentachlorophenol). The preservative concentrations in the creosote-treated timbers associated with the former cableway were near non-detect, and therefore, below the applicable guidelines for the disposal of treated wood waste. Based on these results, the creosote-treated wood associated with the former cableway can be disposed of at any municipal or industrial landfill in the Province of NL.

5.4 Main River at Paradise Pool (02YG001)

The field work at the Main River site was conducted on Sept 29, 2023. The existing cable was dropped and coiled and placed on the right riverbank (same side as gauge house). The wooden cableway structure on the right riverbank was cut into manageable pieces, stockpiled and wrapped in a tarp, ready for future disposal. The cableway structure on the left bank was left intact, but on the ground, awaiting future disposal. Due to site conditions, it was not possible to bring all the material to the right riverbank. The cableway structure on the left bank was left intact as it was determined that it would be easier to sling out by helicopter in one piece, rather than as a pile of debris. One representative sample of the creosote-treated wood was submitted for TCLP leachate analysis.

At the Main River location, one bulk wood sample was submitted to AGAT Laboratories for TCLP analysis for inorganic preservatives (arsenic and chromium), creosote formulations (m Cresol, o Cresol, p Cresol, Total Cresol, and Benzo(a)Pyrene), and chlorophenolic formulation (Pentachlorophenol). The preservative concentrations in the creosote-treated timbers associated with the former cableway were near non-detect, and therefore, below the applicable guidelines for the disposal of treated wood waste. Based on these results, the creosote-treated wood associated with the former cableway can be disposed of at any municipal or industrial landfill in the Province of NL.

5 Conclusions

In 2023–2024, key infrastructure and environmental remediation projects were delivered across Atlantic Canada in line with Treasury Board renewal priorities. Inactive cableways and wells were decommissioned, unsafe shelters replaced, and contaminated sites assessed and remediated. Projects were bundled where possible to reduce costs.

New stations were installed in Nova Scotia in collaboration with Halifax Water, expanding monitoring capabilities. FCSAP funding supported contaminated site work, and NCSCS scoring enabled eligibility assessments for future remediation.

Outstanding tasks remain at sites requiring further investigation or permit approvals. These will be priorities for the upcoming fiscal year. Overall, the program advanced infrastructure renewal while addressing environmental risks efficiently and safely.

6 Closure

This report has been reviewed by:

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