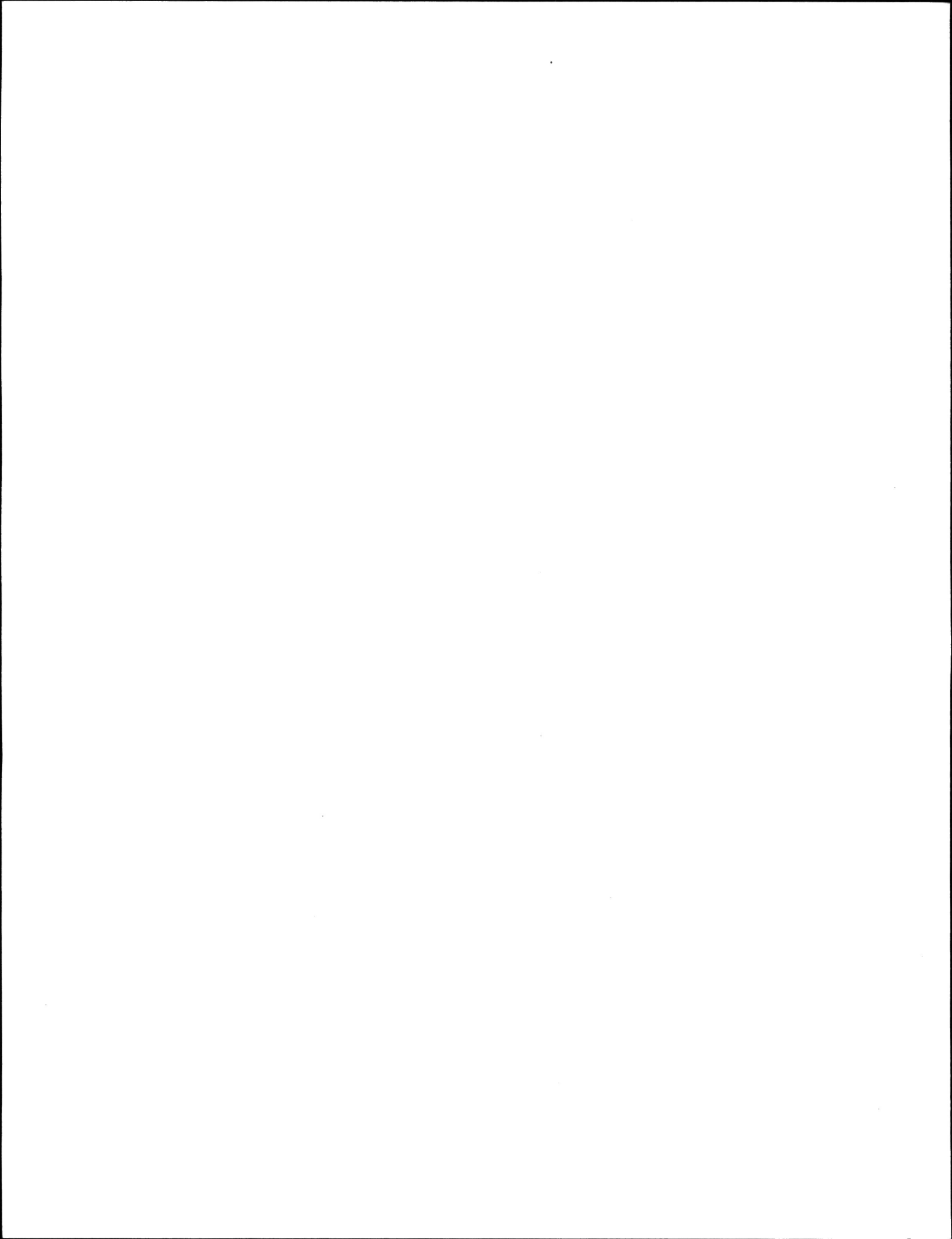


CANADA – ALBERTA
MEMORANDUM OF AGREEMENT
FOR
WATER QUANTITY SURVEYS

REPORT for FISCAL YEAR
2007 – 2008



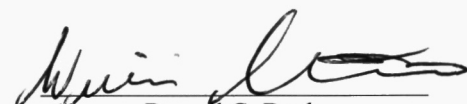
CANADA – ALBERTA
2007 – 2008 Memorandum of Agreement for Water Quantity Surveys

TO: Dr. Alain Pietroniro
Administrator for Canada

Mr. Tom Dickson
Administrator for Alberta

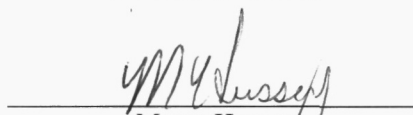
We hereby submit the annual report for the fiscal year 2007 – 2008 covering activities under the Memorandum of Agreement for Water Quantity Surveys for the Province of Alberta.

Government of Canada



for Russell G. Boals
Environment Canada

Province of Alberta



Morna Hussey
Alberta Environment

Members

Alberta Coordinating Committee

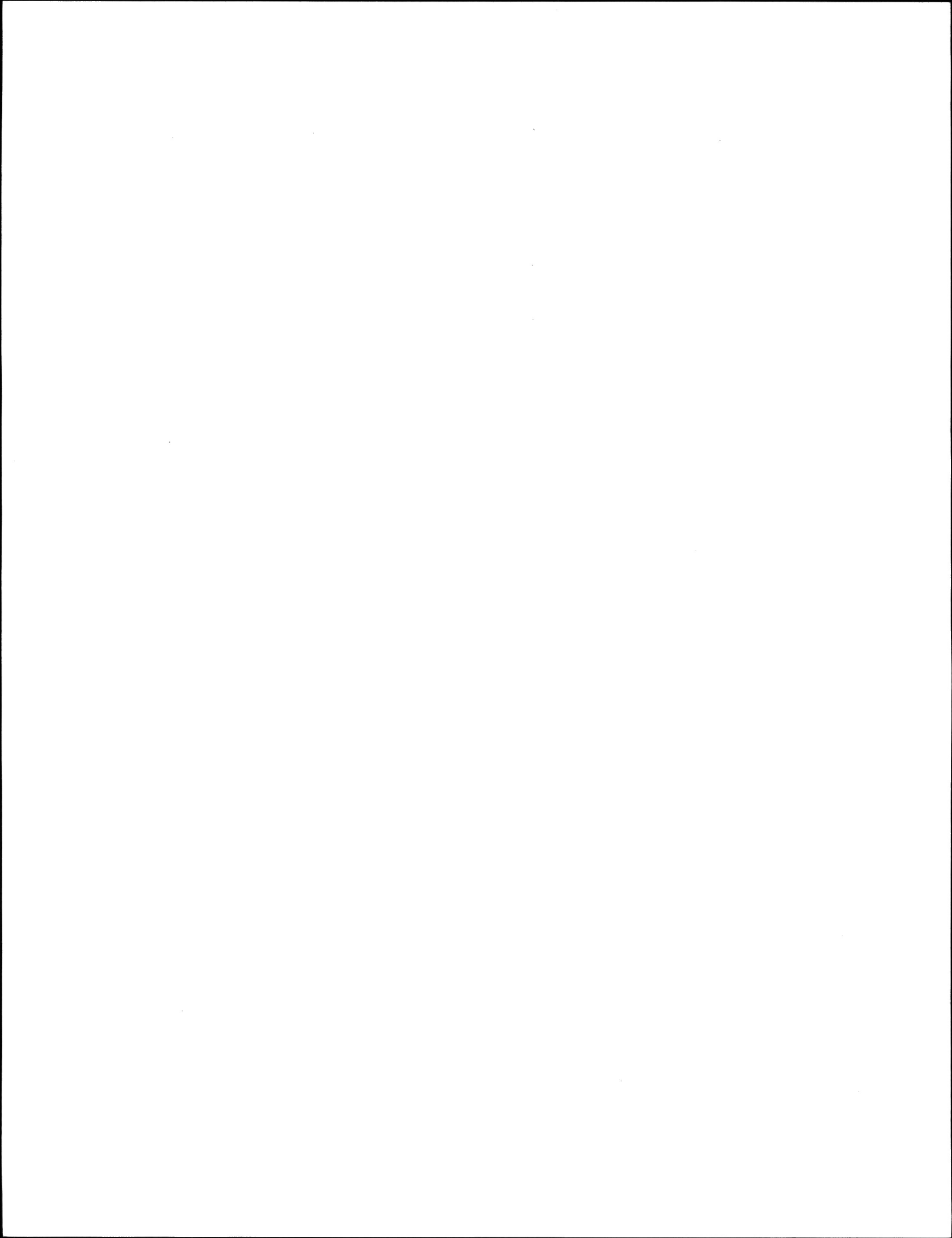


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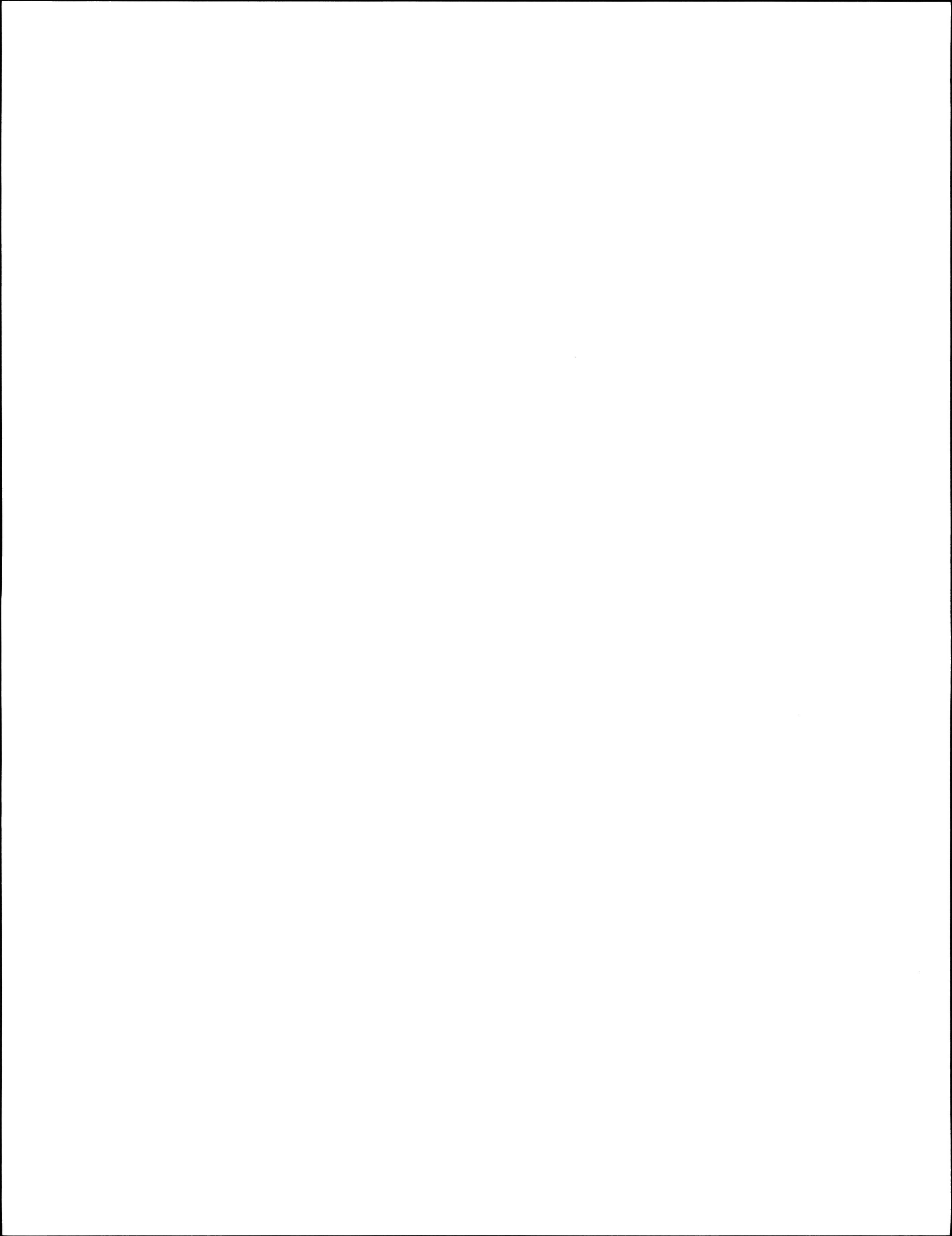
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1.0 INTRODUCTION

To date twenty four reports summarizing the activities of the water quantity surveys in the Province of Alberta have been submitted to the Administrators of the Canada – Alberta Water Quantity Surveys in accordance with Article XII of the 1975 Memorandum of Agreement. The last report was submitted March 2010 for the fiscal years 2006 – 2007.

In 1975, Canada and Alberta signed the Canada – Alberta Memorandum of Agreement for Water Quantity Surveys thus harmonizing the collection, processing, publication and distribution of Hydrometric data for Alberta. In the same year, similar agreements were signed with all provinces and with Indian and Northern Affairs Canada on behalf of the Territories. These agreements have provided the basis for the development of a standardized national archive of data and information on the availability and variability of surface water within Canada.

The evolution of the needs of the parties and monitoring approaches since 1975 have created the need for the renewal of all of the 1975 agreements. This new Agreement provides the structure and flexibility to ensure that the parties are provided with an effective and efficient Hydrometric monitoring service that supports public health and safety, economic development and the sustainability of our natural environment.

As discussions continue on finalizing the new Agreement, the twenty fifth report for the fiscal year 2007 – 2008 has been prepared in accordance with the changes to Schedule B of the new Agreement that have been agreed to by the Administrators at national meetings. Schedule B of the new Agreement describes the procedures for determining and distributing shareable costs.

The 2007 – 2008 report contains a brief summary of the year in review and highlights from the coordinator meetings held May 25 and October 25, 2007 along with highlights from a joint meeting between the Coordinating Committee and the Alberta Environment Hydrometric - Meteorological Committee conducted March 11, 2008. Network status and operational costs for hydrometric and specific project activities are also discussed. A historical over and under cumulative summary and table of Alberta Environment payments is included in Section 3.0, while the historical network development dating back to the early 1900's is illustrated in the final section of this report.

In addition, the Appendices to this report include Schedule C, a station listing for 2007 – 2008; Schedule D, Summary of Financial Considerations Details for 2007 – 2008; Schedule D, Summary of Financial Considerations Estimates 2007 – 2008; Schedule D, Summary of Financial Considerations Estimates 2008 – 2009; Project Details 2007 - 2008.

The 2007 – 2008 Alberta hydrometric program total expenditures were \$ 4,156,231. Canada's calculated share is \$1,630,195 while Alberta Environment's is \$2,526,036.

2.0 SUMMARY of OPERATIONAL CONSIDERATIONS

2.1 Year in Review

Generally, runoff from snowmelt and rainfall events was normal throughout most of the province. The exception was in the northwest which experienced localized high spring runoff. The Clear River at Bear Canyon infrastructure (shelter and cableway) was lost due to flooding. Temporary gauging facilities were installed and a search for a more suitable location was undertaken. This station is vulnerable to flooding with this being the second time in five years the station received extensive damage from runoff events.

Deleted: were

The hydrometric program continues to experience an above normal human resource (HR) vacancy rate. To alleviate some of the pressure and ensure program deliverables are met, Canada, late in 2007 – 2008 temporarily assigned two (2) senior technologists based in Manitoba and Saskatchewan to the Alberta program. These assignments are for a minimum one (1) year.

The hydrometric program human resource challenges is not the only area with HR challenges as the facilities section incurred a supervisor retirement and project engineer transfer, two critical positions to the success of this section.

Gauging station data logger upgrades to high data rate transmitters (HDR) continued with fourteen (14) sites completed, which is on schedule to replace all the existing 1997 models.

The first bank operated cableway installation in Alberta was completed on the Whitemud Creek near Eillerslie. Future plans are in place to install and activate four additional bank operated cableways.

Alberta Environment increased their monitoring capacity through the purchase of two Acoustic Doppler Current Profiler units (ADCP). Over the next few years there will be changes in hydrometric monitoring information as AENV transitions over to Water Information System Kisters Inc. (WISKI), a water quantity application for housing time series data.

2.2 Coordinator Meeting Highlights

The Canada – Alberta Coordinating Committee met on May 25 and October 25, 2007. Alberta was represented by Kendal Tupker, Hubert Howe and Dave Ardell of Alberta Environment while Canada's representatives were Russell Boals and Mike Renouf of Environment Canada. A joint meeting between the Alberta Coordinator Committee and the Alberta Hydrometric – Meteorological Committee was held on March 11, 2008.

Alberta Environment made a presentation to the committee on their strategic Monitoring Business case.

To advance a collaborative approach to hydrometric monitoring, and address emergent challenges, the following strategies can be pursued:

- Leverage the Federal and Provincial agreement on Hydrometric Monitoring to involve a broader range of stakeholders.
- Implement shared data collection methods and standards (ensuring data security and accuracy, timeliness, access, archiving systems, etc).
- Improve access to real time
- Conduct field audits of monitoring activities.

Schedule C changes approved by the Coordinating Committee were; addition of three (3) Provincial (P-1) network expansion stations built in 2006 – 2007; one (1) station re-designated from F-3 to P-1; one (1) P-1 station discontinued; operating periods were modified at four (4) stations and two (2) stations were re-named to better reflect the location.

Coordinators approved the initiative for joint field trips to stations operated by Canada between Alberta Environment and Environment Canada staff. Alberta also submitted a request for AENV personnel to attend the introductory training on the use Acoustic Doppler Current Profiler (ADCP).

Coordinating Committee members were briefed on the challenges and strategies facing human resource staffing issues at both the Calgary and Peace River operations. Compounding the challenges is a proposal to re-organize operational areas with an additional operational base in Edmonton. It was also noted that human resource issues are common across the program nationally and in this context a National Human Resource Committee will look into strategies to address the long term.

The May 2007 agenda included a presentation by Canada on the proposed 2007 – 2008 activity expenditures. Alberta advised their share of Life Cycle Management, Cableway and Decommission project funding was pending and for the interim, Canada should proceed with the agreed modified plan and Schedule D Estimates would be updated in the fall.

Committee was briefed on the status regarding the Regional Aquatics Monitoring Project's, (RAMP) hydrometric activities and future plans. Canada informed the coordinators, discussions with RAMP have been initiated regarding quality audits and contribution of data to the national archive.

Environment Canada and Natural Resources Canada are engaged in discussions on how to expand groundwater monitoring in Canada. The structure of the hydrometric agreements has been suggested as a template for Federal – Provincial cooperation on groundwater. Alberta expressed interest in exploring linkages regarding groundwater monitoring with the Federal government.

The Committee held a discussion on an opportunity to hold a Quality Management System (QMS) stakeholders workshop sponsored by the Alberta Coordinating Committee. It was agreed there are a number of issues to flesh out and noted that the

Manitoba Coordinating Committee has completed the lead work on drafting quality objectives and are available as a starting point.

Coordinators submitted the revised Schedule D Estimates to program Administrators October 3 2007. Alberta noted their share of the decommissioning estimates are reduced this year and requested that Canada proceed at the full level of proposed expenditures with a balance of contributions to be carried out once the project is completed.

The 2007 – 2008 planned expenditure to operate the Alberta program is **\$3,836,243**. Canada's share is estimated at **\$1,535,014** (includes Alberta net credits for program work) while Alberta Environment net share is **\$2,301,429**. Alberta net share includes credits (\$148,077) for operating the Federal network in the Peace Athabasca Delta, Direct Costs incurred for 2007 – 2008 hydrometric program operations and Christina Lake operations

Alberta Environment is exploring options to upgrade the stations they operate out of the Peace Athabasca Delta to be more in line with Life Cycle Management objectives. Canada agreed to work with Alberta utilizing the existing Federal Standing Offer of Agreement contracts.

Alberta Environment informed the committee that it is currently using New Leaf as their data collection system; however it is no longer supported and can not hold all historical data. They informed the Committee they will be migrating over to the web based KISTERS WISKI time series database. Plans include a production model by 2009 with WISKI as the primary system in 2010.

2.3 Network

The Canada – Alberta Hydrometric Agreement includes three hundred and ninety six (396) hydrometric and four (4) sediment monitoring stations operated by the Water Survey Division and ten (10) hydrometric monitoring stations operated by Alberta Environment during 2007 – 2008. Two (2) of the Federal stations operated by Canada are located in Saskatchewan and four (4) international stations are located in Montana.

In addition to the stations operated by Canada and Alberta Environment, Water Survey Division Northwest Territories / Nunavut operated two (2) stations in northern Alberta while Water Survey Division Saskatchewan operated nine (9) stations in southeastern Alberta. Alberta Environment contributed data from forty (40) stations to the National Archive while Trans Alta Utilities and the City of Calgary contributed eighteen (18) and one (1) respectively for a total network size to 476 hydrometric stations.

Three (3) provincial expansion stations constructed in 2006 – 2007 were added to the network as P1. One (1) station was re-designated from F-3 to P-1, one (1) P-1 station discontinued, operating periods were modified at four (4) stations and two (2) stations were re-named to better reflect their location. The above changes included in Table 2.3 are effective April 1 2007.

A detailed listing of the stations is included in Schedule C 2007 – 2008, APPENDIX A

Table 2.3
 Schedule C changes for 2007 – 2008

Schedule C changes 2007 - 08				
		Designation 2007 - 2008	From	To
<u>Designation Changes</u>				
07JD003	Jackpine Creek at Highway No. 88	P-1	near La Corey	Re-named
11AA038	Verdigris Coulee near the Mouth	P-1	F-3	P-1
07JD002	Wabasca River at Highway No. 88	F-4	Wadlin Road	Re-named
<u>Operational Changes</u>				
05EA012	Atim Creek at Century Road	P-1	12QN	8QN
05BH005	Bow River near Cochrane	P-1	12QN	8QN
05EA011	Carrot River near the Mouth	P-1	12QN	8QN
07BK008	Fawcett Lake near Smith	P-1	8HN	12QN
<u>Network Additions</u>				
05DE010	North Saskatchewan River at Hwy 579	P1	NEW	WSD Operations
07HD001	Peace River near Carcajou	P1	NEW	WSD Operations
05FA026	Wolf Creek at Township Road 410	P1	NEW	WSD Operations
<u>Network Deletions</u>				
05AB043	Pine Coulee Diversion Canal above Drop Structure		discontinued	

3.0 COST OF OPERATION

3.1 Operations

The 2007 – 2008 gross program expenditure shares for Canada were calculated at \$1,630,195 while the Alberta Environment's share is \$2,526,036. The calculated gross share values are 117.6% and 103.1% of the estimates for Canada and Alberta Environment respectively.

Alberta Environment's 3.1% over the estimated expenditure in gross share is the difference between 4.9% over expenditure in the operation (direct and indirect) and 1.8% under expenditure in projects. Canada's 17.6% over estimated expenditure in gross share is attributed to a 4.3% and 100% over expenditure in the operation and projects respectively. Canada's project over expenditure is somewhat misleading as Schedule D estimates for their contribution to the decommission project was inadvertently omitted and as a result, skew the percentages. Canada's expenditure estimate omitted was \$144,000 and when factored into the Schedule D estimates, the over expenditure incurred by Canada is 6.5%. Details of over and under estimate expenditures are discussed later in this section.

An error in station count which affected the total Federal station units was found in the station unit summary used to estimate Canada's share of estimated expenditures in the signed Schedule D. The Verdigris Coulee station (F3) was transferred to Alberta and included in the AENV total estimated station units, however the units assigned (0.750)

also remained in Canada's count. This error is taken into consideration for the calculations of this report.

The direct operations expenditures are 6.6% over estimates while the indirect operations expenditures is 7% less than estimates. Training expenditures are significantly lower than the estimates (estimated based on 2006 – 2007 expenditures) which can be attributed to the majority of the indirect operations less than estimate expenditure. The direct operations remote expenditures is 28% over estimates, due to modest increase in air charter cost as well additional field coverage. These increases account for the majority of the overall 6.6% over estimates in direct operations.

Projects as a whole are 21.3% over estimates however as indicated above, Canada's planned expenditure of \$144,000 was inadvertently omitted from the estimates from the decommission project. With the \$144,000 factored into the estimates, the project expenditure deviation is 3.7% above the estimates. The individual projects are discussed later in this section.

Alberta Environment net share of the program expenditures is **\$2,372,758** which is 3.1% over the Schedule D estimates of \$2,301,429.

The Alberta Environment net share includes total credits (\$153,278) for operating the Federal network in the Peace Athabasca Delta (\$105,063), their direct costs incurred for 2007 – 2008 hydrometric program operations (\$38,686) and Christina Lake operations (\$9,529).

Details of the 2007 – 2008 expenditures are included in Appendix B, Table 3.1.1 summarizes these expenditures and Table 3.1.2 is the Alberta Environment quarterly payment listing.

Table 3.1.1
 Schedule D 2007 – 2008
 Summary of Financial Contributions

EXPENDITURE	Stations	Expenditure	SHARE	
			FEDERAL	PROVINCIAL
Direct Operations				
Hydrometric Network Operated by WSC	396	\$2,565,570	\$1,028,008	\$1,537,562
Hydrometric Equipment Depreciation		\$149,286	\$59,818	\$89,468
Full Program Sediment Stations	4	\$26,078	\$4,346	\$21,732
Sediment Equipment Depreciation		\$0	\$0	\$0
Indirect Operations				
Hydrometric Network Operated by WSC	396	\$387,502	\$155,269	\$232,232
Full Program Sediment Stations	4	\$3,939	\$656	\$3,282
Projects				
Life Cycle Management	35	\$380,529	\$141,707	\$238,823
Cableway Upgrades	6	\$178,211	\$84,726	\$93,485
Station Decommissioning		\$239,764	\$155,664	\$84,100
Network Expansion	10	\$225,352	\$0	\$225,352
TOTAL		\$4,156,231	\$1,630,195	\$2,526,036

ALBERTA GROSS SHARE: \$2,526,036

ALBERTA CREDIT:

a) Direct Operation cost (PAD area)	
Hydrometric stations	(\$86,926)
Hydrometric Depreciation	(\$5,007)
b) Indirect Operation cost (PAD)	(\$13,129)
c) Direct Costs Water Sciences (\$39,894 X 124.700 / 313.050)	(\$15,891)
d) Direct Costs Monitoring (\$57,225 X 124.700 / 313.050)	(\$22,795)
e) Christina Lake January - December	(\$9,529)

TOTAL CREDIT (\$153,278)

ALBERTA NET SHARE: Alberta Gross Share - ALBERTA CREDIT \$2,372,758

Schedule D invoice 2007 - 2008 **\$2,301,429**

BALANCE (\$71,329)

Table 3.1.2
 Alberta Environment Payments

2007 - 2008 Payments				
Client	Invoice			
	Number	Date	Service	Total
Alberta Environment	80519760	November 9 2007	1st Quarter billing	\$575,357.25
Alberta Environment	80519762	November 9 2007	2nd Quarter billing	\$575,357.25
Alberta Environment	80519868	January 22 2008	3rd Quarter billing	\$575,357.25
Alberta Environment	80519947	February 27 2008	4th Quarter billing	\$575,357.25
				\$2,301,429.00

3.2 Projects

3.2.1 Life Cycle Management

Thirty five (35) Life Cycle Management (LCM) projects were completed during 2007 – 2008 season. Included in the project activities were; heat tape and gauging station shelter replacements, electrical upgrades, stilling well civil works for fall arrest systems, ramps and barrier installations, rodent proofing, intake repairs and reconnaissance for future work along with minor maintenance at a number of other stations.

Two (2) major projects involved stilling well intake replacements along with associated bank stabilization and one (1) project included channel control and bank stabilization work. The three (3) projects accounted for 17% of the total LCM expenditures. A, new installation on the Sheep River, incurred additional expenditures in order to meet the local authorities request to aesthetically match with the area.

Life Cycle Management projects are 7.8% over the estimated expenditures

Gauging station data logger upgrades to high data rate transmitters (HDR) continued with fourteen (14) sites completed which is on schedule to replace all the existing 1997 models as well a number of other stations were updated with new loggers with modem communications. Shared equipment purchases (\$54,018) for Electronic Data Acquisition Systems (EDAS) were made in preparation for installation in 2008 – 2009.

Additional details on the LCM construction projects are included in Appendix E, 2007 – 2008 Projects.

3.2.2 Cableways

Projects were undertaken at six (6) stations with major works being carried out at the North Saskatchewan at Whirlpool and Berland River near the Mouth stations. Cableway project expenditures were approximately 14.0% over the Schedule D estimates.

The Berland River (P1) project encountered a number of on site issues and resulted a 10% over budget expenditure while design and site specific problems resulted in cost over runs at the North Saskatchewan River (F1).

The first bank operated cableway installation in Alberta was completed on the Whitemud Creek near Ellerslie.

Alberta Environment share of the over estimate expenditure is 2.0% while Canada's is 31%.

Additional details on the cableway projects are included in Appendix E, 2007 – 2008 Projects.

3.2.3 Decommission

Challenges with staffing and financial resources put limitations on project activity however in spite of the challenges twenty three (23) stations were removed. Nineteen (19) stations were removed under five contracts; two contracts in Ft McMurray, one in central Alberta, one in southeastern Alberta and one in the Hinton area. In addition, Alberta Environment and Canada removed three (3) and one (1) respectively with personnel from their organizations.

Table 3.2.3, Decommission Project Summary 2004 – 2008, reflects the total expenditures assigned to parties and not necessarily their share for respective years. Canada, as the project managers, incurred the total disbursements in respective years as noted in Table 3.2.3. Alberta share identified in the table is the payment received from the Schedule D estimates for each respective year.

Canada's 2007 – 2008 estimated expenditure's was pending at the time of signing of Schedule D resulting in the estimates not being included. Because of this, the percentage deviation between the actual and the estimated expenditures are irrelevant.

A full accounting with respective partner shares will be provided once the project is completed.

Table 3.2.3
Decommission Project Summary
2007 – 2008

<u>FISCAL YEAR</u>	<u>PROJECTS</u>	<u>SHARE</u>		<u>TOTAL</u>
		<u>FEDERAL</u>	<u>PROVINCIAL</u>	
2004 - 2005		\$11,835	\$14,202	\$26,037
2005 - 2006	89	\$87,062	\$15,211	\$102,273
2006 - 2007	126	\$98,651	\$28,000	\$126,651
2007 - 2008	23	\$155,664	\$84,100	\$239,764
TOTAL	238	\$353,212	\$141,513	\$494,725

3.2.4 Network Expansion

2007 – 2008 was a challenging year for the expansion activities, with Canada facing human resource vacancies and inexperienced personnel while Alberta Environment continues to be faced with some degree of uncertainty regarding future operational and maintenance resourcing issues required to support the stations.

In order to minimize the human resource challenges, a consultant was hired to coordinate and complete the pre-construction activities for eight (8) stations, including, reconnaissance, land availability searches, Environmental Screening documentation including posting, utility right of way searches and gauging station civil works design and supplier recommendations. In some cases shelter foundations were poured and bench mark locations marked for future reference.

In addition to the planned eight new stations, two (2) previously constructed stations had follow-up work completed in 2007 – 2008 as part of the expansion activities.

Of the eight (8) scheduled new installations, five (5) stations were constructed and prepared for instrumentation, two (2) stations were re-scheduled for 2008 – 2009 and one (1) had the land survey completed and put on hold indefinitely. Instruments and spares were purchased for all locations.

Additional details on the expansion projects are included in Appendix E, 2007 – 2008 Projects.

3.3 Provincial Variance

Table 3.3.1 includes the Alberta Environment historical summary of annual over and under contributions for their financial share of the hydrometric monitoring program. Ending fiscal year 2007 – 2008 Alberta Environment is carrying a surplus of \$501.

Table 3.3.1
Historical Provincial Variance
2007 – 2008

**CUMULATIVE PROVINCIAL OVER OR UNDERPAYMENT
OF AGREEMENT OPERATION COSTS**

Year	Share	Annual Payment	Overpayment (Underpayment)	Cumulative (under) / over	% of Annual Payment
1975-76	197,852	197,400	(452)	(452)	(0.23)
1976-77	231,000	231,000	-	(452)	-
1977-78	247,430	240,000	(7,430)	(7,882)	(3.10)
1978-79	267,055	260,000	(7,055)	(14,937)	(2.71)
1979-80	353,768	370,000	16,232	1,295	4.39
1980-81	423,906	390,000	(33,906)	(32,611)	(8.69)
1981-82	556,741	568,240	11,499	(21,112)	2.02
1982-83	747,352	747,352	-	(21,112)	-
1983-84	812,593	796,033	(16,560)	(37,672)	(2.08)
1984-85	935,664	933,500	(2,164)	(39,836)	(0.23)
1985-86	917,865	927,000	9,135	(30,701)	0.99
1986-87	962,413	962,700	287	(30,414)	0.03
1987-88	819,624	830,579	10,955	(19,459)	1.32
1988-89	868,131	856,000	(12,131)	(31,590)	(1.42)
1989-90	922,430	920,000	(2,430)	(34,020)	(0.26)
1990-91	1,002,759	1,008,350	5,591	(28,429)	0.55
1991-92	957,200	995,600	38,400	9,971	3.86
1992-93	1,030,991	1,062,600	31,609	41,580	2.97
*1993-94	-	(30,149)	(30,149)	11,431	-
1993-94	1,050,459	1,048,000	(2,459)	8,972	(0.23)
1994-95	956,377	964,400	8,023	16,995	0.83
1995-96	887,014	964,400	69,181	86,176	7.17
1996-97	925,700	940,000	30,202	116,378	3.21
**1997-98	971,691	940,000	(31,691)	116,378	(3.37)
**1998-99	950,484	940,000	(10,484)	116,378	(1.12)
**1999-00	943,647	943,943	296	116,378	0.03
2000-01	1,167,191	1,148,934	(18,257)	98,121	(1.59)
2001-02	1,174,758	1,181,417	6,659	104,780	0.56
2002-03	1,234,433	1,235,101	668	105,448	0.05
2003-04	1,870,602	1,862,243	(8,359)	97,089	(0.45)
2004-05	2,529,997	2,411,348	(118,649)	(21,560)	(4.92)
2005-06	2,598,177	2,772,776	174,599	153,039	6.30
***2006-07	2,336,605	2,408,435	71,830	71,830	2.98
2007-08	2,372,758	2,301,429	(71,329)	501	(3.10)
TOTALS	\$ 34,224,667	\$ 34,328,631			

*Credit to Alberta for overpayment in 1992-93

**Letter of Agreement \$0 Balance

*** credit balance 2005 - 06 zeroed in Schedule D calculations

4.0 HISTORICAL NETWORK DEVELOPMENT

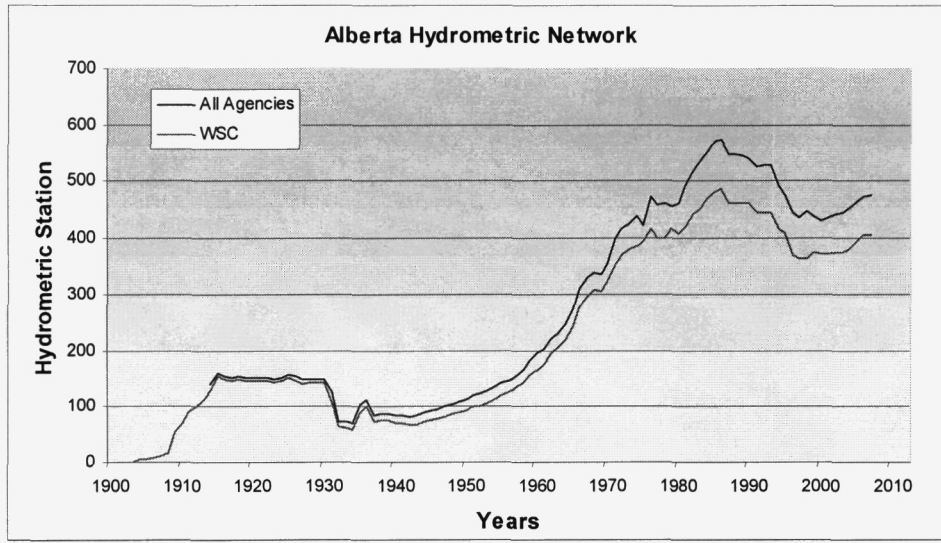
The Canada – Alberta Hydrometric Agreement was signed in 1975 – 1976 when four hundred and twenty three (423) hydrometric stations were assigned a designation and it was agreed the Water Survey of Canada would operate three hundred and eighty three (383) in a partnership with Alberta Environment. During the thirty plus years of cooperation of the Alberta Agreement, very significant changes to the Alberta network were made which can be summarized as; 282 stations established, 269 stations discontinued and 222 stations re-designated.

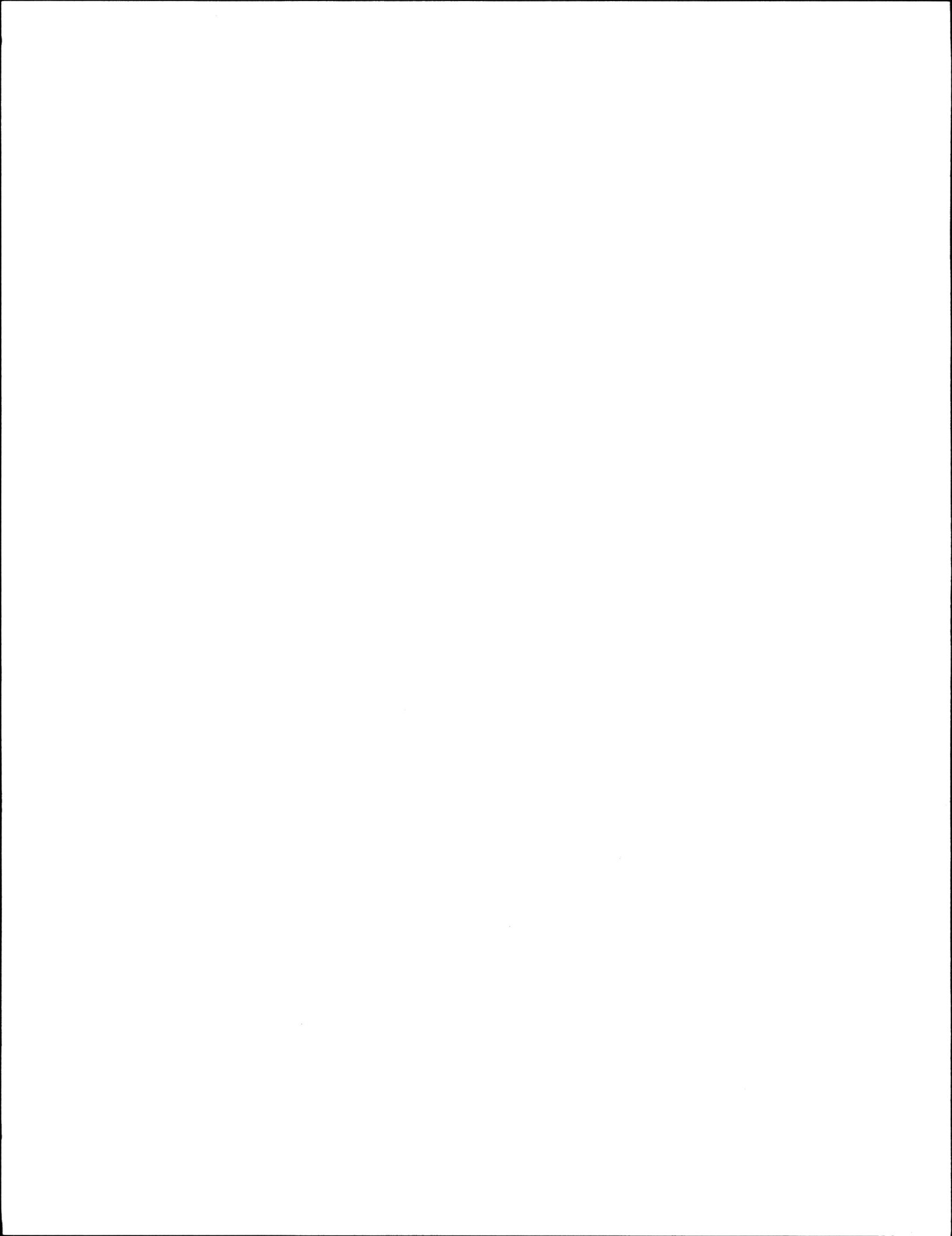
The history of the size of the hydrometric network in Alberta, which includes hydrometric stations operated by Water Survey of Canada (Alberta, Saskatchewan and Northwest Territories – Nunavut), Alberta Environment, Trans Alta Utilities and the City of Calgary, is illustrated in Figure 4.1.

In terms of the current era, it can be seen that the hydrometric network increased rapidly from the mid 1950's until the signing of the agreement in 1975. The stations operated in the hydrometric agreement steadily rose from 1975 to a peak of 573 in 1986 – 1987. After this point in time, resource problems, first by Alberta and then by the Federal Government, resulted in a reduction of the number of stations operated in the agreement. Particularly large numbers of stations were discontinued in 1990 – 1991 (17), 1993 – 1994 (26) and 1995 – 1996 (39), until the network bottomed out in 2000 at 432 stations. During the five year period from 1992 to 1997 the station designation changes almost doubled with 92 occurring in the period 1996 to 1997.

Since 2000 the partner's stabilization of resource bases and introduction of operational efficiencies has allowed for some growth in the network. The current network size has grown to 476 stations, the most significant occurring after 2003 – 2004 with the introduction of Alberta's capital investment plan included in their Water For Life Strategy.

Figure 4.1
Historical Hydrometric Development





APPENDIX A

Schedule C

2007 – 2008

CANADA – ALBERTA
 2007 – 2008 Memorandum of Agreement for Water Quantity Surveys
 APPENDIX A – Schedule C 2007 – 2008

Legend

<u>Station Unit</u>	<u>Classification</u>	<u>Symbol</u>	<u>Station Unit Factor</u>
Normal Access		N	
Remote Access		R	
Flow Station		Q	
Water Level Station		H	
Number of months of operation		Numeric	
	12QN		1.00
	12QR		1.80
	8QN		0.75
	8QR		1.50
	12HN		0.40
	12HR		1.10
	8HN		0.25
	8HR		0.95
<u>Designation and Operating Responsibilities</u>			
Federal Station		F	
Provincial Station		P	
Federal - Provincial Station		FP	
Contributed Alberta Environment		C-AENV	
Contributed Trans Alta Utilities		C-TAU	
Contributed City of Calgary		C-CITY	
Water Survey Division Alberta		WSCAB	
Water Survey Division Saskatchewan		WSCSK	
Alberta Environment		AENV	
Trans Alta Utilities		TAU	
City of Calgary		CITY	
Located in Saskatchewan operated by WSCAB		Station Name with *	
Located in Montana		Station Name with#	
Northwest Territories / Nunavut		NT/NU	

Schedule C Summary of Station Units

Water Survey Division Operated Units

	<u>Hydrometric</u>	<u>Sediment</u>	<u>Total</u>
Federal	124.175	0.525	124.700
Provincial	185.725	2.625	188.350
Total	309.900	3.150	313.050

Alberta Environment Operated Units

	<u>Hydrometric</u>	<u>Sediment</u>	<u>Total</u>
Federal	10.500	0.000	10.500
Provincial	23.650	0.000	23.650
Commercial	0.400	0.000	0.400
Total	34.550	0.000	34.550

1.0 Operated by Calgary WSC

1.1 Hydrometric Units

1.1.1 Federal Hydrometric Units

<u>Classification</u>	<u>Stations</u>	<u>Factor</u>	<u>Units</u>
12QN	24	1.00	24.00
12QR	1	1.80	1.80
8QN	37	0.75	27.75
8QR	1	1.50	1.50
12HN	6	0.40	2.40
12HR	0	1.10	0.00
8HN	0	0.25	0.00
8HR	0	0.95	0.00
Total	69		57.45

1.1.2 Federal Provincial Hydrometric Units

<u>Classification</u>	<u>Stations</u>	<u>Factor</u>	<u>Units</u>
12QN	34	1.00	34.00
12QR	1	1.80	1.80
8QN	105	0.75	78.75
8QR	11	1.50	16.50
12HN	3	0.40	1.20
12HR	0	1.10	0.00
8HN	1	0.25	0.25
8HR	1	0.95	0.95
Total	156		133.45

1.1.3 Provincial Hydrometric Units

<u>Classification</u>	<u>Stations</u>	<u>Factor</u>	<u>Units</u>
12QN	32	1.00	32.00
12QR	0	1.80	0.00
8QN	96	0.75	72.00
8QR	2	1.50	3.00
12HN	7	0.40	2.80
12HR	0	1.10	0.00
8HN	33	0.25	8.25
8HR	1	0.95	0.95
Total	171		119.00

1.2 Sediment Units

	Fed.	Prov.
1 Federal – Provincial	0.525	0.525
2 Provincial @ 1.05		2.100
Total	0.525	2.625

2.0 Operated by Alberta Environment

2.1 Hydrometric Units

2.1.1 Federal Hydrometric Units

Classification	Stations	Factor	Units
12HR	7	1.10	7.70
12HN	0	0.40	0.00
8QR	1	1.50	1.50
Total	8		9.20

2.1.2 Federal Provincial Hydrometric Units

Classification	Stations	Factor	Units
12HR	1	1.10	1.10
8QR	1	1.50	1.50
Total	2		2.60

2.1.3 Provincial Hydrometric Units (contributed stations)

Classification	Stations	Factor	Units
12QN	1	1.00	1.00
12QR	0	1.80	0.00
8QN	20	0.75	15.00
8QR	0	1.50	0.00
12HN	2	0.40	0.80
12HR	1	1.10	1.10
8HN	14	0.25	3.50
8HR	1	0.95	0.95
Total	39		22.35

2.2 Commercial Hydrometric Units (contributed stations)

Classification	Stations	Factor	Units
8QN	1	0.40	0.40
Total	1		0.40

3.0 Operated by 3rd Parties

3.1 Hydrometric Units

3.1.1 Contributed Hydrometric Units

Classification	Stations	Factor	Units
12QN	10	1.00	10.00
12QR	0	1.80	0.00
8QN	1	0.75	0.75
8QR	0	1.50	0.00
12HN	8	0.40	3.20
12HR	0	1.10	0.00
8HN	0	0.25	0.00
8HR	0	0.95	0.00
Total	19		13.95

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Federal Departmental Programs (F1)

Site Identification			Responsibility			Operational Approach					Output Products				
Station Name	Station Number	Station Location	Station Designation	Operator	Station Type	Station Units	Access	Operating Period	Operating Method	Planned Visits	Response Priority	Standards Tier	Real Time	Archive	Other
OPERATED BY - WATER SURVEY OF CANADA, ALBERTA DISTRICT															
BIRCH RIVER BELOW ALICE CREEK	07KE001	SW 35-107-19-4	F1	WSC, Alta.	8QR	1.5	Remote	MAR/OCT					Yes		
BOW RIVER AT BANFF	05BB001	SE 35-25-12-W5	F1	WSC, Alta.	12QN	1	Normal	ANNUAL					Yes		
BOW RIVER AT LAKE LOUISE	05BA001	NE 28-28-16-W5	F1	WSC, Alta.	8QN	0.75	Normal	MAY/OCT					Yes		
MISTAYA RIVER NEAR SASKATCHEWAN CROSSING	05DA007	SW 06-34-19-W5	F1	WSC, Alta.	12QN	1	Normal	ANNUAL					No		
NORTH SASKATCHEWAN RIVER AT WHIRLPOOL POINT	05DA009	SW 14-35-18-W5	F1	WSC, Alta.	12QN	1	Normal	ANNUAL					Yes		
PEKISKO CREEK NEAR LONGVIEW	05BL023	SW 34-17-02-W5	F1	WSC, Alta.	8QN	0.75	Normal	MAR/OCT					Yes		
PIPESTONE RIVER NEAR LAKE LOUISE	05BA002	SW 34-28-16-W5	F1	WSC, Alta.	12QN	1	Normal	ANNUAL					Yes		
SILVERHORN CREEK NEAR THE MOUTH	05DA010	SE 02-33-19 W5	F1	WSC, Alta.	12QN	1	Normal	ANNUAL					No		
ST. MARY RIVER AT HIGHWAY NO. 501	05AE043	SW 01-02-25-W4	F1	WSC, Alta.	8QN	0.75	Normal	MAR/OCT					Yes		
WATERTON LAKE AT WATERTON PARK	05AD025	NW 23-01-30-W4	F1	WSC, Alta.	12HN	0.4	Normal	ANNUAL					Yes		
WATERTON RIVER NEAR WATERTON PARK	05AD003	NE 08-02-29-W4	F1	WSC, Alta.	12QN	1	Normal	ANNUAL					Yes		
Stations Total	11														
OPERATED BY - ALBERTA ENVIRONMENT															
EMBARRAS RIVER BREAKTHROUGH TO MAMAWI LAKE	07KF015		F1	AENV	8QR	1.5	Remote	MAR/OCT			6		Yes		
LAKE ATHABASCA AT FORT CHIPEWYAN	07MD001	SEC. 9-112-7-4	F1	AENV	12HR	1.1	Remote	ANNUAL			10		Yes		
LAKE CLAIRE NEAR OUTLET TO PRAIRIE RIVER	07KF002	58 38 00 - 111 41	F1	AENV	12HR	1.1	Remote	ANNUAL			10		Yes		
MAMAWI LAKE CHANNEL AT OLD DOG CAMP	07KF003		F1	AENV	12HR	1.1	Remote	ANNUAL			10		Yes		
PEACE RIVER BELOW CHENAL DES QUATRE FOURCHES	07KC005	SE 34-114-10-W4	F1	AENV	12HR	1.1	Remote	ANNUAL			10		Yes		
RIVIERE DES ROCHERS ABOVE SLAVE RIVER	07NA001		F1	AENV	12HR	1.1	Remote	ANNUAL			10		Yes		
RIVIERE DES ROCHERS EAST OF LITTLE RAPIDS	07NA007		F1	AENV	12HR	1.1	Remote	ANNUAL			10		Yes		
RIVIERE DES ROCHERS WEST OF LITTLE RAPIDS	07NA008		F1	AENV	12HR	1.1	Remote	ANNUAL			10		Yes		
Stations Total	8														

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Federal Interprovincial Waters (F2)

Site Identification			Responsibility		Operational Approach							Output Products			
Station Name	Station Number	Station Location	Station Designation	Operator	Station Type	Station Units	Access	Operating Period	Operating Method	Planned Visits	Response Priority	Standards Tier	Real Time	Archive	Other
BATTLE RIVER NEAR THE SASKATCHEWAN BOUNDARY	05FE004	SW 12-45-01-W4	F2	WSC, Alta.	12QN	1	Normal	ANNUAL					Yes		
BEAVER RIVER AT COLD LAKE RESERVE	06AD006	NE 10-62-02-W4	F2	WSC, Alta.	12QN	1	Normal	ANNUAL					Yes		
BOUNTIFUL COULEE INFLOW NEAR CRANFORD	05AG026	NE 36-9-18-W4	F2	WSC, Alta.	8QN	0.75	Normal	MAYOCT					No		
BOW RIVER AT CALGARY	05BH004	NE 15-24-01-W5	F2	WSC, Alta.	12QN	1	Normal	ANNUAL					Yes		
BOW RIVER DEVELOPMENT DRAIN D NEAR VAUXHALL	05BN008	SW 30-14-15-4	F2	WSC, Alta.	8QN	0.75	Normal	MAYOCT					No		
BOW RIVER NEAR THE MOUTH	05BN012	NW 33-12-12-W4	F2	WSC, Alta.	12QN	1	Normal	ANNUAL					Yes		
BOXELDER CREEK AT HARGRAVE'S RANCH	05AH050	NE 23-12-30-W3	F2	WSC, Alta.	8QN	0.75	Normal	FEBOCT					Yes		
BOXELDER CREEK NEAR WALSH	05AH001	SE 02-12-30-W3	F2	WSC, Alta.	8QN	0.75	Normal	FEBOCT					No		
CANADIAN ST. MARY CANAL NEAR SPRING COULEE	05AE026	NW 33-4-23-W4	F2	WSC, Alta.	8QN	0.75	Normal	APRNOV					Yes		
COLD LAKE AT COLD LAKE	06AF002	NW 24-63-02-W4	F2	WSC, Alta.	12HN	0.4	Normal	ANNUAL					Yes		
COLD RIVER AT OUTLET OF COLD LAKE	06AF001	NE 27-64-26-W3	F2	WSC, Alta.	12QN	1	Normal	ANNUAL					Yes		
CROWFOOT CREEK NEAR CLUNY	05BM008	SE 06-22-20-W4	F2	WSC, Alta.	8QN	0.75	Normal	MAROCT					Yes		
EASTERN IRRIGATION DISTRICT MAIN BRANCH CANAL NEAR HEADGATE	05BM020	NW 36-20-19-4	F2	WSC, Alta.	8QN	0.75	Normal	APRNOV					Yes		
EXPANSE COULEE NEAR THE MOUTH	05AG003	NE 11-12-16-W4	F2	WSC, Alta.	8QN	0.75	Normal	MAYOCT					Yes		
GLENIFFER RESERVOIR NEAR DICKSON	05CB006	SE 33-35-02-W5	F2	WSC, Alta.	12HN	0.4	Normal	ANNUAL					Yes		
HIGHWOOD DIVERSION CANAL NEAR HEADGATES	05BL025	NE 25-18-30-W4	F2	WSC, Alta.	8QN	0.75	Normal	APROCT					Yes		
LETHBRIDGE NORTHERN IRRIGATION DISTRICT CANAL ABOVE OLDMAN FLUME	05AB019	SE 34-8-27-W4	F2	WSC, Alta.	8QN	0.75	Normal	APROCT					Yes		
LITTLE BOW CANAL AT HIGH RIVER	05BL015	NE 6-19-28-W4	F2	WSC, Alta.	12QN	1	Normal	ANNUAL					Yes		
LITTLE BOW RIVER AT CARMANGAY	05AC003	SW 32-13-23-W4	F2	WSC, Alta.	12QN	1	Normal	ANNUAL					Yes		
LITTLE BOW RIVER BELOW TRAVERS DAM	05AC012	NE 33-13-20-W4	F2	WSC, Alta.	8QN	0.75	Normal	APROCT					No		
LITTLE BOW RIVER NEAR THE MOUTH	05AC023	NW 11-11-19-W4	F2	WSC, Alta.	8QN	0.75	Normal	MAYOCT					Yes		
MAGRATH IRRIGATION DISTRICT CANAL NEAR SPRING COULEE	05AE021	SE 05-05-23-W4	F2	WSC, Alta.	8QN	0.75	Normal	APROCT					No		
MATZHIWIN CREEK BELOW WARE COULEE	05CJ012	SE 35-21-14-W4	F2	WSC, Alta.	8QN	0.75	Normal	MAYOCT					Yes		
MOUNTAIN VIEW IRRIGATION DISTRICT CANAL	05AD017	NW 4-2-28-W4	F2	WSC, Alta.	8QN	0.75	Normal	APRNOV					Yes		
NEW WEST COULEE NEAR THE MOUTH	05BN006	NE 34-14-16-W4	F2	WSC, Alta.	8QN	0.75	Normal	APROCT					Yes		
NORTH SASKATCHEWAN RIVER NEAR DEER CREEK	05EF001	SW 27-52-25-W3	F2	WSC, Alta.	12QN	1	Normal	ANNUAL					Yes		
OLDMAN RIVER NEAR LETHBRIDGE	05AD007	NW 01-09-22-W4	F2	WSC, Alta.	12QN	1	Normal	ANNUAL					Yes		
ONETREE CREEK NEAR PATRICIA	05CJ006	SW 36-20-13-W4	F2	WSC, Alta.	8QN	0.75	Normal	MAROCT					Yes		

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Federal Interprovincial Waters (F2)

Site Identification			Responsibility				Operational Approach					Output Products			
Station Name	Station Number	Station Location	Station Designation	Operator	Station Type	Station Units	Access	Operating Period	Operating Method	Planned Visits	Response Priority	Standards Tier	Real Time	Archive	Other
PEACE RIVER AT PEACE POINT	07KC001	SE 35-116-15-W4	F2	Yellowknife	12QR	1.8	Remote	ANNUAL							
PIYAMI DRAIN NEAR PICTURE BUTTE	05AD037	SE 22-10-21-W4	F2	WSC, Alta.	8QN	0.75	Normal	MAYOCT					No		
POTHOLE CREEK AT RUSSELL'S RANCH	05AE016	NE 18-07-21-W4	F2	WSC, Alta.	8QN	0.75	Normal	MAYNOV					Yes		
RED DEER RIVER AT RED DEER	05CC002	SE 20-38-27-W4	F2	WSC, Alta.	12QN	1	Normal	ANNUAL					Yes		
RED DEER RIVER NEAR BINDLOSS	05CK004	NW 25-22-3-W4	F2	WSC, Alta.	12QN	1	Normal	ANNUAL					Yes		
ROSEBUD RIVER AT REDLAND	05CE005	NE 10-27-22-W4	F2	WSC, Alta.	8QN	0.75	Normal	MAROCT					Yes		
ROSS CREEK AT HIGHWAY 41	05AH052	SE 19-12-04-W4	F2	WSC, Alta.	8QN	0.75	Normal	FEBOCT					Yes		
SEVEN PERSONS CREEK AT MEDICINE HAT	05AH005	SW 30-12-05-W4 59 52 20 111 35	F2	WSC, Alta.	8QN	0.75	Normal	FEBOCT					Yes		
SLAVE RIVER AT FITZGERALD	07NB001	00	F2	Yellowknife	12QR	1.8	Remote	ANNUAL							
SOUTH SASKATCHEWAN RIVER AT MEDICINE HAT	05AJ001	NW 31-12-05-W4	F2	WSC, Alta.	12QN	1	Normal	ANNUAL					Yes		
ST. MARY RESERVOIR NEAR SPRING COULEE	05AE025	NW 01-05-24-W4	F2	WSC, Alta.	12HN	0.4	Normal	ANNUAL					Yes		
TWELVE MILE CREEK NEAR CECIL	05BN002	NE 02-14-13-W4	F2	WSC, Alta.	8QN	0.75	Normal	MAYOCT					Yes		
UNITED IRRIGATION DISTRICT CANAL NEAR HILL SPRING	05AD013	NW 18-3-27-W4	F2	WSC, Alta.	8QN	0.75	Normal	APRNOV					Yes		
WATERTON RESERVOIR	05AD026	SE 27-04-28-W4	F2	WSC, Alta.	12HN	0.4	Normal	ANNUAL					Yes		
Stations Total	42														

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Federal International Waters (F3)

Site Identification			Responsibility				Operational Approach				Output Products				
Station Name	Station Number	Station Location	Station Designation	Operator	Station Type	Station Units	Access	Operating Period	Operating Method	Planned Visits	Response Priority	Standards Tier	Real Time	Archive	Other
BARE CREEK RESERVOIR NEAR ELKWATER	11AB094	NE 31-05-03-W4	F3	WSC, Sask.	8HN		Normal	MAROCT							
BEAR CREEK NEAR INTERNATIONAL BOUNDARY	11AA028	NE 12-01-10-W4	F3	WSC, Alta.	8QN	0.75	Normal	MAROCT					No		
CRESSDAY RESERVOIR NEAR CRESSDAY	11AB097	SE 30-03-02-W4	F3	WSC, Sask.	8HN	0.25	Normal	MAROCT							
GREASEWOOD RESERVOIR NEAR ELKWATER	11AB092	SE 19-06-03-W4	F3	WSC, Sask.	8HN	0.25	Normal	MAROCT							
JAYDOT RESERVOIR NEAR JAYDOT	11AB098	SW 01-03-01-W4	F3	WSC, Sask.	8HN	0.25	Normal	MAROCT							
LAKE SHERBURNE	05AE036	SE 35-36-15WP	F3	WSC, Alta.	12HN	0.4	Normal	ANNUAL					Yes		
MASSY RESERVOIR NEAR ELKWATER	11AB104	SE 17-06-03 W4	F3	WSC, Sask.	8HN	0.25	Normal	MAROCT							
MICHEL RESERVOIR NEAR ELKWATER	11AB091	SE 05-07-03-W4	F3	WSC, Sask.	8HN	0.25	Normal	MAROCT							
MIDDLE CREEK NEAR THE SASKATCHEWAN BOUNDARY	11AB009	SE 34-05-01-W4	F3	WSC, Sask.	8QN	0.75	Normal	MAROCT							
MILK RIVER AT EASTERN CROSSING OF INTERNATIONAL BOUNDARY	11AA031	NW 07-37-10EP	F3	WSC, Alta.	8QN	0.75	Normal	MAROCT					Yes		
MILK RIVER AT MILK RIVER	11AA005	NE 21-02-16-W4	F3	WSC, Alta.	12QN	1	Normal	ANNUAL					Yes		
MILK RIVER AT WESTERN CROSSING OF INTERNATIONAL BOUNDARY	11AA025	NE 01-01-20-W4	F3	WSC, Alta.	8QN	0.75	Normal	MAROCT					Yes		
MINERS COULEE NEAR INTERNATIONAL BOUNDARY	11AA029	SW 10-01-11-W4	F3	WSC, Alta.	8QN	0.75	Normal	MAROCT					No		
MITCHELL RESERVOIR NEAR ELKWATER	11AB099	NW 16-06-01-W4	F3	WSC, Sask.	8HN	0.25	Normal	MAROCT							
NORTH FORK MILK RIVER ABOVE ST. MARY CANAL	11AA032	NE 16-37-11WP	F3	WSC, Alta.	8QN	0.75	Normal	MAROCT					Yes		
NORTH MILK RIVER NEAR INTERNATIONAL BOUNDARY	11AA001	NE 11-01-23-W4	F3	WSC, Alta.	8QN	0.75	Normal	MAROCT					Yes		
REESOR RESERVOIR NEAR ELKWATER	11AB090	SE 20-08-01-W4	F3	WSC, Sask.	8HN	0.25	Normal	MAROCT							
ST. MARY CANAL AT ST. MARY CROSSING	05AE029	SW 19-37-13WP	F3	WSC, Alta.	8QN	0.75	Normal	MAROCT					Yes		
ST. MARY RIVER AT INTERNATIONAL BOUNDARY	05AE027	SW 05-01-25-W4	F3	WSC, Alta.	12QN	1	Normal	ANNUAL					Yes		
Stations Total	19														

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Federal – Provincial Agreements (FP1)

Station Name	Station Number	Station Location	Station Designation	Operator	Station Type	Station Units	Access	Operating Period	Operating Method	Planned Visits	Response Priority	Standards Tier	Real Time	Archive
OPERATED BY - WATER SURVEY OF CANADA, ALBERTA DISTRICT														
BEAVER RIVER ABOVE SYNCRUDE	07DA018	NE 32-91-10-W4	FP1	WSC, Alta.	8QR	1.50	Remote	MAROCT					Yes	
CLEARWATER RIVER AT DRAPER	07CD001	SE 06-89-08-W4	FP1	WSC, Alta.	12QR	1.80	Remote	ANNUAL					Yes	
FIREBAG RIVER NEAR THE MOUTH	07DC001	NW 36-99-08-W4	FP1	WSC, Alta.	8QR	1.50	Remote	MAROCT					Yes	
HANGINGSTONE RIVER AT FORT MCMURRAY	07CD004	NW 10-89-09-W4	FP1	WSC, Alta.	8QR	1.50	Remote	MAROCT					Yes	
MACKAY RIVER NEAR FORT MACKAY	07DB001	SE 03-95-11-W4	FP1	WSC, Alta.	8QR	1.50	Remote	MAROCT					Yes	
MUSKEG RIVER NEAR FORT MACKAY	07DA008	NE 29-94-10-W4	FP1	WSC, Alta.	8QR	1.50	Remote	MAROCT					Yes	
RICHARDSON RIVER NEAR THE MOUTH	07DD002	NE 10-108-8-W4	FP1	WSC, Alta.	8QR	1.50	Remote	MAROCT					Yes	
STEEP BANK RIVER NEAR FORT MCMURRAY	07DA006	SW 29-92-09-W4	FP1	WSC, Alta.	8QR	1.50	Remote	MAROCT					Yes	
WESTERN IRRIGATION DISTRICT CANAL NEAR HEADGATES	05BM015	SE 13-24-1-W5	FP1	WSC, Alta.	8QN	0.75	Normal	APRNOV					Yes	
Stations Total	9													
OPERATED BY - ALBERTA ENVIRONMENT														
ATHABASCA RIVER NEAR OLD FORT	07DD011	58 22 28 11 31 18	FP1	AENV	12HR	1.10	Remote	ANNUAL		10			Yes	
EMBARRAS RIVER BELOW DIVERGENCE	07DD003		FP1	AENV	8QR	1.50	Remote	MAROCT		6			Yes	
Stations Total	2													

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Federal – Provincial River Basin Management (FP2)

Site Identification			Responsibility		Operational Approach						Output Products				
Station Name	Station Number	Station Location	Station Designation	Operator	Station Type	Station Units	Access	Operating Period	Operating Method	Planned Visits	Response Priority	Standards Tier	Real Time	Archive	Other
ATHABASCA RIVER AT HINTON	07AD002	NE 23-51-25-W5	FP2	WSC, Alta.	12QN	1	Normal	ANNUAL					Yes		
BELLY RIVER NEAR MOUNTAIN VIEW	05AD005	NE 05-02-28-W4	FP2	WSC, Alta.	12QN	1	Normal	ANNUAL					Yes		
BOW RIVER BELOW BASSANO DAM	05BM004	SW 02-21-19-W4	FP2	WSC, Alta.	8QN	0.75	Normal	APROCT					Yes		
BOW RIVER BELOW CARSELAND DAM	05BM002	NW 33-21-25-W4	FP2	WSC, Alta.	8QN	0.75	Normal	APROCT					Yes		
ETHEL LAKE NEAR COLD LAKE	06AC004	SE 23-64-03-W4	FP2	WSC, Alta.	12HN	0.4	Normal	ANNUAL					Yes		
HAY RIVER NEAR MEANDER RIVER	07OB003	NW 11-117-22-W5	FP2	WSC, Alta.	8QN	0.75	Normal	MAROCT					Yes		
HIGHWOOD RIVER NEAR THE MOUTH	05BL024	NE 16-21-28-W4	FP2	WSC, Alta.	12QN	1	Normal	ANNUAL					Yes		
KAKWA RIVER AT HIGHWAY NO. 40	07GB003	SE 05-63-04-W6	FP2	WSC, Alta.	8QN	0.75	Normal	MAROCT					Yes		
LEE CREEK AT CARDSTON	05AE002	NW 10-03-25-W4	FP2	WSC, Alta.	12QN	1	Normal	ANNUAL					Yes		
LUTOSE CREEK NEAR STEEN RIVER	07OB006	SW 07-120-19-W5	FP2	WSC, Alta.	8QN	0.75	Normal	MAROCT					No		
MARIE LAKE NEAR COLD LAKE	06AC005	SW 06-65-02-W4	FP2	WSC, Alta.	8HN	0.25	Normal	MAROCT					No		
MCLEOD RIVER NEAR ROSEVEAR	07AG007	NW 28-54-15-W5	FP2	WSC, Alta.	12QN	1	Normal	ANNUAL					Yes		
NORTH SASKATCHEWAN RIVER AT EDMONTON	05DF001	NW 33-52-24-W4	FP2	WSC, Alta.	12QN	1	Normal	ANNUAL					Yes		
OLDMAN RIVER NEAR BROCKET	05AA024	SE 14-07-29-W4	FP2	WSC, Alta.	12QN	1	Normal	ANNUAL					Yes		
PEMBINA RIVER AT JARVIE	07BC002	NE 15-63-27-W4	FP2	WSC, Alta.	12QN	1	Normal	ANNUAL					Yes		
ROLPH CREEK NEAR KIMBALL	05AE005	NE 16-02-24-W4	FP2	WSC, Alta.	8QN	0.75	Normal	MAROCT					No		
SMOKY RIVER ABOVE HELLS CREEK	07GA001	NE 19-57-08-W6	FP2	WSC, Alta.	8QN	0.75	Normal	MAROCT					Yes		
SMOKY RIVER AT WATINO	07GJ001	SE 34-77-24-W5	FP2	WSC, Alta.	12QN	1	Normal	ANNUAL					Yes		
STEEN RIVER NEAR STEEN RIVER	07OB004	NE 4-122-19-5	FP2	WSC, Alta.	8QN	0.75	Normal	MAROCT					Yes		
SWAN RIVER NEAR KINUSO	07BJ001	NE 11-73-10-W5	FP2	WSC, Alta.	12QN	1	Normal	ANNUAL					Yes		
Stations Total	20														

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Site Identification			Responsibility		Operational Approach						Output Products				
Station Name	Station Number	Station Location	Station Designation	Operator	Station Type	Station Units	Access	Operating Period	Operating Method	Planned Visits	Response Priority	Standards Tier	Real Time	Archive	Other
ALKALI CREEK NEAR THE MOUTH	05CK005	SW 28-22-04-W4	FP3	WSC, Alta.	8QN	0.75	Normal	MAROCT					Yes		
AMISK RIVER AT HIGHWAY NO. 36	06AA002	SE 26-63-14-W4	FP3	WSC, Alta.	8QN	0.75	Normal	MAROCT					Yes		
ATIMOSWE CREEK NEAR ELK POINT	05ED002	NW 36-56-07-W4	FP3	WSC, Alta.	8QN	0.75	Normal	MAROCT					No		
BATTLE RIVER NEAR PONOKA	05FA001	NE 31-42-25-W4	FP3	WSC, Alta.	12QN	1.00	Normal	ANNUAL					Yes		
BEAVER RIVER NEAR GOODRIDGE	06AA001	NE 12-63-10-W4	FP3	WSC, Alta.	8QN	0.75	Normal	MAROCT					No		
BERRY CREEK NEAR ROSE LYNN	05CH008	NW 21-28-11-W4	FP3	WSC, Alta.	8QN	0.75	Normal	MAROCT					Yes		
BIGKNIFE CREEK NEAR GADSBY	05FC002	NW 11-41-17-W4	FP3	WSC, Alta.	8QN	0.75	Normal	MAROCT					No		
BLINDMAN RIVER NEAR BLUFFTON	05CC008	NE 31-43-02-W5	FP3	WSC, Alta.	8QN	0.75	Normal	MAROCT					Yes		
BLOCK CREEK NEAR LEEDALE	05CC010	SE 35-41-05-W5	FP3	WSC, Alta.	8QN	0.75	Normal	MAROCT					No		
BOYER RIVER NEAR PADDLE PRAIRIE	07JF004	SW 05-103-22-W5	FP3	WSC, Alta.	8QN	0.75	Normal	MAROCT					No		
BRAZEAU RIVER BELOW CARDINAL RIVER	05DD007	NW 16-45-18-W5	FP3	WSC, Alta.	8QN	0.75	Normal	MAYOCT					Yes		
BROWN CREEK AT FORESTRY ROAD	05DD004	NW 02-44-17-W5	FP3	WSC, Alta.	8QN	0.75	Normal	MAYOCT					Yes		
BUCHANAN CREEK NEAR MANNING	07HC002	NW 16-91-22-W5	FP3	WSC, Alta.	8QN	0.75	Normal	MAROCT					No		
BUFFALO CREEK AT HIGHWAY NO. 41	05FE002	SW 31-46-06-W4	FP3	WSC, Alta.	8QN	0.75	Normal	MAROCT					No		
BULLPOUND CREEK NEAR WATTS	05CG004	NW 16-31-15-W4	FP3	WSC, Alta.	8QN	0.75	Normal	MAROCT					No		

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Station Name	Station Number	Station Location	Station Designation	Operator	Station Type	Station Units	Access	Operating Period	Operating Method	Planned Visits	Response Priority	Standards Tier	Real Time	Archive	Other
CADOTTE RIVER AT OUTLET CADOTTE LAKE	07HB001	SE 27-86-16-W5	FP3	WSC, Alta.	8QN	0.75	Normal	MAROCT					No		
CASTLE RIVER AT RANGER STATION	05AA028	SE 21-05-03-W5	FP3	WSC, Alta.	8QN	0.75	Normal	MAROCT					Yes		
CATARACT CREEK NEAR FORESTRY ROAD	05BL022	SW 26-15-05-W5	FP3	WSC, Alta.	12QN	1.00	Normal	ANNUAL					Yes		
CHINCHAGA RIVER NEAR HIGH LEVEL	07OC001	NW 31-110-02-W6	FP3	WSC, Alta.	12QN	1.00	Normal	ANNUAL					Yes		
CHRISTINA RIVER NEAR CHARD	07CE002	NW 09-79-06-W4	FP3	WSC, Alta.	8QR	1.50	Remote	MAROCT					Yes		
CHRISTMAS CREEK NEAR BLUE RIDGE	07AH002	SE 31-60-09-W5	FP3	WSC, Alta.	8QN	0.75	Normal	MAROCT					No		
CLEAR RIVER NEAR BEAR CANYON	07FD009	SW 28-84-11-W6	FP3	WSC, Alta.	8QN	0.75	Normal	MAROCT					Yes		
CLEARWATER RIVER NEAR DOVERCOURT	05DB006	SW 07-38-06-W5	FP3	WSC, Alta.	12QN	1.00	Normal	ANNUAL					Yes		
COYOTE CREEK NEAR CHERHILL	07BB014	NW 27-56-05-W5	FP3	WSC, Alta.	8QN	0.75	Normal	MAROCT					No		
CROWSNEST RIVER AT FRANK	05AA008	SE 36-07-04-W5	FP3	WSC, Alta.	12QN	1.00	Normal	ANNUAL					Yes		
CUTBANK RIVER NEAR GRANDE PRAIRIE	07GB001	SE 10-64-07-W6	FP3	WSC, Alta.	8QN	0.75	Normal	MAROCT					Yes		
DAPP CREEK AT HIGHWAY NO. 44	07BC006	NW 28-61-26-W4	FP3	WSC, Alta.	8QN	0.75	Normal	MAROCT					No		
DRIFTWOOD RIVER NEAR THE MOUTH	07BK007	NW 22-72-02-W5	FP3	WSC, Alta.	12QN	1.00	Normal	ANNUAL					No		
DRYWOOD CREEK NEAR THE MOUTH	05AD010	SE 14-04-29-W4	FP3	WSC, Alta.	12QN	1.00	Normal	ANNUAL					Yes		
ELBOW RIVER AT BRAGG CREEK	05BJ004	NE 12-23-05-W5	FP3	WSC, Alta.	12QN	1.00	Normal	ANNUAL					Yes		
EUREKA RIVER NEAR WORSLEY	07FD013	SW 13-86-08-W6	FP3	WSC, Alta.	8QN	0.75	Normal	MAROCT					No		
FISH CREEK ABOVE LITTLE FISH LAKE	05CG006	SW 16-28-16-W4	FP3	WSC, Alta.	8QN	0.75	Normal	MAROCT					No		
FISH CREEK NEAR PRIDDIS	05BK001	NE 22-22-03-W5	FP3	WSC, Alta.	8QN	0.75	Normal	MAROCT					Yes		
FLAT CREEK NEAR BOYLE	07CA003	SE 02-65-20-W4	FP3	WSC, Alta.	8QN	0.75	Normal	MAROCT					No		
FREEMAN RIVER NEAR FORT ASSINBOINE	07AH001	NE 13-62-07-W5	FP3	WSC, Alta.	8QN	0.75	Normal	MAROCT					Yes		
GRANDE PRAIRIE CREEK NEAR SEXSMITH	07GE003	SW 6-74-06-W6	FP3	WSC, Alta.	8QN	0.75	Normal	MAROCT					Yes		
GROS VENTRE CREEK NEAR DUNMORE	05AH037	SE 08-11-04-W4	FP3	WSC, Alta.	8QN	0.75	Normal	FEBOCT					Yes		
HEART RIVER NEAR NAMPA	07HA003	NW 30-81-20-W5	FP3	WSC, Alta.	12QN	1.00	Normal	ANNUAL					Yes		
HIGHWOOD RIVER AT DIEBEL'S RANCH	05BL019	NW 4-17-04-W5	FP3	WSC, Alta.	8QN	0.75	Normal	MAROCT					Yes		
HINES CREEK ABOVE GERRY LAKE	07FD011	NE 32-84-02-W6	FP3	WSC, Alta.	8QN	0.75	Normal	MAROCT					Yes		
HOUSE RIVER AT HIGHWAY NO. 63	07CB002	NW 05-77-14-W4	FP3	WSC, Alta.	8QN	0.75	Normal	MAROCT					Yes		
JOSEGUN RIVER NEAR LITTLE SMOKY	07GG003	NW 29-66-21-W5	FP3	WSC, Alta.	8QN	0.75	Normal	MAROCT					No		
IRON CREEK NEAR HARDISTY	05FB002	NE 13-43-10-W4	FP3	WSC, Alta.	8QN	0.75	Normal	MAROCT					No		
JAMES RIVER NEAR SUNDRE	05CA002	SW 20-34-05-W5	FP3	WSC, Alta.	8QN	0.75	Normal	MAROCT					Yes		
JUMPINGPOUND CREEK NEAR COX HILL	05BH013	NE 32-23-07-W5	FP3	WSC, Alta.	8QN	0.75	Normal	MAYOCT					No		
KEG RIVER AT HIGHWAY NO. 35	07HF002	SW 12-101-23-W5	FP3	WSC, Alta.	8QN	0.75	Normal	MAROCT					Yes		
LAC LA BICHE AT LAC LA BICHE	07CA004	NW 06-67-13-W4	FP3	WSC, Alta.	12HN	0.40	Normal	ANNUAL					Yes		
LAFOND CREEK NEAR RED EARTH CREEK	07JC001	NW17-93-07-W5	FP3	WSC, Alta.	8QN	0.75	Normal	MAROCT					Yes		
LESSER SLAVE LAKE AT SLAVE LAKE	07BJ006	SE 12-73-06-W5	FP3	WSC, Alta.	12HN	0.40	Normal	ANNUAL					Yes		
LESSER SLAVE RIVER AT SLAVE LAKE	07BK001	SE 07-73-05-W5	FP3	WSC, Alta.	12QN	1.00	Normal	ANNUAL					Yes		
LITTLE BERLAND RIVER AT HIGHWAY NO. 40	07AC008	SE 21-54-02-W6	FP3	WSC, Alta.	8QN	0.75	Normal	MAROCT					No		

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Station Name	Station Number	Station Location	Station Designation	Operator	Station Type	Station Units	Access	Operating Period	Operating Method	Planned Visits	Response Priority	Standards Tier	Real Time	Archive	Other
LITTLE PADDLE RIVER NEAR MAYERTHORPE	07BB005	SE 31-57-08-W5	FP3	WSC, Alta.	8QN	0.75	Normal	MAROCT					Yes		
LITTLE RED DEER RIVER NEAR WATER VALLEY	05CB002	NW 29-29-05-W5	FP3	WSC, Alta.	8QN	0.75	Normal	MAROCT					Yes		
LITTLE SMOKY RIVER AT LITTLE SMOKY	07GG002	SE 25-66-22-W5	FP3	WSC, Alta.	8QN	0.75	Normal	MAROCT					No		
LOGAN RIVER NEAR THE MOUTH	07CA012	NE 26-71-12-W4	FP3	WSC, Alta.	8QR	1.50	Remote	MAROCT					Yes		
LOVETT RIVER NEAR THE MOUTH	07BA003	NW 26-46-19-W5	FP3	WSC, Alta.	8QN	0.75	Normal	MAYOCT					No		
MACKAY CREEK AT WALSH	05AH002	NW 26-11-01-W4	FP3	WSC, Alta.	8QN	0.75	Normal	FEBOCT					No		
MANYBERRIES CREEK AT BRODIN'S FARM	05AF010	NE 03-05-06-W4	FP3	WSC, Alta.	8QN	0.75	Normal	FEBOCT					Yes		
MASKWA CREEK NO. 1 ABOVE BEARHILLS LAKE	05FA014	SW 18-44-25-W4	FP3	WSC, Alta.	8QN	0.75	Normal	MAROCT					No		
MCLEOD RIVER ABOVE EMBARRAS RIVER	07AF002	SE 07-52-18-W5	FP3	WSC, Alta.	12QN	1.00	Normal	ANNUAL					Yes		
MEDICINE RIVER NEAR ECKVILLE	05CC007	SE 03-39-03-W5	FP3	WSC, Alta.	12QN	1.00	Normal	ANNUAL					Yes		
MONTAGNEUSE RIVER NEAR HINES CREEK	07FD012	SW 22-85-05-W6	FP3	WSC, Alta.	8QN	0.75	Normal	MAROCT					No		
MUSKEG RIVER NEAR GRANDE CACHE	07GA002	SW 15-57-06-W6	FP3	WSC, Alta.	8QN	0.75	Normal	MAROCT					No		
NORDEGG RIVER AT SUNCHILD ROAD	05DD009	SW 27-44-11-W5	FP3	WSC, Alta.	12QN	1.00	Normal	ANNUAL					Yes		
NORTH RAM RIVER AT FORESTRY ROAD	05DC011	SE 19-38-14-W5	FP3	WSC, Alta.	8QN	0.75	Normal	MAYOCT					Yes		
NOTIKEWIN RIVER AT MANNING	07HC001	SE 27-91-23-W5	FP3	WSC, Alta.	12QN	1.00	Normal	ANNUAL					Yes		
OLDMAN RIVER NEAR WALDRON'S CORNER	05AA023	NE 10-10-02-W5	FP3	WSC, Alta.	12QN	1.00	Normal	ANNUAL					Yes		
OWL RIVER BELOW PICHE RIVER	07CA013	SW 36-69-13-W4	FP3	WSC, Alta.	8QR	1.50	Remote	MAROCT					Yes		
PADDLE RIVER NEAR ANSELMO	07BB011	NW 24-56-10-W5	FP3	WSC, Alta.	8QN	0.75	Normal	MAROCT					Yes		
PEACE RIVER AT DUNVEGAN BRIDGE	07FD003	SE07-80-04-W6	FP3	WSC, Alta.	12QN	1.00	Normal	ANNUAL					Yes		
PEAVINE CREEK NEAR FALHER	07GH004	NW 31-76-21-W5	FP3	WSC, Alta.	8QN	0.75	Normal	MAROCT					No		
PEIGAN CREEK NEAR PAKOWKI ROAD	05AH041	NW 19-07-07-W4	FP3	WSC, Alta.	8QN	0.75	Normal	FEBOCT					Yes		
PINCHER CREEK AT PINCHER CREEK	05AA004	SW 23-06-30-W4	FP3	WSC, Alta.	8QN	0.75	Normal	MAROCT					Yes		
PINE CREEK NEAR GRASSLAND	07CA005	SE 26-67-19-W4	FP3	WSC, Alta.	8QN	0.75	Normal	MAROCT					No		
PIPESTONE CREEK NEAR WETASKIWIN	05FA012	SE 08-47-23-W4	FP3	WSC, Alta.	8QN	0.75	Normal	MAROCT					No		
PONTON RIVER ABOVE BOYER RIVER	07JF003	NW 15-109-14-W5	FP3	WSC, Alta.	8QN	0.75	Normal	MAROCT					No		
PRAIRIE CREEK BELOW LICK CREEK	05DB005	SE 12-38-10-W5	FP3	WSC, Alta.	8QN	0.75	Normal	MAROCT					No		
RACEHORSE CREEK NEAR THE MOUTH	05AA027	SE 24-10-04-W5	FP3	WSC, Alta.	8QN	0.75	Normal	APROCT					No		
RAT CREEK NEAR CYNTHIA	07BA002	SW 13-48-11-W5	FP3	WSC, Alta.	8QN	0.75	Normal	MAROCT					No		
RAVEN RIVER NEAR RAVEN	05CB004	SW 14-36-04-W5	FP3	WSC, Alta.	12QN	1.00	Normal	ANNUAL					Yes		
RAY CREEK NEAR INNISFAIL	05CE010	SW 13-35-26-W4	FP3	WSC, Alta.	8QN	0.75	Normal	MAROCT					No		
RED DEER RIVER BELOW BURNT TIMBER CREEK	05CA009	NE 11-31-08-W5	FP3	WSC, Alta.	12QN	1.00	Normal	ANNUAL					Yes		
REDEARTH CREEK NEAR RED EARTH CREEK	07JC002	NW 17-87-08-W5	FP3	WSC, Alta.	8QN	0.75	Normal	MAROCT					No		
REDWATER RIVER NEAR THE MOUTH	05EC005	SW 01-57-21-W4	FP3	WSC, Alta.	8QN	0.75	Normal	MAROCT					No		
RENWICK CREEK NEAR THREE HILLS	05CE011	NE 05-32-24-W4	FP3	WSC, Alta.	8QN	0.75	Normal	MAROCT					Yes		
RIBSTONE CREEK NEAR EDGERTON	05FD001	NW 35-43-04-W4	FP3	WSC, Alta.	8QN	0.75	Normal	MAROCT					No		
ROSE CREEK NEAR ALDER FLATS	05DE007	NW 31-45-07-W5	FP3	WSC, Alta.	8QN	0.75	Normal	MAROCT					Yes		

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Station Name	Station Number	Station Location	Station Designation	Operator	Station Type	Station Units	Access	Operating Period	Operating Method	Planned Visits	Response Priority	Standards Tier	Real Time	Archive	Other
SADDLE RIVER NEAR WOKING	07FD006	NE 4-77-5-6	FP3	WSC, Alta.	8QN	0.75	Normal	MAROCT					Yes		
SAGE CREEK AT Q RANCH NEAR WILDHORSE	11AA026	NW 09-02-02-W4	FP3	WSC, Alta.	8QN	0.75	Normal	MAROCT					Yes		
SAKWATAMAU RIVER NEAR WHITECOURT	07AH003	SE 19-60-12-W5	FP3	WSC, Alta.	8QN	0.75	Normal	MAROCT					Yes		
SAM LAKE TRIBUTARY NEAR SCHULER	05AH047	NE 07-14-02-W4	FP3	WSC, Alta.	8QN	0.75	Normal	FEBOCT					Yes		
SAND RIVER NEAR THE MOUTH	06AB001	NW 20-63-08-W4	FP3	WSC, Alta.	8QN	0.75	Normal	MAROCT					Yes		
SAULTEAUX RIVER NEAR SPURFIELD	07BK005	SE 21-71-02-W5	FP3	WSC, Alta.	8QN	0.75	Normal	MAROCT					No		
SAWRIDGE CREEK NEAR SLAVE LAKE	07BK009	NE 25-72-06-W5	FP3	WSC, Alta.	8QN	0.75	Normal	MAROCT					Yes		
SHEEP RIVER AT BLACK DIAMOND	05BL014	NE 08-20-02-W5	FP3	WSC, Alta.	12QN	1.00	Normal	ANNUAL					Yes		
SIMONETTE RIVER NEAR GOODWIN	07GF001	NE 11-71-02-W6	FP3	WSC, Alta.	8QN	0.75	Normal	MAROCT					Yes		
SNAKE CREEK NEAR VULCAN	05AC030	SW 36-17-22-W4	FP3	WSC, Alta.	8QN	0.75	Normal	FEBOCT					No		
SOUSA CREEK NEAR HIGH LEVEL	07OA001	SE 31-110-03-W6	FP3	WSC, Alta.	8QN	0.75	Normal	MAROCT					Yes		
STONY CREEK NEAR TAWATINAW	07BE004	NW 24-61-24-W4	FP3	WSC, Alta.	8QN	0.75	Normal	MAROCT					No		
STRAWBERRY CREEK NEAR THE MOUTH	05DF004	SE 15-50-01-W5	FP3	WSC, Alta.	8QN	0.75	Normal	MAROCT					Yes		
STRETTON CREEK NEAR MARWAYNE	05EE005	SE 35-51-03-W4	FP3	WSC, Alta.	8QN	0.75	Normal	MAROCT					Yes		
SUNDANCE CREEK NEAR BICKERDIKE	07AF010	NW 11-53-19-W5	FP3	WSC, Alta.	8QN	0.75	Normal	MAROCT					No		
SWAN RIVER NEAR SWAN HILLS	07BJ003	NW 16-67-10-W5	FP3	WSC, Alta.	8QN	0.75	Normal	MAROCT					Yes		
TEEPÉE CREEK NEAR LA CRETE	07JD004	SE 28-105-14-W5	FP3	WSC, Alta.	8QN	0.75	Normal	MAROCT					No		
THREEHILLS CREEK BELOW RAY CREEK	05CE018	SW 18-35-25-W4	FP3	WSC, Alta.	8QN	0.75	Normal	MAROCT					No		
THREEPOINT CREEK NEAR MILLARVILLE	05BL013	NW 07-21-02-W5	FP3	WSC, Alta.	8QN	0.75	Normal	MAROCT					Yes		
TOMAHAWK CREEK NEAR TOMAHAWK	05DE009	NW 13-51-06-W5	FP3	WSC, Alta.	8QN	0.75	Normal	MAROCT					Yes		
TRAP CREEK NEAR LONGVIEW	05BL027	NW 36-17-04-W5	FP3	WSC, Alta.	8QN	0.75	Normal	MAYOCT					Yes		
VERMILION RIVER AT VEGREVILLE	05EE009	NW 17-52-14-W4	FP3	WSC, Alta.	8QN	0.75	Normal	MAROCT					Yes		
VERMILION RIVER TRIBUTARY NEAR BRUCE	05EE006	SW 07-50-14-W4	FP3	WSC, Alta.	8QN	0.75	Normal	MAROCT					Yes		
WABASH CREEK NEAR PIBROCH	07BC007	NW 25-60-27-W4	FP3	WSC, Alta.	8QN	0.75	Normal	MAROCT					Yes		
WAIPAROUS CREEK NEAR THE MOUTH	05BG006	NW 06-27-06-W5	FP3	WSC, Alta.	12QN	1.00	Normal	ANNUAL					Yes		
WANDERING RIVER NEAR WANDERING RIVER	07CA006	SW 0 6-72-16-W4	FP3	WSC, Alta.	8QN	0.75	Normal	MAROCT					Yes		
WAPITI RIVER NEAR GRANDE PRAIRIE	07GE001	SW 23-70-06-W6	FP3	WSC, Alta.	12QN	1.00	Normal	ANNUAL					Yes		
WASKAHIGAN RIVER NEAR THE MOUTH	07GG001	SE 35-66-22-W5	FP3	WSC, Alta.	12QN	1.00	Normal	ANNUAL					Yes		
WASKASOO CREEK AT RED DEER	05CC011	NE 16-38-27-W4	FP3	WSC, Alta.	8QN	0.75	Normal	MAROCT					Yes		
WEST ARROWWOOD CREEK NEAR ARROWWOOD	05BM014	SW 11-21-24-W4	FP3	WSC, Alta.	8QN	0.75	Normal	FEBOCT					No		
WEST ARROWWOOD CREEK NEAR ENSIGN	05BM018	SW 14-18-25-W4	FP3	WSC, Alta.	8QN	0.75	Normal	FEBOCT					No		
WEST PRAIRIE RIVER NEAR HIGH PRAIRIE	07BF002	SE 35-74-17-W5	FP3	WSC, Alta.	12QN	1.00	Normal	ANNUAL					Yes		
WEST WHITEMUD CREEK NEAR IRETON	05DF007	SE 14-49-26-W4	FP3	WSC, Alta.	8QN	0.75	Normal	MAROCT					No		
WHITEMUD RIVER NEAR DIXONVILLE	07HA005	SW 06-87-23-W5	FP3	WSC, Alta.	8QN	0.75	Normal	MAROCT					Yes		
WILDHAY RIVER NEAR HINTON	07AC001	NW 29-52-27-W5	FP3	WSC, Alta.	8QN	0.75	Normal	MAYOCT					Yes		
WILLOW CREEK AT SECONDARY 532	05AB040	SE 09-15-03-W4	FP3	WSC, Alta.	8QN	0.75	Normal	MAROCT					Yes		

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Station Name	Station Number	Station Location	Station Designation	Operator	Station Type	Station Units	Access	Operating Period	Operating Method	Planned Visits	Response Priority	Standards Tier	Real Time	Archive	Other
WILLOW RIVER NEAR WABASCA	071A003	SE 12-80-26-W4	FP3	WSC, Alta.	8QN	0.75	Normal	MAROCT					No		
WOLF CREEK AT HIGHWAY NO. 16A	07AG003	NE 22-53-16-W5	FP3	WSC, Alta.	12QN	1.00	Normal	ANNUAL					Yes		
WOLF LAKE AT OUTLET	06AB004	NW 16-66-07-W4	FP3	WSC, Alta.	8HR	0.95	Remote	MAROCT							
WOLF RIVER AT OUTLET OF WOLF LAKE	06AB002	NE 16-66-07-W4	FP3	WSC, Alta.	8QR	1.50	Remote	MAROCT					Yes		
Stations Total	127														

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Site Identification			Responsibility		Operational Approach					Output Products					
Station Name	Station Number	Station Location	Station Designation	Operator	Station Type	Station Units	Access	Operating Period	Operating Method	Planned Visits	Response Priority	Standards Tier	Real Time	Archive	Other
ALBERTA POWER LIMITED COOLING POND OUTLET	05CG007	NW 29-28-13-W4	P1	WSC, Alta.	8QN	0.75	Normal	MAROCT					No		
ATHABASCA RIVER AT ATHABASCA	07BE001	SE 20-66-22-W4	P1	WSC, Alta.	12QN	1.00	Normal	ANNUAL					Yes		
ATHABASCA RIVER NEAR WINDFALL	07AE001	NE20-60-14-W5	P1	WSC, Alta.	8QN	0.75	Normal	MAROCT					Yes		
ATIM CREEK AT CENTURY RD	05EA012	SW 23-53-27-W4	P1	WSC, Alta.	8QN	0.75	Normal	MAROCT					Yes		
BABETTE CREEK NEAR COLINTON	07CA008	SE 27-65-21-W4	P1	WSC, Alta.	8QN	0.75	Normal	MAROCT					No		
BAPTISTE LAKE NEAR ATHABASCA	07BE002	SW 26-66-24-W4	P1	WSC, Alta.	8HN	0.25	Normal	MAYOCT					No		
BAPTISTE RIVER NEAR THE MOUTH	05DC012	NW 34-42-08-W5	P1	WSC, Alta.	12QN	1.00	Normal	ANNUAL					No		
BATTLE RIVER AT DUHAMEL	05FA011	SE 10-46-21-W4	P1	WSC, Alta.	8QN	0.75	Normal	MAROCT					Yes		
BATTLE RIVER AT HIGHWAY 872	05FC008	NE 32-39-10-W4	P1	WSC, Alta.	8QN	0.75	Normal	MAROCT					Yes		
BATTLE RIVER NEAR FORESTBURG	05FC001	NW 35-41-17-W4	P1	WSC, Alta.	8QN	0.75	Normal	MAROCT					Yes		
BEAR RIVER NEAR VALHALLA CENTRE	07GE007	NW 07-74-09-W6	P1	WSC, Alta.	8QN	0.75	Normal	MAROCT					No		
BEARBERRY CREEK NEAR SUNDRE	05CA011	NW 06-33-5-W5	P1	WSC, Alta.	8QN	0.75	Normal	MAROCT					Yes		
BEAVER CREEK NEAR BROCKET	05AB013	NW 07-08-28-W4	P1	WSC, Alta.	8QN	0.75	Normal	MAROCT					No		
BEAVERLODGE RIVER NEAR BEAVERLODGE	07GD001	SE 34-71-10-W6	P1	WSC, Alta.	8QN	0.75	Normal	MAROCT					No		
BEAVERTAIL CREEK NEAR HYTHE	07GD002	SE 17-73-11-W6	P1	WSC, Alta.	8QN	0.75	Normal	MAROCT					No		
BELLY RIVER NEAR GLENWOOD	05AD041	SE 06-05-26-W4	P1	WSC, Alta.	12QN	1.00	Normal	ANNUAL					Yes		
BELLY-ST. MARY DIVERSION CANAL	05AD021	SE 34-04-27-W4	P1	WSC, Alta.	8QN	0.75	Normal	MAROCT					Yes		
BERLAND RIVER NEAR THE MOUTH	07AC007	SW 18-58-20-W5	P1	WSC, Alta.	8QN	0.75	Normal	MAROCT					Yes		
BERRY CREEK NEAR THE MOUTH	05CH007	SW 10-22-12-W4	P1	WSC, Alta.	8QN	0.75	Normal	MAROCT					No		
BERRY CREEK RESERVOIR NEAR SUNNYSOOK	05CH014	NE 29-26-12-W4	P1	WSC, Alta.	8HN	0.25	Normal	MAROCT					No		
BERRY CREEK RESERVOIR OUTLET	05CH011	NW 21-26-12-W4	P1	WSC, Alta.	8QN	0.75	Normal	MAROCT					No		
BLACKMUD CREEK NEAR ELLERSLIE	05DF003	SE 19-51-24-W4	P1	WSC, Alta.	8QN	0.75	Normal	MAROCT					Yes		
BLINDMAN RIVER NEAR BLACKFALDS	05CC001	NW 14-39-27-W4	P1	WSC, Alta.	12QN	1.00	Normal	ANNUAL					Yes		
BLOOD INDIAN CREEK NEAR CABIN LAKE	05CK007	NE 31-24-09-W4	P1	WSC, Alta.	8QN	0.75	Normal	MAROCT					No		
BLOOD INDIAN CREEK NEAR THE MOUTH	05CK001	SE 16-23-08-W4	P1	WSC, Alta.	8QN	0.75	Normal	MAROCT					No		
BOW RIVER DEVELOPMENT CANAL BELOW HEADGATES	05BM021	SE 32-21-25-W4	P1	WSC, Alta.	8QN	0.75	Normal	MAROCT					Yes		
BOW RIVER NEAR COCHRANE	05BH005	SW 35-25-04-W5	P1	WSC, Alta.	8QN	0.75	Normal	MAROCT					Yes		
BOYER RIVER NEAR FORT VERMILION	07JF002	SE 09-109-14-W5	P1	WSC, Alta.	8QN	0.75	Normal	MAROCT					No		
BUFFALO LAKE NEAR ERSKINE	05CD005	NW 19-40-20-W4	P1	WSC, Alta.	8HN	0.25	Normal	MAYOCT					Yes		
BULLSHEAD CREEK AT BLACK AND WHITE TRAIL	05AH053	NE 17-11-05-W4M	P1	WSC, Alta.	8QN	0.75	Normal	MAROCT					Yes		

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BULLSHEAD RESERVOIR NEAR ELKWATER	05AH057	NW 29-8-4-W4	P1	WSC, Alta.	8HN	0.25	Normal	MAROCT					Yes		
CALLING LAKE AT RANGER STATION	07CB001	SW 17-72-21-W4	P1	WSC, Alta.	8HN	0.25	Normal	MAYOCT					Yes		
CAMROSE CREEK NEAR CAMROSE	05FA025	NW 11-47-20-W4	P1	WSC, Alta.	8QN	0.75	Normal	MAROCT					Yes		
CARROT CREEK NEAR THE MOUTH	05EA011	NE 36-53-26-W4	P1	WSC, Alta.	8QN	0.75	Normal	MAROCT					Yes		
CASTLE RIVER NEAR BEAVER MINES	05AA022	NW 24-06-02-W5	P1	WSC, Alta.	12QN	1.00	Normal	ANNUAL					Yes		
CAVAN LAKE DIVERSION NEAR DUNMORE	05AH044	NW 10-11-04-W4	P1	WSC, Alta.	8QN	0.75	Normal	FEBOCT					No		
CAVAN LAKE NEAR DUNMORE	05AH048	NE 30-11-3-W4	P1	WSC, Alta.	8HN	0.25	Normal	MAROCT					Yes		
CHAIN LAKES RESERVOIR NEAR NANTON	05AB037	NE 27-14-02-W5	P1	WSC, Alta.	12HN	0.40	Normal	ANNUAL					Yes		
CHIP LAKE NEAR NORTHVILLE	07BB008	SW 03-54-10-W5	P1	WSC, Alta.	8HN	0.25	Normal	MAROCT					Yes		
CLEARWATER RIVER ABOVE CHRISTINA RIVER	07CD005	NW 29-88-06-W4	P1	WSC, Alta.	8QR	1.50	Remote	MAROCT					Yes		
COAL LAKE RESERVOIR NEAR WETASKIWIN	05FA016	SE 35-46-23-W4	P1	WSC, Alta.	8HN	0.25	Normal	MAYOCT					No		
CYPRESS VIEW RESERVOIR NEAR ELKWATER	05AH054	SE 12-10-2-W4	P1	WSC, Alta.	8HN	0.25	Normal	MAROCT					Yes		
DICKSON DAM TUNNEL OUTLET	05CB007	SE 04-36-02-W5	P1	WSC, Alta.	12QN	1.00	Normal	ANNUAL					Yes		
EAST MCALPINE CREEK NEAR ELKWATER LAKE	05AH043	NE 03-10-02-W4	P1	WSC, Alta.	8QN	0.75	Normal	FEBOCT					No		
EAST PRAIRIE RIVER NEAR ENILDA	07BF001	NE 14-74-16-W5	P1	WSC, Alta.	8QN	0.75	Normal	MAROCT					Yes		
ELBOW RIVER AT SARCEE BRIDGE	05BJ010	SE 35-23-02-W5	P1	WSC, Alta.	12QN	1.00	Normal	ANNUAL					Yes		
ELBOW RIVER BELOW GLENMORE DAM	05BJ001	SW 04-24-01-W5	P1	WSC, Alta.	12QN	1.00	Normal	ANNUAL					Yes		
ELKWATER LAKE AT ELKWATER	05AH025	NW 24-08-03-W4	P1	WSC, Alta.	8HN	0.25	Normal	MAYOCT					Yes		
EMBARRAS RIVER NEAR WEALD	07AF014	NE 01-51-20-W5	P1	WSC, Alta.	8QN	0.75	Normal	MAROCT					No		
FALLETIMBER CREEK NEAR SUNDRE	05CA012	SW 09-32-05-W5	P1	WSC, Alta.	8QN	0.75	Normal	MAYOCT					Yes		
FAWCETT LAKE NEAR SMITH	07BK008	SE 15-73-01-W4	P1	WSC, Alta.	12QN	1.00	Normal	ANNUAL					Yes		
FORSTER RESERVOIR NEAR CESSFORD	05CH013	SW 28-23-13-W4	P1	WSC, Alta.	8HN	0.25	Normal	MAROCT					No		
GHOST RIVER ABOVE WAIPAROUS CREEK	05BG010	NW 33-26-07-W5	P1	WSC, Alta.	12QN	1.00	Normal	ANNUAL					Yes		
GOLD CREEK NEAR FRANK	05AA030	SW 31-07-03-W5	P1	WSC, Alta.	8QN	0.75	Normal	APRNOV					Yes		
GREGG RIVER NEAR THE MOUTH	07AF015	SW 30-49-23-W5	P1	WSC, Alta.	8QN	0.75	Normal	MAROCT					No		
GREGOIRE LAKE NEAR FORT MCMURRAY	07CE001	SW 07-86-08-W4	P1	WSC, Alta.	8HR	0.95	Remote	MAROCT					Yes		
GROAT CREEK NEAR WHITECOURT	07AG008	NE 22-58-13-W5	P1	WSC, Alta.	8QN	0.75	Normal	MAROCT					Yes		
GULL LAKE AT ASPEN BEACH	05CC006	NE 21-40-28-W4	P1	WSC, Alta.	8HN	0.25	Normal	MAYOCT					Yes		
HAYNES CREEK NEAR HAYNES	05CD006	SW 11-39-24-W4	P1	WSC, Alta.	8QN	0.75	Normal	MAROCT					Yes		
HIGHWOOD RIVER BELOW LITTLE BOW CANAL	05BL004	NE 06-19-28-W4	P1	WSC, Alta.	12QN	1.00	Normal	ANNUAL					Yes		
HILDA LAKE NEAR COLD LAKE	06AC003	NE 08-64-03-W4	P1	WSC, Alta.	8HN	0.25	Normal	MAROCT					Yes		
ISLE LAKE AT EUREKA BEACH	05EA008	NE 32-53-05-W5	P1	WSC, Alta.	8HN	0.25	Normal	MAYOCT					No		
JACKFISH CREEK NEAR LA COREY	06AC001	NE 09-63-05-W4	P1	WSC, Alta.	8QN	0.75	Normal	MAROCT					No		
JACKPINE CREEK AT HIGHWAY NO. 88	07JD003	NE 09-106-11-W5	P1	WSC, Alta.	8QN	0.75	Normal	MAROCT					Yes		
JUMPINGPOUND CREEK AT TOWNSHIP ROAD 252	05BH015		P1	WSC, Alta.	12QN	1.00	Normal	ANNUAL					Yes		
KENNEDY COULEE NEAR ACADIA VALLEY	05CK006	SW 05-25-02-W4	P1	WSC, Alta.	8QN	0.75	Normal	MAROCT					No		

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KETTLES CREEK AT PINCHER CREEK	05AA033	NE23-6-30-W4	P1	WSC, Alta.	8QN	0.75	Normal	MAROCT					Yes		
KILLARNEY LAKE TRIBUTARY NEAR CHAUVIN	05GA010	SW 31-41-01-W4	P1	WSC, Alta.	8QN	0.75	Normal	MAROCT					No		
KLESKUN HILLS MAIN DRAIN NEAR GRANDE PRAIRIE	07GE002	NE 12-72-4-6	P1	WSC, Alta.	8QN	0.75	Normal	MAROCT					No		
KNEEHILLS CREEK NEAR DRUMHELLER	05CE002	NW 12-29-22-W4	P1	WSC, Alta.	8QN	0.75	Normal	MAROCT					Yes		
LAC LA NONNE AT LAC LA NONNE	07BB007	NE 07-57-02-W5	P1	WSC, Alta.	8HN	0.25	Normal	MAYOCT					Yes		
LAC STE. ANNE AT ALBERTA BEACH	05EA006	SE 22-54-03-W5	P1	WSC, Alta.	8HN	0.25	Normal	MAYOCT					Yes		
LASTHILL CREEK NEAR ECKVILLE	05CC013	NE 14-39-04-W5	P1	WSC, Alta.	8QN	0.75	Normal	MAROCT					Yes		
LILY CREEK NEAR SLAVE LAKE	07BG004	NW 14-74-06-W5	P1	WSC, Alta.	8QN	0.75	Normal	MAROCT					No		
LITTLE RED DEER RIVER NEAR THE MOUTH	05CB001	SW 30-35-01-W5	P1	WSC, Alta.	12QN	1.00	Normal	ANNUAL					Yes		
LITTLE SMOKY RIVER NEAR GUY	07GH002	NE 33-74-21-W5	P1	WSC, Alta.	12QN	1.00	Normal	ANNUAL					Yes		
LLOYD CREEK NEAR BLUFFTON	05CC009	NE 25-43-02-W5	P1	WSC, Alta.	8QN	0.75	Normal	MAROCT					No		
LOMOND LATERAL NEAR HEADGATE	05AC017	SW 34-14-20-W4	P1	WSC, Alta.	8QN	0.75	Normal	APROCT					Yes		
LOON RIVER NEAR THE MOUTH	07JC003	SE 20-93-07-W5	P1	WSC, Alta.	12QN	1.00	Normal	ANNUAL					Yes		
MACKAY CREEK RESERVOIR NEAR ELKWATER	05AH056	SW 7-9-1-W4	P1	WSC, Alta.	8HN	0.25	Normal	MAROCT					Yes		
MCALPINE CREEK RESERVOIR NEAR ELKWATER	05AH055	NE 2-9-2-W4	P1	WSC, Alta.	8HN	0.25	Normal	MAROCT					Yes		
MCGREGOR TRAVERS CANAL NEAR CHAMPION	05AC025	SW 15-15-21-W4	P1	WSC, Alta.	8QN	0.75	Normal	APROCT					Yes		
MCLEOD RIVER NEAR CADOMIN	07AF013	SE 30-47-22-W5	P1	WSC, Alta.	8QN	0.75	Normal	MAROCT					Yes		
MCLEOD RIVER NEAR WHITECOURT	07AG004	SE 15-58-13-W5	P1	WSC, Alta.	8QN	0.75	Normal	MAROCT					Yes		
MEADOW CREEK NEAR THE MOUTH	05AB029	NW 32-11-27-W4	P1	WSC, Alta.	8QN	0.75	Normal	MAROCT					Yes		
MICHICHI CREEK AT DRUMHELLER	05CE020	NW 11-29-20-W4	P1	WSC, Alta.	8QN	0.75	Normal	MAROCT					Yes		
MILK RIVER RIDGE RESERVOIR	05AF030	SW 14-05-20 W4	P1	WSC, Alta.	8HN	0.25	Normal	MAROCT					Yes		
MILL CREEK NEAR THE MOUTH	05AA011	SW 18-06-01-W5	P1	WSC, Alta.	8QN	0.75	Normal	MAROCT					Yes		
MONITOR CREEK NEAR CONSORT	05GA011	NW 35-33-06-W4	P1	WSC, Alta.	8QN	0.75	Normal	MAROCT					Yes		
MONITOR CREEK NEAR MONITOR	05GA003	SW 06-35-04-W4	P1	WSC, Alta.	8QN	0.75	Normal	MAROCT					Yes		
MOORE LAKE NEAR COLD LAKE	06AC002	NE 32-63-04-W4	P1	WSC, Alta.	8HN	0.25	Normal	MAROCT					No		
MOOSEHILLS CREEK NEAR ELK POINT	05ED003	SE 23-57-06-W4	P1	WSC, Alta.	8QN	0.75	Normal	MAROCT					No		
MOSQUITO CREEK NEAR THE MOUTH	05AC031	SE 18-15-26-W4	P1	WSC, Alta.	8QN	0.75	Normal	MAROCT					Yes		
MURIEL LAKE NEAR GURNEYVILLE	06AC007	SW 31-59-05-W4	P1	WSC, Alta.	12HN	0.40	Normal	ANNUAL					Yes		
NORTH SASKATCHEWAN RIVER AT HWY. 759	05DE010		P1	WSC, Alta.	12QN	1.00	Normal	ANNUAL					NEW		
NORTH SASKATCHEWAN RIVER NEAR LODGEPOLE	05DE006	SW 14-47-09-W5	P1	WSC, Alta.	8HN	0.25	Normal	MAYOCT					Yes		
NORTH SASKATCHEWAN RIVER NEAR ROCKY MOUNTAIN HOUSE	05DC001	NE 21-39-07-W5	P1	WSC, Alta.	12QN	1.00	Normal	ANNUAL					Yes		
NOSE CREEK ABOVE AIRDRIE	05BH014	SE 14-27-1-W5	P1	WSC, Alta.	8QN	0.75	Normal	MAROCT					Yes		
OLDMAN RESERVOIR NEAR PINCHER CREEK	05AA032	NW 25-07-30-W4	P1	WSC, Alta.	12HN	0.40	Normal	ANNUAL					Yes		
OLDMAN RIVER NEAR THE MOUTH	05AG006	SW 24-11-14-W4	P1	WSC, Alta.	12QN	1.00	Normal	ANNUAL					Yes		
PADDLE RIVER AT BARRHEAD	07BB006	SW 21-59-03-W5	P1	WSC, Alta.	8QN	0.75	Normal	MAROCT					Yes		

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PADDLE RIVER NEAR ROCHFORD BRIDGE	07BB004	SW 06-57-07-W5	P1	WSC, Alta.	8QN	0.75	Normal	MAROCT					Yes		
PAINT EARTH CREEK NEAR HALKIRK	05FC004	NE 30-39-15-W4	P1	WSC, Alta.	8QN	0.75	Normal	MAROCT					No		
PARFLESH CREEK NEAR CHANCELLOR	05BM007	SW 35-23-21-W4	P1	WSC, Alta.	8QN	0.75	Normal	MAROCT					No		
PARLBY CREEK AT ALIX	05CD007	SE 02-40-23-W4	P1	WSC, Alta.	8QN	0.75	Normal	MAROCT					Yes		
PEACE RIVER ABOVE SMOKY RIVER CONFLUENCE	07FD901	NW 36-82-23-W5	P1	WSC, Alta.	12HN	0.40	Normal	ANNUAL					Yes		
PEACE RIVER NEAR CARCAJOU	07HD001		P1	WSC, Alta.	12HN	0.40	Normal	ANNUAL					NEW		
		SW 24-108-13-W5													
PEACE RIVER AT FORT VERMILION	07HF001	W5	P1	WSC, Alta.	12QN	1.00	Normal	ANNUAL					Yes		
PEACE RIVER NEAR ELK ISLAND PARK	07FD934	SW 10-80-26-W5	P1	WSC, Alta.	12HN	0.40	Normal	ANNUAL					Yes		
PEMBINA RIVER BELOW PADDY CREEK	07BA001	NE 12-48-10-W5	P1	WSC, Alta.	8HN	0.25	Normal	MAYOCT					Yes		
PEMBINA RIVER NEAR ENTWISTLE	07BB002	SW 29-53-07-W5	P1	WSC, Alta.	12QN	1.00	Normal	ANNUAL					Yes		
PIGEON LAKE AT PROVINCIAL PARK	05FA013	NE 22-46-01-W5	P1	WSC, Alta.	8HN	0.25	Normal	MAYOCT					Yes		
PINCHER CREEK AT FRONT RANGE ROAD	05AA034	SE 21-4-1-W5	P1	WSC, Alta.	8QN	0.75	Normal	MAROCT					Yes		
PINE COULEE DIVERSION CANAL BELOW HEADGATES	05AB042	SW 32-13-28-4	P1	WSC, Alta.	8QN	0.75	Normal	MAROCT					Yes		
PINE COULEE OUTFLOW BELOW RESERVOIR	05AB045	NW 27-13-28-W4	P1	WSC, Alta.	8QN	0.75	Normal	MAROCT					Yes		
PINE COULEE RESERVOIR NEAR STAVELY	05AB044	SW 34-13-28-W4	P1	WSC, Alta.	8HN	0.25	Normal	MAROCT					Yes		
PINTO CREEK NEAR GRANDE PRAIRIE	07GC002	SW 36-67-10-W6	P1	WSC, Alta.	8QN	0.75	Normal	MAROCT					Yes		
PONY CREEK NEAR CHARD	07CE003	SW 22-79-06-W4	P1	WSC, Alta.	8QR	1.50	Remote	MAROCT					Yes		
PORTER CREEK ABOVE BAPTISTE LAKE	07BE003	SW 21-66-24-W4	P1	WSC, Alta.	8QN	0.75	Normal	MAROCT					No		
PRAIRIE CREEK NEAR ROCKY MOUNTAIN HOUSE	05DB002	NW 15-38-07-W5	P1	WSC, Alta.	12QN	1.00	Normal	ANNUAL					Yes		
RAM RIVER NEAR THE MOUTH	05DC006	SE 19-39-10-W5	P1	WSC, Alta.	12QN	1.00	Normal	ANNUAL					Yes		
RED DEER RIVER ABOVE PANTHER RIVER	05CA004	NE 18-31-10-W5	P1	WSC, Alta.	8QN	0.75	Normal	APROCT					Yes		
RED DEER RIVER AT DRUMHELLER	05CE001	SW 11-29-20-W4	P1	WSC, Alta.	12QN	1.00	Normal	ANNUAL					Yes		
REDWILLOW RIVER NEAR RIO GRANDE	07GD004	NW 24-70-12-W6	P1	WSC, Alta.	12QN	1.00	Normal	ANNUAL					Yes		
ROSEBUD RIVER BELOW CARSTAIRS CREEK	05CE006	NW 22-28-27-W4	P1	WSC, Alta.	8QN	0.75	Normal	MAROCT					No		
RUSH LAKE DRAIN NEAR NEW DAYTON	05AF031	NW 36-05-17-W4	P1	WSC, Alta.	8QN	0.75	Normal	MAROCT					No		
SALT CREEK NEAR GROUARD	07BF009	SW 28-76-14-5	P1	WSC, Alta.	8QN	0.75	Normal	MAROCT					No		
SHEEP RIVER AT OKOTOKS	05BL012	SE 29-20-29-W4	P1	WSC, Alta.	12QN	1.00	Normal	ANNUAL					Yes		
SOUNDING CREEK NEAR CHINOOK	05GA012	SE 09-30-07-W4	P1	WSC, Alta.	8QN	0.75	Normal	MAROCT					Yes		
SOUNDING CREEK NEAR OYEN	05GA008	SE 15-30-04-W4	P1	WSC, Alta.	8QN	0.75	Normal	MAROCT					Yes		
SOUTH HEART RESERVOIR NEAR MCLENNAN	07BF008	SE 20-77-17-W5	P1	WSC, Alta.	8HN	0.25	Normal	MAROCT					Yes		
SOUTH HEART RIVER NEAR BIG PRAIRIE SETTLEMENT	07BF905	SW 17-76-15-W5	P1	WSC, Alta.	12QN	1.00	Normal	ANNUAL					Yes		
SOUTH HEART RIVER NEAR PEAVINE	07BF010	NW 02-79-16-W5	P1	WSC, Alta.	8QN	0.75	Normal	MAROCT					Yes		
SOUTH WABASCA LAKE NEAR DESMARAIS	07JA002	NW 14-80-25-W4	P1	WSC, Alta.	8HN	0.25	Normal	MAYOCT					No		
SPIRIT RIVER NEAR SPIRIT RIVER	07FD020	SE10-78-6-W6	P1	WSC, Alta.	8QN	0.75	Normal	MAROCT					Yes		

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SPRAY RIVER AT BANFF	05BC001	SW 25-25-12-W5	P1	WSC, Alta.	12QN	1.00	Normal	ANNUAL					Yes		
SPRUCE COULEE RESERVOIR NEAR ELKWATER	05AH058	NW 26-8-2-W4	P1	WSC, Alta.	8HN	0.25	Normal	MAROCT					Yes		
ST. MARY RIVER NEAR LETHBRIDGE	05AE006	SW 19-07-21-W4	P1	WSC, Alta.	12QN	1.00	Normal	ANNUAL					Yes		
STIMSON CREEK NEAR PEKISKO	05BL007	SE 14-17-02-W5	P1	WSC, Alta.	8QN	0.75	Normal	MAROCT					Yes		
STIRLING LAKE OUTFLOW NEAR STIRLING	05AF029	SW 03-07-19-W4	P1	WSC, Alta.	8QN	0.75	Normal	MAROCT					No		
STURGEON LAKE NEAR VALLEYVIEW	07GH003	SW 01-71-24-W5	P1	WSC, Alta.	8HN	0.25	Normal	MAYOCT					No		
STURGEON RIVER AT ST. ALBERT	05EA002	NE 04-54-25-W4	P1	WSC, Alta.	12QN	1.00	Normal	ANNUAL					Yes		
STURGEON RIVER NEAR FORT SASKATCHEWAN	05EA001	NE 29-55-22-W4	P1	WSC, Alta.	8QN	0.75	Normal	MAROCT					No		
STURGEON RIVER NEAR MAGNOLIA BRIDGE	05EA010	SW 20-53-06-W5	P1	WSC, Alta.	8QN	0.75	Normal	MAROCT					No		
STURGEON RIVER NEAR VILLENEUVE	05EA005	NW 10-54-26-W4	P1	WSC, Alta.	12QN	1.00	Normal	ANNUAL					Yes		
SUNWAPTA RIVER AT ATHABASCA GLACIER	07AA007	SW 33-37-23-W5	P1	WSC, Alta.	8QN	0.75	Normal	MAYOCT					Yes		
SYLVAN LAKE AT SYLVAN LAKE	05CC003	NE 32-38-01-W5	P1	WSC, Alta.	8HN	0.25	Normal	MAYOCT					Yes		
THREEHILLS CREEK NEAR CARBON	05CE007	SW 17-30-22-W4	P1	WSC, Alta.	8QN	0.75	Normal	MAROCT					No		
TODD CREEK NEAR HIGHWAY NO.22	05AA909	SE 29-09-02-W5	P1	WSC, Alta.	8QN	0.75	Normal	APROCT					No		
TROUT CREEK NEAR GRANUM	05AB005	SW 07-12-27-W4	P1	WSC, Alta.	8QN	0.75	Normal	MAROCT					Yes		
UTIKUMA LAKE NEAR NIPISI	07JA001	SE 24-79-09-W5	P1	WSC, Alta.	8HN	0.25	Normal	MAROCT					No		
VERDIGRIS COULEE NEAR THE MOUTH	11AA038	NW 12-02-14-W4	P1	WSC, Alta.	8QN	0.75	Normal	MAROCT							
VERDIGRIS LAKE TRIBUTARY NEAR MILK RIVER	11AA039	NE 21-03-16-W4	P1	WSC, Alta.	8QN	0.75	Normal	FEBOCT					No		
VERMILION PARK LAKE NEAR VERMILION	05EE008	NW 32-50-06-W4	P1	WSC, Alta.	8HN	0.25	Normal	MAROCT					No		
VERMILION LAKES NEAR MORECAMBE	05EE011	NW 06-54-10-W4	P1	WSC, Alta.	8HN	0.25	Normal	MAROCT					Yes		
VERMILION RIVER AT RGE RD 105	05EE010	SE 31-53-10-W4	P1	WSC, Alta.	8QN	0.75	Normal	MAROCT					Yes		
VERMILION RIVER NEAR MARWAYNE	05EE007	NW 16-52-03-W4	P1	WSC, Alta.	8QN	0.75	Normal	MAROCT					No		
WABAMUN LAKE AT WABAMUN	05DE002	SE 08-53-05-W5M	P1	WSC, Alta.	12HN	0.40	Normal	ANNUAL					Yes		
WAMPUS CREEK NEAR HINTON	07AF003	NW 23-48-23-W5	P1	WSC, Alta.	8QN	0.75	Normal	APROCT					No		
WATERTON RIVER NEAR GLENWOOD	05AD028	SW 05-06-26-W4	P1	WSC, Alta.	12QN	1.00	Normal	ANNUAL					Yes		
WATERTON-BELLY DIVERSION CANAL	05AD027	SE 25-4-28-W4	P1	WSC, Alta.	8QN	0.75	Normal	MAROCT					Yes		
WEED CREEK AT THORSBY	05DF008	NE 15-49-1-W5	P1	WSC, Alta.	8QN	0.75	Normal	MAROCT					Yes		
WEILLER CREEK NEAR WETASKIWIN	05FA024	NE 09-46-23-W4	P1	WSC, Alta.	8QN	0.75	Normal	MAROCT					No		
WHITEMUD CREEK NEAR ELLERSLIE	05DF006	SE 22-51-25-W4	P1	WSC, Alta.	8QN	0.75	Normal	MAROCT					Yes		
WILLOW CREEK AT HIGHWAY NO. 811	05AB046	NW 24-09-26-W4	P1	WSC, Alta.	8QN	0.75	Normal	MAROCT					Yes		
WILLOW CREEK AT OXLY RANCH	05AB041	NW 36-13-29-W4	P1	WSC, Alta.	8QN	0.75	Normal	MAROCT					Yes		
WILLOW CREEK NEAR CLARESHOLM	05AB021	NE 23-12-28-W4	P1	WSC, Alta.	12QN	1.00	Normal	ANNUAL					Yes		
WINAGAMI LAKE AT PROVINCIAL PARK	07BF006	SW 35-76-18-W5	P1	WSC, Alta.	8HN	0.25	Normal	MAYOCT					No		
WOLF CREEK AT TOWNSHIP ROAD 410	05FA026		P1	WSC, Alta.	8QN	0.75	Normal	MAROCT					NEW		
YARROW CREEK AT SPREAD EAGLE ROAD	05AD042	NE 22-3-30-W4	P1	WSC, Alta.	8QN	0.75	Normal	MAROCT					Yes		
YOUNG CREEK NEAR CASTOR	05FC007	NE 12-38-13-W4	P1	WSC, Alta.	8QN	0.75	Normal	MAROCT					No		
Stations Total	171														

CANADA – ALBERTA
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Provincial Contributed Data

Station Name	Station Number	Station Location	Station Designation	Operator	Station Type	Station Units	Access	Operating Period	Operating Method	Planned Visits	Response Priority	Standards Tier	Real Time	Archive
ATHABASCA RIVER ABOVE JACKFISH CREEK	07DD007		PAD	PAD	12HR	1.10	Remote	ANNUAL		10			No	
ATHABASCA RIVER BELOW CROOKED RAPIDS	07CC003	49° 54' 57.2" 110° 38' 54.0"	C-AENV	AENV	8HR	0.95	Remote	MAYOCT						
BEAR LAKE NEAR CLAIRMONT	07GE004	NE 27-72-07-W6	C-AENV	AENV	8HN	0.25	Normal	MAROCT		3				
BIGELOW RESERVOIR NEAR WIMBORNE	05CE901	SW 03-34-25-W4	C-AENV	AENV	8HN	0.25	Normal	MAROCT		7			No	Yes
BOW RIVER DEVELOPMENT MAIN CANAL AT DROP NO. 3	05AC902	SW 09-14-19-W4	C-AENV	AENV	8QN	0.75	Normal	MAROCT		9			X	
CHESTERMERE LAKE AT SOUTH OUTLET	05BM904	NE1/4-030024-28-W4	C-AENV	AENV	8HN	0.25	Normal	MAROCT		8			Yes	Yes
CHRISTINA LAKE NEAR WINEFRED LAKE	07CE906	SW31-76-5-W4	C-AENV	AENV	12HN	0.40	Normal	ANNUAL		3			Yes	Yes
CLEAR LAKE DIVERSION CANAL BELOW HEADGATE	05AC938	NW 2-15-26-W4	C-AENV	AENV	8QN	0.75	Normal	MAROCT		8			X	
CLEAR LAKE DIVERSION HEAD POND ABOVE HEADGATE	05AC939	NW 2-15-26-W4	C-AENV	AENV	8HN	0.25	Normal	MAROCT		8			X	
CLEAR LAKE NEAR STAVELY	05AC901	NE 31-13-25-W4	C-AENV	AENV	8HN	0.25	Normal	MAROCT		9			X	
DRIEDMEAT LAKE AT OUTFLOW	05FA020	SE 17-44-19-W4	C-AENV	AENV	8HN	0.25	Normal	MAROCT		10				Yes
ETZIKOM COULEE NEAR NEMISKAM	05AF905	SW 02-06-10-W4	C-AENV	AENV	8QN	0.75	Normal	MAROCT		12				X
GRIMSHAW DRAINAGE NEAR GRIMSHAW	07FD908	SW 08-83-23 W5	C-AENV	AENV	8QN	0.75	Normal	MAROCT		8				
HAYNES CREEK (M1) NEAR JOFFRE	05CD913	NW03-40-25-W4	C-AENV	AENV	8QN	0.75	Normal	MAROCT		12				Yes
KEHO LAKE NEAR NOBLEFORD	05AC919	SE 33-11-22-W4	C-AENV	AENV	8HN	0.25	Normal	MAROCT		9			X	
LAKE MCGREGOR AT SOUTH DAM	05AC022	NE 21-15-21-W4	C-AENV	AENV	8HN	0.25	Normal	MAROCT		10			X	
LITTLE BOW RESERVOIR NEAR ENCHANT	05AC922	NE 28-14-20-W4	C-AENV	AENV	8HN	0.25	Normal	MAROCT		9				
LITTLE BOW RIVER ABOVE TRAVERS RESERVOIR	05AC034	NW1/4-29-014-22-W4	C-AENV	AENV	8QN	0.75	Normal	MAROCT		8			Yes	Yes
LITTLE BOW RIVER AT HIGHWAY NO. 533	05AC930	NW 17-16-26-W4	C-AENV	AENV	8QN	0.75	Normal	MAROCT		8			Yes	Yes
LITTLE BOW RIVER BELOW TWIN VALLEY RESERVOIR	05AC941	SE1/4-05-015-25-W4	C-AENV	AENV	12QN	1.00	Normal	ANNUAL		8			Yes	Yes
TWIN VALLEY RESERVOIR (at HWY 529)	05AC940	SE1/4-05-015-25-W4	C-AENV	AENV	12HN	0.40	Normal	ANNUAL		8			Yes	Yes
MIRROR BACKFLOOD AT HIGHWAY 50	05CD905	NW20-40-22-W4	C-AENV	AENV	8HN	0.25	Normal	MAROCT		10				Yes
MODESTE CREEK NEAR LINDALE	05DE911	NW20-49-05-W5	C-AENV	AENV	8QN	0.75	Normal	MAROCT		12			Yes	Yes
MOSQUITO CREEK BELOW CLEAR LAKE DIVERSION	05AC937	NW 2-15-26-W4	C-AENV	AENV	8QN	0.75	Normal	MAROCT		12			X	
NAMPA (SOUTH) DRAINAGE NEAR NAMPA	07HA914	NW 12-81-21 W5	C-AENV	AENV	8QN	0.75	Normal	MAROCT		8			Yes	Yes
NORTH STAR DRAINAGE NEAR NORTH STAR	07HC907	SE 27-90-23 W5	C-AENV	AENV	8QN	0.75	Normal	MAROCT		8			Yes	Yes
PADDLE RIVER RESERVOIR NEAR ROCHFORD BRIDGE	07BB914	SE02-57-08-W5	C-AENV	AENV	12HN	0.40	Normal	ANNUAL		8			Yes	Yes
PARLBY CREEK NEAR MIRROR	05CD902	SE 04-41-22-W4	C-AENV	AENV	8QN	0.75	Normal	MAROCT		12			Yes	Yes
PAYNE LAKE NEAR MOUNTAIN VIEW	05AD940		C-AENV	AENV	8HN	0.25	Normal	MAROCT		9			X	
POINTE-AUX-PINS CREEK NEAR ARDROSSAN	05EB902	SW27-53-22-W4	C-AENV	AENV	8QN	0.75	Normal	MAROCT		15				Yes
POINTE-AUX-PINS TRIBUTARY NO. 2 NEAR ARDROSSAN	05EB910	SW23-53-22-W4	C-AENV	AENV	8QN	0.75	Normal	MAROCT		15				Yes
RYCROFT SURVEY NO. 3 NEAR RYCROFT	07FD910	SE 18-78-04 W6	C-AENV	AENV	8QN	0.75	Normal	MAROCT		8				Yes
SPOTTED LAKE NEAR MIRROR	05CD903	SW04-41-22-W4	C-AENV	AENV	8HN	0.25	Normal	MAROCT		10			Yes	Yes
TRAVERS RESERVOIR NEAR ENCHANT	05AC921	NE 18-14-20-W4	C-AENV	AENV	8HN	0.25	Normal	MAROCT		9			X	
TYRRELL LAKE NEAR WARNER	05AF903	SE 17-5-17-4	C-AENV	AENV	8HN	0.25	Normal	MAROCT		9			X	
WASKATENAU CREEK NEAR WASKATENAU	05EC002	SE 28-59-19-W4	C-AENV	AENV	8QN	0.75	Normal	MAROCT		12				Yes

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 2007 – 2008 Memorandum of Agreement for Water Quantity Surveys
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Provincial Contributed Data

Site Identification			Responsibility		Operational Approach				Output Products						
Station Name	Station Number	Station Location	Station Designation	Operator	Station Type	Station Units	Access	Operating Period	Operating Method	Planned Visits	Response Priority	Standards Tier	Real Time	Archive	Other
WHITBURN DRAINAGE PROJECT NEAR SPIRIT RIVER	07FD912	SE 23-79-08 W6 N 50 31' 26.2" W 113 55' 17.7"	C-AENV	AENV	8QN	0.75	Normal	MAROCT		8				Yes	
WOMANS COULEE NEAR CAYLEY	05AC909	113 55' 17.7"	C-AENV	AENV	8QN	0.75	Normal	MAROCT							
YOUNG DRAINAGE PROJECT NEAR SPIRIT RIVER	07FD913	SE 01-79-06 W6	C-AENV	AENV	8QN	0.75	Normal	MAROCT		8			Yes	Yes	
Stations Total	39														

Trans Alta Utilities and City of Calgary Contributed Data

Site Identification			Responsibility		Operational Approach				Output Products						
Station Name	Station Number	Station Location	Station Designation	Operator	Station Type	Station Units	Access	Operating Period	Operating Method	Planned Visits	Response Priority	Standards Tier	Real Time	Archive	Other
BARRIER LAKE NEAR SEEBE	05BF024	51 01 59 115 02 29	C-TAU	TAU - Cont.	12HN	0.40	Normal	ANNUAL							
BOW RIVER BELOW BEARSPAW DAM	05BH008	SW 04-25-02-W5	C-TAU	TAU - Cont.	12QN	1.00	Normal	ANNUAL							
BOW RIVER NEAR SEEBE	05BE004	NE 10-25-08-W5	C-TAU	TAU - Cont.	12QN	1.00	Normal	ANNUAL							
CASCADE POWER DIVERSION NEAR BANFF	05BD004	SE 8-26-11-5	C-TAU	TAU - Cont.	12QN	1.00	Normal	ANNUAL							
GHOST LAKE NEAR COCHRANE	05BE005	NE 13-26-06-W5	C-TAU	TAU - Cont.	12HN	0.40	Normal	ANNUAL							
GHOST RIVER DIVERSION TO LAKE MINNEWANKA	05BG003	NE 2-27-9-5	C-TAU	TAU - Cont.	12QN	1.00	Normal	ANNUAL							
GHOST RIVER NEAR BLACK ROCK MOUNTAIN	05BG002	SE 15-27-09-W5	C-TAU	TAU - Cont.	8QN	0.75	Normal	MAROCT							
GHOST TRAIL	05BE999	NE 13-26-06-W5	C-TAU	TAU - Cont.	12QN	1.00	Normal	ANNUAL							
GOAT CREEK AT BANFF PARK BOUNDARY	05BC008	SW 23-24-11-W5	C-TAU	TAU - Cont.	12QN	1.00	Normal	ANNUAL							
KANANASKIS RIVER ABOVE POCATERRA CREEK	05BF003	NE 13-20-09-W5	C-TAU	TAU - Cont.	12QN	1.00	Normal	ANNUAL							
KANANASKIS RIVER BELOW BARRIER DAM	05BF025	SE 15-24-08-W5	C-TAU	TAU - Cont.	12QN	1.00	Normal	ANNUAL							
LAKE ABRAHAM NEAR NORDEGG	05DC009	SW 35-38-17-W5	C-TAU	TAU - Cont.	12HN	0.40	Normal	ANNUAL							
LAKE MINNEWANKA NEAR BANFF	05BD003	SW 21-26-11-W5	C-TAU	TAU - Cont.	12HN	0.40	Normal	ANNUAL							
LOWER KANANASKIS LAKE	05BF009	SW 13-20-09-W5	C-TAU	TAU - Cont.	12HN	0.40	Normal	ANNUAL							
NORTH SASKATCHEWAN RIVER BELOW BIGHORN PLANT	05DC010	SE 35-38-17-W5	C-TAU	TAU - Cont.	12QN	1.00	Normal	ANNUAL							
SPRAY POWER DIVERSION AT CANMORE	05BE007	SW 32-24-10-5	C-TAU	TAU - Cont.	12QN	1.00	Normal	ANNUAL							
SPRAY RESERVOIR AT THREE SISTERS DAM	05BC006	SW 32-23-10-W5	C-TAU	TAU - Cont.	12HN	0.40	Normal	ANNUAL							
UPPER KANANASKIS LAKE	05BF005	NE 13-19-09-W5	C-TAU	TAU - Cont.	12HN	0.40	Normal	ANNUAL							
GLENMORE RESERVOIR AT CALGARY	05BJ008	SE 32-23-01-W5	C-CITY	City of CAL.	12HN	0.40	Normal	ANNUAL					?City		
Stations Total	19														

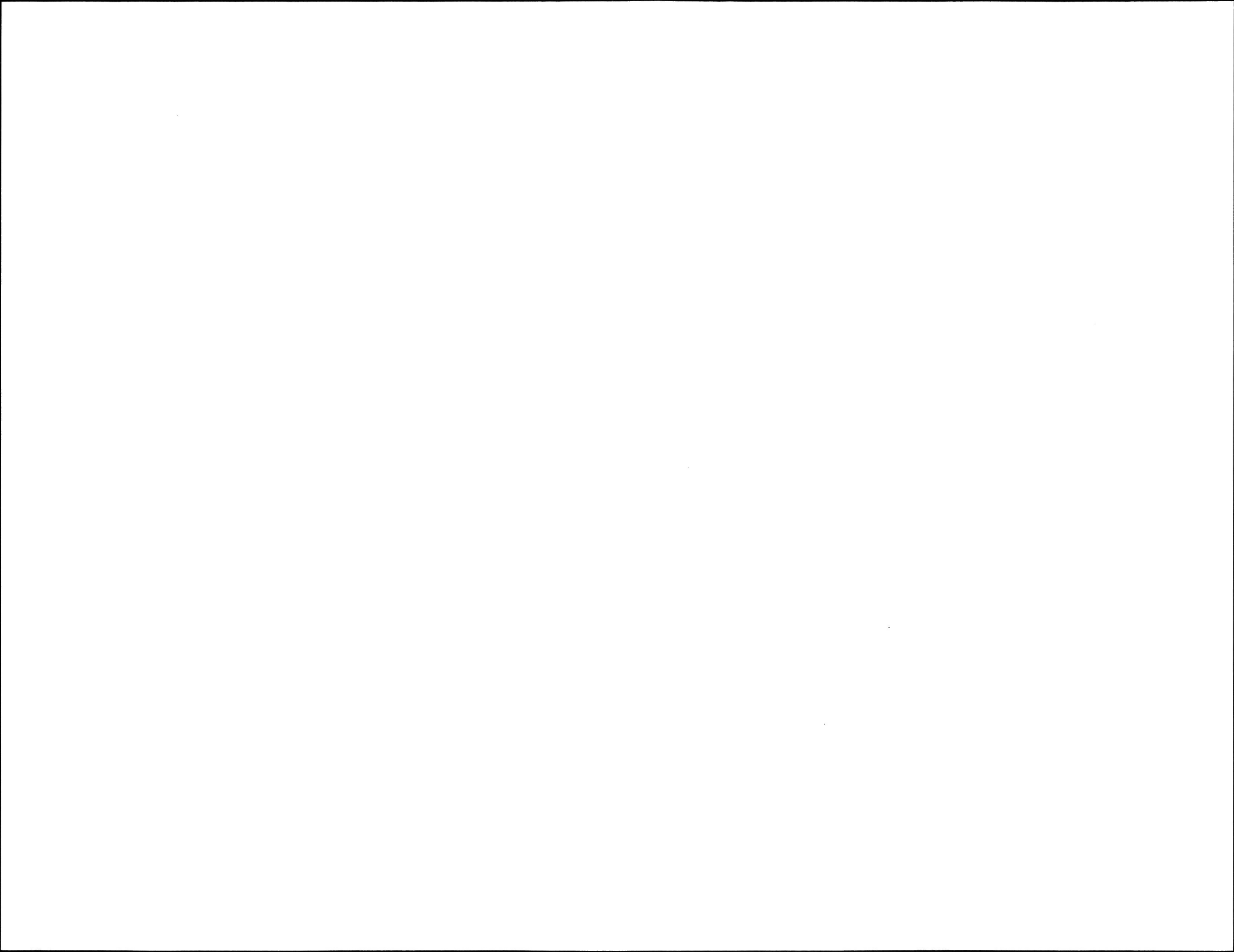
CANADA – ALBERTA

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APPENDIX A – Schedule C 2007 – 2008

Sediment Program

Station Name	Site Identification		Responsibility			Operational Approach					Output Products				
	Station Number	Station Location	Station Designation	Operator	Station Type	Station Units	Access	Operating Period	Operating Method	Planned Visits	Response Priority	Standards Tier	Real Time	Archive	Other
PROVINCIAL															
OLDMAN RIVER NEAR BROCKET	05AA024	SE 14-07-29-W4	FP2	WSC, Alta.	12QN	1.05	Normal	ANNUAL					Yes		
OLDMAN RIVER NEAR WALDRON'S CORNER	05AA023	NE 10-10-2-W5	FP3	WSC, Alta.	12QN	1.05	Normal	ANNUAL					Yes		
FEDERAL - PROVINCIAL															
OLDMAN RIVER NEAR LETHBRIDGE	05AD007	NW 1-9-22-W4	F2	WSC, Alta.	12QN	0.525	Normal	ANNUAL					Yes		
FEDERAL															
SLAVE RIVER AT FITZGERALD	07NB001		F2	NT - NU	12QR	0.525	Remote	ANNUAL							



APPENDIX B

Schedule D

Annual Payment Details

2007 – 2008

CANADA – ALBERTA
 2007 – 2008 Memorandum of Agreement for Water Quantity Surveys
 APPENDIX B – Schedule D Annual Payment Details 2007 – 2008

1.0 DIRECT OPERATIONS

1.1 Salaries

Personnel charged to the direct operations (Appendix A)		\$1,319,869
Overtime (Appendix A)		\$114,134
	Direct Operations Salary	\$1,434,003
O & M Conversion = 0.2 X Direct Operations Salary		\$286,801
	Direct Operations Salary (as O&M)	\$1,720,804

1.2 Unit Salary Costs

A - Station Units (Appendix B)	313,050	
B - Direct Operations Salary (as O&M)	\$1,720,804	
Direct Operations Unit Salary Cost (B / A)		\$5,497

1.3 O&M Costs

1.3.1 Hydrometric Conventional (from Line Object Totals)	\$690,840	
1.3.2 Hydrometric Remote (from Line Object Totals)	\$168,764	
1.3.3 Sediment Program (from Line Object Totals)	\$11,240	
	Direct Operations Operational Costs	\$870,844

1.4 Unit O & M Cost

A - Station Units (Appendix B)	313,050	
B - Direct Operations O&M	\$870,844	
Direct Operations Unit Salary Cost (B / A)		\$2,782

1.5 Direct Operations Station Unit Cost

Unit Salary Cost (sec 1.2)		\$5,497
Unit O & M Cost (sec 1.4)		\$2,782
	Total	\$8,279

1.6 Capital Depreciation

Motor Vehicles Hydrometric (Appendix C)		\$82,893
<u>Field Equipment Amortized over 10 years</u>		
Depreciation Forward		\$30,586
Purchase 2007 - 2008	\$118,648	\$11,865
<u>EDP Equipment Amortized over 4 years</u>		\$23,942
	Total Capital Depreciation	\$149,286

*Note: References made to Appendix and line objects on this page, references the details in data workbooks

CANADA – ALBERTA
 2007 – 2008 Memorandum of Agreement for Water Quantity Surveys
 APPENDIX B – Schedule D Annual Payment Details 2007 – 2008

2.0 INDIRECT OPERATIONS

2.1 Salaries

Salaries for personnel charged to the indirect operations (Appendix A)		\$231,803
Overtime (Appendix A)		\$8,207
	Indirect Operations Salary	\$240,010
O & M Conversion = 0.2 X Indirect Operations Salary		\$48,002
	Indirect Operations Salary (as O&M)	\$288,012

2.2 Unit Salary Costs

A - Station Units (Appendix B)	313,050	
B - Indirect Operations Salary (as O&M)	\$288,012	
Indirect Operations Unit Salary Cost (B / A)		\$920

2.3 Operational Costs

2.3.1 Indirect Operations (O&M)	\$50,047
2.3.2 Training (O&M)	\$33,560
2.3.3 Computer Software and Supplies	\$19,822
	\$103,428

2.4 Unit O & M Cost

A - Station Units (Appendix B)	313,050	
B - Indirect Operations Salary (as O&M)	\$103,428	
Indirect Operations Unit Salary Cost (B / A)		\$330

2.5 Indirect Operations Station Unit Cost

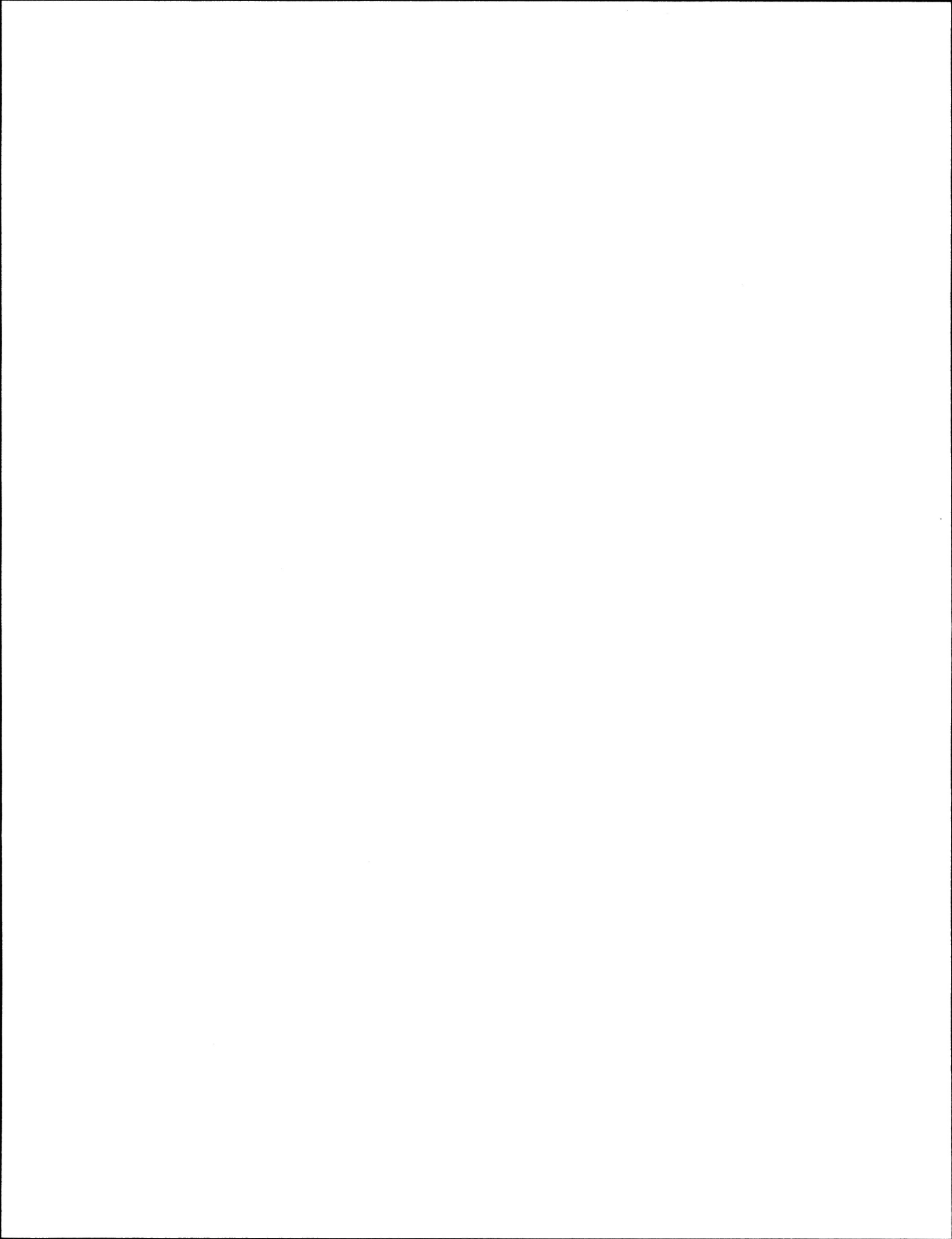
Unit Salary Cost (sec 2.2)	\$920
Unit O & M Cost (sec 2.4)	\$330

Total \$1,250

3.0 TOTAL OPERATIONS UNIT COST

A - Unit Costs Direct Operations (item 1.5)	\$8,279
B - Unit Cost Indirect Operations (item 2.5)	\$1,250
Total Operations Unit Costs (A + B)	\$9,529

Note: References made to Appendix and line objects on this page, references the details in data workbook calculations.



APPENDIX C

Schedule D

Annual Payment Estimates

2007 – 2008

CANADA – ALBERTA
 2007 – 2008 Memorandum of Agreement for Water Quantity Surveys
 APPENDIX C – Schedule D Annual Payment Estimates 2007 – 2008

SCHEDULE D
CONTRIBUTIONS BY PARTIES
CANADA – ALBERTA AGREEMENT ON HYDROMETRIC MONITORING
 For
Fiscal Year 2007 - 2008

Tom Renouf
 FEDERAL GOVERNMENT OF CANADA
 OCT 18 2007
 REGION - SASKATCHEWAN
 IC

TYPE OF EXPENDITURE	NO. OF STNS.	TOTAL COST per Schedule B	SHARE	
			FEDERAL	PROVINCIAL
Direct Operations				
Hydrometric Network Operated by WSC	397	\$ 2,411,272	\$ 969,671	\$ 1,441,601
Hydrometric Equipment Depreciation		\$ 136,576	\$ 54,923	\$ 81,654
Full Program Sediment Stations	4	\$ 24,450	\$ 4,075	\$ 20,375
Sediment Equipment Depreciation		\$ -	\$ -	\$ -
Indirect Operations				
Hydrometric Network Operated by WSC	397	\$ 416,483	\$ 167,485	\$ 248,998
Full Program Sediment Stations	4	\$ 4,223	\$ 704	\$ 3,519
Projects				
Life Cycle Management	27	\$ 352,840	\$ 125,228	\$ 227,612
Cableway Upgrades	9	\$ 156,298	\$ 64,652	\$ 91,646
Station Decommissioning	5	\$ 84,100	\$ -	\$ 84,100
Network Expansion		\$ 250,000	\$ -	\$ 250,000
TOTAL		\$ 3,836,243	\$ 1,386,737	\$ 2,449,506

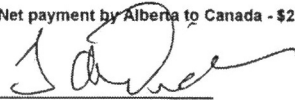
ALBERTA GROSS SHARE: \$ 2,449,506

ALBERTA CREDIT:

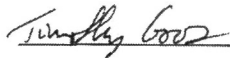
a) Direct Operation cost (PAD area plus Oldman Reservoir):	
Hydrometric stations	\$ (81,501)
Hydrometric Depreciation	\$ (4,570)
b) Indirect Operation cost (PAD area plus Oldman Reservoir):	\$ (14,077)
c) Direct Costs Water Sciences (\$39,894 X 126.20 / 314.55)	\$ (15,949)
d) Direct Costs Monitoring (\$57,225 X 126.20 / 314.55)	\$ (22,877)
d) Christina Lake January -December	\$ (9,103)
TOTAL	\$ (148,077)

ALBERTA NET SHARE: Alberta Gross Share - ALBERTA CREDIT \$ 2,301,429

Net payment by Alberta to Canada - \$2,301,429.



Tom Dickson
 Administrator for Alberta
 Alberta Environment



Tim Goos
 Administrator for Canada
 Environment Canada

1. DIRECT OPERATIONS

1.1 Salaries

Personnel charged to the direct operations		\$1,308,585
Overtime (Appendix A)		\$40,000
	Direct Operations Salary	\$1,348,585
O & M Conversion = 0.2 X Direct Operations Salary		\$269,717
	Direct Operations Salary (as O&M)	\$1,618,302

1.2 Unit Salary Costs

A - Station Units (Appendix B)	313,800	
B - Direct Operations Salary (as O&M)	\$1,618,302	
Direct Operations Unit Salary Cost (A / B)		\$5,157

1.3 O&M Costs

2.1.1 Hydrometric Conventional (from Line Object Totals)	\$677,300	
2.1.2 Hydrometric Remote (from Line Object Totals)	\$132,000	
2.1.3 Sediment Program (from Line Object Totals)	\$8,120	
	Direct Operations Operational Costs	\$817,420

1.4 Unit O & M Cost

A - Station Units (Appendix B)	313,800	
B - Direct Operations O&M	\$817,420	
Direct Operations Unit Salary Cost (A / B)		\$2,605

1.5 Direct Operations Station Unit Cost

Unit Salary Cost (sec 1.2)		\$5,157
Unit O & M Cost (sec 4)		\$2,605
	Total	\$7,762

1.6 Capital Depreciation

Motor Vehicles Hydrometric (Appendix C)		\$63,683
Field Equipment Amortized over 10 years Depreciation Forward Estimated		\$25,570
Purchase 07-08	\$25,000	\$2,500
EDP Equipment Amortized over 4 years		\$44,824
	Total Direct Operations	\$136,576

2.0 INDIRECT OPERATIONS

2.1 Salaries

Salaries personnel charged to the indirect operations		\$268,505
Overtime (Appendix A)		\$0
	Indirect Operations Salary	<u>\$268,505</u>
O & M Conversion		
= 0.2 X Indirect Operations Salary		\$53,701
	Indirect Operations Salary (as O&M)	<u><u>\$322,206</u></u>

2.2 Unit Salary Costs

A - Station Units (Appendix B)	313,800	
A - Station Units (Appendix B)	\$322,206	
Indirect Operations Unit Salary Cost (A / B)		\$1,027

2.3 Operational Costs

(from Line Object Totals)	\$98,500
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2.4 Unit O & M Cost

A - Station Units (Appendix B)	313,800	
B - Indirect Operations Salary (as O&M)	\$98,500	
Indirect Operations Unit Salary Cost (A / B)		\$314

2.5 Indirect Operations Station Unit Cost

Unit Salary Cost (sec 1.2)		\$1,027
Unit O & M Cost (sec 4)		\$314
	Total	<u><u>\$1,341</u></u>

3.0 TOTAL OPERATIONS UNIT COST

A - Unit Costs Direct Operations (item 1.5)	\$7,762
B - Unit Cost Indirect Operations (item 2.5)	<u>\$1,341</u>
Total Operations Unit Costs (A + B)	\$9,103

APPENDIX D

Schedule D

Annual Payment Estimates

2008 – 2009

SCHEDULE D
CONTRIBUTIONS BY PARTIES
CANADA –ALBERTA AGREEMENT ON HYDROMETRIC MONITORING
Fiscal Year 2008 - 2009

TYPE OF EXPENDITURE	NO. OF STATIONS	TOTAL COST per Schedule B	SHARE	
			FEDERAL	PROVINCIAL
Direct Operations				
Hydrometric Network Operated by WSC	397	\$ 2,795,157	\$ 1,124,046	\$ 1,671,111
Hydrometric Equipment Depreciation		\$ 143,222	\$ 57,595	\$ 85,627
Full Program Sediment Stations	4	\$ 28,343	\$ 4,724	\$ 23,619
Sediment Equipment Depreciation		\$ -	\$ -	\$ -
Indirect Operations				
Hydrometric Network Operated by WSC	397	\$ 415,443	\$ 167,067	\$ 248,377
Full Program Sediment Stations	4	\$ 4,213	\$ 702	\$ 3,511
Projects				
Life Cycle Management	50	\$ 307,266	\$ 111,094	\$ 196,172
Cableway Upgrades	13	\$ 143,427	\$ 110,227	\$ 33,200
Station Decommissioning	34	\$ 76,318	\$ 76,318	\$ -
Network Expansion		\$ 150,000	\$ -	\$ 150,000
TOTAL		\$ 4,063,389	\$ 1,651,773	\$ 2,411,615

ALBERTA GROSS SHARE: **\$ 2,411,615**

ALBERTA CREDIT:

a) Direct Operation Cost (PAD area plus Oldman Reservoir)		
Hydrometric Stations	\$ (94,477)	
Hydrometric Depreciation	\$ (4,841)	
b) Indirect Operation Cost (PAD area plus Oldman Reservoir)	\$ (14,042)	
c) Direct Costs Water Sciences (\$39,894 X (124.70+0.750)/ 313.8)	\$ (15,949)	
d) Direct Costs Monitoring (\$5,000 X (124.7+0.750) / 313.80)	\$ (1,999)	
d) Christina Lake January -December	\$ (10,335)	
TOTAL		\$ (141,642)

ALBERTA NET SHARE: (Alberta Gross Share - Alberta Credit) **\$ 2,269,973**

Net payment by Alberta to Canada: **\$ 2,269,973**

original signed by
Tom Dickson
Administrator for Alberta
Alberta Environment

original signed by
Tim Goos
Administrator for Canada
Environment Canada

APPENDIX E

Projects

2007 – 2008

Life Cycle Management Share Calculation

TOTAL Life Cycle Management Shares =

Sum of Salary, Construction Project and Non-Project Expenditure SHARES.

Federal (\$86,393 + \$41,151 + \$14,163) = **\$141,707**
Provincial (\$129,215 + \$88,424 + \$21,183) = **\$238,823**

<u>Salary - Total</u>	<u>Construction & Cableway</u>	<u>Maintenance</u>
base salary	\$138,318	\$67,020
Overtime	\$9,845	
BPE (@20%)	\$29,633	\$13,404
Const. Projects	-\$17,056	
Cableway Projects	-\$25,556	
	\$135,183	\$80,425

Note: A portion of the salary shown above is accounted for in the Construction and Cableway projects. The project based salary is subtracted from total salary before the salary shares are calculated.

Salary SHARES

Federal ((\$135,183 + \$80,425) + ((124.175 / 309.90)) = **\$86,393**
Provincial ((\$135,183 + \$80,425) + ((185.725 / 309.90)) = **\$129,215**

Note:

Salary is distributed using the ratio of station units funded by each party. This distribution method was chosen based on the arguments that flow stations normally have more infrastructure and are more complex to manage than water level stations. Station unit distribution reflects this difference more accurately than station equivalents

Construction Project - SHARES

Federal (\$10,102 + (\$62,097 / 2)) = **\$41,151**
Provincial (\$57,375 + (\$62,097 / 2)) = **\$88,424**

Non-Project LCM Expenditures

Vehicle Depreciation	\$9,919
Non project total of activities below:	\$25,427
Computer Hardware (Lap Top)	
Training (Not including Salaries)	
Trailer upgrade & servicing	
Tools & equipment	
Communications	
	\$35,347

Non-Project LCM Expenditures SHARES are distributed using station units.

Federal (\$35,347 * 124.18 / 309.90) = **\$14,163**
Provincial (\$35,347 * 185.73 / 309.90) = **\$21,183**

Life Cycle Management Projects

Station No.	Station Name	Designation.	Activities	Expenditure	Total
<u>FEDERAL FUNDED PROJECT</u>					
05AH050	BOXELDER CREEK AT HARGRAVES RANCH	F-1	site inspection	\$ 339.97	
05AD007	OLDMAN RIVER NEAR LETHBRIDGE	F-2	Install new shelter	\$ 9,762.08	
					\$10,102
			salary component of cost	\$ 1,863.77	
2					
<u>FEDERAL - PROVINCIAL FUNDED PROJECTS</u>					
07FD009	CLEAR RIVER NEAR BEAR CANYON	FP-3	Replace station washed out by flood	\$ 1,573.94	
07FD013	EUREKA RIVER NEAR WORSLEY	FP-3	De-mouse	\$ 1,063.88	
07OB003	HAY RIVER NEAR MEANDER RIVER	FP-2	needs EC sign, de-mouse, level floor	\$ 1,063.88	
07GB003	KAKWA RIVER AT HIGHWAY NO. 41	FP-2	De-mouse, fix door knob	\$ 1,063.88	
07OB006	LUTOSE CREEK NEAR STEEN RIVER	FP-2	Relocate Shelter to pre-marked location	\$ 3,407.08	
07AG006	MCLEOD RIVER NEAR ROSEVEAR	FP-2	Intake replacement and bank stabilization	\$ 31,184.00	
05AA027	RACEHORSE CREEK NEAR THE MOUTH	FP-3	De-mouse	\$ 360.22	
05AA035	OLDMAN RIVER AT RANGE ROAD 13A	FP-3	Shelter	\$ 2,675.00	
05CE010	RAY CREEK NEAR INNISFAIL	FP-3	Repair electrical service	\$ 256.59	
07OB004	STEEN RIVER NEAR STEEN RIVER	FP-2	needs EC sign, de-mouse, Hg fill required	\$ 1,063.88	
05DF001	NORTH SASKATCHEWAN RIVER AT EDMONTON	FP-2	shelter and staging expenditure	\$ 4,042.50	
07JF004	BOYER RIVER NEAR PADDLE PRAIRIE	FP-3	trenching	\$ 322.00	
07CA005	PINE CREEK NEAR GRASSLAND	FP-3	Electrical meter base install	\$ 547.50	
05DE009	TOMAHAWK CREEK NEAR TOMAHAWK	FP-3	tree removal	\$ 650.00	
05BM014	WEST ARROWWOOD CREEK NEAR ARROWWOOD	FP-3	Bank and control stabilization	\$ 12,822.72	
					\$62,097
			salary component of cost	\$ 6,592.82	
15					

Life Cycle Management Projects

Station No.	Station Name	Designation.	Activities	Expenditure	Total
PROVINCIAL FUNDED PROJECTS					
07CA008	BABETTE CREEK NEAR COLINGTON	P-1	Install Measurement Ramp contract for land survey	\$ 2,359.30	
05CH007	BERRY CREEK NEAR THE MOUTH	P-1	Site Inspection	\$ 679.93	
05FA026	WOLFE CREEK AT TOWNSHIP ROAD 411	P-1	Site Repair	\$ 1,538.41	
05AB041	WILLOW CREEK NEAR OXLY RANCH	P-1	Site Inspection	\$ 212.27	
07AA007	SUNWAPTA RIVER AT ATHABASCA GLACIER	P-1	Reconnaissance	\$ 916.46	
05CH014	BERRY CREEK NEAR SUNNYNOOK	P-1	Relocation	\$ 4,507.40	
05DE006	NORTH SASKATCHEWAN RIVER NEAR LODGEPOLE	P-1	Site Repair	\$ 425.32	
05CA012	FALLENTIMBER CREEK NEAR SUNDRIE	P-1	Site Repair	\$ 1,463.46	
05CK001	BLOOD INDIAN CREEK NEAR THE MOUTH	P-1	Ramp to shelter door	\$ 779.93	
05AA032	OLDMAN RESERVOIR NEAR PINCHER CREEK	P-1	Shelter	\$ 2,675.00	
05AH054	CYPRESS VIEW RESERVOIR NR ELK WATER	P-1	Dessert box replacement.	\$ 7,199.81	
05CC006	GULL LAKE AT ALBERTA BEACH	P-1	Relocate reconnaissance - ice moving shelter	\$ 280.21	
05BM007	PARFLESH CREEK NEAR CHANCELLOR	P-1	Ramp to shelter door	\$ 292.17	
07BA001	PEMBINA RIVER BELOW PADDY CREEK	P-1	Replace Intake, bank stabilization	\$ 21,065.54	
05CE006	ROSEBUD RIVER BELOW CARSTAIRS CREEK	P-1	Install new walk-in shelter	\$ 1,039.89	
05BL012	SHEEP RIVER NEAR OKOTOKS	P-1	Relocate with new shelter	\$ 11,091.30	
05GA012	SOUNDING CREEK NEAR CHINOOK	P-1	Ramp to shelter door	\$ 212.27	
05AB046	WILLOW CREEK AT HIGHWAY NO. 812	P-1	De-mouse	\$ 636.81	
					\$57,375
			salary component of cost	\$ 8,599.62	

CANADA – ALBERTA
 2007 – 2008 Memorandum of Agreement for Water Quantity Surveys
 APPENDIX E – Projects 2007 – 2008

Cableway Projects

Federal (F project+ ((FP project) / 2) =
 (\$80,345+(\$8,762 / 2)) = \$84,726

Provincial (P project+ ((FP project) / 2) =
 (\$89,104 +(\$8,762 / 2)) = \$93,485

Cableway Project Salary \$25,556

Station No.	Station Name	Designation.	Activities	Expenditure	Total
<u>FEDERAL FUNDED PROJECT</u>					
05DA009	NORTH SASKATCHEWAN RIVER AT WHIRLPOOL POINT	F-1	CW Replacement	\$73,304	
05AE027	ST. MARY RIVER AT INTERNATIONAL BOUNDARY	F-3	CW Replacement (initial phases)	\$7,041	
			total		\$80,345
			salary component of cost	\$7,310	
<u>FEDERAL - PROVINCIAL FUNDED PROJECTS</u>					
05CA009	RED DEER RIVER BELOW BURNT TIMBER	FP-3	Complete	\$8,550	
05BL022	CATARACT CREEK NEAR FORESTRY ROAD	FP-3	Inspection	\$212	
			total		\$8,762
			salary component of cost	\$2,819	
<u>PROVINCIAL FUNDED PROJECTS</u>					
07AC007	BERLAND RIVER NEAR THE MOUTH	P-1	CW Replacement	\$85,394	
05DF006	WHITEMUD CREEK NEAR ELLERSLIE	P-1	Install Bank operated cableway	\$3,710	
			total		\$89,104
6			salary component of cost	\$15,427	

Alberta Environment Expansion Projects

Network Expansion Totals

Sum of Salary, Civil Works, Non project O&M expenditures, Instrumentation & spares.
 (\$9,591 + \$49,942 + \$38,898 + \$126,921) = **\$225,352**

Salary - Total

Base Salary \$12,500
 BPE (@20%) \$2,500
 Project Salary -\$5,409

TOTAL **\$9,591** not included with specific projects

Nonspecific Project O & M

Instrumentation

Travel and freight Expenses	Pressure Transducer W/L sensor	\$	18,700
Telecommunications - Telephone & Voice	GOES Antenna	\$	7,700
Personal Services Contracts	Vedas II with GOES Modem	\$	11,736
Contracts, rentals	Vedas II with GOES Hardware	\$	7,620
Repair of Machinery & Equipment	GOES Antenna	\$	1,155
Building & Structures	Vedas II with GOES Hardware	\$	80,010
Purchased Materials.	Total Instrumentation	\$	126,921
Parts, Consumable Tools			
Total non specific = \$ 38,898			

Expansion Projects

Station No	Station Name	Designation	Activity	Expenditure	Total
05EA013	KILINI CREEK AT TOWNSHIP ROAD 543	P-1	shelter and staging	\$4,907	
05BH016	WESTNOSE CREEK AT CALGARY	P-1	shelter	\$4,318	
05DF009	WHITEMUD CREEK at EDMONTON	P-1	shelter and staging	\$4,435	
07XX000	PEACE RIVER NEAR SUNNY VALLEY	P-1	land survey	\$5,000	
07GE005	BEAR CREEK NR BEAR CANYON	P-1	shelter	\$3,250	
07BH003	DRIFTPILE NEAR DRIFTPILE	P-1	new station	\$7,844	
05CE012	GHOSTPINE CREEK NEAR HUXLEY	P-1	new station	\$8,536	
05FD007	SHORNCLIFFE LAKE NEAR CZAR	P-1	new station	\$8,161	
05BH005	BOW RIVER NEAR COCHRANE	P-1	Modification	\$2,441	
07HD001	PEACE RIVER NEAR CARCAJOU	P-1	Completion	\$1,049	
			Total		\$49,942
10			salary component	\$5,409	



