

Report to

THE INTERNATIONAL JOINT COMMISSION

on

THE DIVISION OF THE WATERS OF

THE ST. MARY AND MILK RIVERS

1996



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Cover photo:

Lake Sherburne near Sherburne, Montana, August, 1996.

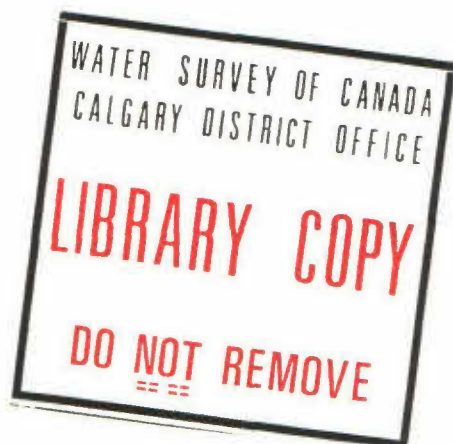
Photo by Donald A. Bischoff, U.S. Geological Survey, Helena, Montana.

Report to
THE INTERNATIONAL JOINT COMMISSION
on
THE DIVISION OF THE WATERS OF
THE ST. MARY AND MILK RIVERS
1996
by

David J. Lystrom
representing the United States

and

R.A. Halliday
representing Canada



March 1997

International Joint Commission
Ottawa, Ontario and Washington, D.C.

Commissioners;

In compliance with the provisions of Article VI of the Boundary Waters Treaty of 1909 and Clause VIII (c) of your order of October 4, 1921, directing the division of the waters of the 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, 1996.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "David I. Lystrom".

David I. Lystrom
Accredited Officer of the United States

A handwritten signature in black ink, appearing to read "R.A. Halliday".

R.A. Halliday
Accredited Officer of Her Majesty

SYNOPSIS

During the 1996 irrigation season, the natural flows of the St. Mary and Milk Rivers were 109 percent and 131 percent, respectively, of the long-term averages.

The natural flow of the St. Mary River at the International Boundary during the irrigation season, April 1 to October 31, 1996, was 782 000 cubic decametres (dam^3) (634,000 acre-feet). Under the terms of the Boundary Waters Treaty, the Canadian share was 467 000 dam^3 (379,000 acre-feet). The total flow recorded at the International Boundary during the irrigation season was 133 percent of the Canadian allotment.

The natural flow of the Milk River at the Eastern Crossing of the International Boundary from March 1 to October 31, 1996, was 183 000 dam^3 (148,000 acre-feet). Under the terms of the Treaty, the United States' allotment was 113 000 dam^3 (91,700 acre-feet). The United States received 334 percent of its allotment at Eastern Crossing, in addition to its share of St. Mary River water diverted into the Milk River by the St. Mary Canal.

The March to October natural flows of the three apportioned tributaries of the Milk River; Lodge Creek, Battle Creek, and Frenchman River; were 213 percent, 260 percent, and 215 percent, respectively, of the long term averages.

The annual meeting of the Field Representatives was held in Helena, Montana, on February 5, 1997. Mutual problems, future plans, and changes in computational procedures were discussed and a schedule of field operations for 1997 was adopted.

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INTRODUCTION

The apportionment of the waters of the St. Mary and Milk Rivers is governed by Article VI of the Boundary Waters Treaty of 1909 between Great Britain and the United States. The terms of the Treaty were further clarified by the 1921 Order of the International Joint Commission. A copy of the 1921 Order, including Article VI, is contained in Annex A of this report.

To comply with this Treaty, Field Representatives of the United States and Canada collected and compiled hydrometric data at 36 international gauging stations on a cooperative basis. An additional 32 gauging stations were operated independently by the United States or Canada to obtain data on diversions, reservoir contents, return flows and index runoff. Most of this additional information was used to improve the accuracy of natural-flow computations.

This report summarizes the 1996 natural-flow computations, apportionment of the natural flow, unusual occurrences during the year, and procedural modifications designed to increase the accuracy of the natural-flow computations. Summary natural-flow tables are included. Detailed natural-flow computations are included in Appendix A. Daily discharge and other related data are included in Appendix B. Appendices A and B are submitted with this report under separate cover.

In accordance with the International System of Units (SI) conversion schedule adopted by the International Joint Commission, this report uses SI units first, followed by inch-pound units in parentheses. Data in tables are shown in SI units first, followed by the respective inch-pound units (for example, Tables 1 and 1A). The format for Appendices A and B of the report is SI units only. All Canadian data are collected, computed and published in SI units. The United States' data, which are collected and computed in inch-pound units, were converted to SI units using the appropriate conversions. A summary of the conversion factors is contained in Annex B.

Mr. R.A. Halliday, as Accredited Officer of Her Majesty, was represented in the field by Mr. R.G. Boals, Chief, Monitoring and Operations Division, Prairie and Northern Region. Mr. David J. Lystrom, United States Geological Survey, as Accredited Officer of the United States, was represented in the field by Mr. R.E. Davis, District Chief, United States Geological Survey, Helena, Montana. This report was prepared jointly by personnel of Environment Canada, Monitoring and

Operations Division, and the United States Geological Survey, under the supervision of Messrs. Boals and Davis.

The annual meeting of the Field Representatives was held in Helena, Montana, on February 5, 1997. Mutual problems, future plans, and changes in computational procedures were discussed and a schedule of field operations for 1997 was adopted.

ST. MARY RIVER

During the irrigation season, April 1 to October 31, Canada's share of the natural flow of the St. Mary River at the International Boundary, as stipulated by the 1921 Order, is three-fourths of the natural flow when that flow is 666 cubic feet per second (18.86 cubic metres per second) or less. Flow in excess of that quantity is divided equally between Canada and the United States. During the non-irrigation season, November 1 to March 31, the flow is divided equally between the two countries.

To comply with the above Order, representatives of both countries make twice-monthly computations of the daily natural flow of the St. Mary River during the irrigation season. If use by the United States is in excess of its share, then a delivery of an equivalent quantity of water is normally made to Canada at the earliest opportunity. Regular interim reports of these computations are sent to all agencies involved in the water use and management of the flow of the St. Mary River. The interim reports keep these agencies informed as to the quantity of water that is available and the status of apportionment.

Tentative computations and interim reports are not made during the non-irrigation season when use by the United States is limited to storage in Lake Sherburne. The flow into Lake Sherburne is considerably less than 50 percent of the natural flow. Occasionally, water is diverted into the St. Mary Canal during the non-irrigation season, necessitating additional computations.

Lake Sherburne, the only storage reservoir within the St. Mary River basin in the United States, is used to store part of the United States' share of flow for later diversion to the Milk River. This water, which passes through Canada, is used by the United States for irrigation in the eastern portion of the Milk River basin.

Storage in Lake Sherburne (station 05AE036) was 44 700 dam³ (36,200 acre-feet) on October 31, 1995 and increased to 48 700 dam³ (39,500 acre-feet) on May 8, 1996, when releases began. Maximum storage was 83 300 dam³ (67,500 acre-feet) on July 4, 1996 and storage decreased to 24 400 dam³ (19,800 acre-feet) by the end of the irrigation season on October 31, 1996.

Water was diverted from the St. Mary River into the Milk River via the St. Mary Canal from May 8 through May 9 and May 16 through October 10, 1996. The St. Mary Canal was not used during May 10-15, 1996, to enable repair of a leak in a syphon pipe. The total flow recorded at the gauging station on the St. Mary Canal at St. Mary Crossing (station 05AE029) was 184 000 dam³ (149,000 acre-feet). Any 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 computed natural flow of the St. Mary River at the International Boundary from November 1, 1995 to October 31, 1996 was 1 020 000 dam³ (827,000 acre-feet) of which 782 000 dam³ (634,000 acre-feet) occurred during the irrigation season, April 1 to October 31, 1996. For the irrigation season, Canada's and the United States' shares were 467 000 dam³ (379,000 acre-feet) and 314 000 dam³ (255,000 acre-feet), respectively. A total discharge of 622 000 dam³ (504,000 acre-feet) was recorded at the International Boundary, which was 133 percent of the Canadian share. The computed natural flow during the irrigation season was 109 percent of the average of the previous 93 years of record.

Deficit deliveries were recorded in 2 of the 14 division periods during the 1996 irrigation season. Deficits were refunded by the middle of October.

The division of St. Mary River natural flow is summarized in Tables 1 and 1A and Figure 1, which follow. The detailed computation of the natural flow is given in Table 6 and the historical summary is given in Table 7 of Appendix A.

TABLE 1
SUMMARY OF ST. MARY RIVER DIVISION FOR 1996¹
QUANTITIES IN CUBIC DECAMETRES

DIVISION PERIOD AT INTERNATIONAL BOUNDARY	COMPUTED NATURAL FLOW	CANADA'S SHARE	RECEIVED BY CANADA	RECEIVED BY CANADA	
				ABOVE SHARE	BELOW SHARE
APR 1 - APR 15	34 531	22 939	33 989	11 050	
APR 16 - APR 30	43 641	27 930	45 087	17 157	
MAY 1 - MAY 15	35 218	23 717	32 374	8 657	
MAY 16 - MAY 31	101 964	57 498	75 330	17 832	
JUNE 1 - JUNE 15	158 752	85 485	131 601	46 116	
JUNE 16 - JUNE 30	121 686	66 951	94 975	28 024	
JULY 1 - JULY 15	100 226	56 221	78 852	22 631	
JULY 16 - JULY 31	57 494	35 264	36 118	854	
AUG 1 - AUG 15	40 222	26 220	22 173		4 047
AUG 16 - AUG 31	26 093	18 845	17 699		1 146
SEPT 1 - SEPT 15	16 386	12 260	12 466	206	
SEPT 16 - SEPT 30	16 106	12 081	16 389	4 308	
OCT 1 - OCT 15	16 860	12 645	15 014	2 369	
OCT 16 - OCT 31	12 584	9 439	9 881	442	
TOTAL	781 763	467 495	621 948		

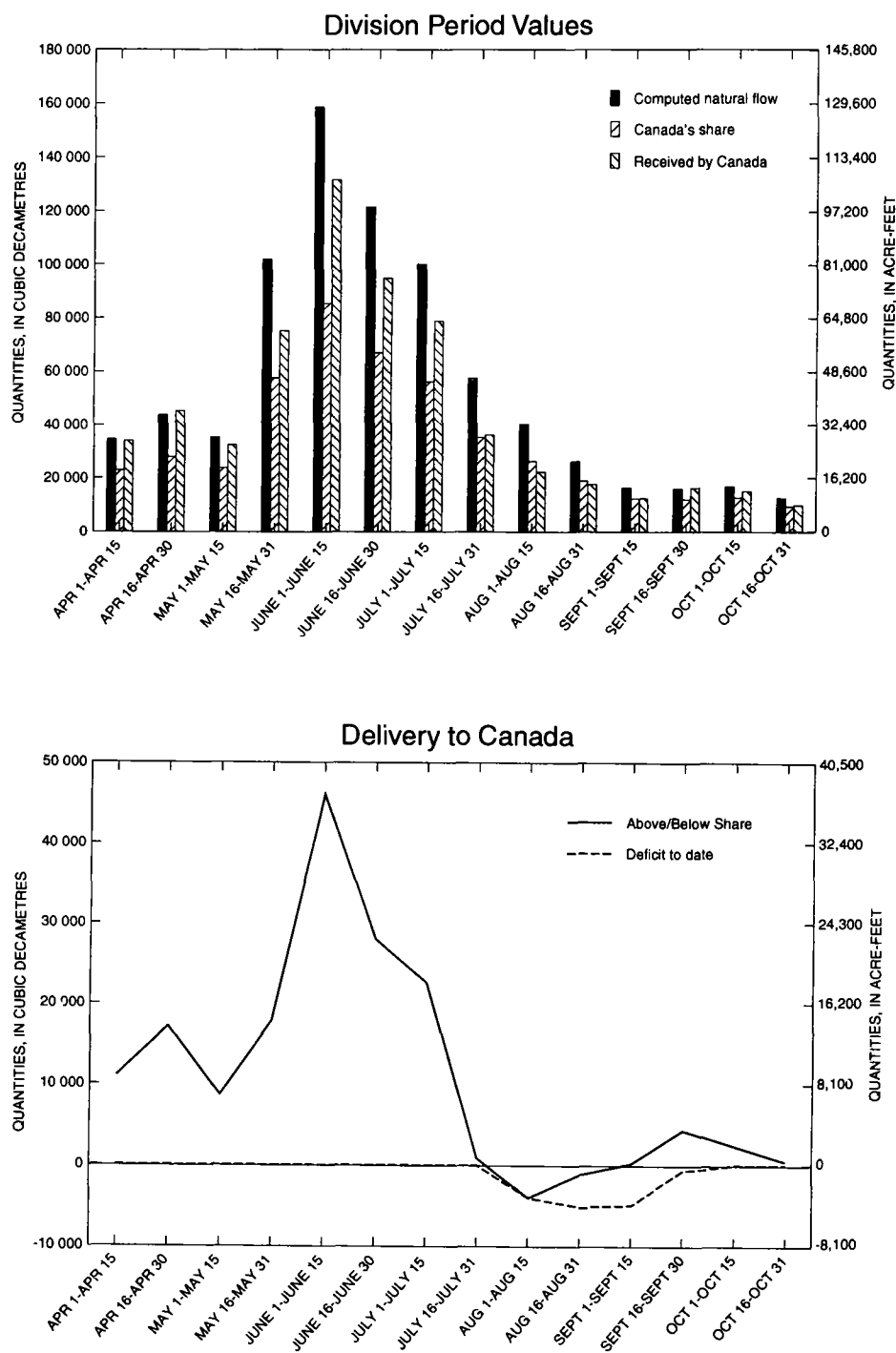
¹This is a summary of data from Table 6, Appendix A.

TABLE 1A
SUMMARY OF ST. MARY RIVER DIVISION FOR 1996¹
QUANTITIES IN ACRE-FEET

DIVISION PERIOD AT INTERNATIONAL BOUNDARY	COMPUTED NATURAL FLOW	CANADA'S SHARE	RECEIVED BY CANADA	RECEIVED BY CANADA	
				ABOVE SHARE	BELOW SHARE
APR 1 - APR 15	27,994	18,597	27,555	8,958	
APR 16 - APR 30	35,380	22,643	36,552	13,909	
MAY 1 - MAY 15	28,551	19,227	26,246	7,108	
MAY 16 - MAY 31	82,662	46,614	61,070	14,456	
JUNE 1 - JUNE 15	128,700	69,303	106,689	37,386	
JUNE 16 - JUNE 30	98,651	54,277	76,996	22,719	
JULY 1 - JULY 15	81,253	45,578	63,925	18,347	
JULY 16 - JULY 31	46,610	28,589	29,281	692	
AUG 1 - AUG 15	32,608	21,257	17,976		3,281
AUG 16 - AUG 31	21,154	15,278	14,349		929
SEPT 1 - SEPT 15	13,284	9,939	10,106	167	
SEPT 16 - SEPT 30	13,057	9,794	13,287	3,492	
OCT 1 - OCT 15	13,668	10,251	12,172	1,921	
OCT 16 - OCT 31	10,202	7,652	8,011	358	
TOTAL	633,775	378,998	504,213		

¹ All values are conversions of data from Table 1. Totals and shares may not add or subtract exactly as a result of rounding.

FIGURE 1
ST. MARY RIVER DIVISION, 1996



MILK RIVER

During the irrigation season, April 1 to October 31, the United States' share of the natural flow of the Milk River at the Eastern Crossing of the International Boundary, as stipulated by the 1921 Order, is three-fourths of the natural flow when that flow is 666 cubic feet per second (18.86 cubic metres per second) or less. Flows in excess of that quantity are divided equally between the United States and Canada. During the non-irrigation season, November 1 to March 31, the entire flow is divided equally between the two countries.

Prior to the mid 1970's, uses of the natural flow of the Milk River by Canada and the United States were assumed to be less than their respective shares and no formal apportionment was made. By 1977, it became apparent that the increasing numbers of sprinkler irrigation systems were capable of using all of the natural flow for long periods of time. Consequently, a more comprehensive natural-flow computation and water-division procedure was developed and has been used since 1985. The revised computation procedure includes an approximate accounting of irrigation consumptive uses in both countries, and the interbasin transfer of water in Canada. An additional refinement was made in 1988 when F.I. Morton's evapotranspiration model replaced the adjusted pan evaporation method in the natural-flow computations. During 1996, the United States' and Canada's respective estimated consumptive uses were 5 050 dam³ (4,090 acre-feet) and 5 160 dam³ (4,180 acre-feet). An interbasin transfer of 9 940 dam³ (8,060 acre-feet) from Verdigris Coulee near the Mouth (station 11AA038) was credited to the Canadian consumptive use.

The computed natural flow of the Milk River at the Eastern Crossing of the International Boundary from March 1 to October 31, 1996 was 200 000 dam³ (162,000 acre-feet). This flow was 143 percent of the average computed natural flow of the previous 84 years of record. It is important to note, however, that natural-flow computations prior to 1985 did not account for consumptive use. Consequently, natural-flow values after 1985 are not directly comparable with natural flows of previous years. The respective shares of the United States and Canada were 125 000 dam³ (101,000 acre-feet) and 75 500 dam³ (61,200 acre-feet). The United States received 165 percent of its allotment at Eastern Crossing, in addition to its share of St. Mary River water diverted into the Milk River by the St. Mary Canal. Deficit deliveries occurred in 4 of the 16 division periods during the season. All deficits were satisfactorily refunded by the end of October.

TABLE 2
SUMMARY OF MILK RIVER DIVISION FOR 1996¹
QUANTITIES IN CUBIC DECAMETRES

DIVISION PERIOD AT INTERNATIONAL BOUNDARY	COMPUTED NATURAL FLOW	U.S.A. SHARE	RECEIVED BY U.S.A.	RECEIVED BY U.S.A.	
				ABOVE SHARE	BELOW SHARE
MAR 1 - MAR 15	67 737	33 867	69 869	36 002	
MAR 16 - MAR 31	28 695	14 349	29 835	15 486	
APR 1 - APR 15	25 214	18 124	26 327	8 203	
APR 16 - APR 30	13 405	10 055	14 411	4 356	
MAY 1 - MAY 15	11 364	8 522	12 117	3 595	
MAY 16 - MAY 31	17 049	12 357	16 583	4 226	
JUNE 1 - JUNE 15	13 217	9 910	12 700	2 790	
JUNE 16 - JUNE 30	9 832	7 289	9 817	2 528	
JULY 1 - JULY 15	3 446	2 583	2 975	392	
JULY 16 - JULY 31	1 659	1 246	1 118		128
AUG 1 - AUG 15	153	115	0		387
AUG 16 - AUG 31	0	0	0		427
SEPT 1 - SEPT 15	4	3	0		42
SEPT 16 - SEPT 30	1 407	1 104	1 931	827	
OCT 1 - OCT 15	3 949	2 960	4 345	1 385	
OCT 16 - OCT 31	3 140	2 352	3 746	1 394	
TOTAL	200 334	124 836	205 774		

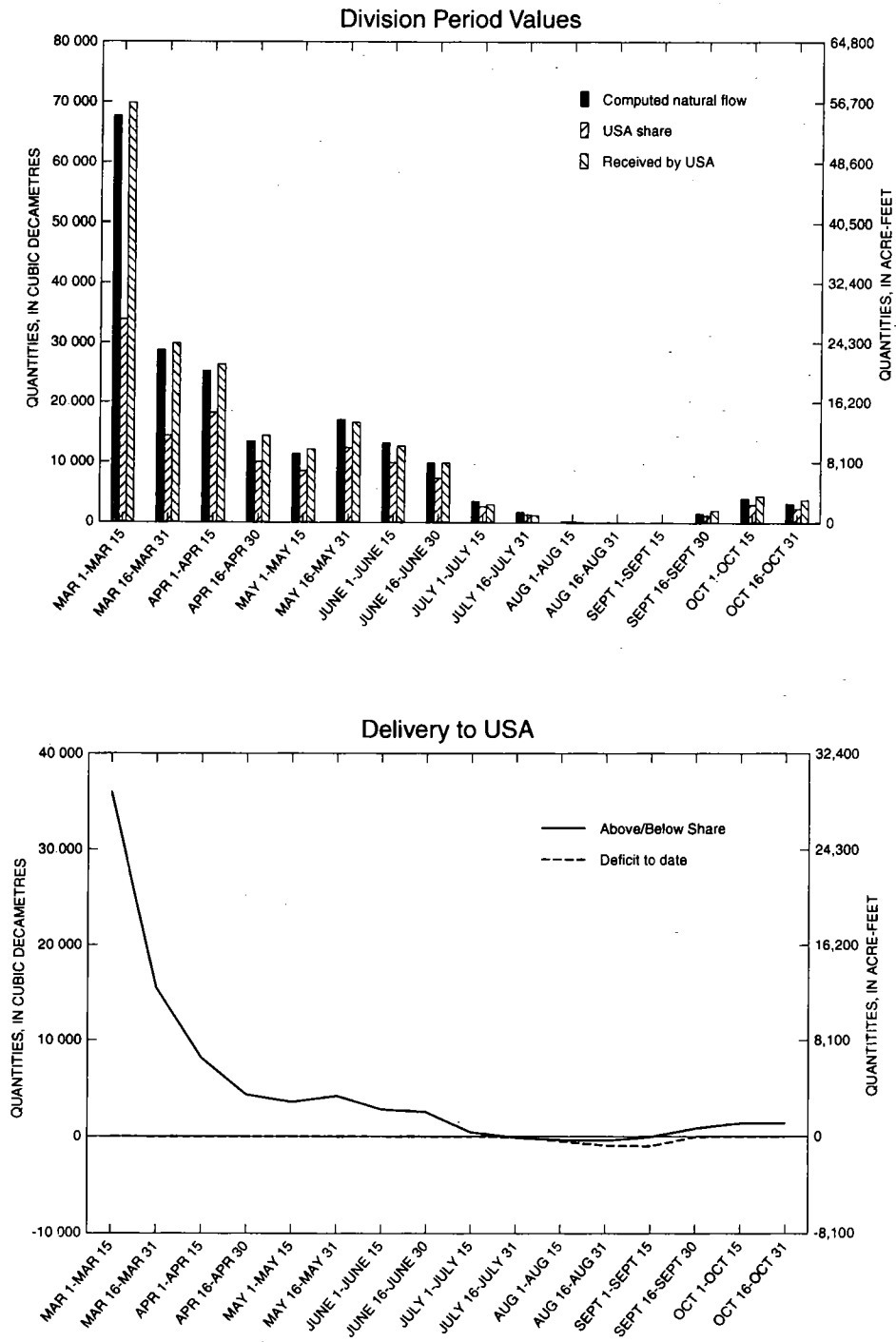
¹This is a summary of data from Table 8, Appendix A.

TABLE 2A
SUMMARY OF MILK RIVER DIVISION FOR 1996¹
QUANTITIES IN ACRE-FEET

DIVISION PERIOD AT INTERNATIONAL BOUNDARY	COMPUTED NATURAL FLOW	U.S.A. SHARE	RECEIVED BY U.S.A.	RECEIVED BY U.S.A.	
				ABOVE SHARE	BELOW SHARE
MAR 1 - MAR 15	54,916	27,457	56,643	29,187	
MAR 16 - MAR 31	23,264	11,633	24,187	12,555	
APR 1 - APR 15	20,441	14,694	21,343	6,650	
APR 16 - APR 30	10,868	8,152	11,683	3,532	
MAY 1 - MAY 15	9,213	6,909	9,823	2,915	
MAY 16 - MAY 31	13,822	10,018	13,444	3,426	
JUNE 1 - JUNE 15	10,716	8,034	10,296	2,262	
JUNE 16 - JUNE 30	7,971	5,909	7,959	2,049	
JULY 1 - JULY 15	2,794	2,094	2,412	318	
JULY 16 - JULY 31	1,345	1,010	906		104
AUG 1 - AUG 15	124	93	0		314
AUG 16 - AUG 31	0	0	0		347
SEPT 1 - SEPT 15	3	2	0		34
SEPT 16 - SEPT 30	1,192	895	1,565	671	
OCT 1 - OCT 15	3,201	2,400	3,522	1,123	
OCT 16 - OCT 31	2,546	1,907	3,037	1,130	
TOTAL	162,411	101,205	166,821		

¹ All values are conversions of data from Table 2. Totals and shares may not add or subtract exactly as a result of rounding.

FIGURE 2
MILK RIVER DIVISION, 1996



SOUTHERN TRIBUTARIES OF THE MILK RIVER

Responding to concerns expressed by Canadian water users, the International Joint Commission at its executive session on December 8, 1986, agreed in principle that the issue of utilization of the southern tributaries should be addressed in an informal, pragmatic manner. The Commission instructed the Accredited Officers to proceed with discussion to resolve Canadian concerns. To assist them in implementing the Commission's instructions, the Accredited Officers established a four-member ad hoc task force comprised of officials from the State of Montana and the Province of Alberta water management agencies and the United States and Canadian field representatives for the St. Mary-Milk River Treaty.

The task force met with United States and Canadian water users, conducted public meetings, toured water-use projects, compiled information on water availability and use, investigated ground-water supplies, and considered various options for resolving issues. The task force determined that United States water users were reluctant to participate in options that might limit their use of water and jeopardize their water claims in future adjudication of water rights. They also determined that basic Canadian water-user needs for domestic and stock-water use were being satisfied with wells and dugouts. Solutions to water-utilization problems were limited because cost of storage facilities, pumpage from the Milk River, and formal apportionment of southern tributary waters would not be cost effective.

In September 1991, the Montana Department of Natural Resources and Conservation, in response to requests from the task force and others, issued an Order to close the southern tributaries to issuance of additional water permits.

The final report was forwarded to the International Joint Commission in May 1994. At its Executive session on September 21, 1994, the Commission agreed that the task force should be terminated as recommended. The Commission also agreed not to act at that time on the three recommendations related to the adjudication process, but requested that the Accredited Officers continue to monitor the situation and report annually, or more frequently if appropriate, on such matters as complaints by Canadian ranchers and changes in the status of basin adjudication.

Communication with officials from Alberta Environment and the Montana Department of Natural Resources and Conservation in January 1997 indicated no Canadian complaints or changes in the Montana adjudication process in 1996.

Flows for March through October 1996 for the southern tributaries were as follows:

- o Breed Creek near International Boundary - 3 540 dam³ (2,870 acre-feet)
- o Bear Creek near International Boundary - 2 460 dam³ (1,990 acre-feet)
- o Miners Coulee near International Boundary - 1 470 dam³ (1,190 acre-feet)

Streamflow monitoring operations at Breed Creek near International Boundary were discontinued at the end of the 1996 season.

EASTERN TRIBUTARIES OF THE MILK RIVER

The waters of the eastern tributaries of the Milk River are divided in accordance with the 1921 Order of the International Joint Commission, which stipulates under Rule III that "The natural flow of the eastern (otherwise known as the Saskatchewan or northern) tributaries of the Milk River at the points where they cross the International Boundary shall be divided equally between the two countries." This order might well be interpreted as requiring that the division of water be made on a continuing basis, however, the physical limitation due to transit time in the flow system was recognized. Further analysis showed that the minimum practical time frame for compilation of the natural flows at the International Boundary was every ten days. In 1994 the time frame was increased to twice monthly to reduce lag-time anomalies, reduce costs, and conform to St. Mary and Milk Rivers computation periods.

Prior to 1937, Canadian use along the eastern tributaries consisted of domestic projects, and the Canadian share of the natural flow was not fully used. In the late 1930's, the Government of Canada constructed three dams on the Frenchman River creating Eastend Reservoir (station 11AC055), Huff Lake (11AC063), and Newton Lake (station 11AC056) and necessitated an operational division of flow on this tributary by 1937. In 1938, dams were constructed at both ends of Cypress Lake (station 11AC037) near the Battle Creek-Frenchman River divide to allow interbasin storage and transfers of water. In the early 1950's the redevelopment of several private irrigation projects and the construction of the Vidora Irrigation Project resulted in increased use of Battle Creek water in Canada and made an operational division of the flow on this tributary necessary by 1957. In 1960, construction of Altawan reservoir (station 11AB089) and Spangler Irrigation Project (station 11AB060) on Lodge Creek made an operational division of flow on this tributary necessary by 1961.

During the period March 1 to October 31, twice-monthly computations of the natural flow of Lodge Creek, Battle Creek and the Frenchman River are made to determine each country's share. If use by Canada is in excess of its share, then a delivery of an equivalent quantity of water is made to the United States at the earliest opportunity. When mutually agreed to, the United States or Canada may request that deficit deliveries be delayed to allow for more efficient use of the water.

Regular interim reports on the progress of the division of the natural flows of Lodge Creek, Battle Creek, and Frenchman River at the International Boundary are distributed to interested agencies during the irrigation season. Additional computations may be made to account for significant usages before October 31. Generally, no division of flow is made during winter as flow and use are low and streamflow records are impractical to obtain.

Lyons Creek is monitored by Canada, but does not have sufficient use in Canada at this time to warrant an operational division of flow. A total flow of 3 790 dam³ (3,070 acre-feet) was recorded on Lyons Creek in 1996.

Volumes for unmeasured diversions to private irrigation projects in the Lodge Creek, Battle Creek, and Frenchman River basins in Saskatchewan were based on year-end reports provided by the Saskatchewan Water Corporation, and for the Lodge Creek and Battle Creek basins in Alberta, by Alberta Environmental Protection. These reports are compiled from reports received from operators of irrigation projects and from on-site inspections. An additional adjustment is made for domestic projects in the Battle Creek and Frenchman River basins based on the results of studies conducted by Canada on domestic use.

For Interim reports prepared at the end of each division period, estimates of minor diversions were made based on field conditions and historical usages. At mid-year and at year-end, estimates of minor diversions were updated based on usage reports received from Alberta Environmental Protection and the Saskatchewan Water corporation. Consequently, some discrepancy exists between interim and the final division computations. Lists of reported diversions are contained in Appendix B.

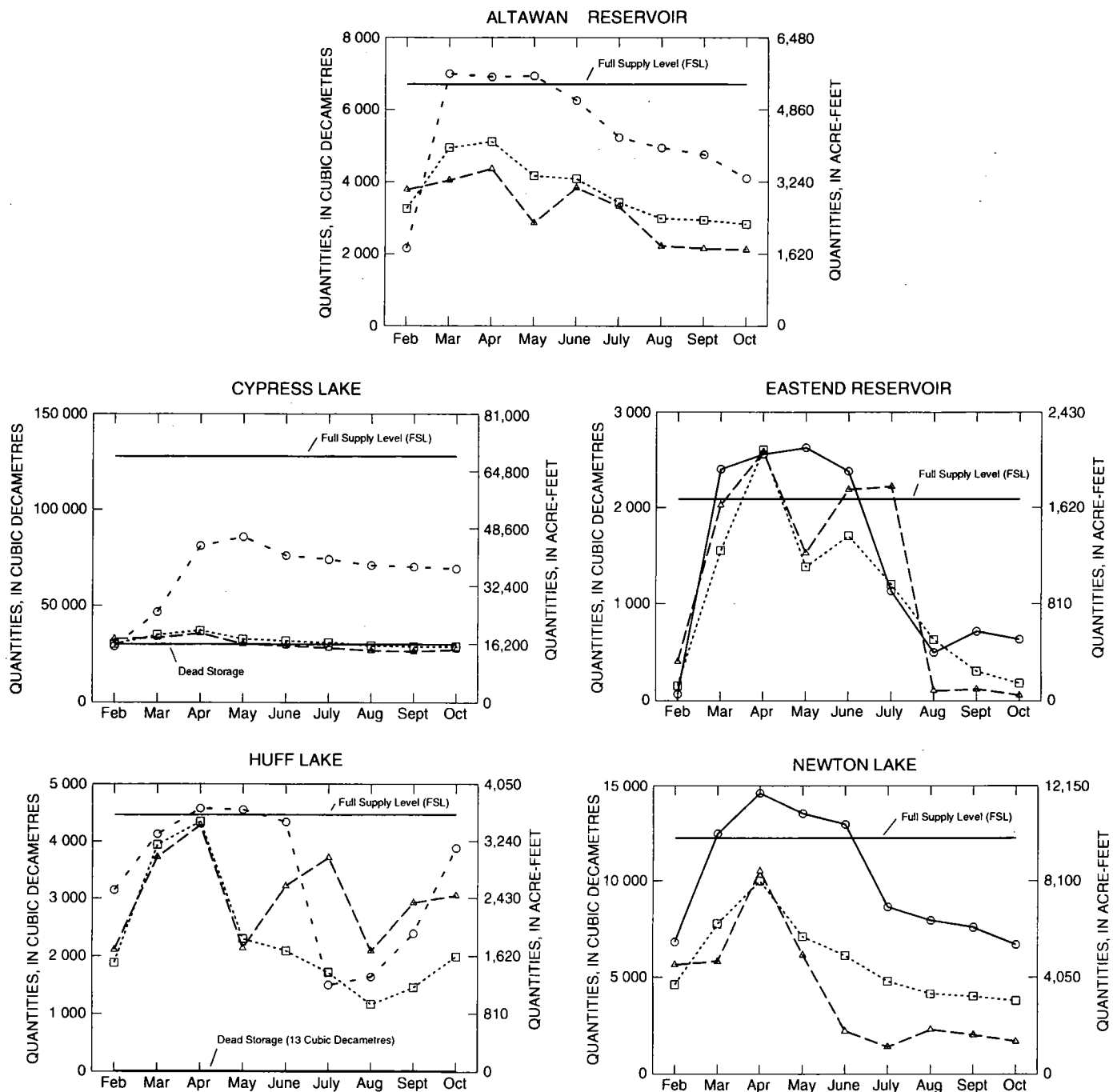
Above average runoff and normal water use by local irrigators occurred in 1996, causing Cypress Lake levels to remain well above dead storage from March through the end of the year. Data collection operations at Middle Creek Reservoir were discontinued in 1996.

On the Frenchman River system, the completed construction of the control and spillway at Eastend Reservoir allowed water levels to be restored to pre-construction levels.

At the end of February, the combined usable storage of Altawan Reservoir, Cypress Lake, Eastend Reservoir, Huff Lake, and Newton Lake was 41 100 dam³ (33,300 acre-feet), or 33 percent of the total usable storage of 124 000 dam³ (102,000 acre-feet). By the end of May, runoff had increased the combined storage to the yearly maximum of 113 000 dam³ (91,600 acre-feet), or 92% of the total usable storage. By the end of September, irrigation usage, evaporation, and releases from the reservoirs depleted the combined usable storage to 85 600 dam³ (69,400 acre-feet) or 69% of the total usable storage. Further details on storage in the major Canadian reservoirs are provided in Figure 3, and in Table 16 of Appendix B.

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FIGURE 3

RESERVOIRS IN LODGE, BATTLE, AND FRENCHMAN BASINS
MONTH-END CONTENTS, 1995, 1996, AND 1986-95 MEAN



EXPLANATION

- 1996
- ▲- 1995
- 1986-95 MEAN

LODGE CREEK

The computed natural flow of Lodge Creek at the International Boundary from March 1 to October 31, 1996, was 68 400 dam³ (55,500 acre-feet). This volume is 213 percent of the average natural flow of the previous 46 years of record. Each country is entitled to 50 percent of the natural flow -- 34 200 dam³ (27,700 acre-feet). A total flow of 53 400 dam³ (43,300 acre-feet) was recorded at Lodge Creek below McRae Creek at the International Boundary (station 11AB083) from March 1 to October 31.

Deficit deliveries were recorded in 4 of the 16 division periods during the season. An attempt was made in early October to refund the 469 dam³ (380 acre-feet) deficit which occurred during the second midsummer irrigation. Most of the deficit was refunded but a deficit of 189 dam³ (153 acre-feet) still remained at the end of October.

The division of the Lodge Creek natural flow is summarized in Tables 3 and 3A and Figure 4 which follow. The detailed computation of the natural flow is given in Table 10 and the historical summary is given in Table 11 of Appendix A.

TABLE 3
SUMMARY OF LODGE CREEK DIVISION FOR 1996¹
QUANTITIES IN CUBIC DECAMETRES

DIVISION PERIOD AT INTERNATIONAL BOUNDARY	COMPUTED NATURAL FLOW	U.S.A. SHARE	RECEIVED BY U.S.A.	RECEIVED BY U.S.A.	
				ABOVE SHARE	BELOW SHARE
MAR 1 - MAR 15	597	298	8		290
MAR 16 - MAR 31	26 305	13 152	16 845	3 693	
APR 1 - APR 15	36 453	18 227	31 908	13 681	
APR 16 - APR 30	2 052	1 026	2 612	1 586	
MAY 1 - MAY 15	940	470	744	274	
MAY 16 - MAY 31	569	285	420	135	
JUNE 1 - JUNE 15	242	121	379	258	
JUNE 16 - JUNE 30	689	345	161		184
JULY 1 - JULY 15	579	290	6		284
JULY 16 - JULY 31	0	0	2	2	
AUG 1 - AUG 15	5	3	0		3
AUG 16 - AUG 31	0	0	0	0	
SEPT 1 - SEPT 15	0	0	0	0	
SEPT 16 - SEPT 30	0	0	0	0	
OCT 1 - OCT 15	0	0	276	276	
OCT 16 - OCT 31	9	5	9	4	
TOTAL	68 441	34 222	53 370		

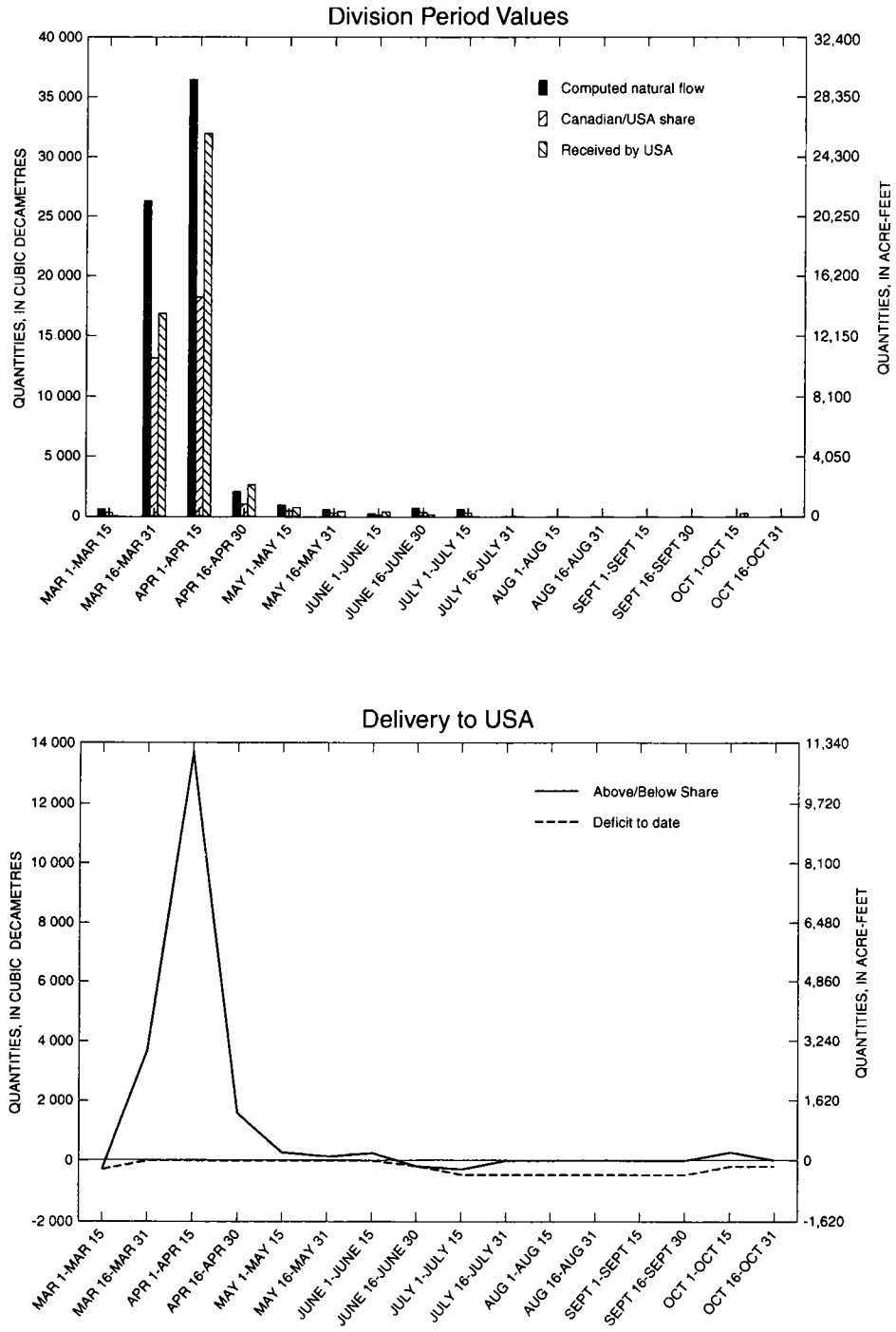
¹This is a summary of data from Table 10, Appendix A. Totals and shares may not add or subtract exactly as a result of rounding.

TABLE 3A
SUMMARY OF LODGE CREEK DIVISION FOR 1996¹
QUANTITIES IN ACRE-FEET

DIVISION PERIOD AT INTERNATIONAL BOUNDARY	COMPUTED NATURAL FLOW	U.S.A. SHARE	RECEIVED BY U.S.A.	RECEIVED BY U.S.A.	
				ABOVE SHARE	BELOW SHARE
MAR 1 - MAR 15	484	242	6		235
MAR 16 - MAR 31	21,325	10,662	13,656	2,994	
APR 1 - APR 15	29,552	14,777	25,868	11,091	
APR 16 - APR 30	1,664	832	2,118	1,286	
MAY 1 - MAY 15	762	381	603	222	
MAY 16 - MAY 31	461	231	340	109	
JUNE 1 - JUNE 15	196	98	307	209	
JUNE 16 - JUNE 30	559	280	131		149
JULY 1 - JULY 15	469	235	5		230
JULY 16 - JULY 31	0	0	2	2	
AUG 1 - AUG 15	4	2	0		2
AUG 16 - AUG 31	0	0	0	0	
SEPT 1 - SEPT 15	0	0	0	0	
SEPT 16 - SEPT 30	0	0	0	0	
OCT 1 - OCT 15	0	0	224	224	
OCT 16 - OCT 31	7	4	7	3	
TOTAL	55,485	27,744	43,267		

¹All values are conversions of data from Table 3. Totals and shares may not add or subtract exactly as a result of rounding.

FIGURE 4
LODGE CREEK DIVISION, 1996



BATTLE CREEK

The computed natural flow of Battle Creek at the International Boundary from March 1 to October 31, 1996, was 79 400 dam³ (64,400 acre-feet). This volume is 260 percent of the average natural flow of the previous 56 years of record. Each country is entitled to 50 percent of the natural flow -- 39 700 dam³ (32,200 acre-feet). A total flow of 38 100 dam³ (30,900 acre-feet) was recorded at Battle Creek at International Boundary (station 11AB027) from March 1 to October 31.

Deficit deliveries were recorded in 3 of the 16 division periods during the season. The season-ending deficit of 1 584 dam³ (1,284 acre-feet) on Battle Creek is a result of a recomputation of records and not of poor water management. The flows into Cypress Lake during the first and second periods resulted in the majority of the deficit to be incurred early in the year. Deliveries to the United States throughout the apportionment period reduced the deficit and interim computations showed that the deficit had been repaid. Since the deficit was carried through the entire year, the recalculation of final records and adjustment upwards of the estimated flows into Cypress Lake resulted in an enduring deficit.

The division of the Battle Creek natural flow is summarized in Tables 4 and 4A and Figure 5 which follow. The detailed computation of the natural flow is given in Table 12 and the historical summary is given in Table 13 of Appendix A.

TABLE 4
SUMMARY OF BATTLE CREEK DIVISION FOR 1996¹
QUANTITIES IN CUBIC DECAMETRES

DIVISION PERIOD AT INTERNATIONAL BOUNDARY	COMPUTED NATURAL FLOW	U.S.A. SHARE	RECEIVED BY U.S.A.	RECEIVED BY U.S.A.	
				ABOVE SHARE	BELOW SHARE
MAR 1 - MAR 25	19 857	9 929	4 670		5 259
MAR 26 - APR 9	8 689	4 345	4 506	161	
APR 10 - APR 24	34 289	17 145	15 879		1 266
APR 25 - MAY 9	6 245	3 123	3 148	25	
MAY 10 - MAY 25	3 358	1 679	1 520		159
MAY 26 - JUNE 9	2 316	1 158	1 360	202	
JUNE 10 - JUNE 24	951	476	2 076	1 600	
JUNE 25 - JULY 9	991	496	2 231	1 735	
JULY 10 - JULY 25	840	420	856	436	
JULY 26 - AUG 9	370	185	368	183	
AUG 10 - AUG 25	181	91	179	88	
AUG 26 - SEPT 9	92	46	90	44	
SEPT 10 - SEPT 24	210	105	210	105	
SEPT 25 - OCT 9	472	236	472	236	
OCT 10 - OCT 25	421	211	421	210	
OCT 26 - OCT 31	150	75	150	75	
TOTAL	79 432	39 720	38 136		

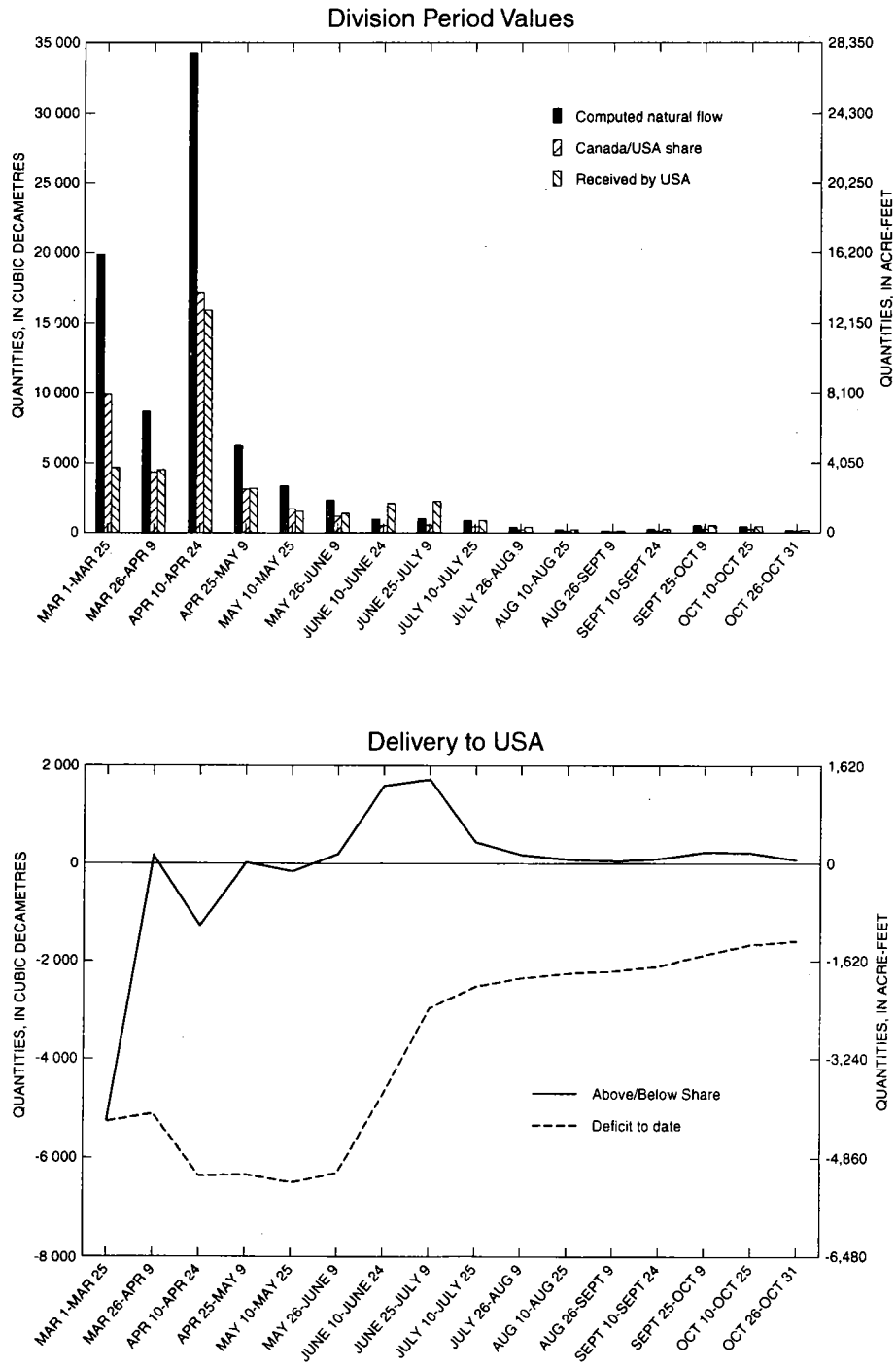
¹This is a summary of data from Table 12, Appendix A. Totals and shares may not add or subtract exactly as a result of rounding.

TABLE 4A
SUMMARY OF BATTLE CREEK DIVISION FOR 1996¹
QUANTITIES IN ACRE-FEET

DIVISION PERIOD AT INTERNATIONAL BOUNDARY	COMPUTED NATURAL FLOW	U.S.A. SHARE	RECEIVED BY U.S.A.	RECEIVED BY U.S.A.	
				ABOVE SHARE	BELOW SHARE
MAR 1 - MAR 25	16,098	8,049	3,786		4,263
MAR 26 - APR 9	7,044	3,522	3,653	131	
APR 10 - APR 24	27,798	13,899	12,873		1,026
APR 25 - MAY 9	5,063	2,532	2,552	20	
MAY 10 - MAY 25	2,722	1,361	1,232		129
MAY 26 - JUNE 9	1,878	939	1,103	164	
JUNE 10 - JUNE 24	771	386	1,683	1,297	
JUNE 25 - JULY 9	803	402	1,809	1,407	
JULY 10 - JULY 25	681	340	694	353	
JULY 26 - AUG 9	300	150	298	148	
AUG 10 - AUG 25	147	74	145	71	
AUG 26 - SEPT 9	75	37	73	36	
SEPT 10 - SEPT 24	170	85	170	85	
SEPT 25 - OCT 9	383	191	383	191	
OCT 10 - OCT 25	341	171	341	170	
OCT 26 - OCT 31	122	61	122	61	
TOTAL	64,396	32,201	30,917		

¹ All values are conversions of data from Table 4. Totals and shares may not add or subtract exactly as a result of rounding.

FIGURE 5
BATTLE CREEK DIVISION, 1996



FRENCHMAN RIVER

The computed natural flow of the Frenchman River at the International Boundary from March 1 to October 31, 1996, was 169 000 dam³ (137,000 acre-feet). This volume is 215 percent of the average natural flow of the previous 56 years of record. Each country is entitled to 50 percent of the natural flow -- 84 500 dam³ (68,500 acre-feet). A total flow of 134 000 dam³ (109,000 acre-feet) was recorded at Frenchman River at International Boundary (station 11AC041) from March 1 to October 31.

Deficit deliveries were recorded in 4 of the 16 division periods during the season. A deficit of 284 dam³ (230 acre-feet) remained at the end of October.

The division of the Frenchman River natural flow is summarized in Tables 5 and 5A and Figure 6 which follow. The detailed computation of the natural flow is given in Table 14 and the historical summary is given in Table 15 of Appendix A.

TABLE 5
SUMMARY OF FRENCHMAN RIVER DIVISION FOR 1996¹
QUANTITIES IN CUBIC DECAMETRES

DIVISION PERIOD AT INTERNATIONAL BOUNDARY	COMPUTED NATURAL FLOW	U.S.A. SHARE	RECEIVED BY U.S.A.	RECEIVED BY U.S.A.	
				ABOVE SHARE	BELOW SHARE
MAR 1 - MAR 15	5 617	2 809	3 115	306	
MAR 16 - MAR 31	55 682	27 841	47 002	19 161	
APR 1 - APR 15	47 471	23 736	46 976	23 240	
APR 16 - APR 30	35 313	17 656	22 432	4 776	
MAY 1 - MAY 15	6 570	3 285	4 871	1 586	
MAY 16 - MAY 31	5 264	2 632	1 918		714
JUNE 1 - JUNE 15	4 830	2 415	2 960	545	
JUNE 16 - JUNE 30	2 430	1 215	1 420	205	
JULY 1 - JULY 15	979	490	611	121	
JULY 16 - JULY 31	1 073	536	1 315	779	
AUG 1 - AUG 15	1 172	586	291		295
AUG 16 - AUG 31	201	101	37		64
SEPT 1 - SEPT 15	0	0	7	7	
SEPT 16 - SEPT 30	1 142	571	733	162	
OCT 1 - OCT 15	718	359	49		310
OCT 16 - OCT 31	433	217	433	216	
TOTAL	168 895	84 449	134 169		

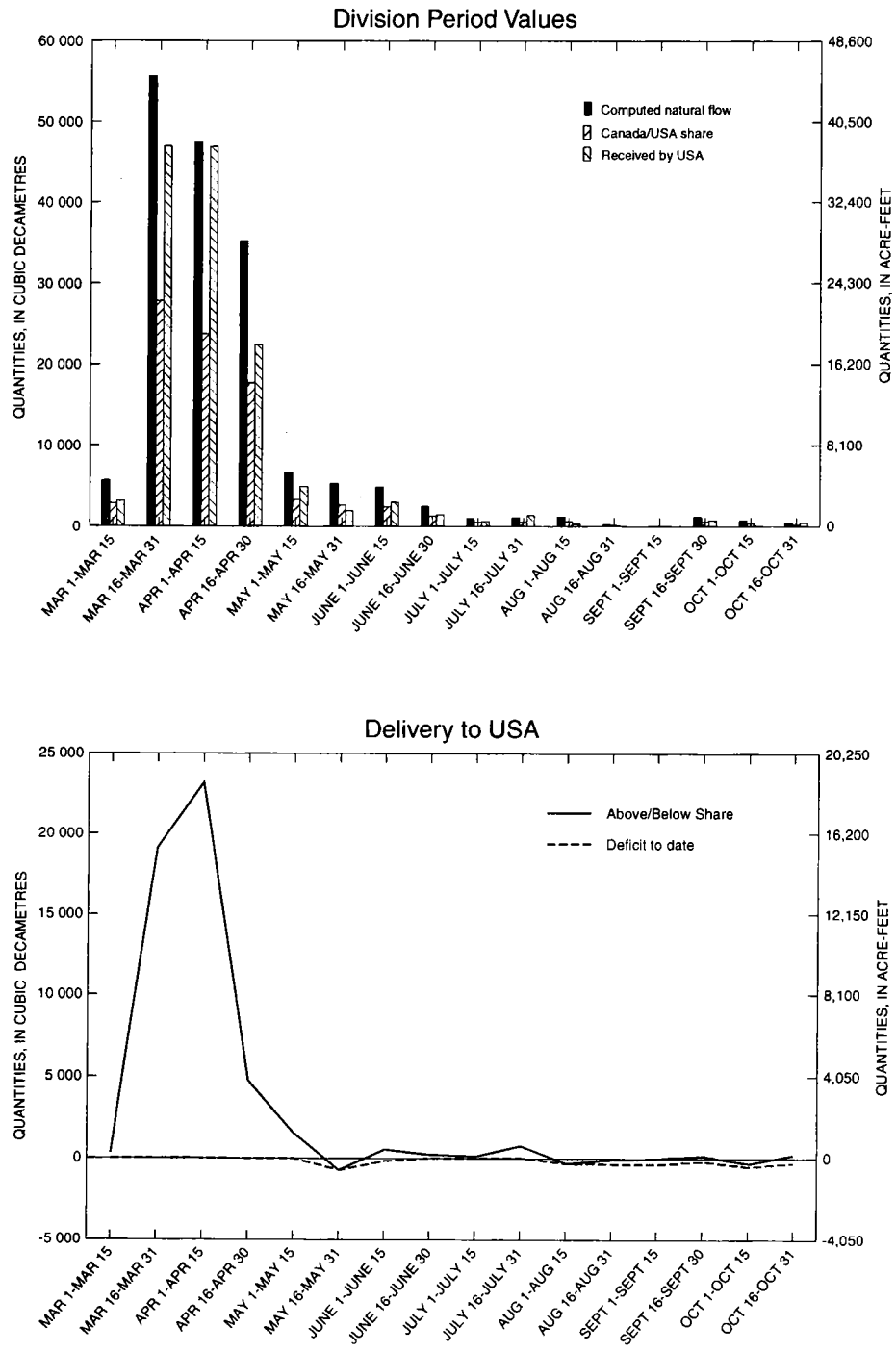
¹This is a summary of data from Table 14, Appendix A. Totals and shares may not add or subtract exactly as a result of rounding.

TABLE 5A
SUMMARY OF FRENCHMAN RIVER DIVISION FOR 1996¹
QUANTITIES IN ACRE-FEET

DIVISION PERIOD AT INTERNATIONAL BOUNDARY	COMPUTED NATURAL FLOW	U.S.A. SHARE	RECEIVED BY U.S.A.	RECEIVED BY U.S.A.	
				ABOVE SHARE	BELOW SHARE
MAR 1 - MAR 15	4,554	2,277	2,525	248	
MAR 16 - MAR 31	45,141	22,571	38,105	15,534	
APR 1 - APR 15	38,485	19,243	38,083	18,841	
APR 16 - APR 30	28,628	14,314	18,186	3,872	
MAY 1 - MAY 15	5,326	2,663	3,949	1,286	
MAY 16 - MAY 31	4,268	2,134	1,555		579
JUNE 1 - JUNE 15	3,916	1,958	2,400	442	
JUNE 16 - JUNE 30	1,970	985	1,151	166	
JULY 1 - JULY 15	794	397	495	98	
JULY 16 - JULY 31	870	435	1,066	632	
AUG 1 - AUG 15	950	475	236		239
AUG 16 - AUG 31	163	82	30		52
SEPT 1 - SEPT 15	0	0	6	6	
SEPT 16 - SEPT 30	926	463	594	131	
OCT 1 - OCT 15	582	291	40		251
OCT 16 - OCT 31	351	176	351	175	
TOTAL	136,923	68,463	108,771		

¹ All values are conversions of data from Table 5. Totals and shares may not add or subtract exactly as a result of rounding.

FIGURE 6
FRENCHMAN RIVER DIVISION, 1996



ANNEX A

1921 ORDER OF THE INTERNATIONAL JOINT COMMISSION
RESPECTING THE ST. MARY-MILK RIVERS

INTERNATIONAL JOINT COMMISSION

ORDER

IN THE MATTER OF THE MEASUREMENT AND APPORTIONMENT OF THE WATERS OF THE ST. MARY AND MILK RIVERS AND THEIR TRIBUTARIES IN THE STATE OF MONTANA AND THE PROVINCES OF ALBERTA AND SASKATCHEWAN.

Whereas by Article VI of the Treaty entered into between the United States of America and His Majesty, the King of the United Kingdom of Great Britain and Ireland and of the British Dominions beyond the Seas, Emperor of India, signed at Washington on the 11th of January 1909, it is provided as follows:

The High Contracting Parties agree that the St. Mary and Milk Rivers and their tributaries (in the State of Montana and the Provinces of Alberta and Saskatchewan) are to be treated as one stream for the purposes of irrigation and power, and the waters thereof shall be apportioned equally between the two countries, but in making such equal apportionment more than half may be taken from one river and less than half from the other by either country so as to afford a more beneficial use to each. It is further agreed that in the division of such waters during the irrigation season, between the 1st of April and 31st of October, inclusive, annually, the United States is entitled to a prior appropriation of 500 cubic feet per second of the waters of the Milk River, or so much of such amount as constitutes three-fourths of its natural flow, and that Canada is entitled to a prior appropriation of 500 cubic feet per second of the flow of St. Mary River, or so much of such amount as constitutes three-fourths of its natural flow.

The channel of the Milk River in Canada may be used at the convenience of the United States for the conveyance, while passing through Canadian territory, of waters diverted from the St. Mary River. The provisions of Article II of this treaty shall apply to any injury resulting to property in Canada from the conveyance of such waters through the Milk River.

The measurement and apportionment of the water to be used by each country shall from time to time be made jointly by the properly constituted reclamation officers of the United States and the properly constituted irrigation officers of His Majesty under the direction of the International Joint Commission.

And whereas, the said Reclamation and Irrigation Officers have been unable to agree as to the manner in which the waters mentioned in the said Article VI should be measured and apportioned;

And whereas, before giving directions as to the measurement and apportionment of the said waters, the International Joint Commission deemed it proper to hear such representations and suggestions thereon as the Governments of the United States and Canada, the Provinces of Alberta and Saskatchewan, and the State of Montana, and as corporations and persons interested might see fit to make, and for such purposes sittings of the Commission were held at the following times and places: At the city of St. Paul, in the State of Minnesota, on the 24th, 25th, 26th, 27th, and 28th days of May, 1915; at the city of Detroit, in the State of Michigan, on the 15th, 16th, and 17th days of May, 1917; at the city of Ottawa, in the Province of Ontario, on the 3rd, 4th, and 5th days of May, 1920; at the village of Chinook, in the State of Montana, on the 15th day of September 1921; and at the city of Lethbridge, in the Province of Alberta, on the 17th day of September, 1921, when counsel and representatives of the said Governments, corporations, and persons appeared and presented their views;

And whereas, pending final decision as to the proper method of measuring and apportioning said waters, interim orders with reference thereto have been made by the International Joint Commission from time to time, the last of such orders bearing the date of 5th day of April, 1921;

And whereas the members of the International Joint Commission have unanimously determined that the said Reclamation and Irrigation Officers should be guided in the measurement and apportionment of said waters by the directions and instructions hereinafter set forth;

IT IS THEREFORE ORDERED AND DIRECTED by the Commission in pursuance of the powers conferred by the said Article VI of the said Treaty that the Reclamation and Irrigation Officers of the United States and Canada shall, until this order is varied, modified, or withdrawn by the Commission, make jointly the measurement and apportionment of the water to be used by the United States and Canada in accordance with the following rules:

St. Mary River

I. (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.

(c) During the non-irrigation season the natural flow of the St. Mary River at the point where it crosses the international boundary shall be divided equally between the two countries.

Milk River

II. (a) During the irrigation season when the natural flow of the Milk River at the point where it crosses the international boundary for the last time (commonly and hereafter called the Eastern Crossing) is six hundred and sixty-six (666) cubic feet per second or less, the United States shall be entitled to three-fourths and Canada to one-fourth of such natural flow.

(b) During the irrigation season when the natural flow of the Milk River at the Eastern Crossing is more than six hundred and sixty-six (666) cubic feet per second the United States 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.

(c) During the non-irrigation season the natural flow of the Milk River at the Eastern Crossing shall be divided equally between the two countries.

Eastern Tributaries of Milk River

III. The natural flow of the eastern (otherwise known as the Saskatchewan or northern) tributaries of the Milk River at the points where they cross the international boundary shall be divided equally between the two countries.

Waters not naturally crossing the boundary

IV. Each country shall be apportioned such waters of the said rivers and of any tributaries thereof as rise in that country but do not naturally flow across the international boundary.

V. For the purpose of carrying out the apportionment directed in Paragraphs I, II, and III hereof the said Reclamation and Irrigation Officers shall jointly take steps:

(a) To ascertain and keep a daily record of the natural flow of the St. Mary River at the international boundary, of the Milk River at the Eastern Crossing, and of the eastern tributaries of the Milk River at the international boundary by measurement in each case:

- (1) At the gauging station at the international boundary;
- (2) At all places where any of the waters which would naturally flow across the international boundary at that particular point are diverted in either country prior to such crossing;
- (3) At all places where any of the waters which would naturally flow across the international boundary at that particular point are stored, or the natural flow thereof increased or decreased prior to such crossing;

(b) To fix the amount of water to which each country is entitled in each case by applying the directions contained in paragraphs 1, 2, and 3 hereof to the total amount of the natural flow so ascertained in each case.

(c) To communicate the amount so fixed to all parties interested, so that the apportionment of the said waters may be fully carried out by both countries in accordance with the said directions.

VI. Each country may receive its share of the said waters as so fixed at such point or points as it may desire. A gauging station shall be established and maintained by the Reclamation or Irrigation Officers of the country in which any diversion, storage, increase or decrease of the natural flow shall be made at every point where such diversion, storage, increase, or decrease takes place.

VII. International gauging stations shall be maintained at the following points:

St. Mary River near international boundary; the north branch of Milk River near international boundary; the south branch of Milk River near international boundary; Milk River at Eastern Crossing; Lodge Creek, Battle Creek, and Frenchman River, near international boundary; and gauging stations shall be established and maintained at such other points as the Commission may from time to time approve.

VIII. The said Reclamation and Irrigation Officers are hereby further authorized and directed:

(a) To make such additional measurements and to take such further and other steps as may be necessary or advisable in order to insure the apportionment of the said waters in accordance with the directions herein set forth.

(b) To operate the irrigation works of either country in such a manner as to facilitate the use by the other country of its share of the said waters and subject hereto to secure to the two countries the greatest beneficial use thereof.

(c) To report to the Commission the measurements made at all international and other gauging stations established pursuant to this order.

IX. In the event of any disagreement in respect to any matter or thing to be done under this order the said Reclamation and Irrigation Officers shall report to the Commission, setting forth fully the points of difference and the facts relating thereto.

X. The said order of the Commission dated the 6th day of April 1921, is hereby withdrawn, except with respect to the report to be furnished to the Commission thereunder.

Dated at Ottawa, Canada, this 4th day of October, 1921.

O. GARDNER,
C.A. MAGRATH,
C.D. CLARK,
HENRY A. POWELL,
W.H. HEARST,
MARK A. SMITH.

ANNEX B

Conversion Factors

FACTORS FOR CONVERSION BETWEEN INCH-POUND UNITS
AND INTERNATIONAL SYSTEM (SI) UNITS

Since 1975, the Report to the International Joint Commission on the Division of the Waters of the St. Mary and Milk Rivers has used dual units (SI and inch-pound).

The two inch-pound units that were used in previous reports were cfs-days and acre-feet.

1 cfs-day = 86,400 cubic feet

1 acre-foot = 43,560 cubic feet

1 cfs-day = 1.9835 acre-feet

The SI unit replacing the inch-pound units is the cubic decametre (dam^3)

1 dam^3 = 1 000 cubic metres

1 cubic metre = 35.315 cubic feet

1 dam^3 = 35,315 cubic feet

1 acre-foot = 1.2335 dam^3

1 cfs-day = 2.4466 dam^3

1 dam^3 = 0.8107 acre-feet

ANNEX C

List of Gauging Stations

INTERNATIONAL GAUGING STATIONS OPERATED JOINTLY
BY
THE UNITED STATES AND CANADA
ST. MARY AND MILK RIVER BASINS
1996

Map Index	Station Name
<u>ST. MARY RIVER BASIN</u>	
05AE027	St. Mary River at International Boundary
05AE029	St. Mary Canal at St. Mary Crossing near Babb, Montana
05AE036	Lake Sherburne at Sherburne, Montana
<u>MILK RIVER BASIN</u>	
11AA001	North Milk River near International Boundary
11AA005	Milk River at Milk River, Alberta
11AA025	Milk River at Western Crossing of International Boundary
11AA031	Milk River at Eastern Crossing of International Boundary
11AA032	N. Fork Milk River above St. Mary Canal near Browning, Montana
11AA038	Verdigris Coulee near the Mouth
<u>LODGE CREEK TRIBUTARY BASIN</u>	
11AB008	Middle Creek above Lodge Creek
11AB001	Middle Creek below Middle Creek Reservoir
11AB108	Middle Creek near Govenlock
11AB009	Middle Creek near Saskatchewan Boundary
11AB060	Spangler Ditch near Govenlock
11AB083	Lodge Creek below McRae Creek at International Boundary
11AB089	Altawan Reservoir near Govenlock

BATTLE CREEK TRIBUTARY BASIN

11AB018	Nashlyn Canal near Consul
11AB027	Battle Creek at International Boundary
11AB044	McKinnon Ditch near Consul
11AB058	Richardson Ditch near Consul
11AB077	Cypress Lake West Outflow Canal
11AB078	Cypress Lake West Inflow Canal
11AB084	Vidora Ditch near Consul
11AB085	Cypress Lake West Inflow Canal Drain
11AB102	Gaff Ditch near Merryflat

FRENCHMAN RIVER TRIBUTARY BASIN

11AC037	Cypress Lake
11AC041	Frenchman River at International Boundary
11AC052	Eastend Canal near Eastend
11AC054	Newton Lake Main Canal
11AC055	Eastend Reservoir
11AC056	Newton Lake
11AC060	Cypress Lake East Outflow Canal
11AC063	Huff Lake
11AC064	Belanger Creek Diversion to Cypress Lake
11AC065	Huff Lake Gravity Canal
11AC066	Huff Lake Pumping Canal

GAUGING STATIONS OPERATED INDEPENDENTLY
BY EITHER
THE UNITED STATES OR CANADA
ST. MARY AND MILK RIVER BASINS
1996

*Data for these stations are not included in this report or appendices

Map Index	Station Name	Operated by
<u>ST. MARY RIVER BASIN</u>		
5-0145*	Swiftcurrent Creek at Many Glacier, Montana	U.S.A.
5-0160*	Swiftcurrent Creek at Sherburne, Montana	U.S.A.
5-0175*	St. Mary River near Babb, Montana	U.S.A.
<u>MILK RIVER BASIN</u>		
6-1322*	South Fork Milk River near Babb, Montana	U.S.A.
11AA028*	Bear Creek near International Boundary	Canada
11AA029*	Miners Coulee near International Boundary	Canada
11AA040*	Breed Creek near International Boundary	Canada
<u>LODGE CREEK TRIBUTARY BASIN</u>		
11AB082*	Lodge Creek at Alberta Boundary	Canada
11AB091	Michel Reservoir near Elkwater	Canada
11AB092	Greasewood Reservoir near Elkwater	Canada
11AB094	Bare Creek Reservoir near Elkwater	Canada
11AB097	Cressday Reservoir near Cressday	Canada
11AB098	Jaydot Reservoir near Jaydot	Canada
11AB099	Mitchell Reservoir near Elkwater	Canada
11AB103	Squaw Coulee near Willow Creek	Canada
11AB104	Massy Reservoir near Elkwater	Canada
11AB114	Middle Creek Reservoir Bedford Outlet	Canada
11AB115	Middle Creek Reservoir Flood Spillway	Canada

BATTLE CREEK TRIBUTARY BASIN

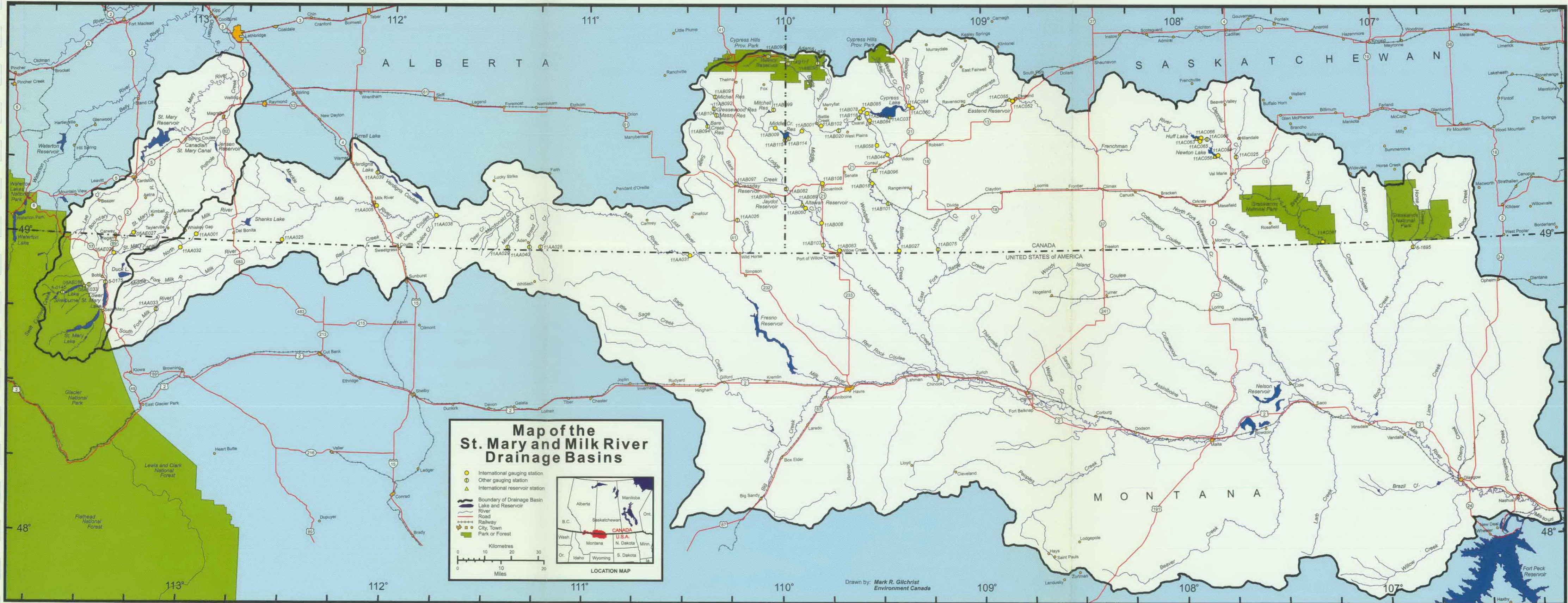
11AB020*	Shepherd Ditch near Consul	Canada
11AB075	Lyons Creek at International Boundary	Canada
11AB090	Reesor Reservoir near Elkwater	Canada
11AB095*	Adams Lake	Canada
11AB096*	Battle Creek near Consul	Canada
11AB101*	Battle Creek below Nashlyn Project	Canada
11AB117*	Battle Creek at Alberta Boundary	Canada
11AB118*	Battle Creek below Wilson's Weir	Canada

FRENCHMAN RIVER TRIBUTARY BASIN

11AC001*	Frenchman River Below Eastend Reservoir	Canada
11AC025*	Denniel Creek near Val Marie	Canada
11AC062*	Frenchman River below Newton Lake	Canada
11AC068*	Val Marie Pump No. 1	Canada

ROCK CREEK TRIBUTARY BASIN

6-1695*	Rock Creek below Horse Creek near International Boundary	U.S.A.
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1694
.A2
R424
1996

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Commission on the division and use
of the waters of the St. Mary and
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