Report to

THE INTERNATIONAL JOINT COMMISSION

on

THE DIVISION AND USE MADE OF THE WATERS OF

ST. MARY AND MILK RIVERS

by

J. D. McLEOD
representing Canada

and

L. B. LEOPOLD
representing United States

1958

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International Joint Commission,

Washington, D.C., and Ottawa, Ontario.

Gentlemen:

In compliance with the Provisions of Clause VIII (c) of your Order of the 4th October, 1921, directing the division of the waters of St. Mary and Milk Rivers between the United States and Canada, we are transmitting herewith a report on the operations during the irrigation season ended October 31, 1958.

Respectfully submitted,

J. D. McLeod
Accredited Officer of Her Majesty.

L.B. Leopold
Accredited Officer of the United States.

25 March , 1959.
(date)

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Introduction

The field work incidental to the division and administration of the waters of the St. Mary and Milk Rivers in Alberta, Saskatchewan and Montana was conducted during the irrigation season of 1958 by representatives of the United States Geological Survey and the Water Resources Branch (Canada).

Mr. J. D. McLeod, Chief Engineer, Water Resources Branch, Department of Northern Affairs and National Resources, acting in the capacity of accredited officer of Her Majesty, was represented in the field by Mr. E. P. Collier, District Engineer, Calgary, Alberta. Dr. L. B. Leopold, Chief Hydraulic Engineer, United States Geological Survey, as accredited officer of the United States, was represented in the field by Mr. F. Stermitz, District Engineer, Helena, Montana.

The waters of the two rivers were divided between the two countries in accordance with the Order of the International Joint Commission dated at Ottawa, Canada, on the 4th day of October, 1921.

The hydrometric data upon which this report is based were collected and compiled jointly for 36 international stations by engineers of the Water Resources Branch (Canada) under the direction of Mr. Collier and of the United States Geological Survey under the direction of Mr. Stermitz. Data for another 19 stations in Canada and 6 stations in the United States were collected independently by the same engineers in their respective countries. The United States Bureau of Reclamation furnished data for another 8 canal stations in Montana.

Complete data for 51 of the stations mentioned above are contained in the appendix to this report; monthly quantities only for 11 canal stations in Montana are shown in Table 3, page 2, and Table 7. Data for 3

stations maintained by the United States Geological Survey in the St. Mary River basin and 4 stations maintained by Canada in the St. Mary and Milk River basins are not used for purposes of division and are not included in either this report or its appendix.

This report has been compiled jointly by Mr. E. P. Collier and Mr. F. Stermitz.

Water Supply

St. Mary River

The total natural flow of the St. Mary River at the International Boundary for the year November 1, 1957, to October 31, 1958, was 589,157 acre-feet. Of this total 530,645 occurred during the irrigation season, April 1 to October 31. The natural flow during the irrigation season was 90 percent of 588,975 acre-feet, the average of the previous 55 years of record. Of the total natural flow there was delivered to Canada 408,010 acre-feet, 363,580 acre-feet during the irrigation season and 44,430 acre-feet during the balance of the year.

The thirty-seventh annual international survey of snow conditions in the St. Mary River drainage basin was conducted on April 30 and May 1, 1958. The survey provided advance information on the probable run-off during the irrigation season. The tabulated results of the forecasts and measured discharge at three locations are shown below.

Location	Period of Correlation	Forecast of 1958 Run-off		Measured Run-off	
		Acre-feet	% of Average	Acre-feet	% of Average
Swiftcurrent Creek at Many Glacier	1923-57	72,000 (May to July)	105	65,740 (May to July)	96
Natural Flow Swiftcurrent Creek at Sherburne	1922-57	120,000 (May to Sept.)	105	109,960 (May to Sept.)	96
Natural Flow St.Mary River at International Boundary	1922-57	533,000 (May to Sept.)	106	474,281 (May to Sept.)	94

Milk River

The estimated natural flow of Milk River at its eastern crossing of the international boundary, during the period March 1 to October 31, 1958 was 113,000 acre-feet or 97 percent of 116,000 acre-feet, the estimated average of the previous 46 years of record.

Eastern Tributaries of Milk River

The total quantity of water delivered to the United States by the eastern tributaries of Milk River during the period, March 1 to October 31, 1958 was 129,900 acre-feet or 88 percent of 147,000 acre-feet, the average of the previous 31 years. The quantities delivered to the United States by the various tributaries are listed in Table 8.

During the season a total of 33,641 acre-feet was diverted from the eastern tributaries in Canada to irrigation canals or storage. These diversions are listed in Table 6. The consumptive use was less than the total diversions shown because of return flow from irrigation projects. Measured diversions in Montana amounted to 13,530 acre-feet. These are listed in Table 7.

The sixth annual snow survey in the basins of the eastern tributaries of Milk River was conducted by the Water Resources Branch, Canada

on February 28 and March 1, 1958. The correlation of snow survey data and subsequent run-off will be attempted after several more years record have been obtained. For comparison purposes the average snow cover and the average water content for the history of the survey are listed below:

Year	Average Snow Cover	Average Water Content
1953	10.3 inches	2.1 inches
1954	4.4 "	1.2 "
1955	10.4 "	2.8 "
1956	13.0 "	3.4 "
1957	7.7 "	2.1 "
1958	7.9 "	1.2 "

Division of Water

St. Mary River

The division of the waters of the St. Mary River was carried out in accordance with the Order of the International Joint Commission dated October 4, 1921, which stipulates:

"(a) During the irrigation season, when the natural flow of the St. Mary River at the point where it crosses the international boundary is six hundred and sixty-six (666) cubic feet per second or less, Canada shall be entitled to three-fourths and the United States to one-fourth of such flow.

(b) During the irrigation season, when the natural flow of the St. Mary River at the point where it crosses the international boundary is more than six hundred and sixty-six (666) cubic feet per second, Canada shall be entitled to a prior appropriation of five hundred (500) cubic feet per second and the excess over six hundred and sixty-six (666) cubic feet per second shall be divided equally between the two countries."

The daily natural flow of the St. Mary River was determined in the following manner:

(1) Daily records were obtained at the following gauging and climatologic stations:

1. Lake Sherburne (formerly called Sherburne Lake Reservoir), Daily Storage or Release.

2. United States St. Mary Canal at St. Mary Crossing near Babb (United States Diversion from St. Mary River Basin).

3. St. Mary River at International Boundary (Quantity delivered to Canada).

4. Evaporation and Precipitation station near Babb, Montana.

(2a) When water was being stored in Lake Sherburne, the natural flow of the St. Mary River at the international boundary was considered to be the sum of the quantities measured at gauging stations 1, 2 and 3 above. This sum is the total of the United States storage and diversion and the quantity delivered to Canada.

(2b) When water was being released from Lake Sherburne, the natural flow of the St. Mary River at the international boundary was computed by adding the quantities measured at gauging stations 2 and 3 above, and subtracting the quantity measured at station 1; that is, the natural flow was considered to be the sum of the quantity diverted in the United States St. Mary Canal and that delivered to Canada reduced by the quantity released from Lake Sherburne.

(3) In order to synchronize Lake Sherburne operations with flow quantities at the international boundary, a two-day time lag was applied to data from station 1.

(4) The natural flow of the St. Mary River having been determined, the division of its waters was carried out in accordance with the above Order.

(5) Computed evaporation losses from Lake Sherburne were treated as storage by the United States.

During the irrigation season, April 1 to October 31, field engineers of both countries made frequent computations of the daily natural flow of the river and each country's share thereof, in order that any appropriation by the United States in excess of their share could be adjusted by a subsequent delivery to Canada of an equivalent amount at the earliest opportunity.

Regular interim reports on the progress of the division of the natural flow at the international boundary were made to interested agencies throughout the irrigation season.

During the non-irrigation season, November 1, 1957, to March 31, 1958, no interim reports were made as the only United States use during this period was storage in Lake Sherburne where the contributing drainage area is about 14 percent of the total area of the St. Mary River drainage basin in the United States.

Storage in Lake Sherburne was 9,950 acre-feet on October 31, 1957, and had increased to 23,690 by March 31, 1958, and to 62,640 acre-feet by June 19, 1958. Thereafter, water was released at varying rates of flow until the storage was reduced to 2,700 acre-feet by September 19, 1958. On October 31, 1958, the storage had been increased to 16,600 acre-feet.

The United States St. Mary Canal was operated between April 24 and September 25 and water was delivered to the North Branch of the Milk River from April 25 to September 25.

Seepage from the canal between the point of diversion and the crossing of the St. Mary River is assumed to return to the river and eventually become available to Canada. The discharge of 172,580 acre-feet which passed the gauging station on the United States St. Mary Canal at St. Mary Crossing between April 24 and September 25 was considered to be the quantity diverted from the St. Mary River by the United States. A total of

167,280 acre-feet was delivered to the North Branch of Milk River at Hudson Bay Divide during the season, from where it was conveyed to irrigation projects in Montana via the Milk River.

Canada diverted 334,443 acre-feet of water from the St. Mary River Reservoir in 1958 as measured at the Canadian St. Mary Canal and Magrath Irrigation District Canal gauging stations near Spring Coulee.

Milk River

No division of the flow of Milk River at Eastern Crossing was made in 1958. Except for a few small unmeasured diversions above the eastern crossing of the international boundary, the entire natural flow of the Milk River at that point was delivered to the United States.

Eastern Tributaries of Milk River

Minor Diversions

There are a number of small diversions from the eastern tributaries of Milk River in Saskatchewan for which only estimates of the quantities diverted are available. These estimates were provided by the Water Rights Division of the Province of Saskatchewan and are based on reports from the individual irrigators. It is considered that the quantities diverted do not justify the expense of gauging these small diversions. These estimates, being incomplete and of doubtful value, are not used in the Frenchman River and Battle Creek division computations in Tables 4 and 5, except as an adjustment to the totals for the season. The estimated quantities reported to date for 1958 are, however, shown in Table 6 and also detailed in the appendix to this report.

Battle Creek

The computed natural flow of Battle Creek at the international boundary for the period March 1 to October 31, 1958, was 27,795 acre-feet,

of which each country was entitled to fifty percent. The details of this division are shown in Table 4 of this report. Canada used 7,498 acre-feet, including an estimated 1,479 acre-feet in minor diversions as detailed in the appendix, and delivered 20,297 acre-feet to the United States.

Frenchman River

The computed natural flow of the Frenchman River at the international boundary for the period March 1 to October 31, 1958, was 64,105 acre-feet, of which each country was entitled to fifty percent. The details of this division are shown in Table 5 of this report. Canada used 11,992 acre-feet, including an estimated 1,979 acre-feet in minor diversions as detailed in the appendix, and delivered 52,114 acre-feet to the United States.

Lodge Creek

Canada diverted or stored a total of 4,939 acre-feet in the Lodge Creek basin during the period March 1 to October 31, 1958, and delivered 34,120 acre-feet to the United States. The Canadian use mentioned above includes 2,180 acre-feet diverted into the Spangler ditch near Govenlock, 3,208 acre-feet stored in Middle Creek Reservoir and an additional 205 acre-feet in minor diversions as detailed in the appendix.

Description of Tables

The eight tables accompanying this report show the total water available in the St. Mary and Milk River basins, the manner in which it was divided and the use made by each country of its share during the irrigation season.

Table 1 deals with the natural flow of the St. Mary River at the international boundary and its division. It comprises seven pages, one for each month of the irrigation season. The table shows the computed daily natural flow and each country's share thereof. It also shows the

recorded flow at international boundary and the quantity diverted by the United States.

Table 2 is a summary of the mean monthly natural flow of the St. Mary River at International Boundary.

Table 3, Page 1, (upper table), shows the monthly discharge of the St. Mary River at the International Boundary, the contributions by Lee and Rolph Creeks in Canada and the total available to Canada at the St. Mary Reservoir near Spring Coulee.

Table 3, Page 1, (lower table), shows the monthly disposition made by Canada of its share of the natural flow of the St. Mary River at the international boundary.

Table 3, page 2, (upper table), is a summary by months of the disposition of the United States share of the natural flow of the St. Mary River at the international boundary. It shows the quantities stored in or released from Lake Sherburne, the quantity diverted to the United States St. Mary Canal for delivery to the Milk River basin and the unused portion of the United States share. The table also shows, by months, the measured discharge of the Milk River at Eastern Crossing. This discharge is the sum of the natural flow of the Milk River above its eastern crossing of the international boundary and the water diverted from the St. Mary River basin in the United States. Thus it represents the total quantity available to the United States from the two basins during the irrigation season of 1958.

Table 3, Page 2, (lower table), shows the measured diversions, in acre-feet, from the Milk River to several canals in the United States. These records as well as the data for Fresno and Nelson Reservoirs were furnished by the Milk River Project of the United States Bureau of Reclamation.

Table 4 is a compilation, in ten-day periods, of the natural flow of the Battle Creek at the international boundary. This table consists of

three pages. Page 1 shows the Canadian diversion to Cypress Lake; Page 2 shows the Canadian diversion to irrigated lands; Page 3 shows the total quantity used by Canada, the natural flow of Battle Creek at the international boundary, the quantity delivered, the United States share and the excess quantity delivered to the United States.

Table 5 is a compilation, in ten-day periods, of the natural flow of the Frenchman River at the international boundary. This table consists of four pages. Page 1 shows the Canadian storage in the main stem reservoirs; Page 2 shows the Canadian diversions; Page 3 shows the summary of storage and diversion and Page 4 shows the net Canadian diversion and storage, the natural flow of the Frenchman River at international boundary, the United States share thereof and the quantity delivered to the United States.

Table 6 summarizes the available information on the diversions from the Eastern Tributaries of Milk River in Canada in 1958.

Table 7 shows the available information on quantities diverted from the Eastern Tributaries of Milk River in the United States in 1958.

Table 8 shows the measured monthly run-off, in acre-feet, of the Eastern Tributaries of Milk River at the international boundary for the period March 1 to October 31, 1958.

Following the tables is a list of the gauging stations operated jointly by Canada and the United States in the St. Mary and Milk River drainage basins in 1958 and a list of other gauging stations in these basins operated independently by either the United States or Canada. A map showing the location of all these stations is included in this report.

Appendix

An appendix, submitted with this report, under separate cover, contains the result of discharge measurements, summary of monthly discharge and the daily gauge height and discharge data for 51 gauging stations operated during 1958 in the St. Mary and Milk River drainage basins. Details of the Canadian minor diversions, as grouped in Table 6 of the report, are included.

NATURAL FLOW OF ST. MARY RIVER AT INTERNATIONAL BOUNDARY AND ITS DIVISION BETWEEN CANADA AND UNITED STATES (C.F.S. ft. per sec.) Table 1.

1958 Day APRIL	Computed Nat. Flow St. Mary River at Int. Bdry.	Canada's share of St. Mary River Nat. Flow	Recorded Flow of St. Mary River nr. Int.Bdry.	Canada rec'd more (+) or less (-) than share +	-	U.S. share of St. Mary River.	Storage Factors Lake Sherburne (2-day lag applied) Stored	Rlsd.	Diverted by U.S. St. Mary Canal	Net Used by United States	U.S. used more (+) or less (-) than share. +	-
1	241	181	202	21		60	39		0	39		21
2	256	192	206	14		64	50		0	50		14
3	248	186	198	12		62	50		0	50		12
4	264	198	214	16		66	50		0	50		16
5	246	184	202	18		62	44		0	44		18
6	252	189	202	13		63	50		0	50		13
7	269	202	214	12		67	55		0	55		12
8	378	284	306	22		94	72		0	72		22
9	383	287	322	35		96	61		0	61		35
10	345	259	290	31		86	55		0	55		31
11	362	272	295	23		90	67		0	67		23
12	386	290	310	20		96	76		0	76		20
13	381	286	305	19		95	76		0	76		19
14	401	301	295		6	100	106		0	106	6	
15	376	282	275		7	94	101		0	101	7	
16	381	286	270		16	95	111		0	111	16	
17	427	320	275		45	107	152		0	152	45	
18	484	363	295		68	121	189		0	189	68	
19	479	359	295		64	120	184		0	184	64	
20	561	421	310		111	140	251		0	251	111	
21	494	370	327		43	124	167		0	167	43	
22	566	424	354		70	142	212		0	212	70	
23	522	392	360		32	130	162		0	162	32	
24	548	411	338		73	137	156		54	210	73	
25	485	364	300		64	121	40		145	185	64	
26	444	333	344	11		111		54	154	100		11
27	439	329	366	37		110		93	166	73		37
28	447	335	349	14		112		104	202	98		14
29	487	365	280		85	122		103	310	207	85	
30	465	349	316		33	116		169	318	149	33	
31												
Total Sec.-ft.	12,017	9,014	8,615	(318)	(717) 399	3,003	2,576	523	1,349	3,402	(717) 399	(318)
Mean	401	300	287		13.3	100	85.9	17.4	45.0	113	13.3	
Ac.-ft.	23,835	17,879	17,088		791	5,956	5,109	1,037	2,676	6,748	791	

NATURAL FLOW OF ST. MARY RIVER AT INTERNATIONAL BOUNDARY AND ITS DIVISION BETWEEN CANADA AND UNITED STATES (C.F.S. ft. per sec.) Table 1.

1958 Day MAY	Computed Nat. Flow St. Mary River at Int. Bdry.	Canada's share of St. Mary River Nat. Flow	Recorded Flow of St. Mary River nr. Int.Bdry.	Canada rec'd more (+) or less (-) than share +	-	U.S. share of St. Mary River.	Storage Factors Lake Sherburne (2-day lag applied) Stored	Rlsd.	Diverted by U.S. St. Mary Canal	Net Used by United States	U.S. used more (+) or less (-) than share. +	-
1	459	344	354	10		115		218	323	105		10
2	475	356	384	28		119		245	336	91		28
3	518	388	366		22	130		255	407	152	22	
4	639	479	434		45	160		209	414	205	45	
5	818	576	514		62	242		125	429	304	62	
6	1,002	668	602		66	334		91	491	400	66	
7	1,246	790	802	12		456		77	521	444		12
8	1,433	883	1,010	127		550		139	562	423		127
9	1,781	1,057	1,280	223		724		96	597	501		223
10	2,222	1,278	1,560	282		944	39		623	662		282
11	2,778	1,556	1,840	284		1,222	303		635	938		284
12	3,552	1,943	2,250	307		1,609	650		652	1,302		307
13	3,838	2,086	2,520	434		1,752	670		648	1,318		434
14	3,823	2,078	2,460	382		1,745	718		645	1,363		382
15	3,485	1,909	2,250	341		1,576	590		645	1,235		341
16	3,180	1,757	2,110	353		1,423	422		648	1,070		353
17	3,238	1,786	2,060	274		1,452	530		648	1,178		274
18	3,219	1,776	1,980	204		1,443	594		645	1,239		204
19	3,344	1,839	1,900	61		1,505	799		645	1,444		61
20	3,338	1,836	1,890	54		1,502	803		645	1,448		54
21	3,275	1,804	1,920	116		1,471	710		645	1,355		116
22	3,489	1,911	2,080	169		1,578	761		648	1,409		169
23	3,765	2,049	2,210	161		1,716	903		652	1,555		161
24	3,869	2,101	2,290	189		1,768	924		655	1,579		189
25	3,938	2,136	2,320	184		1,802	960		658	1,618		184
26	3,901	2,117	2,320	203		1,784	923		658	1,581		203
27	3,928	2,131	2,330	199		1,797	940		658	1,598		199
28	3,879	2,106	2,300	194		1,773	921		658	1,579		194
29	3,776	2,055	2,270	215		1,721	854		652	1,506		215
30	3,654	1,994	2,210	216		1,660	792		652	1,444		216
31	3,509	1,921	2,080	159		1,588	777		652	1,429		159
Total				(5,381)	(195)						(195)	(5,381)
Sec.-ft.	85,371	47,710	52,896	5,186		37,661	15,583	1,455	18,347	32,475		5,186
Mean	2,754	1,539	1,706	167		1,215	503	46.9	592	1,048		167
Ac.-ft.	169,331	94,631	104,918	10,286		74,700	30,908	2,886	36,391	64,413		10,286

NATURAL FLOW OF ST. MARY RIVER AT INTERNATIONAL BOUNDARY AND ITS DIVISION BETWEEN CANADA AND UNITED STATES (Sec.-ft. per day.) Table 1.

1958 Day JUNE	Computed Nat. Flow St. Mary River at Int. Bdry.	Canada's Share of St. Mary River Nat. Flow	Observed Flow of St. Mary River at Int. Bdry.	Canada used more (+) less (-) than share +	-	U.S. Share of St. Mary River	Storage Factors Lower St. Mary Lake (2-day lag applied) Stored	Rlsd.	Diverted by U.S. St. Mary Canal	Net Used by United States	U.S. used more (+) less (-) than share +	-
1	3,411	1,872	2,010	138		1,539	749		652	1,401		138
2	3,434	1,884	2,130	246		1,550	649		655	1,304		246
3	3,100	1,717	2,130	413		1,383	315		655	970		413
4	3,045	1,689	2,370	681		1,356	23		652	675		681
5	3,110	1,722	2,410	688		1,388	52		648	700		688
6	3,200	1,767	2,320	553		1,433	232		648	880		553
7	3,132	1,733	2,270	537		1,399	212		650	862		537
8	2,985	1,659	2,210	551		1,326	125		650	775		551
9	3,019	1,676	2,290	614		1,343	77		652	729		614
10	3,704	2,019	3,010	991		1,685	39		655	694		991
11	3,995	2,164	3,010	846		1,831	333		652	985		846
12	4,173	2,253	3,160	907		1,920	363		650	1,013		907
13	3,507	1,920	2,950	1,030		1,587		85	642	557		1,030
14	2,987	1,660	2,550	890		1,327		201	638	437		890
15	2,755	1,544	2,240	696		1,211		120	635	515		696
16	2,584	1,459	1,940	481		1,125	16		628	644		481
17	2,331	1,332	1,660	328		999	43		628	671		328
18	2,483	1,408	1,550	142		1,075	303		630	933		142
19	2,768	1,551	1,790	239		1,217	336		642	978		239
20	3,046	1,690	2,220	530		1,356	203		623	826		530
21	3,025	1,679	2,240	561		1,346	167		618	785		561
22	2,398	1,366	2,050	684		1,032		268	616	348		684
23	2,300	1,317	1,830	513		983		146	616	470		513
24	2,193	1,263	1,650	387		930		73	616	543		387
25	2,115	1,224	1,490	266		891	2		623	625		266
26	2,058	1,196	1,390	194		862	35		633	668		194
27	2,037	1,185	1,370	185		852	29		638	667		185
28	2,181	1,257	1,550	293		924		14	645	631		293
29	2,247	1,290	1,460	170		957	147		640	787		170
30	2,086	1,210	1,340	130		876	108		638	746		130
31												
Total Sec.-ft.	85,409	47,706	62,590	14,884		37,703	4,558	907	19,168	22,819		14,884
Mean	2,847	1,590	2,086	496		1,257	152	30.2	639	761		496
Ac.-ft.	169,406	94,623	124,145	29,522		74,783	9,041	1,799	38,019	45,261		29,522

NATURAL FLOW OF ST. MARY RIVER AT INTERNATIONAL BOUNDARY AND ITS DIVISION BETWEEN CANADA AND UNITED STATES (C. ft. per sec.) Table 1.

1958 Day JULY	Computed Nat. Flow St. Mary River at Int. Bdry.	Canada's share of St. Mary River Nat. Flow	Recorded Flow of St. Mary River nr. Int. Bdry.	Canada rec'd more (+) or less (-) than share +	-	U.S. share of St. Mary River.	Storage Factors Lake Sherburne (2-day lag applied) Stored	Rlsd.	Diverted by U.S. St. Mary Canal	Net Used by United States	U.S. used more (+) or less (-) than share. +	-
1	1,905	1,119	1,230	111		786	40		635	675		111
2	1,751	1,042	1,140	98		709		19	630	611		98
3	1,574	954	1,030	76		620		82	626	544		76
4	1,494	914	924	10		580		51	621	570		10
5	1,429	881	830		51	548		15	614	599	51	
6	1,407	870	782		88	537	16		609	625	88	
7	1,362	848	735		113	514	21		606	627	113	
8	1,417	875	735		140	542	68		614	682	140	
9	1,406	870	718		152	536	46		642	688	152	
10	1,449	891	735		156	558	69		645	714	156	
11	1,521	927	764		163	594	109		648	757	163	
12	1,337	835	773		62	502		88	652	564	62	
13	1,203	768	782	14		435		234	655	421		14
14	1,243	788	802	14		455		214	655	441		14
15	1,166	750	792	42		416		281	655	374		42
16	1,142	738	735		3	404		245	652	407	3	
17	1,060	697	701	4		363		291	650	359		4
18	987	660	676	16		327		337	648	311		16
19	955	644	650	6		311		343	648	305		6
20	944	639	642	3		305		343	645	302		3
21	941	637	642	5		304		346	645	299		5
22	935	634	618		16	301		325	642	317	16	
23	942	638	642	4		304		345	645	300		4
24	918	626	650	24		292		377	645	268		24
25	930	632	626		6	298		341	645	304	6	
26	916	625	642	17		291		371	645	274		17
27	835	584	634	50		251		444	645	201		50
28	854	594	626	32		260		414	642	228		32
29	786	560	618	58		226		474	642	168		58
30	922	628	735	107		294		461	648	187		107
31	917	625	676	51		292		404	645	241		51
Total Sec.-ft.	36,648	23,493	23,285	(742)	(950) 208	13,155	369	6,845	19,839	13,363	(950) 208	(742)
Mean	1,182	758	751		6.71	424	11.9	221	640	431	6.71	
Ac.-ft.	72,690	46,598	46,185		413	26,093	732	13,577	39,350	26,505	413	

NATURAL FLOW OF ST. MARY RIVER AT INTERNATIONAL BOUNDARY AND ITS DIVISION BETWEEN CANADA AND UNITED STATES (Cu. ft. per sec.) Table 1.

1958 Day AUGUST	Computed Nat. Flow St. Mary River at Int. Bdry.	Canada's share of St. Mary River Nat. Flow	Recorded Flow of St. Mary River nr. Int. Bdry.	Canada rec'd more (+) or less (-) than share +	-	U.S. share of St. Mary River.	Storage Factors Lake Sherburne (2-day lag applied) Stored	Rlsd.	Diverted by U.S. St. Mary Canal	Net Used by United States	U.S. used more (+) or less (-) than share +	-
1	828	581	626	45		247		440	642	202		45
2	817	575	602	27		242		425	640	215		27
3	785	559	602	43		226		457	640	183		43
4	774	554	570	16		220		436	640	204		16
5	651	488	538	50		163		527	640	113		50
6	646	484	514	30		162		503	635	132		30
7	645	484	490	6		161		478	633	155		6
8	620	465	476	11		155		489	633	144		11
9	564	423	462	39		141		528	630	102		39
10	602	452	448		4	150		474	628	154	4	
11	538	404	441	37		134		531	628	97		37
12	564	423	434	11		141		498	628	130		11
13	588	441	434		7	147		474	628	154	7	
14	535	401	420	19		134		513	628	115		19
15	507	380	420	40		127		539	626	87		40
16	551	413	408		5	138		480	623	143	5	
17	512	384	390	6		128		499	621	122		6
18	483	362	378	16		121		516	621	105		16
19	497	373	372		1	124		493	618	125	1	
20	472	354	378	24		118		524	618	94		24
21	488	366	354		12	122		482	616	134	12	
22	508	381	354		27	127		462	616	154	27	
23	461	346	338		8	115		493	616	123	8	
24	507	380	322		58	127		429	614	185	58	
25	475	356	316		40	119		455	614	159	40	
26	446	334	310		24	112		478	614	136	24	
27	430	322	310		12	108		494	614	120	12	
28	437	328	332	4		109		513	618	105		4
29	402	302	327	25		100		543	618	75		25
30	460	345	332		13	115		490	618	128	13	
31	444	333	310		23	111		482	616	134	23	
Total Sec.-ft.	17,237	12,793	13,008	(449) 215	(234)	4,444		15,145	19,374	4,229	(234)	(449) 215
Mean	556	413	420	6.94		143		489	625	136		6.94
Ac.-ft.	34,189	25,375	25,801	426		8,815		30,040	38,428	8,388		426

NATURAL FLOW OF ST. MARY RIVER AT INTERNATIONAL BOUNDARY AND ITS DIVISION BETWEEN CANADA AND UNITED STATES (Cu. ft. per sec.) Table 1.

1958 Day SEPTEMBER	Computed Nat. Flow St. Mary River at Int. Bdry.	Canada's share of St. Mary River Nat. Flow	Recorded Flow of St. Mary River nr. Int. Bdry.	Canada rec'd more (+) or less (-) than share +	-	U.S. share of St. Mary River.	Storage Factors Lake Sherburne (2-day lag applied) Stored	Rlsd.	Diverted by U.S. St. Mary Canal	Net Used by United States	U.S. used more (+) or less (-) than share. +	-
1	417	313	300		13	104		501	618	117	13	
2	391	293	275		18	98		495	611	116	18	
3	345	259	260	1		86		526	611	85		1
4	370	278	246		32	92		485	609	124	32	
5	382	286	228		58	96		450	604	154	58	
6	327	245	214		31	82		486	599	113	31	
7	328	246	198		48	82		464	594	130	48	
8	309	232	178		54	77		454	585	131	54	
9	312	234	194		40	78		453	571	118	40	
10	343	257	214		43	86		438	567	129	43	
11	261	196	242	46		65		532	551	19		46
12	306	230	270	40		76		491	527	36		40
13	356	267	327	60		89		450	479	29		60
14	330	248	344	96		82		454	440	- 14		96
15	278	208	372	164		70		456	362	- 94		164
16	309	232	408	176		77		359	260	- 99		176
17	391	293	414	121		98		233	210	- 23		121
18	533	400	506	106		133		77	104	27		106
19	557	418	578	160		139		34	13	- 21		160
20	532	399	530	131		133		4	6	2		131
21	662	496	506	10		166	151		5	156		10
22	755	544	483		61	211	269		3	272	61	
23	805	569	490		79	236	314		1	315	79	
24	897	615	506		109	282	391		0	391	109	
25	913	623	490		133	290	423		0	423	133	
26	813	573	469		104	240	344		0	344	104	
27	519	389	448	59		130	71		0	71		59
28	599	449	434		15	150	165		0	165	15	
29	555	416	420	4		139	135		0	135		4
30	557	418	414		4	139	143		0	143	4	
31												
Total Sec.-ft.	14,452	10,626	10,958	(1,174) 332	(842)	3,826	2,406	7,842	8,930	3,494	(842)	(1,174) 332
Mean	482	354	365	11.1		128	80.2	261	298	116		11.1
Ac.-ft.	28,665	21,076	21,735	659		7,589	4,772	15,554	17,712	6,930		659

NATURAL FLOW OF ST. MARY RIVER AT INTERNATIONAL BOUNDARY AND ITS DIVISION BETWEEN CANADA AND UNITED STATES (Cu. ft. per sec.) Table 1.

1958 Day OCTOBER	Computed Nat. Flow St. Mary River at Int. Bdry.	Canada's share of St. Mary River Nat. Flow	Recorded Flow of St. Mary River nr. Int. Bdry.	Canada rec'd more (+) or less (-) than share +	-	U.S. share of St. Mary River.	Storage Factors Lake Sherburne (2-day lag applied) Stored	Rlsd.	Diverted by U.S. St. Mary Canal	Net Used by United States	U.S. used more (+) or less (-) than share. +	-
1	580	435	414		21	145	166		0	166	21	
2	627	470	414		56	157	213		0	213	56	
3	556	417	414		3	139	142		0	142	3	
4	544	408	396		12	136	148		0	148	12	
5	468	351	384	33		117	84		0	84		33
6	529	397	372		25	132	157		0	157	25	
7	465	349	372	23		116	93		0	93		23
8	521	391	378		13	130	143		0	143	13	
9	513	385	378		7	128	135		0	135	7	
10	490	368	378	10		122	112		0	112		10
11	494	370	366		4	124	128		0	128	4	
12	485	364	360		4	121	125		0	125	4	
13	523	392	360		32	131	163		0	163	32	
14	504	378	360		18	126	144		0	144	18	
15	482	362	360		2	120	122		0	122	2	
16	607	455	372		83	152	235		0	235	83	
17	460	345	378	33		115	82		0	82		33
18	496	372	396	24		124	100		0	100		24
19	563	422	408		14	141	155		0	155	14	
20	587	440	414		26	147	173		0	173	26	
21	630	472	427		45	158	203		0	203	45	
22	650	488	427		61	162	223		0	223	61	
23	605	454	420		34	151	185		0	185	34	
24	615	461	414		47	154	201		0	201	47	
25	548	411	402		9	137	146		0	146	9	
26	533	400	396		4	133	137		0	137	4	
27	521	391	384		7	130	137		0	137	7	
28	486	364	372	8		122	114		0	114		8
29	437	328	354	26		109	83		0	83		26
30	441	331	344	13		110	97		0	97		13
31	440	330	338	8		110	102		0	102		8
Total Sec.-ft.	16,400	12,301	11,952	(178)	(527) 349	4,099	4,448		0	4,448	(527) 349	(178)
Mean	529	397	386		11.3	132	143		0	143	11.3	
Ac.-ft.	32,529	24,399	23,706		692	8,130	8,822		0	8,822	692	

Historical Summary
of
Natural Flow of St. Mary River at International Boundary

TABLE 2

Year	Mean Monthly Discharge In Second-feet During Irrigation Season April - October							Run-off in Acre-feet		
	April	May	June	July	August	September	October	Non Irrigation Season Nov.-Mar.	Irrigation Season Apr.-Oct.	For Year Nov.-Oct.
1901-02	-	-	-	-	-	616 d	477 d	-	66,111 z	66,111 z
1902-03	568	1724	5200	2924	1484	1109	917	57,965	837,816	895,781
1903-04	724	2823	2936	1903	931	420	421	96,361	555,162	651,523
1904-05	304	1215	2461	1242	547	371	772	39,126	461,855	500,983
1905-06	481	1504	2285	1826	946	628	756	51,592	511,307	562,899
1906-07	489	1931	4259	3117	1935	1214	632	124,082	785,988	910,070
1907-08	844	2483	7500	2968	854	462	481	62,436	910,631	973,067
1908-09	350	1404	5162	3000	1460	640	450	65,276	785,464	850,740
1909-10	1188	2315	2240	1175	580	553	1036	87,729	551,042	638,771
1910-11	520	2035	3470	1679	1053	1350	621	97,349	650,860	748,209
1911-12	542	2831	2347	1562	882	529	423	59,092	505,795	564,887
1912-13	749	1913	4519	2824	1162	574	448	69,604	688,735	758,339
1913-14	637	2236	2298	1430	719	559	641	58,564	530,307	588,871
1914-15	575	1847	2251	1722	969	842	739	83,970	530,287	614,257
1915-16	664	1707	4634	3463	1228	947	391	109,773	789,058	898,831
1916-17	453	2215	4104	3437	759	479	378	58,828	654,520	713,348
1917-18	661	1875	3093	1185	763	487	394	91,256	511,779	603,035
1918-19	340	1678	2116	919	478	336	189	49,684	386,479	436,163
1919-20	429	1720	3100	2355	800	572	557	61,025	579,977	641,002
1920-21	646	2664	3713	1909	755	416	499	72,117	636,167	708,284
1921-22	282	2293	3835	1579	642	420	301	64,657	565,880	630,537
1922-23	422	2986	3359	1726	788	482	560	47,191	583,224	630,415
1923-24	393	2088	3152	1534	728	397	302	51,406	520,145	571,551
1924-25	1272	3461	3512	1893	807	542	406	78,819	720,710	799,329
1925-26	670	1264	1978	818	405	751	1141	49,198	371,837	421,035
1926-27	600	2695	5434	2812	1274	1509	1143	74,838	935,423	1,010,261
1927-28	546	3645	2940	2594	921	513	863	112,116	734,376	846,492
1928-29	314	1337	2558	1472	493	291	288	66,040	427,377	493,417
1929-30	1477	2425	2489	1264	511	370	314	52,374	535,575	587,949
1930-31	224	1957	1838	796	592	464	291	38,856	373,888	412,744
1931-32	567	2497	2896	1409	595	307	240	83,750	515,819	599,569
1932-33	416	1764	4339	2163	766	492	685	67,488	643,242	710,730
1933-34	1734	3441	2929	1155	540	323	269	168,272	629,044	797,316
1934-35	392	1841	2716	1516	630	387	235	136,576	467,568	604,144
1935-36	617	2417	2153	823	420	252	162	30,004	414,845	444,849
1936-37	267	1797	3752	1409	475	298	285	34,013	500,701	534,714
1937-38	696	2611	3323	1622	510	360	322	65,262	571,983	637,245
1938-39	640	2271	1721	1069	459	292	188	59,359	402,996	462,355
1939-40	381	1860	1802	737	382	427	415	37,815	364,056	401,871
1940-41	364	1333	1429	879	359	520	635	32,842	334,846	367,688
1941-42	676	1890	2773	1824	754	526	397	94,304	535,668	629,972
1942-43	1240	1996	3722	2691	810	376	328	63,366	675,767	739,133
1943-44	197	1273	1634	809	536	424	374	36,343	318,121	354,464
1944-45	153	2000	3382	1455	457	486	421	46,471	505,676	552,147
1945-46	658	2361	2731	1500	571	495	521	76,816	535,571	612,387
1946-47	913	2729	2585	1634	657	526	1250	86,866	624,962	711,828
1947-48	621	2963	5486	1576	758	329	266	71,379	725,024	796,403
1948-49	526	2337	2272	991	471	532	404	35,419	456,637	492,056
1949-50	462	1969	4537	3159	1100	492	929	96,111	766,778	862,889
1950-51	819	3366	3431	3230	1128	1209	1390	141,366	885,233	1,026,599
1951-52	969	2408	2204	1433	839	409	264	82,832	517,093	599,925
1952-53	635	2716	5534	2519	887	438	283	62,545	786,960	849,505
1953-54	435	3237	3637	3184	1100	771	736	62,618	795,874	858,492
1954-55	267	1491	3755	2248	799	363	810	79,260	589,738	668,998
1955-56	525	2793	3631	2027	828	441	513	89,020	652,395	741,415
1956-57	275	3569	2947	1077	478	303	332	59,363	545,264	604,627
1957-58	401	2754	2847	1182	556	482	529	58,512	530,645	589,157
Average	593	2228	3252	1791	767	545	527	71,234	587,933	659,167

This table contains revisions to formerly reported data.

Natural flow records computed on basis of Lake Sherburne storage and release records as published in the original reports to the International Joint Commission.

d - 1902 data not used.
z - Partial record not included in average.

DIVISION OF FLOW OF ST. MARY RIVER
1958

Water Available to Canada at Spring Coulee
(Acre-feet)

Month	St. Mary River Int. Boundary	Rolph Creek Kimball	Lee Creek Cardston	Total Available at Spring Coulee
April	17,088	3,770	6,650	27,508
May	104,918	600	9,680	115,198
June	124,145	597	13,310	138,052
July	46,185	631	5,840	52,656
August	25,801	664	1,680	28,145
September	21,735	293	849	22,877
October	23,706	107	887	24,700
Total	363,578	6,662	38,896	409,136

DISPOSITION OF CANADIAN SHARE

Water Used in St. Mary and Milk Rivers Development
(Acre-feet)

Month	Canada's Share Natural Flow: Int. Boundary	Canadian St. Mary Canal: Spring Coulee	Magrath I.D. Canal: Spring Coulee	Total Diverted to S.M.R.D.	Available Storage from Canada's Share
April	17,879	7	0	7	17,872
May	94,631	20,710	366	21,076	73,555
June	94,623	49,130	1,560	50,690	43,933
July	46,598	58,870	2,230	61,100	- 14,502
August	25,375	62,860	2,620	65,480	- 40,105
September	21,076	95,740	2,090	97,830	- 76,754
October	24,399	36,030	2,230	38,260	- 13,861
Total	324,581	323,347	11,096	334,443	- 9,862

Storage in St. Mary Reservoir March 31, Elev. 3601.70 = 188,500 acre-feet
October 31, Elev. 3593.86 = 149,500 acre-feet

DIVISION OF FLOWS OF ST. MARY AND MILK RIVERS
1958

Water Available to the United States in Milk River at Eastern Crossing including Diversion from St. Mary River
(Acre-feet)

Month	St. Mary River Basin						Milk River Basin
	United States Share Nat. Flow	Lake Sherburne Stored	Lake Sherburne Rlsd.	Total Available for Diversion	Diverted to Milk River Basin	Unused	Measured Flow at Eastern Crossing*
April	5,956	5,109	1,037	1,884	2,676	- 792	67,580
May	74,700	30,908	2,886	46,678	36,391	10,287	39,900
June	74,783	9,041	1,799	67,541	38,019	29,522	47,820
July	26,093	732	13,577	38,938	39,350	- 412	42,130
Aug.	8,815	0	30,040	38,855	38,428	427	37,090
Sept.	7,589	4,772	15,554	18,371	17,712	659	24,540
Oct.	8,130	8,822	0	- 692	0	- 692	3,620
Total	206,066	59,384	64,893	211,575	172,576	38,999	262,680

* Represents natural flow of Milk River and diversion from St. Mary River Basin.
Lake Sherburne quantities are corrected for evaporation.

Storage in Lake Sherburne on March 31 = 23,690 acre-feet
October 31 = 16,600 acre-feet
Storage in Fresno Reservoir on March 31 = 63,550 acre-feet
October 31 = 27,630 acre-feet

MAJOR DIVERSIONS FROM MILK RIVER IN THE UNITED STATES
1958

(Acre-feet)

Month	Fort Belknap Canal	Paradise Canal	Harlem Canal	Harlem No. 2	Agency Canal	Dodson North	Dodson South	Vandalia Canal	Total
April	2,380	-----	238	-----	-----	1,430	14,880	952	19,880
May	18,900	7,190	5,080	1,470	2,700	9,540	16,460	10,670	72,010
June	15,710	6,420	4,400	1,170	2,980	6,900	18,450	8,350	64,380
July	21,680	7,600	4,800	1,810	2,930	9,790	14,280	9,840	72,730
Aug.	17,900	7,270	4,200	490	3,270	7,180	12,940	8,850	62,100
Sept.	13,130	4,280	2,500	1,020	1,250	5,010	15,720	7,290	50,200
Oct.	1,600	357	278	-----	-----	307	8,230	7,510	18,282
Nov.	-----	-----	-----	-----	-----	-----	1,060	694	1,754
Total	91,300	33,117	21,496	5,960	13,130	40,157	102,020	54,156	361,336

Storage in Nelson Reservoir on March 31, 47,870 acre-feet
on October 31, 45,930 acre-feet

In addition to the above listed diversions the following quantities in acre-feet were diverted by the Wiota Pumping Plant: May 976, June 1,600, July 1,440, August 503, September 806, October 1,760; Total for season 7,085.

DETERMINATION OF NATURAL FLOW OF BATTLE CREEK AT INTERNATIONAL BOUNDARY 1958

Diversion to Cypress Lake
Quantities in Second-foot Days

Period at International Boundary	West Inflow Canal	West Inflow Canal Drain	Diversion to Cypress Lake	West Outflow Canal	Net Diversion to Cypress Lake
Feb.23 - Mar. 4	Nil	Nil	Nil	Nil	Nil
Mar. 5 - Mar.14	Nil	Nil	Nil	Nil	Nil
Mar.15 - Mar.25	Nil	Nil	Nil	Nil	Nil
Mar.26 - Apr. 4	416.0	58.0	358.0	4.0	+ 354.0
Apr. 5 - Apr.14	3,123.0	8.0	3,115.0	10.5	+ 3,104.5
Apr.15 - Apr.24	777.0	3.2	773.8	59.8	+ 714.0
Apr.25 - May 4	345.5	42.8	302.7	399.1	- 96.4
May 5 - May 14	7.3	6.9	0.4	23.9	- 23.5
May 15 - May 25	1.8	1.8	Nil	260.3	- 260.3
May 26 - June 4	0.9	0.7	0.2	718.0	- 717.8
June 5 -June 14	0.6	0.4	0.2	535.7	- 535.5
June 15-June 24	0.2	0.1	0.1	307.2	- 307.1
June 25-July 4	0.0	Nil	0.0	220.2	- 220.2
July 5-July 14	0.5	0.4	0.1	340.8	- 340.7
July 15-July 25	2.5	1.6	0.9	528.1	- 527.2
July 26-Aug. 4	2.7	1.4	1.3	551.0	- 549.7
Aug. 5 - Aug.14	0.0	0.0	Nil	512.3	- 512.3
Aug.15 - Aug.25	Nil	Nil	Nil	149.0	- 149.0
Aug.26 - Sept.4	Nil	Nil	Nil	5.3	- 5.3
Sept. 5-Sept.14	0.9	0.0	0.9	4.9	- 4.0
Sept.15-Sept.24	Nil	Nil	Nil	127.4	- 127.4
Sept.25- Oct. 4	Nil	Nil	Nil	244.4	- 244.4
Oct. 5 - Oct.14	Nil	Nil	Nil	0.4	- 0.4
Oct.15 - Oct.25	Nil	Nil	Nil	0.3	- 0.3
Oct.26 - Oct.31	Nil	Nil	Nil	0.0	0.0
Total	4,678.9	125.3	4,553.6	5,002.6	- 449.0
Acre-feet	9,280	249	9,032	9,923	- 891

DETERMINATION OF NATURAL FLOW OF BATTLE CREEK AT INTERNATIONAL BOUNDARY
1958

Diversion to Irrigated Lands
Quantities in Second-foot Days

Period at International Boundary	Stirling & Nash Ditch	McKinnon Ditch	Richard-son Ditch	Vidora Ditch	Total Diverted	Return Flow	Net Diversion to Irri-gated Land
Feb.23 - Mar. 4	Nil	Nil	Nil	Nil	Nil	Nil	Nil
Mar. 5 - Mar.14	Nil	Nil	Nil	Nil	Nil	Nil	Nil
Mar.15 - Mar.25	Nil	Nil	Nil	Nil	Nil	Nil	Nil
Mar.26 - Apr. 4	85.1	1.9	0.0	8.0	95.0	28.5	66.5
Apr. 5 - Apr.14	132.9	22.8	0.0	0.1	155.8	46.7	109.1
Apr.15 - Apr.24	130.6	13.5	0.0	5.1	149.2	44.8	104.4
Apr.25 - May 4	130.3	0.0	0.0	23.8	154.1	46.2	107.9
May 5 - May 14	94.8	0.0	0.0	4.0	98.8	29.6	69.2
May 15 - May 25	84.3	63.6	123.0	38.0	308.9	92.7	216.2
May 26 - June 4	73.7	296.7	340.5	119.7	830.6	249.2	581.4
June 5 -June 14	67.3	266.7	162.3	102.8	599.1	179.7	419.4
June 15-June 24	42.2	158.5	77.4	64.6	342.7	102.8	239.9
June 25-July 4	17.9	16.4	62.4	41.9	138.6	41.6	97.0
July 5-July 14	Nil	57.6	40.5	174.6	272.7	81.8	190.9
July 15-July 25	Nil	118.8	193.9	116.1	428.8	128.6	300.2
July 26-Aug. 4	42.2	125.5	174.2	174.3	516.2	154.9	361.3
Aug. 5 - Aug.14	48.7	129.7	185.3	120.4	484.1	145.2	338.9
Aug.15 - Aug.25	6.6	46.4	23.3	43.4	119.7	35.9	83.8
Aug.26 - Sept.4	Nil	Nil	Nil	5.5	5.5	1.6	3.9
Sept. 5-Sept.14	Nil	Nil	Nil	4.6	4.6	1.4	3.2
Sept.15-Sept.24	Nil	Nil	Nil	93.4	93.4	28.0	65.4
Sept.25- Oct. 4	3.5	2.2	0.0	162.5	168.2	50.5	117.7
Oct. 5 - Oct.14	Nil	Nil	0.0	0.0	0.0	0.0	Nil
Oct.15 - Oct.25	8.2	Nil	0.0	Nil	8.2	2.5	5.7
Oct.26 - Oct.31	2.5	Nil	0.0	Nil	2.5	0.8	1.7
Total	970.8	1,320.3	1,382.8	1,302.8	4,976.7	1,493.0	3,483.7
Acre-feet	1,926	2,619	2,743	2,584	9,871	2,961	6,910

Return flow assumed to be 30 percent of diverted quantities.

DETERMINATION OF NATURAL FLOW OF BATTLE CREEK AT INTERNATIONAL BOUNDARY 1958

Quantities in Second-foot Days

Period at International Boundary	Net Diversion to Cypress Lake	Net Diversion to Irrigated Land	Total Used by Canada	Battle Creek Flow at Int'l Boundary	Battle Creek Natural Flow	United States Share	United States Received in Excess of Share
Feb.23 - Mar. 4	Nil	Nil	Nil	72.0	72.0+	36.0	+ 36.0
Mar. 5 - Mar.14	Nil	Nil	Nil	67.0	67.0+	33.5	+ 33.5
Mar.15 - Mar.25	Nil	Nil	Nil	287.0	287.0+	143.5	+ 143.5
Mar.26 - Apr. 4	+ 354.0	66.5	+ 420.5	5,245.0	5,665.5+	2,832.8	+2,412.2
Apr. 5 - Apr.14	+ 3,104.5	109.1	+ 3,213.6	1,366.0	4,579.6+	2,289.8	- 923.8
Apr.15 - Apr.24	+ 714.0	104.4	+ 818.4	687.0	1,505.4+	752.7	- 65.7
Apr.25 - May 4	- 96.4	107.9	+ 11.5	510.1	521.6+	260.8	+ 249.3
May 5 - May 14	- 23.5	69.2	+ 45.7	265.8	311.5+	155.8	+ 110.0
May 15 - May 25	- 260.3	216.2	- 44.1	202.6	158.5+	79.2	+ 123.4
May 26 - June 4	- 717.8	581.4	- 136.4	192.6	56.2+	28.1	+ 164.5
June 5 -June 14	- 535.5	419.4	- 116.1	283.3	167.2+	83.6	+ 199.7
June 15-June 24	- 307.1	239.9	- 67.2	164.2	97.0+	48.5	+ 115.7
June 25-July 4	- 220.2	97.0	- 123.2	154.1	30.9+	15.4	+ 138.7
July 5-July 14	- 340.7	190.9	- 149.8	155.7	5.9+	3.0	+ 152.7
July 15-July 25	- 527.2	300.2	- 227.0	245.8	18.8+	9.4	+ 236.4
July 26-Aug. 4	- 549.7	361.3	- 188.4	122.0	- 66.4-	33.2	+ 155.2
Aug. 5 - Aug.14	- 512.3	338.9	- 173.4	67.1	- 106.3-	53.2	+ 120.3
Aug.15 - Aug.25	- 149.0	83.8	- 65.2	67.8	2.6+	1.3	+ 66.5
Aug.26 - Sept.4	- 5.3	3.9	- 1.4	6.6	5.2+	2.6	+ 4.0
Sept. 5-Sept.14	- 4.0	3.2	- 0.8	0.3	- 0.5-	0.2	+ 0.5
Sept.15-Sept.24	- 127.4	65.4	- 62.0	Nil	- 62.0-	31.0	+ 31.0
Sept.25- Oct. 4	- 244.4	117.7	- 126.7	Nil	- 126.7-	63.4	+ 63.4
Oct. 5 - Oct.14	- 0.4	Nil	- 0.4	6.4	6.0+	3.0	+ 3.4
Oct.15 - Oct.25	- 0.3	5.7	+ 5.4	29.9	35.3+	17.6	+ 12.3
Oct.26 - Oct.31	0.0	1.7	+ 1.7	34.9	36.6+	18.3	+ 16.6
Total	- 449.0	3,483.7	+ 3,034.7	10,233.2	13,267.9	+6,633.9	+3,599.3
Acre-feet	- 891	6,910	+ 6,019	20,297	26,316	+13,158	+7,139
Estimated acre-feet total of minor diversions detailed in appendix to this report.			1,479		1,479		
			7,498		27,795		

DETERMINATION OF NATURAL FLOW OF FRENCHMAN RIVER AT INTERNATIONAL BOUNDARY
1958

Storage in Frenchman River Main Stem Reservoirs
Quantities in Second-foot Days

Period at International Boundary	Eastend Reservoir		Val Marie West Reservoir		Val Marie Reservoir		Total Storage on Frenchman River
	Stored	Released	Stored	Released	Stored	Released	
March (col)	(9) +	(9) -	(6) +	(6) -	(3) +	(3) -	col (10)
1 - 10	Nil			4	223		+ 219
11 - 20	2			2	143		+ 143
21 - 31		2	79		177		+ 254
April							
1 - 10	211		509		381		+ 1,101
11 - 20	240		46		1,352		+ 1,638
21 - 30	351		68		603		+ 1,022
May							
1 - 10	33		102		45		+ 180
11 - 20	4		53			116	- 59
21 - 31		46		362		619	- 1,027
June							
1 - 10		290		85		436	- 811
11 - 20	61			3		619	- 561
21 - 30		122	162			239	- 199
July							
1 - 10		164	55			267	- 376
11 - 20	10			246		126	- 362
21 - 31	171			172		450	- 451
Aug.							
1 - 10		71	289			479	- 261
11 - 20		134	4			240	- 370
21 - 31	11			144		102	- 235
Sept.							
1 - 10		25	100			68	+ 7
11 - 20		18	9			100	- 109
21 - 30		17	2			12	- 27
Oct.							
1 - 10	18		19			5	+ 32
11 - 20	3		92		9		+ 104
21 - 31	22		123			11	+ 134
Total	1,137	889	1,712	1,018	2,933	3,889	- 14
Acre-feet	2,255	1,763	3,396	2,019	5,818	7,714	- 28

DETERMINATION OF NATURAL FLOW OF
FRENCHMAN RIVER AT INTERNATIONAL BOUNDARY
1958

Diversion to Irrigated Lands
Quantities in Second-foot Days

Summation of Measured & Estimated Diversions

Period at International Boundary	Eastend Canal	Val Marie West Pumping Canal	Val Marie West Gravity Canal	Val Marie Main Canal	Total Diverted to Val Marie Districts	Total Diverted to Irrigated Lands
March	Col (15)	(13)	(12)	(11)	(14)	(16)
1 - 10	Nil	Nil	Nil	Nil	Nil	Nil
11 - 20	Nil	Nil	Nil	Nil	Nil	Nil
21 - 31	Nil	Nil	Nil	Nil	Nil	Nil
April						
1 - 10	0.0	Nil	Nil	Nil	Nil	0.0
11 - 20	0.0	Nil	Nil	Nil	Nil	0.0
21 - 30	36.6	Nil	Nil	Nil	Nil	36.6
May						
1 - 10	0.0	0.5	Nil	Nil	0.5	0.5
11 - 20	0.0	58.5	Nil	363.4	421.9	421.9
21 - 31	134.7	241.6	368.9	769.0	1,379.5	1,514.2
June						
1 - 10	484.5	144.1	94.0	532.6	770.7	1,255.2
11 - 20	475.6	96.7	58.3	481.8	636.8	1,112.4
21 - 30	307.1	14.1	14.1	244.3	272.5	579.6
July						
1 - 10	290.5	45.0	4.1	227.6	276.7	567.2
11 - 20	97.5	228.5	101.0	68.9	398.4	495.9
21 - 31	138.8	175.5	51.1	456.3	682.9	821.7
Aug.						
1 - 10	363.8	102.2	78.2	548.8	729.2	1,093.0
11 - 20	272.0	31.4	156.8	377.3	565.5	837.5
21 - 31	223.0	Nil	60.0	273.4	333.4	556.4
Sept.						
1 - 10	39.3	Nil	22.7	43.2	65.9	105.2
11 - 20	0.0	Nil	2.6	0.0	2.6	2.6
21 - 30	Nil	Nil	0.0	0.0	0.0	0.0
Oct.						
1 - 10	Nil	4.9	0.0	Nil	4.9	4.9
11 - 20	Nil	Nil	Nil	Nil	Nil	Nil
21 - 31	Nil	Nil	0.2	Nil	0.2	0.2
Total	2,863.4	1,143.0	1,012.0	4,386.6	6,541.6	9,405.0
Acre-feet	5,680	2,267	2,007	8,701	12,975	18,655

DETERMINATION OF NATURAL FLOW OF FRENCHMAN RIVER AT INTERNATIONAL BOUNDARY
1958

A report from page 1

Total Canadian Storage and Diversion Quantities in Second-foot Days

A report from page 2

Period at International Boundary	Total Storage on Frenchman River	Belanger Creek Diversion to Cypress Lake	Cypress Lake East Outflow Canal	Net Belanger Creek Diversion to Cypress Lake	Cypress Lake Natural Overflow	Total Diverted to Irrigated Lands	Total Stored or Diverted by Canada
March	col (10)	(17)	(18)	(19)	(20)	(16)	(21)
1 - 10	+ 219	Nil	10.0	- 10.0	Nil	Nil	+ 209.0
11 - 20	+ 143	Nil	10.0	- 10.0	Nil	Nil	+ 133.0
21 - 31	+ 254	Nil	21.0	- 21.0	Nil	Nil	+ 233.0
April							
1 - 10	+ 1,101	162.6	75.0	+ 87.6	Nil	0.0	+ 1,188.6
11 - 20	+ 1,638	1,435.0	132.4	+ 1,302.6	Nil	0.0	+ 2,940.6
21 - 30	+ 1,022	114.6	274.4	- 159.8	Nil	36.6	+ 898.8
May							
1 - 10	+ 180	52.7	23.3	+ 29.4	Nil	0.5	+ 209.9
11 - 20	- 59	Nil	6.8	- 6.8	Nil	421.9	+ 356.1
21 - 31	- 1,027	Nil	1.8	- 1.8	Nil	1,514.2	+ 485.4
June							
1 - 10	- 811	Nil	38.3	- 38.3	Nil	1,255.2	+ 405.9
11 - 20	- 561	Nil	514.4	- 514.4	Nil	1,112.4	+ 37.0
21 - 30	- 199	Nil	71.8	- 71.8	Nil	579.6	+ 308.8
July							
1 - 10	- 376	Nil	16.2	- 16.2	Nil	567.2	+ 175.0
11 - 20	- 362	Nil	61.2	- 61.2	Nil	495.9	+ 72.7
21 - 31	- 451	Nil	471.3	- 471.3	Nil	821.7	- 100.6
Aug.							
1 - 10	- 261	Nil	800.0	- 800.0	Nil	1,093.0	+ 32.0
11 - 20	- 370	Nil	445.6	- 445.6	Nil	837.5	+ 21.9
21 - 31	- 235	Nil	282.1	- 282.1	Nil	556.4	+ 39.3
Sept.							
1 - 10	+ 7	Nil	5.9	- 5.9	Nil	105.2	+ 106.3
11 - 20	- 109	Nil	1.1	- 1.1	Nil	2.6	- 107.5
21 - 30	- 27	Nil	0.3	- 0.3	Nil	0.0	- 27.3
Oct.							
1 - 10	+ 32	Nil	1.2	- 1.2	Nil	4.9	+ 35.7
11 - 20	+ 104	Nil	6.0	- 6.0	Nil	Nil	+ 98.0
21 - 31	+ 134	Nil	16.4	- 16.4	Nil	0.2	+ 117.8
Total	- 14	1,764.9	3,286.5	- 1,521.6	Nil	9,405.0	+ 7,869.4
Acre-feet	- 28	3,501	6,519	- 3,018	Nil	18,655	+15,609

A repeat from page 3

DETERMINATION OF NATURAL FLOW OF FRENCHMAN RIVER AT INTERNATIONAL BOUNDARY
1958

Quantities in Second-foot Days

Period at International Boundary	Total Stored or Diverted by Canada	Return Flow	Net Stored or Diverted by Canada	Frenchman River at International Boundary			
				Measured Flow	Natural Flow	United States Share	Received in Excess of Share by U.S.A.
March	col (21)	(24)	(25)	(26)	(27)	28	(29)
1 - 10	+ 209.0	Nil	+ 209.0	237.0	+ 446.0	+ 223.0	+ 14.0
11 - 20	+ 133.0	Nil	+ 133.0	92.0	+ 225.0	+ 112.5	- 20.5
21 - 31	+ 233.0	Nil	+ 233.0	1,865.0	+ 2,098.0	+ 1,049.0	+ 816.0
April							
1 - 10	+ 1,188.6	0.0	+ 1,188.6	13,890.0	+15,078.6	+ 7,539.3	+6,350.7
11 - 20	+ 2,940.6	0.0	+ 2,940.6	7,104.0	+10,044.6	+ 5,022.3	+2,081.7
21 - 30	+ 898.8	11.0	+ 887.8	794.4	+ 1,682.2	+ 841.1	- 46.7
May							
1 - 10	+ 209.9	0.2	+ 209.7	508.9	+ 718.6	+ 359.3	+ 149.6
11 - 20	+ 356.1	126.6	+ 229.5	336.7	+ 566.2	+ 283.1	+ 53.6
21 - 31	+ 485.4	454.2	+ 31.2	334.0	+ 365.2	+ 182.6	+ 151.4
June							
1 - 10	+ 405.9	376.6	+ 29.3	339.7	+ 369.0	+ 184.5	+ 155.2
11 - 20	+ 37.0	333.7	- 296.7	221.0	- 75.7	- 37.8	+ 258.8
21 - 30	+ 308.8	173.9	+ 134.9	174.6	+ 309.5	+ 154.8	+ 19.8
July							
1 - 10	+ 175.0	170.2	+ 4.8	99.3	+ 104.1	+ 52.0	+ 47.3
11 - 20	+ 72.7	148.7	- 76.0	82.2	+ 6.2	+ 3.1	+ 79.1
21 - 31	- 100.6	246.5	- 347.1	46.9	- 300.2	- 150.1	+ 197.0
Aug.							
1 - 10	+ 32.0	327.9	- 295.9	51.2	- 244.7	- 122.4	+ 173.6
11 - 20	+ 21.9	251.2	- 229.3	42.0	- 187.3	- 93.6	+ 135.6
21 - 31	+ 39.3	166.9	- 127.6	9.9	- 117.7	- 58.8	+ 68.7
Sept.							
1 - 10	+ 106.3	31.6	+ 74.7	2.0	+ 76.7	+ 38.4	- 36.4
11 - 20	- 107.5	0.8	- 108.3	24.7	- 83.6	- 41.8	+ 66.5
21 - 30	- 27.3	0.0	- 27.3	14.8	- 12.5	- 6.2	+ 21.0
Oct.							
1 - 10	+ 35.7	1.5	+ 34.2	2.8	+ 37.0	+ 18.5	- 15.7
11 - 20	+ 98.0	Nil	+ 98.0	0.5	+ 98.5	+ 49.2	- 48.7
21 - 31	+ 117.8	0.1	+ 117.7	0.3	+ 118.0	+ 59.0	- 58.7
Total	+ 7,869.4	2,821.6	+ 5,047.8	26,273.9	+31,321.7	+15,661.0	+10,612.9
Acre-feet	+15,609	5,597	+10,012	52,114	+62,126	+31,063	+21,050
Estimated Acre-feet Total of Minor Diversions detailed in appendix to this report.			1,979		1,979		
			11,991		64,105		

Return flow assumed to be 30 percent of diverted quantities.

Table 6

DIVERSIONS FROM THE EASTERN TRIBUTARIES OF MILK RIVER IN CANADA 1958

Quantities in Acre-feet

Lodge Creek Tributary Basin

Middle Creek near Alberta Boundary	4,140[a]	
Released to Lodge Creek from Middle Creek Reservoir	932[b]	3,208
Spangler Ditch near Govenlock	2,180	
Estimated return flow from Spangler Ditch	654	1,526
Total of 14 Minor Diversions Detailed in Appendix		205[c]
Total Diverted by Canada		4,939

a - Total flow of this station stored in Middle Creek Reservoir.

b - Released from Middle Creek Reservoir via Bedford Slough.

c - 50 acre-feet diverted by Mitchell Ranching Co. and listed as a Minor Diversion in Appendix is included in Middle Creek near Alberta Boundary.

(Lodge Creek at International Boundary = 34,120 acre-feet)

Battle Creek Tributary Basin

Diverted by Cypress Lake West Inflow Canal		9,280	
Returned by Cypress Lake West Inflow Canal Drain	249		
Returned by Cypress Lake West Outflow Canal	9,923	10,172	- 892
Vidora Ditch near Consul	2,584		
Richardson Ditch near Consul	2,743		
McKinnon Ditch near Consul	2,619		
Stirling and Nash Ditch near Consul	1,926	9,872	
Estimated Return Flow from Irrigated Lands		2,961	6,911
Total of 74 Minor Diversions Detailed in Appendix			1,479
Total Diverted by Canada			7,498

(Battle Creek at International Boundary = 20,297 acre-feet)

Frenchman River Tributary Basin

Belanger Creek Diversion to Cypress Lake	3,501		
Returned by Cypress Lake East Outflow Canal	6,519	-3,018	
Cypress Lake Natural Overflow		0	-3,018
Stored in Eastend Reservoir		2,255	
Released from Eastend Reservoir		1,763	+ 492
Stored in Val Marie Reservoirs		9,214	
Released from Val Marie Reservoirs		9,733	- 519
Eastend Irrigation District Canal	5,680		
Val Marie Irrigation District West Canals	4,274		
Val Marie Main Canal	8,701	18,655	
Estimated Return Flow from Irrigated Lands		5,597	13,058
Total of 75 Minor Diversions Detailed in Appendix			1,979
Total Diverted by Canada			11,992

(Frenchman River at International Boundary = 52,114 acre-feet)

MEASURED DIVERSIONS FROM THE EASTERN TRIBUTARIES

OF MILK RIVER IN THE UNITED STATES

1958

(Quantities in Acre-feet)

Irrigator	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Total
				Lodge Creek					
North Chinook Canal	804	3,890	375	0	0	0	0	0	5,070
				Battle Creek					
Matheson Canal	-	-	-	-	-	-	-	-	170[a]
Pumping	-	-	-	-	-	-	-	-	470[b]
				Frenchman River					
Frenchman Canal	1.8	1,210	1,460	2,270	1,480	1,260	135	0	7,820
Total	-	-	-	-	-	-	-	-	13,530

a - Stage discharge relation indefinite; discharge, estimated on basis of 1 discharge measurement, eleven observations of no flow, engineer's notes, and appearance of gauge-height graph.

b - Estimated use by pumping from Battle Creek to land under the Matheson Canal.

Table 7

Measured Run-off of Eastern Tributaries of Milk River
at International Boundary for period March to October, 1958
(Quantities in Acre-feet)

STREAM	March	April	May	June	July	Aug.	Sept.	Oct.	Total
Lodge Creek	4,730	29,000	315	73	0	0	0	0	34,120
Woodpile Coulee	2,150	997	0	0	0	0	0	0	3,150
Battle Creek	5,800	10,170	1,450	1,200	1,110	346	3	141	20,220
Lyons Coulee	1,120	738	0	0	0	0	0	0	1,860
East Br. Battle Cr.	2,030	437	0	0	0	0	0	0	2,470
Whitewater Creek	1,930	415	6.0	1.2	0.6	0	0	1	2,350
Frenchman River	4,350	43,220	2,340	1,460	453	204	82	7.1	52,120
McEachern Creek	2,960	1,590	1.4	0	0	0	0	0	4,550
Horse Creek	1,530	460	0	0	0	0	0	0	1,990
Rock Creek	2,730	3,930	260	78	32	0	0	57	7,090
Totals	29,330	90,957	4,372.4	2,812.2	1,595.6	550	85	206.1	129,900

GAUGING STATIONS OPERATED JOINTLY BY
CANADA AND UNITED STATES
IN ST. MARY AND MILK RIVER DRAINAGE BASINS

- 1958 -

Map Index	Stream and Location	Remarks
	St. Mary River Basin	
$5AE_{27}$	St. Mary River at International Boundary	Int.[a]
$5AE_{0.5}$	Swiftcurrent Creek at Many Glacier, Montana	Int.[a]
$5AE_{0.9}$	Lake Sherburne at Sherburne, Montana	Int.R[a]
$5AE_{0.6}$	Swiftcurrent Creek at Sherburne, Montana	Int.[a]
$5AE_{0.2}$	United States St. Mary Canal at St. Mary Crossing, near Babb, Montana	Int.[a]
$5AE_{0.3}$	United States St. Mary Canal at Hudson Bay Divide near Browning, Montana	Int.[a]
	Milk River Basin	
$11AA_{5}$	Milk River at Milk River, Alberta	Int.[a]
$11AA_{0.2}$	Milk River at Eastern Crossing of International Boundary	Int.[a]
$11AA_{0.3}$	North Branch of Milk River above St. Mary Canal, near Browning, Montana	Int.[a]
$11AA_{1}$	North Branch of Milk River near International Boundary	Int.[a]
$11AA_{25}$	South Branch of Milk River near International Boundary	Int.[a]
$11AD_{0.1}$	Whitewater Creek near International Boundary	Int.[a]
	Lodge Creek Tributary Basin	
$11AB_{83}$	Lodge Creek below McRae Coulee at International Boundary	Int.[a]
	Battle Creek Tributary Basin	
$11AB_{76}$	Battle Creek above Cypress Lake West Inflow Canal near West Plains, Saskatchewan	Int.[a]
$11AB_{27}$	Battle Creek at International Boundary	Int.[a]

Map Index	Stream and Location	Remarks
	Battle Creek Tributary Basin	
$11AB_{0.1}$	Woodpile Coulee near International Boundary	Int.[a]
$11AB_{0.3}$	East Branch of Battle Creek near International Boundary	Int.[a]
$11AB_{75}$	Lyons Coulee at International Boundary	Int.[a]
$11AB_{78}$	Cypress Lake West Inflow Canal	Int.[a]
$11AB_{77}$	Cypress Lake West Outflow Canal	Int.[a]
	Frenchman River Tributary Basin	
$11AC_{37}$	Cypress Lake Reservoir near Vidora, Saskatchewan	Int.R[a]
$11AC_{64}$	Belanger Creek Diversion to Cypress Lake	Int.[a]
$11AC_{60}$	Cypress Lake East Outflow Canal	Int.[a]
$11AC_{18}$	Frenchman River above East End Reservoir	Int.[a]
$11AC_{55}$	East End Reservoir at East End, Saskatchewan	Int.R[a]
$11AC_{52}$	East End Canal at East End, Saskatchewan	Int.[a]
$11AC_{1}$	Frenchman River below East End Reservoir	Int.[a]
$11AC_{63}$	Val Marie West Reservoir, near Val Marie, Saskatchewan	Int.R[a]
$11AC_{65}$	Val Marie West Gravity Canal	Int.[a]
$11AC_{56}$	Val Marie Reservoir near Val Marie, Saskatchewan	Int.R[a]
$11AC_{54}$	Val Marie Main Canal	Int.[a]
$11AC_{41}$	Frenchman River at International Boundary	Int.[a]
	Rock Creek Tributary Basin	
$11AE_{0.2}$	Rock Creek at International Boundary	Int.[a]
$11AE_{0.6}$	Rock Creek below Horse Creek near International Boundary	Int.[a]
$11AE_{0.3}$	Horse Creek near International Boundary	Int.[a]
$11AE_{0.4}$	McEachern Creek near International Boundary	Int.[a]

GAUGING STATIONS OPERATED INDEPENDENTLY
BY CANADA OR UNITED STATES

IN ST. MARY AND MILK RIVER DRAINAGE BASINS

- 1958 -

Map Index	Stream and Location	Remarks
	St. Mary River Basin	
	Grinnell Creek near Many Glacier, Montana	U.S.[c]
	St. Mary River near Babb, Montana	U.S.[c]
	St. Mary Lake near St. Mary, Montana	U.S.[c]
$5AE_6$	St. Mary River near Lethbridge	Canada[c]
$5AE_5$	Rolph Creek near Kimball, Alberta	Canada[a]
$5AE_2$	Lee Creek at Cardston, Alberta	Canada[a]
$5AE_{25}$	St. Mary Reservoir near Spring Coulee, Alberta	Canada R[a]
$5AE_{26}$	Canadian St. Mary Canal near Spring Coulee, Alberta	Canada[a]
$5AF_{28}$	Canadian St. Mary Canal at Drop 1	Canada[c]
$5AE_{21}$	Magrath Irrigation District Canal near Spring Coulee, Alberta	Canada[a]
	Milk River Basin	
	Lodge Creek Tributary Basin	
$11AB_{82}$	Lodge Creek near Alberta Boundary	Canada[a]
$11AB_9$	Middle Creek near Alberta Boundary	Canada[a]
$11AB_{80}$	Middle Creek Reservoir	Canada R[a]
$11AB_{60}$	Spangler Ditch near Govenlock, Saskatchewan	Canada[a]
2	North Chinook Canal near Havre, Montana	U.S.[b]

Map Index	Stream and Location	Remarks
	Battle Creek Tributary Basin	
$11AB_{81}$	Battle Creek at Ranger Station	Canada[c]
$11AB_{85}$	Cypress Lake West Inflow Canal Drain	Canada[a]
$11AB_{84}$	Vidora Ditch near Consul, Saskatchewan	Canada[a]
$11AB_{58}$	Richardson Ditch near Consul, Saskatchewan	Canada[a]
$11AB_{44}$	McKinnon Ditch near Consul, Saskatchewan	Canada[a]
$11AB_{18}$	Stirling and Nash Ditch near Consul, Saskatchewan	Canada[a]
3	Matheson Canal near Chinook, Montana	U.S.[b]
	Frenchman River Tributary Basin	
$11AC_{51}$	Frenchman River below Val Marie, Saskatchewan	Canada[c]
$11AC_{66}$	Val Marie West Pumping Canal near Val Marie, Saskatchewan	Canada[a]
4	Frenchman Canal near Saco, Montana	U.S.[b]

Int. - International Gauging Station

Int.R - International Station on Reservoir

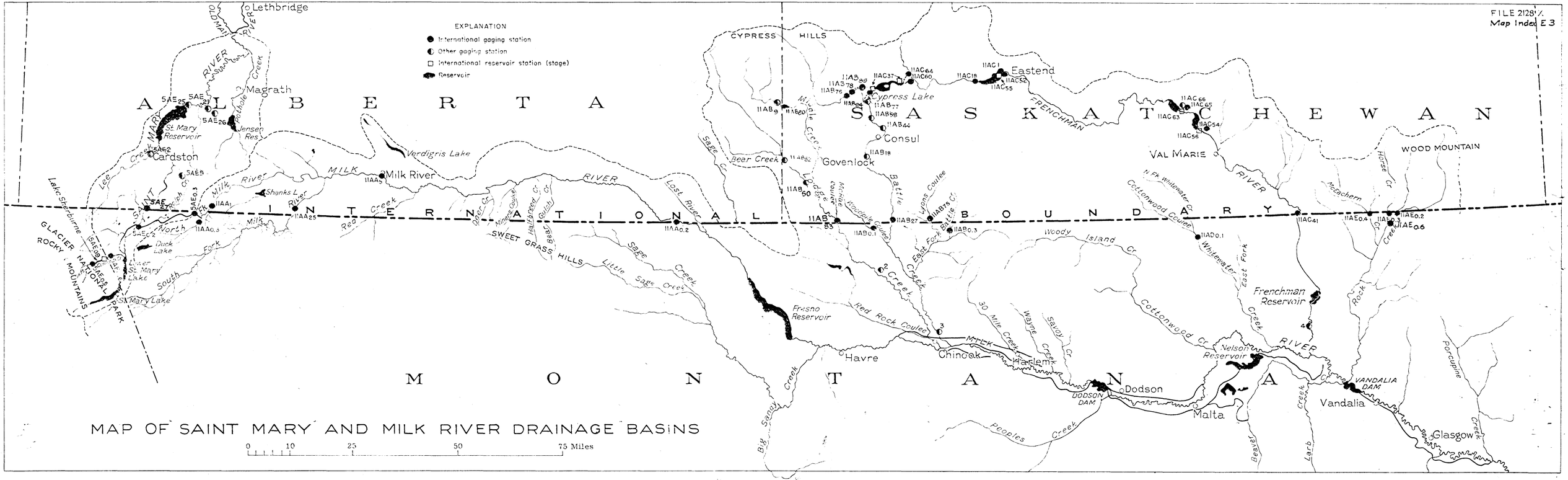
U.S. - Denotes operation by United States Geological Survey.

Canada - Denotes operation by Water Resources Branch, Canada.

a - Monthly and daily discharge data and stream measurements contained in Appendix.

b - Monthly Discharge data only tabulated in this report.

c - Data not included in this report or appendix.



MAP OF SAINT MARY AND MILK RIVER DRAINAGE BASINS

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Report to the International Joint Commission on the division and use of the waters of the St. Mary and Milk Rivers...