

D. J. St. John

Report to

THE INTERNATIONAL JOINT COMMISSION

on

THE DIVISION AND USE MADE OF THE WATERS OF
ST. MARY AND MILK RIVERS

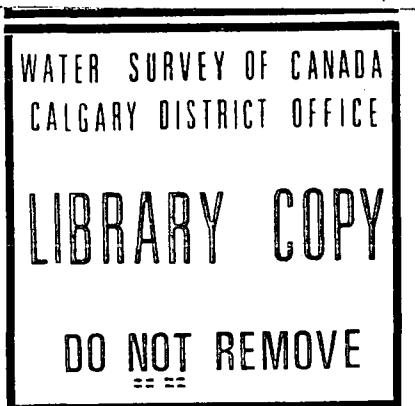
by

G. L. PARKER
representing the United States

and

VICTOR MEEK
representing Canada

1945



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The Honourable, The International Joint Commission,
Washington, D.C., and Ottawa, Canada.

Gentlemen:-

In compliance with the Provisions of
Clause VIII (c) of your Order of the 4th of 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, 1945.

Respectfully submitted,

(Signed) C.G. Paulsen,
Accredited Officer of the United States.

(Signed) V. Meek,
Accredited Officer of His Majesty.

April 2, 1946.

Prior to the completion of this report,
the sudden death in Washington, D.C.,
on February 12, 1946, of Mr. G.L. Parker,
Chief Hydraulic Engineer of the United
States Geological Survey, is deeply
regretted. Mr. Parker has been the
accredited officer for the United States
in the matter of the division of the
St. Mary and Milk Rivers since 1939.

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 1945, by the same group of engineers as in previous years.

The Chief Hydraulic Engineer, United States Geological Survey, Mr. G. L. Parker to February 12, 1946, as accredited officer of the United States, was represented in the field by Mr. A. H. Tuttle, District Engineer, Helena, Montana. Mr. Victor Meek, Controller, Dominion Water and Power Bureau, as accredited officer of His Majesty, was represented by Mr. O.H. Hoover, District Chief Engineer, Calgary, Alberta.

The water of the two rivers was divided between the two countries in accordance with the Order of the Commission dated in Ottawa, Canada, on the 4th day of October, 1921.

The hydrometric data on which this report is based were obtained from streams and ditches in Montana by engineers of the United States Geological Survey under the supervision of Mr. Tuttle; while those in Canada were collected by engineers of the Dominion Water and Power Bureau under the direction of Mr. Hoover.

The joint international gauging stations were visited frequently by representatives of both countries and the data obtained were jointly approved by the field engineers.

The annual report was compiled and assembled under the direction of Mr. S.G. Dawson, Dominion Water and Power Bureau, Ottawa, Canada.

The run-off from the St. Mary River basin during the irrigation season of 1945 was about 90 per cent of the average for the 42 years of record. The field engineers constantly kept themselves closely informed as to the natural flow of the river, the water stored or released from storage and the quantity diverted by each country. Any discrepancy in the division was adjusted to allow each country its proper share as set forth in the Order of the Commission dated October 4, 1921. Statements showing the daily division of water were prepared and forwarded to the Superintendent, Lethbridge Section, Canadian Pacific Irrigation System; to the Project Manager, United States Bureau of Reclamation, Malta, Montana; and to the Controller, Dominion Water and Power Bureau, Ottawa, Canada.

Division of Water

Although the United States St. Mary Canal was in operation at the headgates from April 24th to the end of October, water was only delivered to the North Branch Milk River during the periods April 24th to October 2nd and October 18th to October 25th, inclusive.

As the seepage from the canal between the intake and the crossing of the St. Mary River is assumed to return directly to the river and eventually become available to Canada, the discharge of 177,530 acre-feet passing in the canal at St. Mary Crossing during the period April 24th to October 25th is considered as the actual quantity diverted from the St. Mary River by the United States. A total of 174,600 acre-feet was delivered to the North Branch Milk River and made available for irrigation in Montana. The slight decrease between the St. Mary River Crossing and the Hudson Bay Divide, the end of the canal, was probably due to evaporation and seepage.

On October 1st, 1944, 6,766 acre-feet of water remained in Sherburne Reservoir. By March 31, 1945, 23,040 acre-feet of water was in storage. This was increased to 60,930 acre-feet by July 5th. From April 24th to October 24th, water was released in varying amounts to supplement the flow of St. Mary River. On September 30, 1945, 3,118 acre-feet remained in storage.

As only a small quantity of water was diverted from Milk River in Canada, the natural flow of the river at Eastern Crossing is considered as being delivered to the United States. The natural flow of the river at Eastern Crossing for the open water period of 1945, March 1st to October 31st, is estimated as 25,000 acre-feet. The total measured diversion for irrigation from Milk River in Montana was 212,232 acre-feet.

The quantity delivered to the United States at the International Boundary from the Northern Tributaries of Milk River, during the open water period of 1945, was 53,745 acre-feet. This flow is exceptionally low being about 40 per cent of the average for the previous 18 years.

During the open water period of 1945, Canada diverted to Cypress Lake reservoir, 1,950 acre-feet of the flow of Battle Creek, but later returned 2,120 acre-feet, while 8,080 acre-feet was delivered to Montana at the International Boundary. In the Frenchman River basin, Canada stored in Cypress Lake reservoir about 2,360 acre-feet of the flow from Davis, Belanger and Sucker Creeks, and 11,640 acre-feet from the main stream in the reservoirs at East End and Val Marie. From this storage 7,010 acre-feet was released to irrigate land in the Frenchman River

valley in Canada, while 23,060 acre-feet of the natural flow of Frenchman River was delivered to Montana. The apportionment during the open water period is shown in Table 3.

The Canadian Pacific Railway canal at Kimball, Alberta, diverted 146,990 acre-feet from the St. Mary River during the period of operation from 4th of April to the 31st of October and applied 128,835 acre-feet of this diversion to land in Southern Alberta during the irrigation season. An additional 2,160 acre-feet was diverted during the month of November.

The Dominion Water and Power Bureau is dependent to a large extent upon the irrigators themselves for records of the diversions in Canada from the Northern Tributaries of Milk River as, in the majority of cases, the diversions are too small to justify the expense of appointing and paying gauge observers. Consequently the records are believed to be incomplete and of doubtful value. The total diversions from these tributaries in Canada as reported and shown in Table 4 were: from Lodge Creek, no record; from Battle Creek, 843 acre-feet; from Frenchman River, 10,478 acre-feet.

Any question as to the proper share of St. Mary River being delivered to either country was decided in the following manner. Record of the daily flow was kept of

Swiftcurrent Creek at Many Glacier, but the flow from the other creeks entering Swiftcurrent Creek above the Sherburne dam was estimated. The total of these creeks gave the inflow into Sherburne Reservoir. The losses by evaporation in the reservoir were considered when estimating the flow from the unrecorded small streams. A record of the outflow from the reservoir was kept at the gauging station just below the dam. The difference between the inflow and the outflow showed the quantity of water being stored or released from storage. A record of the daily flow in the United States St. Mary Canal at St. Mary crossing was kept to find the water diverted by the United States and a record of the daily flow in the St. Mary River at Kimball, near the International Boundary, was kept to determine the water being delivered to Canada.

If water was being stored in Sherburne Reservoir the natural flow of St. Mary River at the Boundary was obtained by adding the quantity of water stored to that diverted by the St. Mary Canal and that delivered to Canada, a two-day lag was allowed for stored water to reach the Boundary. If water was being released, the quantity released was deducted from the combined flow of the St. Mary Canal and that in the river at Kimball to determine the natural flow.

The natural flow having been determined, the share to which each country was entitled was calculated on the following basis:-

- (1) When the natural flow of the St. Mary River was 666 cubic-feet per second or less, Canada was entitled, by the ruling of the Commission, to three-fourths of that flow and the United States to one-fourth.
- (2) When the natural flow of the St. Mary River was greater than 666 cubic-feet per second, Canada was entitled to 500 cubic-feet per second plus one-half of the increase over 666 cubic-feet per second and the United States was entitled to the remainder.

No actual division was made of the waters of Milk River or its Northern Tributaries except those of Frenchman River and Battle Creek.

Water Supply

In the mountainous areas tributary to the St. Mary River basin, as shown by the twenty-fourth annual international survey of the snow conditions on the headwaters of the Swiftcurrent Creek, an area considered

typical of the headwaters of the St. Mary River, the snow cover of 73.3 inches was 140 per cent of the mean for the previous 23 years, while the water content, 30.2 inches, of this snow cover was about 120 per cent of the mean. The run-off of 68,650 acre-feet from the area surveyed, during May, June and July, was slightly above the average for the previous 23 years.

The natural flow of 505,780 acre-feet of St. Mary River at the Boundary during the irrigation season of 1945, from the first of April to the end of October, was 88 per cent of the average for 42 years of record.

The run-off from the prairies, as indicated by the Northern Tributaries of Milk River was about 40 per cent of the average for the last 19 years.

Twenty-two gauging stations used in the determination of the natural flow of the streams in the St. Mary and Milk River basins were operated jointly as international gauging stations. The gauging stations necessitated by the operation of reservoirs and the two irrigation districts in the Frenchman River valley in Canada and established for the determination of the natural flow of the river and of Battle Creek were again maintained in 1945.

An appendix to this report gives the results of current meter measurements, the daily gauge heights and the discharge at all the gauging stations operated in the two drainage basins during 1945.

Description of Tables

The tables following have been prepared to summarize the data on the division and use made of the waters in the St. Mary and Milk River basins.

Table No. 1 shows the method used to determine the natural flow of St. Mary River during the irrigation season of 1945, the water available for use and used by the United States and by Canada. In this table there are four pages for each month from April to October, inclusive.

Page 1 (water stored or released from Sherburne Reservoir) shows the daily inflow into and the outflow from Sherburne Reservoir. The difference gives the quantity of water stored or released from storage. On this sheet the unrecorded inflow is determined by comparison with the recorded flows in Swiftcurrent Creek and with the use of the water levels of Sherburne Reservoir to give the gain or loss in storage, after direct application of the evaporation and seepage losses has been made. This estimate is put in the column headed "unrecorded inflow".

Page 2 (determination of natural flow of the St. Mary River) shows the actual flow of St. Mary River at Kimball near the International Boundary, the quantity of water diverted, stored or released from storage by the United States and the computed natural flow of St. Mary River, or that flow which would have crossed the Boundary had there been no interference. It has been determined that two days are required for stored water released from Sherburne Reservoir to influence the flow at the International Boundary, consequently a two-day lag has been applied to the stored or released water.

Page 3 (water available for use and used by the United States) shows the water available for use and used by the United States under the ruling of the Order of October 4, 1921, the water diverted and stored and the excess or deficit in the quantity used as compared with the share available.

Page 4 (water available for use and used by Canada) shows the natural flow of St. Mary at the International Boundary, Canada's share by the ruling of the Commission, the actual discharge of St. Mary River at Kimball, which is the quantity available for use by Canada, the quantity used by Canada and the excess or deficit of the quantity received by Canada as compared with the share.

Table 2 is a statement showing the quantity in acre-feet taken each month by each country and the quantity thereof which is applied to the land, the quantity diverted from the St. Mary River, the loss or waste from canals and the diversions from Milk River in the United States.

Table 3 shows the determination of the natural flow of Frenchman River at the International Boundary. This table consists of three pages; page 1 shows the quantity used by Canada in Cypress Lake Reservoir and at East End; page 2 shows the quantity used by Canada at Val Marie; and page 3 shows the total quantity used by Canada, the natural flow of Frenchman River at the Boundary and the quantity delivered to the United States.

Table 4 shows the available information on the diversions from the Northern Tributaries of Milk River in Canada.

Table 5 gives the measured diversions from the Northern Tributaries of Milk River in the United States. Smaller diversions have not been measured.

Table 1
April
Page 1

DETERMINATION OF NATURAL FLOW OF ST. MARY RIVER
WATER STORED OR RELEASED FROM SHERBURN RESERVOIR

APRIL - 1945

Day	Inflow to Sherburne Reservoir	Outflow	Stored	Released	
	Recorded Inflow	Un-	Swiftcurrent	in	from
	Swiftcurrent	recorded	Total	Creek at	Reservoir
	Creek	Inflow	Inflow	Sherburne	Sec-ft.
					Gross
					Net
1	37	30	67	--	67
2	34	16	50	--	50
3	34	21	55	--	55
4	31	24	55	--	55
5	26	24	50	--	50
6	21	34	55	--	55
7	24	26	50	--	50
8	24	20	44	--	44
9	24	20	44	--	44
10	24	20	44	--	44
11	21	23	44	--	44
12	21	23	44	--	44
13	21	23	44	--	44
14	20	30	50	--	50
15	21	29	50	--	50
16	24	9	33	--	33
17	24	3	27	--	27
18	19	3	22	--	22
19	16	1	17	--	17
20	23	16	39	--	39
21	46	4	50	--	50
22	64	34	98	138	--
23	64	10	74	429	--
24	64	6	70	426	--
25	62	13	75	445	--
26	56	46	102	493	--
27	49	45	94	512	--
28	51	37	88	512	--
29	42	56	98	505	--
30	52	55	107	517	--
Total					
Sec-ft.	1039	701	1740	3977	934
Mean	35	23	58	133	31
Ac-ft.	2060	1390	3450	7890	1850
					3171
					106
					6290

Table 1
April
Page 2

DETERMINATION OF NATURAL FLOW OF ST. MARY RIVER

APRIL - 1945

Day	St. Mary River at Kimball	Diverted by U.S.B.R.	Stored by U.S.B.R.	Total in Sec-ft.	Stored Water Released	Natural Flow at Boundary
1	110	--	39	149	--	149
2	115	--	57	172	--	172
3	129	--	67	196	--	196
4	139	--	50	189	--	189
5	134	--	55	189	--	189
6	121	--	55	176	--	176
7	115	--	50	165	--	165
8	108	--	55	163	--	163
9	107	--	50	157	--	157
10	106	--	44	150	--	150
11	104	--	44	148	--	148
12	105	--	44	149	--	149
13	109	--	44	153	--	153
14	110	--	44	154	--	154
15	119	--	44	163	--	163
16	114	--	50	164	--	164
17	120	--	50	170	--	170
18	113	--	33	146	--	146
19	124	--	27	151	--	151
20	144	--	22	166	--	166
21	175	--	17	192	--	192
22	187	--	39	226	--	152
23	175	--	50	225	--	140
24	243	12	--	255	40	120
25	113	187	--	300	355	100
26	142	215	--	357	356	100
27	237	227	--	464	370	94
28	221	308	--	529	391	138
29	142	414	--	556	418	138
30	142	440	--	582	424	158
Total						
Sec-ft.	4123	1803	1030	6956	2354	4602
Mean	137	258	34	232	78	153
Ac-ft.	8180	3580	2040	13800	4670	9130

Note:- April 22nd to April 27th Adjusted.

Table 1
April
Page 3

DIVISION OF WATER OF ST. MARY RIVER
WATER AVAILABLE FOR USE AND USED BY U.S.A.

APRIL - 1945

Day	Natural:		AVAILABLE		USED			
	Flow	FOR USE BY U.S.A.	BY U.S.A.		Excess	Deficit		
St. Mary	U.S.	Released	Total	Diverted	Stored	Total	of Share	Used
	River	Share	Storage	Available	ed	Gross	Used	:
	:	:	Net	able	:	:	:	:
1	149	37	--	37	--	39	39	2
2	172	43	--	43	--	57	57	14
3	196	49	--	49	--	67	67	18
4	189	47	--	47	--	50	50	3
5	189	47	--	47	--	55	55	8
6	176	44	--	44	--	55	55	11
7	165	41	--	41	--	50	50	9
8	163	41	--	41	--	55	55	14
9	157	39	--	39	--	50	50	11
10	150	38	--	38	--	44	44	6
11	148	37	--	37	--	44	44	7
12	149	37	--	37	--	44	44	7
13	153	38	--	38	--	44	44	6
14	154	38	--	38	--	44	44	6
15	163	41	--	41	--	44	44	3
16	164	41	--	41	--	50	50	9
17	170	42	--	42	--	50	50	8
18	146	36	--	36	--	33	33	3
19	151	38	--	38	--	27	27	11
20	166	42	--	42	--	22	22	20
21	192	48	--	48	--	17	17	31
22	152	38	--	38	--	39	39	73
23	140	35	--	35	--	50	50	70
24	120	30	40	70	12	--	12	153
25	100	25	355	380	187	--	187	38
26	100	25	356	381	215	--	215	67
27	94	24	370	394	227	--	227	167
28	138	34	391	425	308	--	308	117
29	138	34	418	452	414	--	414	38
30	158	40	424	464	440	--	440	24
Total								
Sec-ft.	4602	1149	2354	3503	1803	1030	2833	142
Mean	153	38	78	117	258	34	94	5
Ac-ft.	9130	2280	4670	6950	3580	2040	5620	282
								1610

Note:- April 22nd to April 27th Adjusted.

Table 1
April
Page 4

DIVISION OF WATER OF ST. MARY RIVER
WATER AVAILABLE FOR USE AND USED BY CANADA

APRIL - 1945

Day	Natural Flow of St. Mary R. : at Boundary:	Canada's Share of St. Mary R. : Available	Diverted at Kimball: Delivered to Canada:	Excess or Deficit of Share Delivered : Used :	
1	149	112	110	--	2
2	172	129	115	--	14
3	196	147	129	--	18
4	189	142	139	15	3
5	189	142	134	15	8
6	176	132	121	14	11
7	165	124	115	16	9
8	163	122	108	40	14
9	157	118	107	78	11
10	150	112	106	94	6
11	148	111	104	93	7
12	149	112	105	95	7
13	153	115	109	99	6
14	154	116	110	101	6
15	163	122	119	110	3
16	164	123	114	106	9
17	170	128	120	112	8
18	146	110	113	113	--
19	151	113	124	122	--
20	166	124	144	141	20
21	192	144	175	163	31
22	152	114	187	175	73
23	140	105	175	165	70
24	120	90	243	213	153
25	100	75	113	90	38
26	100	75	142	136	67
27	94	70	237	214	167
28	138	104	221	196	117
29	138	104	142	142	38
30	158	118	142	138	24
Total					
Sec-ft.	4602	3453	4123	2996	812
Mean	153	115	137 (4-30)	111	27
Ac-ft.	9130	6850	8180	5940	1610
					282

Table 1
May
Page 1

DETERMINATION OF NATURAL FLOW OF ST. MARY RIVER
WATER STORED OR RELEASED FROM SHERBURN RESERVOIR

MAY - 1945

Day	Inflow to Sherburne Reservoir	Outflow	Stored	Released	
	Recorded Inflow	Un- recorded	Swiftcurrent	in Creek at Sherburne	from Reservoir
	Creek	Inflow	Inflow	Sec-ft.	Reservoir Sec-ft. Gross
		Est'd	:	:	Net
1	112	76	188	531	--
2	191	110	301	524	--
3	249	148	397	524	--
4	348	217	565	579	--
5	434	232	666	630	36
6	569	273	842	633	209
7	584	268	852	637	215
8	490	221	711	645	66
9	450	227	677	611	66
10	538	225	763	437	326
11	520	247	767	9	758
12	441	123	564	9	555
13	438	325	763	9	754
14	364	211	575	9	566
15	348	176	524	8	516
16	402	141	543	7	536
17	457	225	682	3	679
18	415	192	607	2	605
19	351	171	522	1	521
20	289	120	409	1	408
21	273	153	426	163	263
22	267	138	405	429	-
23	329	134	463	429	34
24	415	181	596	400	196
25	507	231	738	172	566
26	503	267	770	11	759
27	457	259	716	10	706
28	493	223	716	10	706
29	470	235	705	8	697
30	594	328	922	7	915
31	744	335	1079	7	1072
Total					
Sec-ft.	13042	6412	19454	7455	12730
Mean	421	207	628	240	411
Ac-ft.	25870	12720.	38590	14790	25250
					1450

Table 1
May
Page 2

DETERMINATION OF NATURAL FLOW OF ST. MARY RIVER

MAY - 1945

Day	St. Mary River at Kimball	Diverted by U.S.B.R.	Stored by U.S.B.R.	Total in Sec-ft.	Released	Stored Water in St. Mary River at Boundary	Natural Flow
1	199	456	--	655	407	248	
2	234	483	--	717	410	307	
3	278	504	--	782	343	439	
4	352	514	--	866	223	643	
5	487	531	--	1018	127	891	
6	718	550	--	1268	14	1254	
7	975	567	36	1578	--	1578	
8	1090	578	209	1877	--	1877	
9	1200	586	215	2001	--	2001	
10	1410	596	66	2072	--	2072	
11	1460	598	66	2122	--	2122	
12	1360	590	326	2276	--	2276	
13	1350	592	758	2700	--	2700	
14	1330	590	555	2475	--	2475	
15	1230	588	754	2572	--	2572	
16	1200	586	566	2352	--	2352	
17	1210	586	516	2312	--	2312	
18	1210	590	536	2336	--	2336	
19	1210	588	679	2477	--	2477	
20	1180	586	605	2371	--	2371	
21	1080	582	521	2183	--	2183	
22	1080	582	408	2070	--	2070	
23	1130	588	263	1981	--	1981	
24	1190	586	--	1776	24	1752	
25	1340	592	34	1966	--	1966	
26	1490	598	196	2284	--	2284	
27	1530	598	566	2694	--	2694	
28	1490	596	759	2845	--	2845	
29	1490	598	706	2794	--	2794	
30	1610	600	706	2916	--	2916	
31	1910	594	697	3201	--	3201	
Total							
Sec-ft.	35023	17771	10743	63537	1548	61989	
Mean	1130	573	347	2050	50	2000	
Ac-ft.	69470	35250	21310	126030	3070	122950	

Table 1
May
Page 3

DIVISION OF WATER OF ST. MARY RIVER
WATER AVAILABLE FOR USE AND USED BY U.S.A.

MAY - 1945

Day	Natural:			AVAILABLE		USED			Excess Deficit	
	: Flow	: FOR USE BY U.S.A.	: Released	Total	Diverted	Stored	Total	of Share	Used	:
	: River	: Share	: Storage	: Avail-	ed	Gross	: Used	:	:	:
			: Net	: able						
1	248	62	407	469	456	--	456	--	--	13
2	307	77	410	487	483	--	483	--	--	4
3	439	110	343	453	504	--	504	51	--	
4	643	161	223	384	514	--	514	130	--	
5	891	279	127	406	531	--	531	125	--	
6	1254	460	14	474	550	--	550	76	--	
7	1578	622	--	622	567	36	603	--	--	19
8	1877	772	--	772	578	209	787	15	--	
9	2001	834	--	834	586	215	801	--	--	33
10	2072	869	--	869	596	66	662	--	--	207
11	2122	894	--	894	596	66	662	--	--	232
12	2276	971	--	971	590	326	916	--	--	55
13	2700	1183	--	1183	592	758	1350	167	--	
14	2475	1071	--	1071	590	555	1145	74	--	
15	2572	1119	--	1119	588	754	1342	223	--	
16	2352	1009	--	1009	586	566	1152	143	--	
17	2312	989	--	989	586	516	1102	113	--	
18	2336	1001	--	1001	590	536	1123	125	--	
19	2477	1072	--	1072	588	679	1267	195	--	
20	2371	1019	--	1019	586	605	1191	172	--	
21	2183	925	--	925	582	521	1103	178	--	
22	2070	868	--	868	582	408	990	122	--	
23	1981	824	--	824	588	263	851	27	--	
24	1752	709	24	733	586	--	586	--	--	147
25	1966	816	--	816	592	34	626	--	--	190
26	2284	975	--	975	598	196	794	--	--	181
27	2694	1180	--	1180	598	566	1164	--	--	16
28	2845	1256	--	1256	596	759	1355	99	--	
29	2794	1230	--	1230	598	706	1304	74	--	
30	2916	1291	--	1291	600	706	1306	15	--	
31	3201	1434	--	1434	594	697	1291	--	--	143
Total										
Sec-ft.	61989	26082	1548	27630	17771	10743	28514	2124	1240	
Mean	2000	841	50	891	573	347	920	69	40	
Ac-ft.	123000	51730	3070	54790	35250	21310	56550	4210	2460	

Table 1
May
Page 4

DIVISION OF WATER OF ST. MARY RIVER
WATER AVAILABLE FOR USE AND USED BY CANADA

MAY - 1945

Day	Natural Flow of St. Mary R. at Boundary:	Canada's Share of St. Mary R. Available at Boundary:	St. Mary R. Delivered by Kimball: at Kimball:	Diverted by Canada: Delivered to Canada:	Excess or Deficit Used: Delivered:	
1	248	186	199	189	13	--
2	307	230	234	221	4	--
3	439	329	278	259	--	51
4	643	482	352	271	--	130
5	891	612	487	282	--	125
6	1254	794	718	286	--	76
7	1578	956	975	262	19	--
8	1877	1105	1090	278	--	15
9	2001	1167	1200	277	33	--
10	2072	1203	1410	274	207	--
11	2122	1228	1460	283	232	--
12	2276	1305	1360	418	55	--
13	2700	1517	1350	402	--	167
14	2475	1404	1330	389	--	74
15	2572	1453	1230	411	--	223
16	2352	1343	1200	418	--	143
17	2312	1323	1210	424	--	113
18	2336	1335	1210	424	--	125
19	2477	1405	1210	418	--	195
20	2371	1352	1180	413	--	172
21	2183	1258	1080	393	--	178
22	2070	1202	1080	428	--	122
23	1981	1157	1130	428	--	27
24	1752	1043	1190	434	147	--
25	1966	1150	1340	496	190	--
26	2284	1309	1490	476	181	--
27	2694	1514	1530	472	16	--
28	2845	1589	1490	482	--	99
29	2794	1564	1490	492	--	74
30	2916	1625	1610	498	--	15
31	3201	1767	1910	502	143	--
Total						
Sec-ft.	61989	35907	35023	11700	1240	2124
Mean	2000	1160	1130	377	40	69
Ac-ft.	123000	71220	69470	23210	2460	4210

Table 1
June
Page 1

DETERMINATION OF NATURAL FLOW OF ST. MARY RIVER
WATER STORED OR RELEASED FROM SHERBURNE RESERVOIR

JUNE - 1945

Day	Inflow to Sherburne Reservoir		Outflow	Stored	Released
	Recorded Inflow	Un- recorded	Swiftcurrent	in	from
	Swiftcurrent Creek	recorded	Total	Creek at Reservoir	Reservoir
		Inflow	Inflow	Sherburne	Sec-ft.
		Est'd	:	:	Gross
					Net
1	811	387	1198	7	1191
2	715	369	1084	8	1076
3	625	288	913	8	905
4	606	462	1068	515	553
5	625	405	1030	892	138
6	558	389	947	869	78
7	450	320	770	842	--
8	374	212	586	802	--
9	377	216	593	564	29
10	460	249	709	393	316
11	486	209	695	393	302
12	434	185	619	393	226
13	358	127	485	396	89
14	323	158	481	398	83
15	273	142	415	396	19
16	243	106	349	396	--
17	279	146	425	396	29
18	393	175	568	396	172
19	510	238	748	398	350
20	569	274	843	398	445
21	671	303	974	404	570
22	798	371	1169	407	762
23	606	256	862	412	450
24	496	182	678	412	266
25	470	235	705	409	296
26	483	201	684	412	272
27	444	202	646	415	231
28	364	171	535	418	117
29	304	113	417	415	2
30	286	109	395	415	--
Total					20
Sec-ft	14391	7200	21591	12979	8967
Mean	480	240	720	433	299
Ac-ft.	28540	14280	42820	25740	17780
					704

Table 1
June
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DETERMINATION OF NATURAL FLOW OF ST. MARY RIVER

JUNE - 1945

Day	St. Mary River at Kimball	Diverted by U.S.B.R.	Stored by U.S.B.R.	Total in Sec-ft.	Stored Water Released	Natural Flow St. Mary River at Boundary
1	2300	584	915	3799	--	3799
2	2540	592	1072	4204	--	4204
3	2570	592	1191	4353	--	4353
4	2860	590	1076	4526	--	4526
5	3450	561	905	4916	--	4916
6	3700	563	553	4816	--	4816
7	3600	561	138	4299	--	4299
8	3320	554	78	3952	--	3952
9	3020	544	--	3564	72	3492
10	2690	531	--	3221	216	3005
11	2480	535	29	3044	--	3044
12	2280	569	316	3165	--	3165
13	2130	573	302	3005	--	3005
14	2040	590	226	2856	--	2856
15	1970	586	89	2645	--	2645
16	1770	580	83	2433	--	2433
17	1630	576	19	2225	--	2225
18	1600	571	--	2171	47	2124
19	1720	573	29	2322	--	2322
20	1920	578	172	2670	--	2670
21	2130	582	350	3062	--	3062
22	2450	590	445	3485	--	3485
23	2660	602	570	3832	--	3832
24	2720	604	762	4086	--	4086
25	2650	604	450	3704	--	3704
26	2540	600	266	3406	--	3406
27	2460	594	296	3350	--	3350
28	2330	592	272	3194	--	3194
29	2110	586	231	2927	--	2927
30	1870	580	117	2567	--	2567
Total						
Sec-ft.	73510	17337	10952	101799	335	101464
Mean	2450	578	365	3393	11	3380
Ac-ft.	145800	34390	21720	201910	664	201250

Table 1
June
Page 3

DIVISION OF WATER OF ST. MARY RIVER
WATER AVAILABLE FOR USE AND USED BY U.S.A.

JUNE - 1945

Day	Natural:		AVAILABLE		USED			
	: Flow	: St. Mary River	: FOR USE BY U.S.A.	: Released Share	: Total Storage	: Diverted Available	: Stored Gross	: Excess Used Deficit
1	3799	1733	--	1733	584	915	1499	-- 234
2	4204	1935	--	1935	592	1072	1664	-- 271
3	4353	2010	--	2010	592	1191	1783	-- 227
4	4526	2096	--	2096	590	1076	1666	-- 430
5	4916	2291	--	2291	561	905	1466	-- 825
6	4816	2241	--	2241	563	553	1116	-- 1125
7	4299	1983	--	1983	561	138	699	-- 1284
8	3952	1809	--	1809	554	78	632	-- 1177
9	3492	1579	72	1651	544	--	544	-- 1107
10	3005	1336	216	1552	531	--	531	-- 1021
11	3044	1355	--	1355	535	29	564	-- 791
12	3165	1416	--	1416	569	316	885	-- 531
13	3005	1336	--	1336	573	302	875	-- 461
14	2856	1261	--	1261	590	226	816	-- 445
15	2645	1156	--	1156	586	89	675	-- 481
16	2433	1050	--	1050	580	83	663	-- 387
17	2225	946	--	946	576	19	595	-- 351
18	2124	895	47	942	571	--	524	-- 371
19	2322	994	--	994	573	29	602	-- 392
20	2670	1168	--	1168	578	172	750	-- 418
21	3062	1364	--	1364	582	350	932	-- 432
22	3485	1576	--	1576	590	445	1035	-- 541
23	3832	1749	--	1749	602	570	1172	-- 577
24	4086	1876	--	1876	604	762	1366	-- 510
25	3704	1685	--	1685	604	450	1054	-- 631
26	3406	1536	--	1536	600	266	866	-- 670
27	3350	1508	--	1508	594	296	890	-- 618
28	3194	1430	--	1430	592	272	864	-- 566
29	2927	1297	--	1297	586	231	817	-- 480
30	2567	1117	--	1117	580	117	697	-- 420
Total								
Sec-ft.	101464	45728	335	46063	17337	10952	28289	-- 17774
Mean	3380	1520	11	1535	578	365	943	-- 592
Ac-ft.	201300	90700	664	91360	34390	21720	56110	-- 35250

Table 1
June
Page 4

DIVISION OF WATER OF ST. MARY RIVER
WATER AVAILABLE FOR U.S. AND USED BY CANADA

JUNE - 1945

Day	Natural Flow of St. Mary R. at Boundary:	Canada's Share of St. Mary R. Available at Boundary:	St. Mary R. Delivered at Kimball:	Diverted by Canada:	Excess or Deficit of Share Delivered to Canada:	Used:
1	3799	2066	2300	504	234	--
2	4204	2269	2540	512	271	--
3	4353	2343	2570	502	227	--
4	4526	2430	2860	462	430	--
5	4916	2625	3450	422	825	--
6	4816	2575	3700	353	1125	--
7	4299	2316	3600	346	1284	--
8	3952	2143	3520	345	1177	--
9	3492	1913	3020	337	1107	--
10	3005	1669	2690	334	1021	--
11	3044	1689	2480	340	791	--
12	3165	1749	2280	335	531	--
13	3005	1669	2130	337	461	--
14	2856	1595	2040	334	445	--
15	2645	1489	1970	338	481	--
16	2433	1383	1770	335	387	--
17	2225	1279	1630	335	351	--
18	2124	1229	1600	382	371	--
19	2322	1328	1720	415	392	--
20	2670	1502	1920	415	418	--
21	3062	1698	2130	415	432	--
22	3485	1909	2450	411	541	--
23	3832	2083	2660	418	577	--
24	4086	2210	2720	541	510	--
25	3704	2019	2650	612	631	--
26	3406	1870	2540	677	670	--
27	3350	1842	2460	640	618	--
28	3194	1764	2330	455	566	--
29	2927	1630	2110	464	480	--
30	2567	1450	1870	460	420	--
Total						
Sec.-ft.	101464	55736	73510	12776	17774	--
Mean	3380	1860	2450	426	592	--
Ac.-ft.	201300	110600	145800	25340	35250	--

Table 1
July
Page 1

DETERMINATION OF NATURAL FLOW OF ST. MARY RIVER
WATER STORED OR RELEASED FROM SHERBURNE RESERVOIR

JULY - 1945

Day	: Inflow to Sherburne Reservoir	: Outflow	: Stored	: Released
	: Recorded Inflow:	Un-	: Swiftcurrent:	in : from
	: Swiftcurrent	: recorded	: Total	: Creek at : Reservoir:Reservoir
	Creek	: Inflow	: Inflow: Sherburne	: Sec-ft. : Sec-ft.
		: Est'd	:	: Gross : Net
1	301	114	415	251 164 --
2	370	113	483	158 325 --
3	374	130	504	217 287 --
4	358	151	509	308 201 --
5	313	127	440	392 48 --
6	289	99	388	421 -- 33
7	289	96	385	418 -- 33
8	292	76	368	421 -- 53
9	286	136	422	421 1 --
10	273	94	367	418 -- 51
11	279	80	359	421 -- 62
12	307	110	417	418 -- 1
13	320	82	402	418 -- 16
14	298	88	386	415 -- 29
15	264	70	334	418 -- 84
16	228	68	296	415 -- 119
17	191	39	230	418 -- 188
18	163	76	239	415 -- 176
19	150	65	215	415 -- 200
20	150	42	192	407 -- 215
21	158	46	204	407 -- 203
22	177	30	207	404 -- 197
23	169	52	221	404 -- 183
24	161	53	214	404 -- 190
25	161	24	185	459 -- 274
26	158	42	200	531 -- 331
27	150	41	191	528 -- 337
28	142	19	161	554 -- 393
29	142	25	167	581 -- 414
30	140	26	166	570 -- 404
31	128	18	146	567 -- 421
Total				
Sec-ft.	7181	2232	9413	12994 1026 4607
Mean	232	72	304	419 33 149
Ac-ft.	14240	4430	18670	25770 2040 9140

Table 1
July
Page 2

DETERMINATION OF NATURAL FLOW OF ST. MARY RIVER

JULY - 1945

Day	St. Mary River at Kimball	Diverted by U.S.B.R.	Stored by U.S.B.R.	Total in Sec-ft.	Stored Water Released	Natural Flow at Boundary
1	1680	575	2	2257	--	2257
2	1430	569	--	1999	20	1979
3	1280	580	164	2024	--	2024
4	1250	582	325	2157	--	2157
5	1260	596	287	2143	--	2143
6	1260	592	201	2053	--	2053
7	1250	590	48	1888	--	1888
8	1210	590	--	1800	33	1767
9	1200	588	--	1788	33	1755
10	1170	586	--	1756	53	1703
11	1140	586	1	1727	--	1727
12	1160	578	--	1738	51	1687
13	1160	550	--	1710	62	1648
14	1140	550	--	1690	1	1689
15	1100	546	--	1646	16	1630
16	1050	542	--	1592	29	1563
17	991	542	--	1533	84	1449
18	901	569	--	1470	119	1351
19	816	582	--	1398	188	1210
20	763	580	--	1343	176	1167
21	718	578	--	1296	200	1096
22	682	576	--	1258	215	1043
23	638	575	--	1213	203	1010
24	604	582	--	1186	197	989
25	584	578	--	1162	183	979
26	584	580	--	1164	190	974
27	604	582	--	1186	274	912
28	604	582	--	1186	331	855
29	604	580	--	1184	337	847
30	604	586	--	1190	393	797
31	578	580	--	1158	414	744
Total						
Sec-ft.	30015	17852	1028	48895	3802	45093
Mean	968	576	33	1577	123	1450
Ac-ft.	59530	35410	2040	96980	7540	89440

Table 1
July
Page 3

DIVISION OF WATER OF ST. MARY RIVER
WATER AVAILABLE FOR USE AND USED BY U.S.A.

JULY - 1945

Day	Natural: AVAILABLE			USED			Excess Deficit		
	Flow : St.Mary: U.S.: Released	FOR USE BY U.S.A.	Total	Divert- ed	Stored	Total	of Share Used		
	River : Share	Storage	Avail- able		Gross	Used			
	:	:	Net	:	able	:	:	:	:
1	2257	962	--	962	575	2	577	--	385
2	1979	823	20	843	569	--	549	--	274
3	2024	845	--	845	580	164	744	--	101
4	2157	912	--	912	582	325	907	--	5
5	2143	905	--	905	596	287	883	--	22
6	2053	860	--	860	592	201	793	--	67
7	1888	777	--	777	590	48	638	--	139
8	1767	717	33	750	590	--	590	--	160
9	1755	711	33	744	588	--	588	--	156
10	1703	685	53	738	586	--	586	--	152
11	1727	697	--	697	580	1	587	--	110
12	1687	677	51	728	578	--	578	--	150
13	1648	657	62	719	550	--	550	--	169
14	1689	678	1	679	550	--	550	--	129
15	1630	648	16	664	546	--	546	--	118
16	1563	615	29	644	542	--	542	--	102
17	1449	558	84	642	542	--	542	--	100
18	1351	509	119	628	569	--	569	--	59
19	1210	438	188	626	582	--	582	--	44
20	1167	417	176	593	580	--	580	--	13
21	1096	381	200	581	578	--	578	--	3
22	1043	355	215	570	576	--	576	6	--
23	1010	338	203	541	575	--	575	34	--
24	989	328	197	525	582	--	582	57	--
25	979	323	183	506	578	--	578	72	--
26	974	320	190	510	580	--	580	70	--
27	912	289	274	563	582	--	582	19	--
28	855	261	331	592	582	--	582	--	10
29	847	257	337	594	580	--	580	--	14
30	797	232	393	625	586	--	586	--	39
31	744	205	414	619	580	--	580	--	39
Total									
Sec-ft.	45093	17380	3802	21182	17852	1028	18880	258	2560
Mean	1450	561	123	683	576	33	609	8	83
Ac-ft.	89440	34470	7540	42010	35410	2040	37450	510	5080

Table 1
July
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DIVISION OF WATER OF ST. MARY RIVER
WATER AVAILABLE FOR USE AND USED BY CANADA

JULY - 1945

Day	:	:	:	:	:	:
	Natural Flow of St. Mary R.	Canada's Share at Kimball	Diverted at St. Mary R.	Excess or Deficit of Share Delivered		
	Available at Boundary:	Delivered	Delivered by Canada	Used		
1	2257	1295	1680	470	585	--
2	1979	1156	1430	476	274	--
3	2024	1179	1280	482	101	--
4	2157	1245	1250	551	5	--
5	2143	1238	1260	609	22	--
6	2053	1193	1260	687	67	--
7	1888	1111	1250	677	139	--
8	1767	1050	1210	680	160	--
9	1755	1044	1200	682	156	--
10	1703	1018	1170	694	152	--
11	1727	1030	1140	760	110	--
12	1687	1010	1160	814	150	--
13	1648	991	1160	884	169	--
14	1689	1011	1140	902	129	--
15	1630	982	1100	899	118	--
16	1563	948	1050	905	102	--
17	1449	891	991	881	100	--
18	1351	842	901	814	59	--
19	1210	772	816	755	44	--
20	1167	750	763	699	13	--
21	1096	715	718	656	3	--
22	1043	688	632	621	--	6
23	1010	672	638	586	--	34
24	989	661	604	553	--	57
25	979	656	584	528	--	72
26	974	654	584	539	--	70
27	912	623	604	560	--	19
28	855	594	604	555	10	--
29	847	590	604	555	14	--
30	797	565	604	558	39	--
31	744	539	579	541	39	--
Total						
Sec-ft.	45093	27713	30015	20573	2560	258
Mean	1450	894	963	664	83	8
Ac-ft.	89440	54970	59530	40810	5080	510

Table 1
August
Page 1

DETERMINATION OF NATURAL FLOW OF ST. MARY RIVER
WATER STORED OR RELEASED FROM SHERBURNE RESERVOIR

AUGUST - 1945

Day	Inflow to Sherburne Reservoir: Recorded Inflow: Swiftcurrent: Creek	Outflow : Swiftcurrent: Inflow: Est'd	Stored : in Creek at Sherburne	Released : from Reservoir: Sec-ft. Gross		
1	116	27	143	574	--	431
2	107	16	123	570	--	447
3	101	25	126	560	--	434
4	99	17	116	557	--	441
5	98	23	121	560	--	439
6	96	11	107	574	--	467
7	94	20	114	601	--	487
8	98	18	116	637	--	521
9	99	17	116	630	--	514
10	103	15	118	633	--	515
11	103	15	118	633	--	515
12	98	15	113	630	--	517
13	92	11	103	623	--	520
14	92	5	97	615	--	518
15	86	11	97	601	--	504
16	83	10	93	594	--	501
17	81	10	91	587	--	496
18	81	10	91	581	--	490
19	81	10	91	581	--	490
20	80	10	90	574	--	484
21	73	10	83	564	--	481
22	68	10	78	560	--	482
23	64	12	76	557	--	481
24	66	18	84	547	--	463
25	66	9	75	537	--	462
26	62	20	82	528	--	446
27	61	10	71	521	--	450
28	57	9	66	557	--	491
29	61	3	64	587	--	523
30	62	9	71	570	--	499
31	61	8	69	557	--	488
Total						
Sec-ft.	2589	414	3003	18000	--	14997
Mean	84	13	97	581	--	484
Ac-ft.	5130	820	5950	35690	--	29740

Table 1
August
Page 2

DETERMINATION OF NATURAL FLOW OF ST. MARY RIVER

AUGUST - 1945.

Day	St. Mary River at Kimball	Diverted by U.S.B.R.	Stored by U.S.B.R.	Total in Sec-ft.	Stored Water Released	Natural Flow St. Mary River at Boundary
1	558	580	--	1138	404	734
2	546	578	--	1124	421	703
3	528	578	--	1106	431	675
4	487	573	--	1060	447	613
5	470	573	--	1043	434	609
6	448	571	--	1019	441	578
7	427	571	--	998	439	559
8	422	576	--	998	467	531
9	432	576	--	1008	487	521
10	432	576	--	1008	521	487
11	437	576	--	1013	514	499
12	448	578	--	1026	515	511
13	432	576	--	1008	515	493
14	412	575	--	987	517	470
15	402	575	--	977	520	457
16	378	573	--	951	518	433
17	365	571	--	936	504	432
18	356	573	--	929	501	428
19	327	563	--	890	496	394
20	315	561	--	876	490	386
21	307	561	--	868	490	378
22	293	558	--	851	484	367
23	282	556	--	838	481	357
24	275	554	--	829	482	347
25	261	552	--	813	481	332
26	251	550	--	801	463	338
27	240	548	--	788	462	326
28	231	544	--	775	446	329
29	227	546	--	773	450	323
30	234	548	--	782	491	291
31	231	546	--	777	523	254
Total						
Sec-ft.	11454	17536	--	28990	14835	14155
Mean	369	566	--	935	479	457
Ac-ft.	28720	34780	--	57500	29420	28080

Table 1
August
Page 3

DIVISION OF WATER OF ST. MARY RIVER
WATER AVAILABLE FOR USE AND USED BY U.S.A.

AUGUST - 1945

Day	Natural:		AVAILABLE		USED		Excess Deficit		
	Flow	St. Mary River	FOR USE BY U.S.A.	Released	Total	Diverted	Stored	Total	
	Share	Storage	Avail:	ed	Gross	Used	:	:	
			Net	able:					
1	734	200	404	604	580	--	580	--	24
2	703	185	421	606	578	--	578	--	28
3	675	171	431	602	578	--	578	--	24
4	613	153	447	600	573	--	573	--	27
5	609	152	434	586	573	--	573	--	13
6	578	144	441	585	571	--	571	--	14
7	559	140	439	579	571	--	571	--	8
8	531	133	467	600	576	--	576	--	24
9	521	130	487	617	576	--	576	--	41
10	487	122	521	643	576	--	576	--	67
11	499	125	514	639	576	--	576	--	63
12	511	128	515	643	578	--	578	--	65
13	493	123	515	638	576	--	576	--	62
14	470	118	517	635	575	--	575	--	60
15	457	114	520	634	575	--	575	--	59
16	435	108	518	626	573	--	573	--	53
17	432	108	504	612	571	--	571	--	41
18	428	107	501	608	573	--	573	--	35
19	394	98	496	594	563	--	563	--	31
20	386	96	490	586	561	--	561	--	25
21	378	94	490	584	561	--	561	--	23
22	367	92	484	576	558	--	558	--	18
23	357	89	481	570	556	--	556	--	14
24	347	87	482	569	554	--	554	--	15
25	332	83	481	564	552	--	552	--	12
26	338	84	463	547	550	--	550	3	--
27	326	82	462	544	548	--	548	4	--
28	329	82	446	528	544	--	544	16	--
29	323	81	450	531	546	--	546	15	--
30	291	73	491	564	548	--	548	--	16
31	254	64	523	587	546	--	546	--	41
Total									
Sec-ft.	14155	3566	14835	18401	17536	--	17536	38	903
Mean	457	115	479	594	566	--	566	1	29
Ac-ft.	28080	7070	29420	36490	34780	--	34780	80	1790

Table 1
August
Page 4

DIVISION OF WATER OF ST. MARY RIVER
WATER AVAILABLE FOR USE AND USED BY CANADA

AUGUST - 1945

Day	Natural Flow of St. Mary R. at Boundary:	Canada's Share at Kimball: Available at Boundary:	St. Mary R.:Diverted at Kimball: Delivered to Canada:	Excess or Deficit of Share Delivered Used:		
1	734	534	558	520	24	--
2	703	518	546	504	28	--
3	675	504	528	486	24	--
4	613	460	487	466	27	--
5	609	457	470	447	13	--
6	578	434	448	430	14	--
7	559	419	427	415	8	--
8	531	398	422	409	24	--
9	521	391	432	420	41	--
10	487	365	432	418	67	--
11	499	374	437	417	63	--
12	511	383	448	428	65	--
13	493	370	432	420	62	--
14	470	352	412	404	60	--
15	457	343	402	389	59	--
16	433	325	378	371	53	--
17	432	324	365	354	41	--
18	428	321	356	343	35	--
19	394	296	327	326	31	--
20	386	290	315	302	25	--
21	378	284	307	297	23	--
22	367	275	293	286	18	--
23	357	268	282	272	14	--
24	347	260	275	262	15	--
25	332	249	261	255	12	--
26	338	254	251	241	--	3
27	326	244	240	231	--	4
28	329	247	231	225	--	16
29	323	242	227	215	--	15
30	291	218	234	221	16	--
31	254	190	231	220	41	--
Total						
Sec-ft.	14155	10589	11454	10994	903	38
Mean	457	342	369	355	29	1
Ac-ft.	28080	21000	22720	21810	1790	80

Table 1
September
Page 1

DETERMINATION OF NATURAL FLOW OF ST. MARY RIVER
WATER STORED OR RELEASED FROM SHERBURNE RESERVOIR

SEPTEMBER - 1945

Day	: Inflow to Sherburne Reservoir	: Outflow	: Stored	: Released	
	: Recorded Inflow:	Un-	: Swiftcurrent:	in	: from
	: Swiftcurrent	: recorded:	Total	Creek at	: Reservoir:
	Creek	: Inflow	: Inflow	Sherburne	: Sec-ft.
		: Est'd	:	:	: Gross : Net
1	61	10	71	550	-- 479
2	62	8	70	537	-- 467
3	57	2	59	524	-- 465
4	64	63	127	521	-- 394
5	223	148	371	515	-- 144
6	270	102	372	560	-- 188
7	186	11	197	598	-- 401
8	142	48	190	598	-- 408
9	125	54	179	581	-- 402
10	101	55	156	570	-- 414
11	92	41	133	560	-- 427
12	88	20	108	544	-- 436
13	83	28	111	531	-- 420
14	78	49	127	518	-- 391
15	76	14	90	518	-- 428
16	76	10	86	531	-- 445
17	85	50	135	541	-- 406
18	88	10	98	531	-- 433
19	81	10	91	502	-- 411
20	81	49	130	495	-- 365
21	96	43	139	465	-- 326
22	99	42	141	369	-- 228
23	96	10	106	297	-- 191
24	90	59	149	224	-- 75
25	90	10	100	192	-- 92
26	88	10	98	163	-- 65
27	85	32	117	151	-- 34
28	78	34	112	140	-- 28
29	71	32	103	134	-- 31
30	74	5	79	116	-- 37
Total					
Sec-ft.	2986	1059	4045	13076	-- 9031
Mean	100	35	135	436	-- 301
Ac-ft.	5920	2100	8020	25940	-- 17910

Table 1
September
Page 2

DETERMINATION OF NATURAL FLOW OF ST. MARY RIVER

SEPTEMBER - 1945

Day	St. Mary River at Kimball	Diverted by U.S.B.R.	Stored by U.S.B.R.	Total in Sec-ft.	Released	Stored Water in St. Mary River at Boundary	Natural Flow
1	224	544	--	768	499		269
2	221	544	--	765	488		277
3	208	542	--	750	479		271
4	202	546	--	748	467		281
5	234	544	--	778	465		313
6	271	552	--	823	394		429
7	343	567	--	910	144		766
8	407	575	--	982	188		794
9	453	582	--	1035	401		634
10	448	582	--	1030	408		622
11	432	578	--	1010	403		608
12	427	576	--	1003	414		589
13	397	571	--	968	427		541
14	356	565	--	921	436		485
15	339	561	--	900	420		480
16	323	559	--	882	391		491
17	335	561	--	896	428		468
18	360	563	--	923	445		478
19	335	563	--	898	406		492
20	319	558	--	877	433		444
21	311	544	--	855	411		444
22	311	525	--	836	365		471
23	282	521	--	803	326		477
24	261	483	--	744	228		516
25	278	411	--	689	191		498
26	247	367	--	614	75		539
27	278	295	--	573	92		481
28	247	298	--	545	65		480
29	244	267	--	511	34		477
30	278	215	--	493	28		465
Total							
Sec-ft.	9371	15159	--	24530	9950		14580
Mean	312	505	--	818	332		486
Ac-ft.	18590	30070	--	48660	19740		28920

Table 1
September
Page 3

DIVISION OF WATER OF ST. MARY RIVER
WATER AVAILABLE FOR USE AND USED BY U.S.A.

SEPTEMBER - 1945

Day	Natural : AVAILABLE			USED			Excess Deficit		
	Flow : St. Mary River	FOR USE BY U.S.A. : U.S. Share	Total : Released	Diverted : Stored	Gross : Used	of Share Used	Net : able	Used : :	Deficit : :
1	269	67	499	566	544	--	544	--	22
2	277	69	488	557	544	--	544	--	13
3	271	66	479	547	542	--	542	--	5
4	281	70	467	537	546	--	546	9	--
5	313	78	465	543	544	--	544	1	--
6	429	107	394	501	552	--	552	51	--
7	766	216	144	360	567	--	567	207	--
8	794	230	188	418	575	--	575	157	--
9	634	158	401	559	582	--	582	23	--
10	622	156	406	564	582	--	582	18	--
11	608	152	402	554	578	--	578	24	--
12	589	147	414	561	576	--	576	15	--
13	541	135	427	562	571	--	571	9	--
14	485	121	436	557	565	--	565	8	--
15	480	120	420	540	561	--	561	21	--
16	491	123	391	514	559	--	559	45	--
17	468	117	428	545	561	--	561	16	--
18	478	120	445	565	563	--	563	--	2
19	492	123	406	529	563	--	563	34	--
20	444	111	433	544	558	--	558	14	--
21	444	111	411	522	544	--	544	22	--
22	471	118	365	483	525	--	525	42	--
23	477	119	326	445	521	--	521	76	--
24	516	129	228	357	483	--	483	126	--
25	498	124	191	315	411	--	411	96	--
26	539	135	75	210	367	--	367	157	--
27	481	120	92	212	295	--	295	83	--
28	480	120	65	185	298	--	298	113	--
29	477	119	34	153	267	--	267	114	--
30	465	116	28	144	215	--	215	71	--
Total									
Sec-ft.	14530	5699	9950	13649	15159	--	15159	1552	42
Mean	486	123	332	455	505	--	505	52	1
Ac-ft.	28920	7340	19740	27070	30070	--	30070	3080	80

Table 1
September
Page 4

DIVISION OF WATER OF ST. MARY RIVER
WATER AVAILABLE FOR USE AND USED BY CANADA

SEPTEMBER - 1945

Day	: Natural Flow of St. Mary R.: Available at Boundary:	: Canada's Share at Kimball:	: St. Mary R.: Delivered by Canada:	: Diverted at Kimball:	: Excess or Deficit of Share Delivered by Canada:	: Used:
1	269	202	224	214	22	--
2	277	208	221	209	13	--
3	271	203	208	197	5	--
4	281	211	202	192	--	9
5	313	235	231	217	--	1
6	429	322	271	254	--	51
7	766	550	343	324	--	207
8	794	564	407	380	--	157
9	634	476	453	430	--	23
10	622	466	448	424	--	18
11	608	456	432	415	--	24
12	589	442	427	407	--	15
13	541	406	397	386	--	9
14	485	364	356	350	--	8
15	480	360	339	334	--	21
16	491	368	323	319	--	45
17	468	351	335	327	--	16
18	478	358	360	348	2	--
19	492	369	335	327	--	34
20	444	333	319	313	--	14
21	444	333	311	300	--	22
22	471	353	311	308	--	42
23	477	358	282	278	--	76
24	516	387	261	245	--	126
25	498	374	278	245	--	96
26	539	404	247	228	--	157
27	481	361	278	261	--	83
28	480	360	247	231	--	113
29	477	358	244	228	--	114
30	465	349	278	265	--	71
Total						
Sec-ft.	14580	10881	9371	8956	42	1552
Mean	486	363	312	299	1	52
Ac-ft.	28920	21580	18590	17760	80	3080

Table 1
October
Page 1

DETERMINATION OF NATURAL FLOW OF ST. MARY RIVER
WATER STORED OR RELEASED FROM SHERBURNE RESERVOIR

OCTOBER - 1945

Day	: Inflow to Sherburne Reservoir	: Outflow	: Stored	: Released	
	: Recorded Inflow	: Un-	: Swiftcurrent	: in	: from
	: Swiftcurrent	: recorded	: Total	: Creek at	: Reservoir
	: Creek	: Inflow	: Inflow	: Sherburne	: Sec-ft.
		: Est'd	:	:	: Gross
					: Net
1	81	27	108	121	-- 13
2	92	38	130	143	-- 13
3	101	45	146	150	-- 4
4	121	13	134	151	-- 17
5	116	37	153	165	-- 12
6	105	61	166	163	3 --
7	101	37	138	137	1 --
8	96	12	108	138	-- 30
9	86	9	95	137	-- 42
10	88	19	107	127	-- 20
11	86	20	106	99	7 --
12	85	59	144	1	143 --
13	83	25	108	1	107 --
14	80	46	126	1	125 --
15	74	10	84	1	83 --
16	74	18	92	1	91 --
17	71	22	93	1	92 --
18	71	31	102	1	101 --
19	59	11	70	236	-- 166
20	59	11	70	372	-- 302
21	57	13	70	226	-- 156
22	57	13	70	114	-- 44
23	56	8	64	1	63 --
24	49	8	57	1	56 --
25	64	8	72	1	71 --
26	83	8	91	1	90 --
27	94	8	102	1	101 --
28	88	7	95	1	94 --
29	81	8	89	1	88 --
30	130	13	143	1	142 --
31	223	22	245	1	244 --
Total					
Sec-ft.	2711	667	3378	2495	1702 819
Mean	87	22	109	80	55 26
Ac-ft.	5380	1320	6700	4950	3380 1620

Table 1
October
Page 2

DETERMINATION OF NATURAL FLOW OF ST. MARY RIVER

OCTOBER - 1945

Day	St. Mary River at Kimball	Diverted by U.S.B.R.	Stored by U.S.B.R.	Total in Sec-ft.	Stored Water Released	Natural Flow St. Mary River at Boundary
1	257	191	--	448	31	417
2	453	23	--	476	37	439
3	464	--	--	464	13	451
4	470	--	--	470	13	457
5	481	--	--	481	4	477
6	487	--	--	487	17	470
7	487	--	--	487	12	475
8	487	--	3	490	--	490
9	492	--	1	493	--	493
10	492	--	--	492	30	462
11	487	--	--	487	42	445
12	470	--	--	470	20	450
13	432	--	7	439	--	439
14	402	--	143	545	--	545
15	383	--	107	490	--	490
16	360	--	115	485	--	485
17	347	--	83	430	--	430
18	335	14	91	440	--	440
19	134	213	92	439	--	439
20	106	288	101	495	--	495
21	94	349	--	443	166	277
22	86	353	--	439	302	137
23	84	343	--	427	156	371
24	81	257	--	338	44	294
25	349	11	63	423	--	423
26	360	--	56	416	--	416
27	315	--	71	386	--	386
28	311	--	90	401	--	401
29	296	--	101	397	--	397
30	289	--	94	383	--	383
31	300	--	88	386	--	388
Total						
Sec-ft.	10591	2042	1316	13949	887	13062
Mean	342	204	42	450	29	421
Ac-ft.	21010	4050	2610	27670	1760	25910

Table 1
October
Page 3

DIVISION OF WATER OF ST. MARY RIVER
WATER AVAILABLE FOR USE AND USED BY U.S.A.

OCTOBER - 1945

Day	Natural Flow			AVAILABLE FOR USE BY U.S.A.		USED BY U.S.A.			Exceeds Deficit	
	St. Mary River	U.S. Share	Release	Total Storage	Avail-able	Divert-ed	Stored	Total Gross	Used	of Share Used
					Net					
1	417	104	31	135	191	--	191	56	--	--
2	439	110	37	147	23	--	23	--	124	
3	451	113	13	126	--	--	--	--	126	
4	457	114	13	127	--	--	--	--	127	
5	477	119	4	123	--	--	--	--	123	
6	470	118	17	135	--	--	--	--	135	
7	475	119	12	131	--	--	--	--	131	
8	490	122	--	122	--	3	3	--	119	
9	493	123	--	123	--	1	1	--	122	
10	462	116	30	146	--	--	--	--	146	
11	445	111	42	153	--	--	--	--	153	
12	450	112	20	132	--	--	--	--	132	
13	439	110	--	110	--	7	7	--	103	
14	545	136	--	136	--	143	143	7	--	
15	490	122	--	122	--	107	107	--	15	
16	485	121	--	121	--	125	125	4	--	
17	430	108	--	108	--	83	83	--	25	
18	440	110	--	110	14	91	105	--	5	
19	439	110	--	110	213	92	305	195	--	
20	495	124	--	124	288	101	389	265	--	
21	277	69	166	235	349	--	349	114	--	
22	137	34	302	336	353	--	353	17	--	
23	271	68	156	224	343	--	343	119	--	
24	294	74	44	118	257	--	257	139	--	
25	423	106	--	106	11	63	74	--	32	
26	416	104	--	104	--	56	56	--	48	
27	386	96	--	96	--	71	71	--	25	
28	401	100	--	100	--	90	90	--	10	
29	397	99	--	99	--	101	101	2	--	
30	383	96	--	96	--	94	94	--	2	
31	388	97	--	97	--	88	88	--	9	
Total										
Sec-ft.	13062	3265	887	4152	2042	1316	3358	918	1712	
Mean	421	105	29	134	204	42	108	30	55	
Ac-ft.	25910	6480	1760	8240	4050	2610	6660	1820	3400	

Table 1
October
Page 4

DIVISION OF WATER OF ST. MARY RIVER
WATER AVAILABLE FOR USE AND USED BY CANADA

OCTOBER - 1945

Day	Natural Flow of St. Mary R. at Boundary:	Canada's Share at Kimball:	St. Mary R. Available at Boundary:	Diverted by Canada:	Excess or Deficit of Share Delivered	
1	417	313	257	242	--	56
2	439	329	453	429	124	--
3	451	338	464	447	126	--
4	457	343	470	451	127	--
5	477	358	481	458	123	--
6	470	352	487	468	135	--
7	475	356	487	466	131	--
8	490	368	487	472	119	--
9	493	370	492	478	122	--
10	462	346	492	480	146	--
11	445	334	487	474	153	--
12	450	338	470	460	132	--
13	439	329	432	430	103	--
14	545	409	402	357	--	7
15	490	368	383	--	15	--
16	485	364	360	--	--	4
17	430	322	347	--	25	--
18	440	330	535	--	5	--
19	439	329	134	--	--	195
20	495	371	106	--	--	265
21	277	208	94	--	--	114
22	137	103	86	--	--	17
23	271	203	84	--	--	119
24	294	220	81	--	--	139
25	423	317	349	--	32	--
26	416	312	360	--	48	--
27	386	290	315	--	25	--
28	401	301	311	--	10	--
29	397	298	296	--	--	2
30	383	287	289	--	2	--
31	388	291	300	--	9	--
Total						
Sec-ft.	13062	9797	10591	6108	1712	918
Mean	421	316	342 (1-14)	436	55	30
Ac-ft.	25910	19430	21010	12120	3400	1820

Table 2
Page 1

DIVISION OF ST. MARY RIVER
CANADA
1945

Water Available in Acre-Feet

Month	St. Mary R. at Kimball	Rolph Creek at Kimball	Lee Creek at Cardston	Pothole Creek at Magrath	Combined Flow
April	8180	53	1250	--	9483
May	69470	249	7720	--	77439
June	145800	798	16720	--	163318
July	59530	164	3300	--	62994
August	22720	106	544	--	23370
September	18590	205	877	--	19672
October	21010	114	872	--	21996
Total	345300	1689	31283	--	378272 ^a

DISPOSITION

Month	Canada's Share	Diverted by Canada	Unused by Canada	Gain or loss in Canal	Wasted from Canal	Applied to Land
April	6850	5940	910	+ 160	940	5160
May	71220	23210	48010	- 988	1813	20409
June	110600	25340	85260	-1351	6357	17632
July	54970	40810	14160	-2145	2580	36085
August	21000	21810	-810	-1386	30	20394
September	21580	17760	3820	- 516	84	17160
October	19430	12120	7310	+ 206	331	11995
Total	305650	146990 ^b	158660 ^c	-6020 ^d	12135 ^e	128835 ^f

a - Computed. b - Diverted by A.R. & I. Co. at Kimball.

c - Difference between Canada's share and quantity diverted.

d - Gain or loss in canal between Kimball and Magrath.

e - Wasted in Pinepound and Pothole Creeks.

f - Flow in canal at Magrath plus diversions by laterals.

DIVISION OF ST. MARY RIVER
UNITED STATES
1945

Month	Water Available in Acre-Feet						
	St. Mary River			Total			:Total Flow
	:U. S.	:Stored	:Released	:Available	:Diverted	:Unused	:Milk River
	:Share	: from	: for	:	:	:	:Eastern
		: Storage	:Diversion:				:Crossing
April	2280	2040	4670	4910	3580	- 1330	4760
May	51730	21310	3070	33490	35250	+ 1760	36800
June	90700	21720	664	69640	34390	-35250	45870
July	34470	2040	7540	39980	35410	- 4570	36960
August	7070	--	29420	36490	34780	- 1710	32210
September	7340	--	19740	27030	30070	+ 2990	32160
October	6480	2610	1760	5630	4050	- 1580	9230
Total	200070	49720	66864	217220	177530	-39690	197990

In storage in Sherburne Reservoir on March 31, 23,040 acre-feet;
on October 31, 4,445 acre-feet.

In storage in Fresno Reservoir on March 31, 54,421 acre-feet;
on October 31, 58,052 acre-feet.

The water "stored" in Sherburne Reservoir includes the amount lost
by evaporation.

DIVERSIONS FROM MILK RIVER
UNITED STATES
1945

Month	Quantities in Acre-Feet								
	:Fort	:Belknap	:Paradise	:Harlem	:Harlem	:Agency	:Dodson	:Van-	
	: Canal	: Canal	: Canal	: No.2	: Canal	: North	: South	: Total	
April	3130	347	127	----	1340	647	4460	----	10051
May	7080	2970	2090	349	2600	2600	10160	4870	32519
June	8660	2950	2630	413	2030	1600	11510	4270	34063
July	9170	6030	3480	1360	3160	5070	12290	5720	46280
August	12900	5320	3410	1300	2490	3740	11420	6730	47310
September	8630	2840	1150	540	1000	2590	10210	5240	32200
October	----	----	----	----	----	1040	3090	4150	8280
November	----	----	----	----	----	71	863	595	1529
Total	49570	20457	12887	3962	12620	17358	64003	31375	212232

In storage in Nelson Reservoir on March 31, 36,487 acre-feet;
on October 31, 31,487 acre-feet.

Table 3
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DETERMINATION OF NATURAL FLOW OF FRENCHMAN RIVER
AT THE INTERNATIONAL BOUNDARY
1945

Water used by Canada at Cypress Lake and East End
Quantities in Second-Feet

Date at Intern'l Boundary:	Used at Cypress Stored:	Used at Cypress Released:	Used at East End Stored:	Used at East End Released:	Return Diverted:	Total used Flow:
March						
1 - 10	0.0	0.0	0.0	0.0	0.0	0.0
11 - 20	0.0	0.0	0.0	0.0	0.0	0.0
21 - 31	230.0	0.0	75.0	0.0	0.0	+ 305.0
April						
1 - 10	239.4	0.0	332.0	0.0	0.0	+ 571.4
11 - 20	12.9	0.0	207.0	0.0	0.0	+ 219.9
21 - 30	12.5	0.0	76.0	0.0	0.0	+ 88.5
May						
1 - 10	0.0	0.0	0.0	36.0	0.0	- 36.0
11 - 20	0.0	1.9	68.0	0.0	0.0	+ 66.1
21 - 31	0.0	7.4	89.0	0.0	113.2	56.0
June						
1 - 10	0.0	18.9	0.0	18.0	210.5	60.0
11 - 20	0.0	78.3	100.0	0.0	175.4	70.0
21 - 30	0.0	19.5	0.0	124.0	191.1	70.0
July						
1 - 10	0.0	57.1	0.0	226.0	328.3	80.0
11 - 20	0.0	99.5	0.0	216.0	353.7	90.0
21 - 31	0.0	47.5	0.0	193.0	275.8	80.0
August						
1 - 10	0.0	252.1	24.0	0.0	240.8	50.0
11 - 20	0.0	455.5	94.0	0.0	233.6	50.0
21 - 31	0.0	270.0	0.0	9.0	151.0	50.0
September						
1 - 10	0.0	92.0	0.0	16.0	67.0	10.0
11 - 20	0.0	83.3	23.0	0.0	5.5	0.0
21 - 30	0.0	3.1	23.0	0.0	14.2	4.0
October						
1 - 10	24.1	0.0	31.0	0.0	4.0	0.0
11 - 20	29.2	0.0	36.0	0.0	2.8	0.0
21 - 31	1.5	0.0	18.0	0.0	0.0	+ 19.5
Total						
Sec-ft.	549.6	1469.1	1196.0	838.0	2366.9	670.0
Mean	2.2	6.0	4.9	3.4	9.7	2.7
i.c-ft.	1090	2910	2370	1660	4690	1330
						2250

Table 3
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DETERMINATION OF NATURAL FLOW OF FRENCHMAN RIVER
AT THE INTERNATIONAL BOUNDARY
1945

Water used by Canada at Val Marie
Quantities in Second-Feet

Upper Val Marie			Lower Val Marie			Return	Total Used
Stored	Released	Diverted	Stored	Released	Diverted	Flow	
March							
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
205.0	0.0	0.0	541.0	0.0	0.0	0.0	+ 746.0
410.0	0.0	0.0	1610.0	0.0	0.0	0.0	+ 2020.0
April							
16.0	0.0	0.0	440.0	0.0	0.0	0.0	+ 456.0
92.0	0.0	0.0	0.0	251.0	0.0	0.0	- 159.0
47.0	0.0	0.0	502.0	0.0	3.1	0.0	+ 552.1
May							
68.0	0.0	0.0	0.0	121.0	12.9	0.0	- 40.1
106.0	0.0	0.0	42.0	0.0	16.8	0.0	+ 164.8
79.0	0.0	0.0	0.0	27.0	183.4	60.0	+ 175.4
June							
52.0	0.0	0.0	0.0	245.0	519.1	170.0	+ 156.1
46.0	0.0	0.0	39.0	0.0	293.6	100.0	+ 278.6
55.0	0.0	0.0	63.0	0.0	200.6	70.0	+ 248.6
July							
0.0	495.0	0.0	0.0	171.0	139.3	40.0	- 566.7
0.0	350.0	0.0	0.0	75.0	255.7	80.0	- 249.3
0.0	163.0	0.0	42.0	0.0	514.5	150.0	+ 243.5
August							
19.0	0.0	0.0	0.0	391.0	424.3	120.0	- 67.7
15.0	0.0	0.0	0.0	54.0	269.0	80.0	+ 150.0
11.0	0.0	0.0	0.0	178.0	55.6	0.0	- 111.4
September							
0.0	16.0	0.0	0.0	135.0	78.3	0.0	- 72.7
0.0	12.0	0.0	38.0	0.0	79.8	50.0	+ 55.8
0.0	11.0	0.0	30.0	0.0	28.1	0.0	+ 47.1
October							
10.0	0.0	0.0	16.0	0.0	0.6	0.0	+ 26.6
17.0	0.0	0.0	28.0	0.0	0.0	0.0	+ 45.0
30.0	0.0	0.0	9.0	0.0	0.0	0.0	+ 39.0
1278.0	1047.0	0.0	3400.0	1648.0	3074.7	920.0	+ 4137.7
5.2	4.3	0.0	13.9	6.7	12.5	3.8	16.9
2530	2080	0.0	6740	3270	6100	1820	8200

Table 3
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DETERMINATION OF NATURAL FLOW OF FRENCHMAN RIVER
AT THE INTERNATIONAL BOUNDARY
1945

Quantities in Second-Feet									
Date at :	CANADA			Frenchman River			UNITED STATES		
Intern'l Boundary:	Used at: East End:	Used at: Val Marie:	Total:	Natural:		Flow:	Share:	Received:	+ or -
:	:	:	:	:	:	:	:	:	:
March									
1 - 10	0.0	0.0	0.0	57.0	57.0	28.5	+	28.5	
11 - 20	0.0	+ 746.0	+ 746.0	2707.0	3453.0	1726.5	+	980.5	
21 - 31	+ 305.0	+ 2020.0	+ 2325.0	4434.0	6759.0	3379.5	+ 1054.5		
April									
1 - 10	+ 571.4	+ 456.0	+ 1027.4	1412.3	2439.7	1219.8	+	192.5	
11 - 20	+ 219.9	- 159.0	+ 60.9	133.5	194.4	97.2	+	36.3	
21 - 30	+ 88.5	+ 552.1	+ 640.6	258.9	899.5	449.8	-	190.9	
May									
1 - 10	- 36.0	- 40.1	- 76.1	716.0	639.9	320.0	+	396.0	
11 - 20	+ 66.1	+ 164.8	+ 230.9	236.1	467.0	233.5	+	2.6	
21 - 31	+ 138.8	+ 175.4	+ 314.2	204.2	518.4	259.2	-	55.0	
June									
1 - 10	+ 113.6	+ 156.1	+ 269.7	234.3	504.0	252.0	-	17.7	
11 - 20	+ 127.1	+ 278.6	+ 405.7	251.4	657.1	328.5	-	77.2	
21 - 30	- 22.4	+ 248.6	+ 226.2	171.5	397.7	198.8	-	27.3	
July									
1 - 10	- 34.8	- 566.7	- 601.5	245.9	- 355.6	0.0	+	245.9	
11 - 20	- 51.8	- 249.3	- 301.1	256.0	- 45.1	0.0	+	256.0	
21 - 31	- 44.7	+ 243.5	+ 198.8	17.9	216.7	108.4	-	90.5	
August									
1 - 10	- 17.3	- 67.7	- 85.0	92.4	7.4	3.7	+	88.7	
11 - 20	- 177.9	+ 150.0	- 27.9	129.6	101.7	50.8	+	78.8	
21 - 31	- 178.0	- 111.4	- 289.4	42.0	- 247.4	0.0	+	42.0	
September									
1 - 10	- 51.0	- 72.7	- 123.7	1.3	- 122.4	0.0	+	1.3	
11 - 20	- 57.8	+ 55.8	- 2.0	0.3	- 1.7	0.0	+	0.3	
21 - 30	+ 30.1	+ 47.1	+ 77.2	18.4	95.6	47.8	-	29.4	
October									
1 - 10	+ 59.1	+ 26.8	+ 85.7	4.2	89.9	45.0	-	40.8	
11 - 20	+ 68.0	+ 45.0	+ 113.0	1.0	114.0	57.0	-	56.0	
21 - 31	+ 19.5	+ 39.0	+ 58.5	0.2	58.7	29.4	-	29.2	
Total									
Sec-ft.	1135.4	+ 4137.7	+ 5273.1	11625.4	16898.5	8835.4		2789.9	
Mean	4.6	16.9	21.5	47.5	69.0	26.1		11.4	
Ac-ft.	2250	8200	10460	23060	33520	17520		5530	

Table 4

ESTIMATED DIVERSION FROM THE NORTHERN TRIBUTARIES
OF MILK RIVER IN CANADA
1945

Quantities in Acre-Feet

Irrigator	Source of Supply	Estimated Diversion
<u>Lodge Creek Basin</u>		
No report		
	Total diverted from Lodge Creek Flow of Lodge Creek at Boundary	7930
<u>Battle Creek Basin</u>		
Lindner Bros.	Battle Creek	100
Shepherd Bros.	Battle Creek	3
J. McKinnon	Battle Creek	40
Stirling & Nash	Battle Creek	650
C.B.Spangler	Sixmile Coulee	100
Shepherd Bros.	A Coulee	15
G. Fondrick	A Coulee	30
L. Sowden	A Coulee	75
Battle Creek diversion to Cypress reservoir 1950 less return of <u>2120</u>		-170
Total diverted from Battle Creek Flow of Battle Creek at Boundary		843 8080
<u>Frenchman River Basin</u>		
Hensman, Mrs. S.A.	Nr. Br. Frenchman River	100
Armstrong Bros.	Clarence Coulee	20
Armstrong Bros.	Armstrong Coulee	10
Bolingbroke, J.E.	Bolingbroke Creek	8
Howard J. (Pearce Ditch)	Concrete Coulee	75
Beck, Mary	A Coulee	25
To Cypress Lake Reservoir	2360	
	Less return of <u>2910</u>	-550
East End Irrigation District		4690
Val Marie Irrigation District		6100
Total diverted from Frenchman River Flow of Frenchman River at Boundary		10478 23050

Table 5

MEASURED DIVERSIONS FROM THE NORTHERN TRIBUTARIES
OF MILK RIVER IN THE UNITED STATES

1945

Quantities in Acre-feet

Irrigator	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Total
<u>Lodge Creek</u>									
North Chinook Canal	2780	379	0	0	0	0	0	0	3159
<u>Battle Creek</u>									
Matheson Canal	0	143	164	92	60	40	0	0	499
<u>Frenchman River</u>									
Frenchman Canal	0	868	1790	1210	993	137	0	0	4998
Total	2780	1390	1954	1302	1053	177'	0	0	8556

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