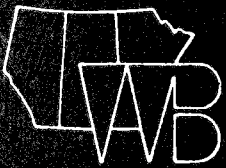


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ANNUAL REPORT

FOR THE YEAR ENDING MARCH 31, 1979



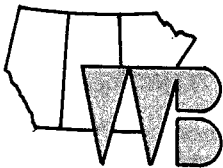
PRAIRIE PROVINCES WATER BOARD

CANADA ALBERTA SASKATCHEWAN MANITOBA

1978-79

ANNUAL REPORT

FOR THE YEAR ENDING MARCH 31, 1979



PRAIRIE PROVINCES WATER BOARD

306 - 1901 VICTORIA AVENUE REGINA, SASKATCHEWAN S4P 3R4

CANADA

ALBERTA

SASKATCHEWAN

MANITOBA

ISSN 0704-8726

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INTRODUCTION

The Master Agreement on Apportionment records the agreement of Canada and the Provinces of Alberta, Saskatchewan and Manitoba to share the flow and consider the quality of eastward flowing interprovincial streams, to work together for the mutual benefit of all parties, and to set up an administrative body named the Prairie Provinces Water Board to administer the Agreement. The Agreement is dated October 30, 1969.

Two meetings were held by the Prairie Provinces Water Board during this fiscal year. The first meeting, No. 18, was held on April 28, 1978 in Calgary, Alberta. The second meeting, No. 19, was held on November 15, 1978 in Winnipeg, Manitoba.

There were no changes in Board membership in the past fiscal year but Mr. G.S. Brown, Deputy Director General of PFRA, was appointed alternate member to the Board on August 2, 1978. Also, on April 30, 1978 Mr. D.J. Berry resigned his position as Executive Director to assume the job of Chief, Water Development Service, with PFRA-DREE. Mr. Berry has been Executive Director since June 1, 1972. The Board expresses its appreciation for the six years of service provided by Mr. Berry as its first full-time Executive Director.

This report summarizes the activities and progress of the Prairie Provinces Water Board for the period April 1, 1978 to March 31, 1979.

RECONSTITUTION OF BOARD ADMINISTRATION

During the 22 year history of the original Prairie Provinces Water Board (PPWB), the Engineering Secretary to the Board was a Federal Government PFRA employee who served in this capacity as part of his regular duties. The support staff for studies and office accommodation during these 22 years were provided by the PFRA in Regina at no charge.

Schedule C of the Master Agreement on Apportionment reconstituted the Prairie Provinces Water Board. It provides for the necessary Board staff, accommodation and supplies, to be jointly financed by the four governments party to the Agreement. Following the reconstitution of the PPWB the members also agreed to the establishment of a semi-autonomous Board Secretariat.

The Secretariat is composed of a group of Federal Public Servants that receive their direction entirely from the Board and have no working connection with any part of the Federal Government. The Board directly controls the operation of the Secretariat through approval of an Annual Budget. The Board has Federal spending authority up to an amount equal to the total Board budget with the Provincial Governments' shares being recovered after the audit for the current fiscal year is completed.

The Board's change in administration policy became effective when an Executive Director was appointed on June 1, 1972. The Board now operates through an Executive Director and his staff, supported by various committees as shown in the organization chart on page 41.

With the appointment of a permanent staff, the By-Laws, and Rules and Procedures became effective on July 1, 1972. The 1969 Master Agreement on Apportionment, and these By-Laws, and Rules and Procedures are appended to this Annual Report.

ADMINISTRATIVE DECISIONS

Natural Flow Determination

Quarterly reports on natural flows, consumptive use and storage changes in the South Saskatchewan River basin in Alberta were prepared on a regular basis and distributed. The 1978 recorded flows in all measured interprovincial rivers indicated a more optimistic water supply situation than in 1977 and special monitoring was not required at any time in the 1978 season. A summary table of these final quarterly report flow results is shown on page 22 of this report. Similar summaries for other interprovincial rivers are shown on pages 24 and 25. The method used to determine natural flows in all but the Qu'Appelle River Basin is the Project Depletion Method. Qu'Appelle Basin natural flows are calculated by the SSARR routing-model method.

During 1978 the recorded flow, natural flow, and percent of natural flow of these basins were:

	<u>Recorded Flow in Acre-Feet</u>	<u>Natural</u>	<u>Percent</u>
North Saskatchewan to A-S boundary	6,280,000	6,400,000	98
South Saskatchewan to A-S boundary	6,430,000	7,190,000	89
Saskatchewan to S-M boundary	13,900,000	15,600,000	89
Qu'Appelle to S-M boundary	64,700	69,200	94

There were no low flow problems in the major interprovincial basins being monitored so there was no necessity for special streamflow forecasting for water supply purposes as was done in 1977.

PPWB Monitoring Stations

The Board has designated 11 locations for the establishment of common water quantity - water quality monitoring stations to carry out the responsibilities of the PPWB. The Inland Waters Directorate of Environment Canada were requested, and agreed, to ensure monthly monitoring of the flow and quality of the waters at these locations. The map on pages 66 and 67 of this Annual Report shows the location of these 11 monitoring stations.

Ducks Unlimited Cumberland Marsh Project

The Board, in the interests of good interprovincial water management, has a continuing interest in the Ducks Unlimited Project being constructed in the Cumberland Marsh area and the effect it may have on downstream water quantity and quality. Saskatchewan Environment with the support of Environment Canada have made arrangements with Ducks Unlimited to ensure that water quantity and water quality monitoring of this project will be undertaken on a regular basis to ensure that its effect on interprovincial streams is adequately measured.

The Saskatchewan Regional Office of the Water Survey of Canada will, in cooperation with Saskatchewan Environment, produce an annual report on the results of this monitoring program. This report will include a description of the current extent of development and the method of operation. The first report of this type will be produced in the Spring of 1979 summarizing 1978 activities in connection with the project.

Small Interprovincial Basin Studies

There are natural flow studies being made on five small interprovincial basins; Antler River, Pipestone Creek, Assiniboine River, MacKay Creek, and Boxelder Creek. The Board has agreed that the first of these five studies, the Antler River Study, should be reviewed in detail by the Committee on Hydrology to determine that both content and format are adequate. Subsequent studies will be reviewed only by the Secretariat unless special problems arise. The Board members also approved an expenditure of \$13,930.42 for work done to date in the current fiscal year on the Antler, Pipestone and Assiniboine River studies.

Long Term - First Order Water Quality Network Report

The report on a recommended minimum first order long term water quality network for the Prairie Provinces was forwarded to the Deputy Ministers of all member agencies in the Spring of 1978. All agencies agreed in principle that a long term water quality network would be advantageous to all parties. They agreed to work towards this goal both by adding the additional stations required in their area and by upgrading the sampling frequency and the number of parameters being measured.

Updating of SNBB Monthly Streamflow Estimates

The Board agreed that the Prairie Provinces Water Board Secretariat would assume the continuing responsibility of updating the Saskatchewan-Nelson Basin Board monthly streamflow estimates. They instructed the Executive Director to bring these files up to date as soon as practical and to ensure that the files are updated annually.

Disposal of Water Demand Study Capital Assets

The staff of the four year Water Demand Study recently started by the Prairie Provinces Water Board require office furniture for the duration of the Study. It is more economical to purchase this furniture than it would be to rent it for a four year period. It has been agreed by the Board that such capital assets acquired for the conduct of the Water Demand Study and not required by the Prairie Provinces Water Board should be made available to Environment Canada on completion of the Study. The Inland Waters Directorate, Western and Northern Region of Environment Canada, will have the option of purchasing all or a portion of such assets on a depreciated basis based on the original purchase price with any funds accruing from their sale being credited to the account of the Water Demand Study.

Procedures for Signing Water Demand Study Memorandum of Understanding

The ongoing Water Demand Study requires that several Memorandum of Understanding be signed between the Prairie Provinces Water Board and the Study participants. The Board agreed that the following procedure would be used to formulate, approve and circulate these Memorandum of Understanding;

- 1) the Memorandum would be formulated by the Study Director and Sector Sub-Committees and forwarded to the Committee on Water Demand,
- 2) the Committee on Water Demand will review, modify and approve these memoranda,
- 3) the Executive Director will sign all Memoranda not exceeding \$5,000 and the Board Chairman will sign all Memoranda exceeding \$5,000 on behalf of the Board.

General Procedures for Reviewing Proposed Projects

It was agreed that the Board would adopt the following general procedures for proposed projects that may affect interprovincial streams;

- 1) the proponent, through the appropriate Board member, is responsible for preparing an initial report on a project for the Board,
- 2) the Secretariat will have the report evaluated through its appropriate sub-committees,
- 3) the Secretariat will report to the Board on items felt to be of concern to the Board.

Three such projects were submitted through the Board at the November 15, 1978 meeting. These were the proposed Dixon Dam on the Upper Red Deer River in Alberta, the proposed Qu'Appelle Conveyance Channel in the Qu'Appelle River in Saskatchewan and the proposed Nipawin Dam immediately upstream from Nipawin on the Saskatchewan River in Saskatchewan. The Board has submitted all three of these projects to both the Committee on Hydrology and the Committee on Water Quality for their consideration.

BOARD STUDIES

Water Demand Study

The Prairie Provinces Water Board, in 1970, established a task force to examine the need for and to develop terms of reference for a Water Demand (or Water Use) Study. In January 1972 that Task Force submitted a report to the Board outlining the need for such a Study in the Prairie Region. Subsequently, at a meeting of the SNBB Committee of Ministers, it was agreed that the Study should be undertaken, but that it should be divided into two parts. The first part would document historical and current water uses; the second would forecast future water demands. Implementation of the Part I study was postponed until May 18, 1977 when all members of the Board reaffirmed their desire to proceed with Part I of the proposed Study at a total estimated cost of \$880,000.

Staffing of the Study Office began in 1978. A Study Director, Mr. W.M. Jones, was hired and began work July 1, 1978 and the position of Study Secretary was filled February 5, 1979. The position of Assistant to the Study Director was advertised, and will be filled in May, 1979.

The Water Demand Study has been divided into six sectors with each sector describing one type of water demand or use. Each Sub-Committee, under the chairmanship of the Study Director, and the direction of the Committee on Water Demand is responsible for itemizing historic and present uses in their work area. All Sub-Committees finalized both study objectives and their proposed methodology in this fiscal year. Memoranda of Understanding, for the conduct of the necessary studies and investigations, were signed by the Board and participating agencies in March 1979 for all sectors.

The Regional Economic Base Sub-committee met three times in the last year; the Municipal and Industrial Sub-committee four times; and the Environmental Considerations Sub-committee, formerly Environmental Enhancement, five times. Also the Power Generations Sub-committee met once, the Agriculture Sub-committee met twice; and the Recreation Sub-committee met four times.

The Study, in addition to the technical reports for each water use sector, will document international and interprovincial legal and administrative arrangements relating to water management practice in the Saskatchewan-Nelson River Basin.

The final report of the Study, Part I, including all sector reports, is scheduled for completion by March 31, 1982.

Water Quality Objectives Study

This Study is being conducted by the Committee on Water Quality and the Secretariat to update the current (1973) PPWB Water Quality Objectives.

The Committee has received water quality data at the eleven PPWB monitoring stations and, based on this review is prepared to recommend to the Board a methodology for updating objectives. In conjunction with this review a fifth draft of the Report on Water Quality Objectives has been prepared and circulated to the Committee to provide background information on alternate methodologies that could be used.

It is planned to submit a proposal to the Spring meeting of the PPWB. If this proposal is accepted the objectives will be updated station by station on a site specific basis to establish improved criteria for the quality of water at the eleven PPWB monitoring sites.

Natural Flow of Small Interprovincial Basins

At the June 10, 1975 meeting of the Board, the Members recommended that a continuing study be made by the Secretariat of natural flow computations of small interprovincial river basins not dealt with in the Natural Flow Study. An initial list of streams that fell into this category and an order of their priority was prepared by the Members.

The Secretariat then submitted to each member agency the top six basins on the priority list asking them to submit a cost estimate and a time schedule for studies that they could undertake on any or all of the basins. In addition, the Secretariat prepared an estimate of the work it could undertake and the time involved.

The Board considered these proposals at its October 13, 1976 meeting and agreed that the speed with which the studies could be completed would depend both on the availability of Secretariat personnel and the availability of personnel from the participating agencies.

In the 1977-78 fiscal year, the Secretariat prepared Memoranda of Understanding between the Board and PFRA to undertake natural flow studies on the Pipestone Creek, the Antler River, and the Assiniboine River. Memorandum of Understanding were also prepared for Water Survey of Canada to undertake natural flow studies on Boxelder Creek and Mackay Creek.

The Antler River Study has been completed and a final draft of the report has been submitted to the Committee on Hydrology. A revised final report is now being prepared by PFRA. The Pipestone Creek Study will be completed in the summer of 1979 and PFRA plans to complete the Assiniboine River Study in the 1979-80 fiscal year. Similarly the Boxelder Creek and Mackay Creek studies being done by the Saskatchewan Regional office of Water Survey of Canada are scheduled for completion in the fall of 1979.

Administration of Apportionment Study

At the November 5, 1974 meeting of the Prairie Provinces Water Board, the members discussed the type of problems that may be encountered in the administration of the Apportionment Agreement as water use increases to the point where apportionment becomes critical. The Committee on Hydrology, at the request of the Board, prepared Terms of Reference for a study of these problems. The Board subsequently approved these Terms and agreed that the Committee on Hydrology should be responsible for the study.

The Committee on Hydrology in the past fiscal year has prepared a working paper based on the study Terms of Reference and will submit this working paper to the spring 1979 meeting of the Prairie Provinces Water Board. A final report on administration of apportionment will then be prepared based on the comments and discussion arising from this paper. It is planned to complete this assignment in the coming fiscal year.

Westward Flowing Streams

The Board recognizes that there are streams which cross inter-provincial boundaries in an east to west direction and are therefore not covered by the Apportionment Agreement. At the November 1973 meeting of the Board, the members observed that, although no problems have arisen, the situation should be considered in view of the probable time involved to develop a satisfactory solution.

The Committee on Hydrology in analyzing this problem has divided the problem into two parts; the rivers that are westward flowing tributaries of eastward flowing streams and the rivers that are westward flowing streams that are not tributary to eastward flowing streams.

It is proposed to prepare two separate reports dealing with these two separate types of streams. A rough preliminary report dealing with westward flowing tributaries of eastward flowing streams was submitted to the Committee on Hydrology in the 1978-79 fiscal year and it is proposed to prepare a more comprehensive report on this subject in the coming fiscal year. This report will comment on the number and size of streams involved, will consider possible apportionment problems, and will speculate on possible solutions taking into account relevant precedence.

Forest Management for Increased Water Yields

For some fifteen years there has been considerable interest in the Province of Alberta on the possibility of managing the eastern slopes of the Rockies to benefit water production and to control other uses of the forest area. At the May 18, 1977 meeting of the Board the members heard an address by Mr. R.A. Swanson of the Northern Forest Research Area on present research efforts towards increasing water yields from the Eastern slopes. Following this presentation the members agreed that the Committee on Hydrology should undertake an examination of the increased yield available by forest management practices, the timing and benefits of increased yield, and the total increase in yield that may be expected on the major river basins with their headwaters in the Eastern Slopes area.

Alberta Environment and the Alberta Forest Service in cooperation with Federal agencies have the management responsibilities for this green zone and they are interested in pursuing further the potential for producing significant increases in water yields. The Committee on Hydrology will continue to maintain an active interest in the progress of this research and/or operation in Alberta and the Alberta member of the Committee will continue to report the results of their deliberations.

Allocation of Water in the Battle and Lodge Creek Basins

The Committee on Interjurisdictional Agreements Administration is studying the allocation of Battle and Lodge Creek waters between Alberta and Saskatchewan. No further work has been done on this study in the past year due to a lack of staff but it is anticipated that a report will be prepared recommending the allocation of water on both Lodge and Battle Creek in the coming fiscal year.

Battle Creek Study

At the May 18, 1977 meeting, the Board discussed the need for a study to resolve the water supply problem in Battle Creek. The members agreed that a comprehensive approach was needed and recommended that the Executive Director call a meeting of representatives from Environment Canada, Saskatchewan Environment, Alberta Environment and PFRA to develop detailed Terms of Reference for a coordinated study of the basin. Initial meetings were held to draft Terms of Reference and to prepare cost estimates for the study. Further action on the study has been deferred until a recommendation has been made on the allocation of water in Battle Creek basin.

BOARD COMMITTEES

Committee on Hydrology

The Committee on Hydrology met three times during fiscal 1978-79. The meetings were held on April 6-7, 1978 in Edmonton; on October 11-12, 1978 in Regina; and on March 5-6, 1979 in Winnipeg.

Forest management for increased water yields was discussed and the Committee decided it would be premature to start a study of this project until results of the on-going studies in Alberta were known. The Alberta member agreed to submit periodic progress reports to the Committee on these studies.

The Antler River Natural Flow Report was completed during this fiscal year and a draft of the Antler River Natural Flow Report was presented to the Committee. They decided that a new draft should be prepared containing more detailed streamflow estimates and that the Committee would then be prepared to accept similar reports for the other basins being studied. A revised draft report was presented and accepted at the March 5-6, 1979 meeting in Winnipeg.

The Administration of Apportionment Study received considerable attention at all three meetings. Mr. Wettlaufer, a past member of the Prairie Provinces Water Board, was asked to prepare a draft report on administration of apportionment and this report was reviewed in detail. A working paper based on the contents of this report is now being prepared for the Spring meeting of the Prairie Provinces Water Board.

The Committee also discussed the reports on the proposed Qu'Appelle Conveyance project, the Nipawin Dam on the Saskatchewan River and the proposed Dixon Dam on the Red Deer River and prepared responses to the Board on all three projects.

During this fiscal year the Committee agreed that the Secretariat should have the continuing responsibility of retaining and updating the SNBB streamflow files. Methods proposed for apportioning westward flowing tributaries were discussed but no further progress was made on this study during the current fiscal year.

There were several changes in Committee membership in the current fiscal year. G.H. MacKay, a founding member of the Data Network Planning Committee that preceded the COH, left the Committee, as did D.A. Davis, also a member of the DNPC since 1969. The Committee takes this opportunity to formally acknowledge the constructive guidance that these two members have provided over the past several years.

Committee on Water Quality

The Committee on Water Quality met three times during the 1978-79 fiscal year. The meetings were held; in Calgary on June 6-7, 1978, in Regina on October 18-19, 1978, and in Winnipeg on February 21-22, 1979.

The proposed updating of the 1973 PPWB Water Quality Objectives was of prime concern to the Committee at all three meetings. Based on discussions at these meetings and on the fifth draft of the Report on Water Quality Objectives the members are prepared to recommend to the Board that the updated objectives should be site specific at each of the eleven monitoring stations and that they should be based on a 50 per cent share of the difference between natural parameter levels and acceptable maximum levels at each station.

The Committee also reviewed copies of the responses given by each agency to the letter written by the Chairman of the Board recommending that all member agencies should work towards implementation of a first order long-term Water Quality Network. They noted that all agencies supported the concept and agreed that the Committee should monitor progress being made to achieve the proposed goals.

Water Quality Methodology in the laboratories operated by and for member agencies continued to be an area of concern in the past fiscal year. At the Calgary meeting the members observed demonstrations of new analytical methods for nutrients in the Environment Canada Water Quality laboratory. They also agreed to implement new analytical techniques for nitrogen; carbon and phosphorus in samples collected at PPWB stations.

Three projects were referred to the Committee for review in the current fiscal year; The Qu'Appelle Conveyance Channel, the Nipawin Damsite, and The Dixon Damsite. The members did not express an opinion on the adequacy of downstream water quality studies for any of these three projects because the reports submitted contained insufficient water quality information.

The Committee continued to exchange information on the proposed Cold Lake Oil Sands Project. Information on the status of the project, the environmental hearings conducted by the Alberta Energy Resources Conservation Board, and on waste water disposal alternatives was exchanged. Committee members are continuing to exchange information on the quality and quantity of effluent which may be discharged into the Beaver River approximately 20 river kilometers above the PPWB monitoring station.

Committee on Water Demand

The Committee on Water Demand met five times during this fiscal year by a Conference Call on May 30, 1978; in Edmonton on September 7-8, 1978; in Regina on September 22-23, 1978; in Winnipeg on January 23-24, 1979; and by Conference Call on March 8, 1979.

Members were appointed to all six technical Sub-Committees during this fiscal year and Terms of Reference and Objectives for these Sub-Committees were approved and data collection procedures begun by several of the Sub-Committees.

Memoranda of Understanding for the conduct of studies and investigations, Letters of Understanding regarding travel arrangements, and proposals for the disposal of capital assets were prepared by the Committee. They were subsequently approved and signed by the Board and the participating agencies.

The position of Study Director and Secretary to the Study Director were filled. The position of Assistant to the Study Director was advertised, to be filled in May, 1979.

A total of \$88,768.81 was spent on the Study this year.

Committee on Interjurisdictional Agreements Administration

There were no meetings of this Committee in the past fiscal year but informal discussions were held individually with the Committee members on the Battle-Lodge Creek problem. Based on these informal discussions and on individual meetings with Committee members the Secretariat will produce a draft of the final report for the members' consideration.

Battle Creek Steering Committee

The Battle Creek Steering Committee has not met in the past fiscal year. It is not proposed to reactivate this Committee until measurable progress has been made on the COIAA Committee dealing with apportionment of water between Alberta and Saskatchewan on Battle Creek.

SECRETARIAT

Accommodation and Staff

PPWB Secretariat is located in Room 306, Motherwell Building in Regina, Saskatchewan. This office is in the same building as the Western Region office of the Environmental Management Service of Environment Canada and personnel and financial administrative services are provided through its staff.

There were several staff resignations in the past year. Mr. R.J. Wettlaufer, Operations Engineer, resigned on March 31, 1978 to take a position as Evaluation and Planning Officer for PFRA. Mr. D.J. Berry, the Executive Director, resigned on April 30, 1978 to become Chief of Water Development Service of PFRA. Mr. E.J. Smith, the Systems Technician, resigned on August 18, 1978 to accept the position of Systems Analyst with the Inland Waters Directorate of Environment Canada. Mr. Adrian D'Hont, Computations Technician, resigned on September 14, 1978 to return to Uranium City, Saskatchewan, and Mrs. L.C.M. Glasser, Secretary to the Executive Director, resigned on September 30, 1978 to move to Calgary, Alberta.

Mr. R.B. Godwin became the new Executive Director on September 1, 1978. The position of Secretary to the Executive Director was filled by Ms. Doreen Sinclair on January 22, 1979 and Mr. Ken MacTaggart was initially appointed as a Computations Technician on January 8, 1979 and subsequently promoted, as a result of an open competition, to the position of Systems Technician on March 19, 1979.

Reports

The Secretariat published and distributed to member agencies the third annual report containing Water Quality data collected at the 11 Prairie Provinces Water Board Monitoring Stations. Because of the large size of this report, distribution was limited to people directly connected to the Board's quality of water activities.

Information

The activities of the Secretariat have been reported under the sections titled Board Committees and Board Studies. It should be pointed out that, due to staff limitations for much of the current year, progress on Board work has been somewhat limited.

Financial

The Secretariat expenditures for this fiscal year, audited by the Audit Services Bureau of the Department of Supply and Services, Canada, are shown on page 42. They indicate a total expenditure of \$224,477. The audited statement for the current fiscal year did not separate Water Demand Study expenditures from normal Secretariat operations. An unaudited division of current expenditures is shown on page 43. It indicates expenditures of \$135,708.22 for normal Prairie Provinces Water Board activities and \$88,768.81 on the Water Demand Study.

Natural Flow Reports

Water Survey of Canada, Inland Waters Directorate, provided the Board with quarterly reports on the natural flow of the South Saskatchewan River below the junction with the Red Deer River and the Qu'Appelle River at the Saskatchewan-Manitoba border at a cost of \$4,000 and \$2,000 respectively.

Natural flows on the South Saskatchewan River Basin were calculated using the project depletion method and natural flows of the Qu'Appelle River Basin were calculated using the Streamflow Synthesis and Reservoir Regulation (SSARR) Model. Both procedures were approved by the Board as the way to calculate natural flow on these two specific basins.

1978 FLOW DATA

NATURAL FLOWS, CONSUMPTIVE USE AND STORAGE
(ACRE-FEET ROUNDED TO THREE SIGNIFICANT FIGURES)

FOR THE YEAR 1978

SOUTH SASKATCHEWAN RIVER -- ALBERTA-SASKATCHEWAN BOUNDARY

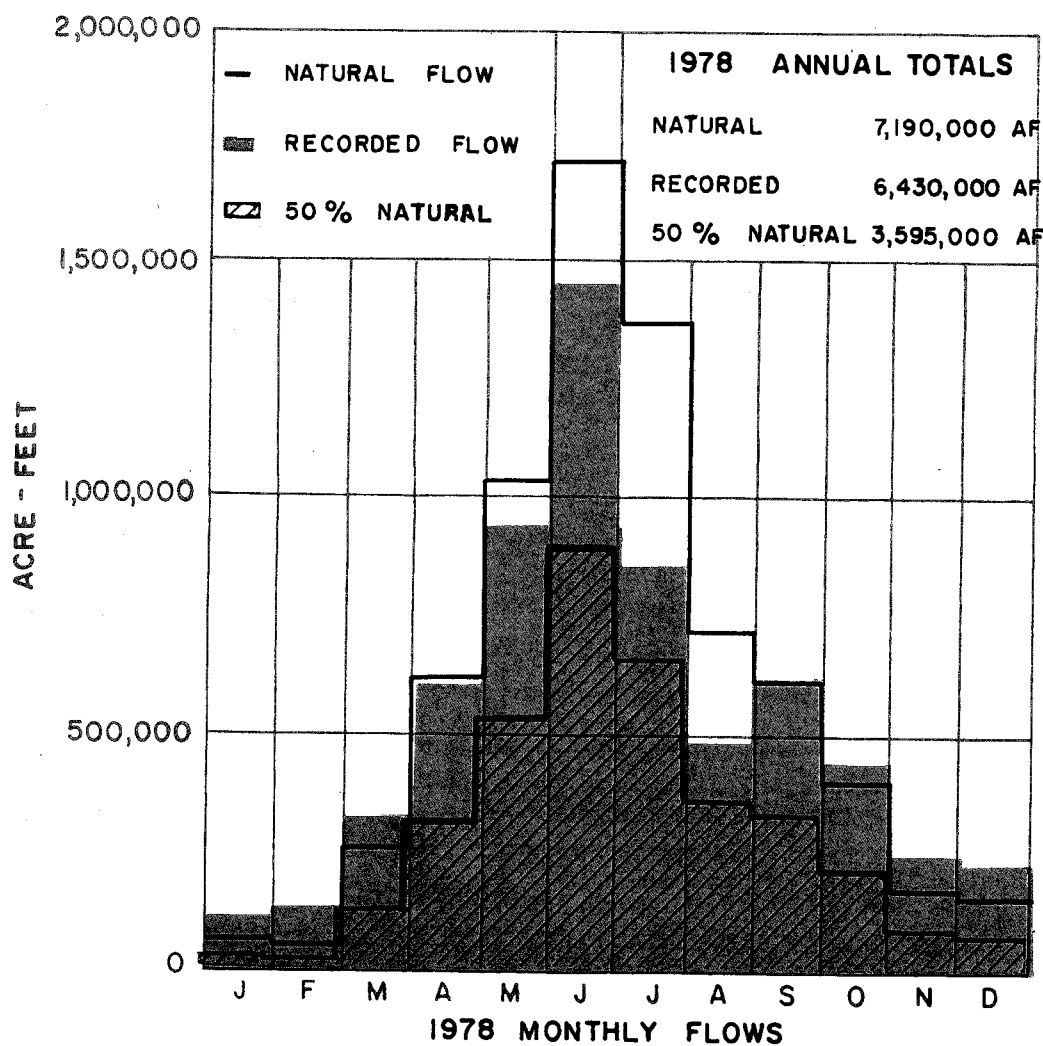
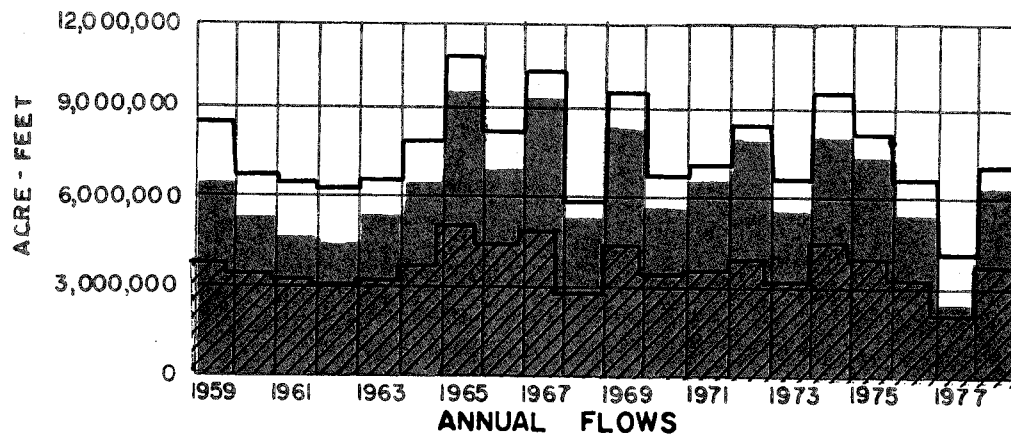
	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.	TOTALS
RECORDED DISCHARGE	102,000	130,000	302,000	378,000	752,000	1,180,000	655,000	348,000	464,000	354,000	197,000	207,000	5,070,000
CONSUMPTIVE USE	0	0	0	40,500	82,800	57,000	285,000	161,000	30,700	- 910	-11,800	- 726	643,000
CHANGE IN RESERVOIRS	-58,200	-80,800	-39,400	-16,200	+55,900	+234,000	+153,000	+27,200	-16,200	-70,700	-30,500	-60,900	97,500
DIVERSION FROM BASIN	0	0	0	0	6,170	17,200	21,300	29,500	22,100	11,800	2,700	0	111,000
NATURAL FLOW ALTA. BDRY.	60,900	54,800	247,000	391,000	882,000	1,470,000	1,110,000	593,000	510,000	335,000	135,000	153,000	5,940,000

RED DEER RIVER -- ALBERTA-SASKATCHEWAN BOUNDARY

	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.	TOTALS
RECORDED DISCHARGE	15,400	12,000	16,600	215,000	170,000	279,000	193,000	151,000	153,000	89,000	47,400	24,100	1,370,000
CONSUMPTIVE USE	0	0	0	0	0	0	0	0	0	0	0	0	0
DIVERSION FROM BASIN	0	0	0	0	- 6,170	-17,200	-21,300	-29,500	-22,100	-11,800	- 2,700	0	- 111,000
NATURAL FLOW ALTA. BDRY.	15,400	12,000	16,600	215,000	164,000	263,000	171,000	121,000	132,000	74,900	45,000	23,800	1,250,000

SOUTH SASKATCHEWAN RIVER -- BELOW JUNCTION WITH RED DEER

	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.	TOTALS
RECORDED DISCHARGE	117,000	142,000	319,000	593,000	922,000	1,460,000	848,000	499,000	617,000	443,000	244,000	231,000	6,430,000
NATURAL FLOW	76,300	66,800	264,000	606,000	1,050,000	1,730,000	1,280,000	714,000	641,000	410,000	180,000	177,000	7,190,000



SOUTH SASKATCHEWAN RIVER NEAR ALBERTA-SASKATCHEWAN BOUNDARY
(INCLUDES RED DEER RIVER)

RECORDED AND NATURAL FLOWS - SUMMARY
SELECTED INTERPROVINCIAL STREAMS
(ACRE-FEET ROUNDED TO THREE SIGNIFICANT FIGURES)

FOR THE YEAR 1978

	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.	TOTALS
--	------	------	------	------	-----	------	------	------	-------	------	------	------	--------

NORTH SASKATCHEWAN -- ALBERTA-SASKATCHEWAN BOUNDARY (NEAR DEER CREEK)

RECORDED FLOW	264,000	258,000	205,000	455,000	570,000	1,140,000	1,080,000	538,000	639,000	460,000	364,000	309,000	6,280,000
NATURAL FLOW	44,400	79,000	55,400	391,000	610,000	1,370,000	1,470,000	848,000	858,000	428,000	167,000	78,000	6,400,000

CHURCHILL RIVER -- SASKATCHEWAN-MANITOBA BOUNDARY (AT SANDY BAY)

RECORDED FLOW	1,910,000	1,630,000	1,670,000	1,650,000	1,740,000	1,840,000	1,740,000	1,710,000	2,250,000	2,140,000	2,040,000	1,960,000	22,300,000
NATURAL FLOW	1,690,000	1,390,000	1,450,000	1,390,000	1,610,000	2,230,000	2,220,000	2,230,000	2,020,000	2,440,000	2,300,000	2,190,000	23,100,000

SASKATCHEWAN RIVER -- SASKATCHEWAN-MANITOBA BOUNDARY

RECORDED FLOW	843,000	735,000	744,000	1,100,000	1,970,000	1,550,000	1,690,000	1,170,000	1,190,000	1,430,000	777,000	700,000	13,900,000
APPORTIONMENT* FLOW	403,000	505,000	689,000	1,530,000	2,400,000	2,500,000	2,380,000	1,480,000	1,310,000	1,400,000	570,000	466,000	15,600,000

QU'APPELLE RIVER -- SASKATCHEWAN-MANITOBA BOUNDARY (NEAR WELBY)

RECORDED FLOW	2,000	714	1,290	15,700	11,600	8,550	5,620	2,210	575	4,270	8,730	3,590	64,700
NATURAL FLOW	0	0	1,600	24,400	19,200	12,500	7,300	4,460	1,750	133	2	0	69,200

* Recorded flow from Alberta + natural inflow from Saskatchewan

RECORDED DISCHARGE - SUMMARY
 SELECTED INTERPROVINCIAL STREAMS
 (ACRE-FEET - ROUNDED TO THREE SIGNIFICANT FIGURES)

FOR THE YEAR 1978

JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.	TOTALS
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BEAVER RIVER -- ALBERTA-SASKATCHEWAN BOUNDARY (AT COLD LAKE)

10,800	9,790	11,900	69,400	89,800	186,000	43,100	21,100	68,900	64,300	24,100	16,100	615,000
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BATTLE RIVER -- ALBERTA-SASKATCHEWAN BOUNDARY (NEAR UNWIN)

1,010	1,270	1,980	31,600	16,100	8,530	5,290	1,760	14,300	9,230	4,510	2,610	98,200
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CARROT RIVER -- SASKATCHEWAN-MANITOBA BOUNDARY (NEAR TURNBERRY)

3,700	1,910	2,190	53,900	279,000	71,200	21,300	38,100	29,900	82,600	41,100	12,700	638,000
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RED DEER RIVER -- SASKATCHEWAN-MANITOBA BOUNDARY (NEAR ERWOOD)

1,670	632	633	114,000	86,400	23,700	11,700	29,900	23,700	34,400	20,200	5,300	352,000
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ASSINIBOINE RIVER -- SASKATCHEWAN-MANITOBA BOUNDARY (AT KAMSACK)

579	362	584	33,100	15,000	1,870	2,690	282	146	384	1,460	1,240	57,700
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WATER QUALITY MONITORING

PPWB Water Quality Monitoring Program

At the request of the Prairie Provinces Water Board, the Water Quality Branch of Environment Canada continued reporting monthly or quarterly data collected at the 11 PPWB monitoring stations for the 90 water quality parameters listed on page 29.

This data has been collected to establish the range of existing parameter concentrations and estimate compliance with the 1973 PPWB Water Quality Objectives for the parameters marked with an asterisk. (*)

This program started in April 1974 and has been carried out continuously since that time. All data obtained at these 11 stations from April 1, 1974 to December 31, 1978 have been validated, published in the PPWB Annual Water Quality Reports, and distributed to member agencies.

- * Aldrin
 - Alkalinity, phenol.
 - Alkalinity, total
 - Aluminum, extract.
 - N-Alkanes
 - Aromatic Hydrocarbons
- * Arsenic, diss.
 - Barban
- * Barium, extract.
 - BHC - (alpha)
- * Boron, diss.
- * Cadmium, extract.
 - Calcium, diss.
 - Carbon, diss., inorganic
 - Carbon, diss., organic
 - Carbon, organic, particulate
 - Carbon, total, inorganic
 - Carbon, total, organic
 - Chloride, diss.
 - Chlorophyll A
- * Chromium, extract.
 - Cobalt
 - Coliforms, fecal
 - Coliforms, total
- * Color, apparent
- * Copper, extract.
- * Cyanide, total
 - O,P-DDT
- * P,P-DDT
- * P,P-DDD
- * P,P-DDE
- * Dieldrin
 - Endosulfan-alpha
 - Endosulfan-beta
- * Endrin
- * Fluoride, diss.
 - Hardness, total, CaCO₃
- * Heptachlor
- * Heptachlor, exoxide
 - Hexachloro-benzene
- * Iron, extract.
- * Lead, extract.
 - Gamma-BHC (Lindane)
- * Magnesium, diss.
- * Manganese, extract.
- * MBAS Surfactants
 - MCPA
- * Mercury, extract.
 - P,P-methoxychlor
 - Mirex
 - NTA (Nitrilotriacetic Acid)
 - Nitrogen, TKN
 - Nitrogen, diss., NO₃+NO₂
 - Nitrogen, particulate
- * Nitrogen, total, calc.
- * Nitrogen, total, diss.
- * Odour, TON
- * Oil and Grease
- * Oxygen, demand, BOD
- * Oxygen, diss., DO
 - PCB, Arochlor 1248
 - PCB, Arochlor 1254
 - PCB, Arochlor 1260
- * pH
- * Phenolics
- * Phosphorous, total, diss.
- * Phosphorous, total, phosphate
- * Potassium, diss.
- * Radioactivity Gross Beta
- * Radium 226
- * Residue, nonfilterable
 - Residue, fixed, nonfilterable
- * Selenium, diss.
 - Silica, reactive
- * Silver, extract.
 - Silvex
- * Sodium, diss.
 - Specific Conductance
- * Strontium
 - Sulphate, diss.
- * Temperature
 - Tordon (Picloram)
- * Turbidity
 - Trifluralin
 - Vanadium, extract.
- * Zinc, extract.
 - 2,4-D
 - 2,4-DB
 - 2,4-DP
 - 2,4,5-T

* Objectives exist

APPENDIX

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APPENDIX INDEX

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PPWB MEMBERS

Chairman	Mr. J.P. Bruce	Assistant Deputy Minister Environmental Management Service Environment Canada
	Dr. H.M. Hill	Director General Prairie Farm Rehabilitation Administration Department of Regional Economic Expansion
	Mr. R.E. Bailey	Special Projects Director Alberta Environment
	Mr. S.R. Blackwell	Chief Water Management Service Saskatchewan Environment
	Mr. T.E. Weber	Senior Assistant Deputy Minister Manitoba Department of Mines, Natural Resources and the Environment
<hr/>		
Secretary	Mr. R.J. Wettlaufer	Operations Engineer PPWB Secretariat
	January 1973 - April 1978	
	Mr. E.W. Allison	Water Quality Analyst PPWB Secretariat
	May 1978 -	

ALTERNATE MEMBERS

Mr. D.A. Davis

Regional Director
Western and Northern Region
Inland Waters Directorate
Environmental Management Service
Environment Canada

Mr. G.S. Brown

August 1978 -

Deputy Director General
Prairie Farm Rehabilitation Administration
Department of Regional Economic Expansion

Mr. P.G. Melnychuk

Assistant Deputy Minister
Environmental Engineering Support Services
Alberta Environment

Mr. D.L. MacLeod

Director
Hydrology Branch
Water Management Service
Saskatchewan Environment

Mr. N. Mudry

Director of Planning
Water Resources Branch
Manitoba Department of Mines, Natural
Resources and the Environment

COMMITTEE ON HYDROLOGY

Terms of Reference

At the request of, and under the direction of the PPWB, the Committee on Hydrology shall investigate, oversee, review, report and recommend on matters pertaining to hydrology of interprovincial or interjurisdictional basins.

The Committee may consider such things as natural flow; forecasting; network design; collection, processing and transmission of data; basin studies and other items of interprovincial interest involving hydrology.

Current Members

R.B. Godwin Chairman - September 1978	Executive Director Prairie Provinces Water Board
G.H. Morton April 1978 -	Water Survey of Canada Environment Canada
D.W. Lawson February 1979 -	Prairie Farm Rehabilitation Administration Department of Regional Economic Expansion
R.K. Deeprise	Environmental Engineering Support Services Alberta Environment
V.M. Austford	Water Resources Division Manitoba Department of Mines, Natural Resources and Environment
D.L. MacLeod	Hydrology Branch Saskatchewan Environment
E. Einarsson Interim Member - January 1979	Atmospheric Environment Service Environment Canada

COMMITTEE ON HYDROLOGY CHANGES IN 1978-79

<p>D.J. Berry January 1972 - April 1978</p>	<p>Executive Director Prairie Provinces Water Board</p>
<p>D.L. MacLeod Interim Chairman May 1978 - August 1978</p>	<p>Hydrology Branch Saskatchewan Environment</p>
<p>R.B. Godwin September 1972 - August 1978</p>	<p>Prairie Farm Rehabilitation Administration Department of Regional Economic Expansion</p>
<p>D.A. Davis November 1969 - April 1978</p>	<p>Inland Waters Directorate Environment Canada</p>
<p>G.H. MacKay July 1966 - April 1978</p>	<p>Water Resources Branch Manitoba Department of Mines, Natural Resources and the Environment</p>
<p>H.F. Cork September 1974 - December 1978</p>	<p>Atmospheric Environment Service Environment Canada</p>
<p>R.J. Wettlaufer Secretary January 1973 - April 1978</p>	<p>Operations Engineer PPWB Secretariat</p>
<p>R.W. Harrison Interim Secretary March 5-6, 1979</p>	<p>Water Resources Division Manitoba Department of Mines, Natural Resources and the Environment</p>

COMMITTEE ON WATER QUALITY

Terms of Reference

At the request of, and under the direction of the Prairie Provinces Water Board, the Committee on Water Quality shall investigate, oversee, review, report and recommend on matters pertaining to water quality of interprovincial and inter-jurisdictional basins.

Carrying out the above responsibilities may include such things as natural quality assessment; quality forecasting; network design; processing and dissemination of data; determination of implications of proposed projects that may significantly alter the water quality of interprovincial streams; consideration of special problems; establishment of procedures for emergency situations; and other items of interprovincial interest involving water quality.

Members

D.J. Berry <small>Chairman October 1972 - April 1978</small>	Executive Director Prairie Provinces Water Board
R.B. Godwin <small>Interim Chairman, May 1978-August 1978 Chairman, September 1978-</small>	Executive Director Prairie Provinces Water Board
K.W. Reid	Water Quality Branch Environment Canada
D.W. Lawson	Prairie Farm Rehabilitation Administration Department of Regional Economic Expansion
J.N. Warrener	Environmental Protection Branch Manitoba Department of Mines, Natural Resources and the Environment
R.A. McDonald	Water Pollution Control Branch Saskatchewan Environment
P.G. Shewchuk	Standards and Approvals Division Alberta Environment
E.W. Allison <small>Secretary</small>	Water Quality Analyst PPWB Secretariat

COMMITTEE ON INTERJURISDICTIONAL AGREEMENTS ADMINISTRATION

It was agreed that a committee consisting of the Executive Director, one member from Saskatchewan, one member from Alberta, and Mr. E.F. Durant be struck to handle the problem of developing a methodology for the efficient administration of interjurisdictional agreements, particularly as regards Battle and Lodge Creek Basins.

(8-35: March 20, 1973)

Members

D.J. Berry

Chairman
March 1973 - August 1978

Executive Director
Prairie Provinces Water Board

R.B. Godwin

Chairman - September 1978

Executive Director
Prairie Provinces Water Board

B.N. Johnson

Inland Waters Directorate
Environment Canada

A.L. Jones

Water Rights Branch
Saskatchewan Environment

B.W. Boyson

Water Resources Branch
Alberta Environment

R.J. Wettlaufer

Secretary
March 1973 - March 1978

Operations Engineer
PPWB Secretariat

Position of Secretary was vacant in 1978-79

COMMITTEE ON WATER DEMAND

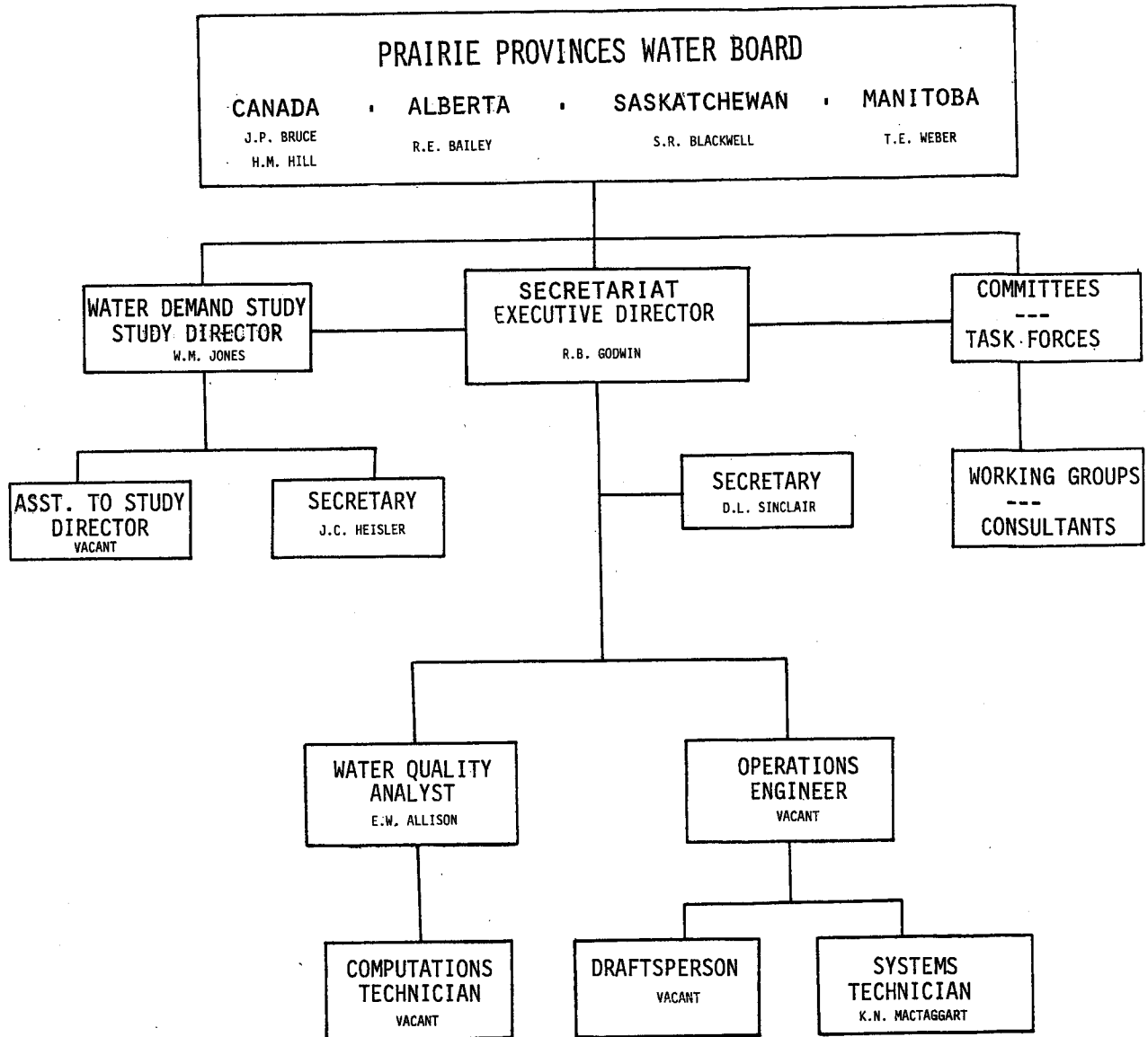
Terms of Reference

The Committee on Water Demand shall be composed of one member representing each of the Provinces of Alberta, Saskatchewan and Manitoba, two members representing Canada, and the Executive Director of the Prairie Provinces Water Board who shall be Chairman. The Committee shall function during the life of the Water Demand Study in the Saskatchewan-Nelson Basin and shall have the responsibility of providing technical guidance and financial management for the Water Demand Study on behalf of the Board.

The Water Demand Study shall be divided into two parts. Part One shall be done under the auspices of the Prairie Provinces Water Board and consist of a study of water demand based on current needs and historical uses in accordance with the Terms of Reference for Part One. Part Two may be done at a later date and would provide estimates of future water demands. Throughout Part One of the study the Committee shall: monitor and oversee the technical and financial aspects of the study as directed by the Board; ensure that there is no duplication of studies; report regularly to the Board on the progress of the study.

Members

D.J. Berry <small>Chairman November 1975 - April 1978</small>	Executive Director Prairie Provinces Water Board
R.B. Godwin <small>Chairman - September 1978</small>	Executive Director Prairie Provinces Water Board
H. Foerstel <small>Interim Chairman May 1978 - August 1978</small>	Environmental Management Service Environment Canada
V.M. Austford	Water Resources Branch Manitoba Department of Mines, Natural Resources and the Environment
R.L. Kellow	Policy, Planning and Research Branch Saskatchewan Environment
C. Primus	Planning Division Alberta Environment
G.T. Forsyth	Prairie Farm Rehabilitation Administration Department of Regional Economic Expansion
<hr/>	
E.W. Allison <small>Secretary</small>	Water Quality Analyst PPWB Secretariat



ORGANIZATION CHART
MARCH 1979

STATEMENT OF EXPENDITURES

	✓ 1976-77 Submitted and Audited Amount	1977-78 Submitted and Audited Amount	1978-79 Submitted and Audited Amount *
Salaries	\$ 97,472.	\$118,891.	\$ 99,307.
Travel and Transportation	3,656.	5,055.	20,344.
Postage, Freight and Express	421.	258.	195.
Telephone and Telegraph	2,272.	3,392.	3,733.
Professional and Special Studies	5,300.	3,026.	59,656.
Computing Services	8,416.	10,187.	7,744.
Stenographic and Typing Services	1,167.	2,920.	6,818.
Miscellaneous Special Services	501.	74.	712.
Accommodation Rental	10,848.	11,292.	11,867.
Computer Equipment Rentals	1,169.	1,128.	1,282.
Photocopying and Office Equipment Rentals	1,795.	1,829.	2,141.
Furniture and Fixtures		1,165.	3,837.
Stationery, Printed Matter & Office Supplies	6,260.	3,616.	6,472.
Miscellaneous	104.	175.	369.
	\$139,381.	\$163,008.	\$224,477.

*Audited Statement includes Water Demand Study expenditures.

Shares

Canada	: one half	\$ 69,690.	\$ 81,504.	\$112,238.
Alberta	: one sixth	23,230.	27,168.	37,413.
Manitoba	: one sixth	23,230.	27,168.	37,413.
Saskatchewan	: one sixth	23,230.	27,168.	37,413.

Previous Board Expenditures

Fiscal 1970-71	\$ 0
Fiscal 1971-72	105,174.12
Fiscal 1972-73	136,816.45
Fiscal 1973-74	158,273.82
Fiscal 1974-75	109,546.78
Fiscal 1975-76	143,805.20

Breakdown of PPWB Secretariat and Water Demand Expenses

1978-79

	<u>PPWB Secretariat</u>	<u>Water Demand Study</u>
Salaries	\$ 75,684.61	\$ 23,622.73
Travel and Transportation	6,670.46	13,673.05
Postage, Freight and Express	78.45	116.45
Telephone and Telegraph	2,991.49	741.84
Professional and Special Services	16,039.59	43,616.74
Computing Services	7,744.10	----
Stenographic Services	4,415.70	2,402.75
Miscellaneous Special Services	712.05	----
Accommodation Rental	11,866.86	----
Computer Equipment Rentals	1,282.00	----
Photocopying and Other Equipment Rentals	1,859.94	281.23
Furniture and Fixtures	1,485.37	2,351.48
Stationery, Printed Matter & Supplies	4,572.02	1,899.55
Miscellaneous	305.58	62.99
	<hr/>	<hr/>
	\$ 135,708.22	\$ 88,768.81
	<hr/>	<hr/>

**MASTER AGREEMENT
ON APPORTIONMENT**

MASTER AGREEMENT ON APPORTIONMENT

THIS AGREEMENT is made in quadruplicate this THIRTIETH day of OCTOBER, 1969, A.D.

BETWEEN:

HER Majesty, the Queen, in right of Canada, represented herein by the Minister of Energy, Mines and Resources

(Hereinafter called "Canada")

- and -

HER Majesty, the Queen, in right of Alberta, represented herein by the Minister in charge of Water Resources for Alberta

(Hereinafter called "Alberta")

- and -

HER Majesty, the Queen, in right of Saskatchewan, represented herein by the Minister in charge of The Water Resources Commission Act of the said Province

(Hereinafter called "Saskatchewan")

- and -

HER Majesty, the Queen, in right of Manitoba, represented herein by the Minister in charge of The Water Control and Conservation Branch Act of the said Province

(Hereinafter called "Manitoba")

WHEREAS under natural conditions the waters of the watercourses hereinafter referred to arising in or flowing through the Province of Alberta would flow into the Province of Saskatchewan and under the said conditions the waters of some of the said watercourses arising in or flowing through the Province of Saskatchewan would flow into the Province of Manitoba;

AND WHEREAS the Governor-in-Council has authorized Canada to enter into this agreement by Order-in-Council P.C. 1969-8/2051 dated October 29, 1969, and the Lieutenant Governors-in-Council for Alberta, Manitoba and Saskatchewan, respectively, have authorized them to enter into this agreement by the following Orders-in-Council:

Alberta	- O.C. 2053/69
Manitoba	- O.C. 1359/69
Saskatchewan	- O.C. 1612/69

AND WHEREAS the parties hereto deem it to be in their mutual interest that an agreement be reached among the four parties as to the apportionment as described in the schedules attached hereto of such interprovincial waters among the three Provinces;

AND WHEREAS Alberta and Saskatchewan have entered into an agreement, which agreement is attached to this agreement as Schedule A, that permits the Province of Alberta to make a net depletion of one-half the natural flow of water arising in or flowing through the Province of Alberta and that permits the remaining one-half of the natural flow of each such watercourse to flow into the Province of Saskatchewan, subject to certain prior rights as are set forth in the said agreement;

AND WHEREAS Saskatchewan and Manitoba have entered into an agreement, which agreement is attached to this agreement as Schedule B, that permits the Province of Saskatchewan to make a net depletion of one-half the natural flow of water arising in, and one-half of the water flowing into the Province of Saskatchewan, and that permits the remaining one-half of the flow of each such watercourse to flow into the Province of Manitoba, subject to such conditions and agreements as therein contained;

AND WHEREAS the parties are desirous that the Prairie Provinces Water Board (referred to herein as the Board), reconstituted by this agreement will be responsible for the administration of this agreement;

AND WHEREAS the parties hereto recognize the continuing need for consultation and co-operation as between themselves with respect to the matters herein referred to so that the interests of all the parties are best served;

NOW THEREFORE, THIS AGREEMENT (hereinafter known as the Master Agreement) witnesseth that each party agrees as follows:

Interprovincial Agreements

1. Alberta and Saskatchewan agree that the agreement between them (hereinafter called the First Agreement), a copy of which is set out in Schedule A to the Master Agreement, will become binding upon them upon the date that the Master Agreement is executed.
2. Saskatchewan and Manitoba agree that the agreement between them (hereinafter called the Second Agreement), a copy of which is set out in Schedule B to the Master Agreement, will become binding upon them upon the date that the Master Agreement is executed.
3. The parties agree to the apportionment of water between Alberta and Saskatchewan and Manitoba as provided in the First and Second Agreements and each party agrees to be bound by the said agreements as they relate to apportionment as if it were a party thereto.
4. The parties agree that the First or Second Agreement, or both, may be altered by an agreement in writing among the four parties to the Master Agreement, but not otherwise.
5. The parties agree that the First and Second Agreements will continue in force and effect until cancelled by an agreement in writing among the four parties to the Master Agreement.

Water Quality

6. The parties mutually agree to consider water quality problems; to refer such problems to the Board; and to consider recommendations of the Board thereon.

Monitoring

7. The parties agree that the monitoring of the quantity and quality of waters as specified in the First and Second Agreements, the collection, compilation and publication of water quantity and quality data required for the implementation and maintenance of the provisions of this agreement shall be conducted by Canada, subject to provision of funds being voted by the Parliament of Canada.

Administration

8. The parties agree, subject to Clause 9 of this agreement that if at any time, any dispute, difference or question arises between the parties with respect to this agreement or the construction, meaning and effect thereof, or anything therein, or the rights and liabilities of the parties thereunder or otherwise in respect thereto, then every such dispute, difference or question will be referred for determination to the Exchequer Court under the provisions of the Exchequer Court Act of Canada and each of the parties hereto agrees to maintain or enact the necessary legislation to provide the Exchequer Court with jurisdiction to determine any such dispute, difference, or question in the manner provided under the Exchequer Court Act.
9. The parties also agree that the Board, with the consent of the parties in dispute, may cause to be prepared, a factual report of the dispute for consideration by the parties hereto prior to the referral of the dispute to the Exchequer Court.
10. The parties agree that the Prairie Provinces Water Board shall monitor and report on the apportionment of waters as set out in the provisions of the First and Second Agreements and ratified by this Master Agreement.
11. The parties agree to revoke the agreement dated July 28, 1948, establishing the Prairie Provinces Water Board and to reconstitute the

Prairie Provinces Water Board in the form of Schedule C hereto and the said Schedule shall form and become part of this Master Agreement.

12. Because the Orders-in-Council referred to in Schedule D hereto will become redundant upon the execution of this Master Agreement, the parties agree to take steps to have them revoked.
13. The parties agree for the future application of the provisions of the Master Agreement (and the First and Second Agreements thereunder), to work together and to cooperate to the fullest extent each with the other for the integrated development and use of water and related resources to support economic growth according to selected social goals and priorities and to participate in the formulation and implementation of comprehensive planning and development programs according to their national, regional and provincial interest and importance.
14. No Member of the Parliament of Canada or Member of the Legislative Assemblies of the Provinces party to this agreement shall hold, enjoy, or be admitted to any share or part of any contract, agreement, commission or benefit arising out of this agreement.

IN WITNESS HEREOF Canada has caused its presents to be executed by its Minister of Energy, Mines and Resources, and Alberta has caused its presents to be executed by its Minister in charge of Water Resources, and Saskatchewan has caused its presents to be executed by its Minister in charge of The Water Resources Commission Act, and Manitoba has caused its presents to be executed by its Minister in charge of The Water Control and Conservation Branch Act on the day and year first mentioned above.

"A. Davidson"

Witness to the signature of the Minister
(Energy, Mines and Resources) for Canada

"J.J. Greene"

Minister (Energy, Mines and Resources) for
Canada

October 30, 1969

Date

"R. E. Bailey"

Witness to the signature of the Minister in
charge of Water Resources for Alberta

"Henry A. Ruste"

Minister in charge of Water Resources for
Alberta

October 30, 1969

Date

"Harold W. Pope"

Witness to the signature of the Minister in
charge of The Water Resources Commission
Act for Saskatchewan

"Allan R. Guy"

Minister in charge of The Water Resources
Commission Act for Saskatchewan

October 30, 1969

Date

"Thomas E. Weber"

Witness to the signature of the Minister in
charge of The Water Control and Conserva-
tion Branch Act for Manitoba

"Lenard S. Evans"

Minister in charge of The Water Control
and Conservation Branch Act for Manitoba

October 30, 1969

Date

SCHEDULE A

THIS AGREEMENT is made in quadruplicate this THIRTIETH day of OCTOBER, 1969, A.D.

BETWEEN:

HER Majesty, the Queen, in right of Alberta, represented herein by the Minister in charge of Water Resources for Alberta

(Hereinafter called "Alberta")

- and -

HER Majesty, the Queen, in right of Saskatchewan, represented herein by the Minister in charge of The Water Resources Commission Act of the said Province

(Hereinafter called "Saskatchewan")

WHEREAS under natural conditions the waters of the watercourses hereinafter referred to arising in or flowing through the Province of Alberta would flow into the Province of Saskatchewan and under the said conditions the waters of some of the said watercourses arising in or flowing through the Province of Saskatchewan would flow into the Province of Manitoba;

AND WHEREAS the parties hereto deem it to be in their mutual interest and in the interest of Manitoba that an agreement in principle be reached among the said three Provinces as to the apportionment of such interprovincial waters among them;

AND WHEREAS the parties hereto are of the opinion that an equitable apportionment of such waters as between the adjoining Provinces of Alberta and Saskatchewan would be to permit the Province of Alberta to make a net depletion of one-half the natural flow of water arising in or flowing through the Province of Alberta and to permit the remaining one-half of the natural flow of water of each such watercourse to flow into the Province of Saskatchewan, subject to certain

prior rights as are hereinafter set forth or may hereafter be mutually agreed upon in writing;

AND WHEREAS on the basis of the foregoing apportionment as between the Provinces of Alberta and Saskatchewan the parties hereto are of the opinion that in a similar manner, an equitable apportionment of the remainder of the natural flow of the said watercourses that flow into the Province of Manitoba after permitting the Province of Alberta to make its depletion of one-half thereof would be to permit the Province of Saskatchewan to make a net depletion of one-half of the said remainder and to permit the other one-half thereof to flow into the Province of Manitoba; and that the natural flow of any tributaries to the said watercourses which tributaries join the said watercourses in the Province of Saskatchewan without arising in or first flowing through the Province of Alberta could be apportioned one-half to the Province of Saskatchewan and one-half to the Province of Manitoba in a manner similar to the apportionment of waters as between the Provinces of Alberta and Saskatchewan, in all cases subject to such prior rights as may be mutually acknowledged by the said Provinces of Manitoba and Saskatchewan;

AND WHEREAS the parties hereto recognize the continuing need for consultation and cooperation as between themselves and with Manitoba with respect to the matters herein referred to so that the best and most beneficial use of the said waters may be made and the interests of all said provinces best served:

NOW THIS AGREEMENT witnesseth as follows:

1. IN THIS AGREEMENT:

- (a) "Natural flow" means the quantity of water which would naturally flow in any watercourse had the flow not been affected by human interference or human intervention, excluding any water which is part of the natural flow in Alberta but is not available for the use of Alberta because of the provisions of any international treaty which is binding on Alberta.

- (b) "Watercourse" means any river, stream, creek, or other natural channel which from time to time carries a flowing body of water from the Province of Alberta to the Province of Saskatchewan and includes all tributaries of each such river, stream, creek or natural channel which do not themselves cross the common boundary between the Provinces of Alberta and Saskatchewan. Such tributaries as do themselves cross the said common boundary between the Provinces of Alberta and Saskatchewan shall be deemed to be "watercourses" for the purpose of this agreement.
2. (a) The parties hereto shall mutually establish a method by which to determine the natural flow of each watercourse flowing across their said common boundary.
- (b) For the purpose of this agreement, the said natural flow shall be determined at a point as near as reasonably may be to their said common boundary.
- (c) Notwithstanding sub-paragraph (b) the point at which the natural flow of the watercourses known as the South Saskatchewan and Red Deer Rivers is to be determined may be, at the option of Alberta, a point at or as near as reasonably may be below the confluence of the said two rivers.
3. Alberta shall permit a quantity of water equal to one-half the natural flow of each watercourse to flow into the Province of Saskatchewan, and the actual flow shall be adjusted from time to time on an equitable basis during each calendar year, but this shall not restrict or prohibit Alberta from diverting or consuming any quantity of water from any watercourse provided that Alberta diverts water to which it is entitled of comparable quality from other streams or rivers into such watercourse to meet its commitments to Saskatchewan with respect to each watercourse.
4. Notwithstanding paragraph 3 hereof, the following special provisions shall apply as between the parties hereto with respect to the watercourse known as the South Saskatchewan River.
- (a) Alberta shall be entitled in each year to consume, or to divert or store for its consumptive use a minimum of 2,100,000 acre-feet net depletion out of the flow of the watercourse known as the South Saskatchewan River even though its share for the said year, as calculated under paragraph 3 hereof, would be less than 2,100,000 acre-feet net depletion, provided however Alberta shall not be entitled to so consume or divert, or store for its consumptive use, more than one-half the natural flow of the said South Saskatchewan watercourse if the effect thereof at any time would be to reduce the actual flow of the said watercourse at the common boundary of the said Provinces of Saskatchewan and Alberta to less than 1,500 cubic feet per second.
- (b) The consumption or diversion by Alberta provided for under the preceding subparagraph shall be made equitably during each year, depending on the actual flow of water in the said watercourse and the requirements of each Province, from time to time.
5. The parties hereto shall work together and co-operate to the fullest extent, each with the other, for the most effective, economical and beneficial use of waters flowing from the Province of Alberta into the Province of Saskatchewan, including the construction and operation of approved projects of mutual advantage to our Provinces on a cost-share basis proportionate to the benefits derived therefrom by each Province, (the approval of which projects shall not be unreasonably withheld by either of the parties hereto) and shall enter into such other arrangements, agreements or accords with each other, and with the Governments of Canada and other Provinces to best achieve the principles herein agreed upon.

6. This agreement shall not adversely affect any right to water in Battle or Lodge Creeks which has been given by the Government of Canada prior to the transfer of the natural resources to the Provinces and is still subsisting, or any right to such water given by either Province heretofore which has been recognized and approved by both Provinces.
7. If at any time any dispute, difference or question shall arise between the parties or their representatives touching this agreement or the construction, meaning and effect thereof, or anything therein, or the rights or liabilities, of the parties or their representatives thereunder or otherwise in respect thereto then every such dispute, difference or question shall be referred for determination to the Exchequer Court under the provisions of The Exchequer Court Act of Canada, and each of the parties hereto agrees to enact the necessary legislation to provide the Exchequer Court with jurisdiction to determine any such dispute, difference or question in the manner provided under Section 30 of The Exchequer Court Act.
8. This agreement shall become effective upon the execution of an agreement by Canada, Alberta, Manitoba and Saskatchewan relative to the apportionment of waters referred to in this agreement.

"R. E. Bailey"

Witness to the signature of the Minister
in charge of Water Resources for Alberta

"Henry A. Ruste"

Minister in charge of Water Resources
for Alberta

"Harold W. Pope"

Witness to the signature of the Minister
in charge of The Water Resources Com-
mission Act

IN WITNESS WHEREOF Alberta has caused these presents to be executed on its behalf by its Minister in charge of Water Resources, and Saskatchewan has caused these presents to be executed by its Minister in charge of The Water Resources Commission Act, both on the day and year first above mentioned.

"Allan R. Guy"

Minister in charge of The Water Re-
sources Commission Act

SCHEDULE B

THIS AGREEMENT is made in quadruplicate this THIRTIETH day of OCTOBER, 1969, A.D.

BETWEEN:

HER Majesty, the Queen, in right of Saskatchewan, represented herein by the Minister in charge of The Water Resources Commission Act of the said Province

(Hereinafter called "Saskatchewan")

- and -

HER Majesty, the Queen, in right of Manitoba, represented herein by the Minister in charge of The Water Control and Conservation Branch Act of the said Province

(Hereinafter called "Manitoba")

WHEREAS under natural conditions the waters of the watercourses hereinafter referred to arising in or flowing through the Province of Saskatchewan would flow into the Province of Manitoba;

AND WHEREAS the parties hereto deem it to be in their mutual interest and in the interest of Alberta that an agreement in principle be reached among the said three Provinces as to the apportionment of interprovincial waters among them;

AND WHEREAS the parties hereto are of the opinion that an equitable apportionment of such waters as between the adjoining Provinces of Saskatchewan and Manitoba would be to permit the Province of Saskatchewan to make a net depletion of one-half the natural flow of water arising in, and one-half the flow of water flowing into, the Province of Saskatchewan, and to permit the remaining one-half of the flow of water of each such watercourse to flow into the Province of Manitoba, subject to certain rights as may hereafter be mutually agreed upon in writing;

AND WHEREAS on the basis of the foregoing apportionment as between the Provinces of Saskatchewan and Manitoba, the parties hereto are of the opinion that in a similar manner, an equitable apportionment of the natural flow of the said watercourses arising in or flowing through the Province of Alberta would be to permit the Province of Alberta to make a net depletion of one-half thereof, subject to such prior rights as may be mutually acknowledged by the said Provinces of Alberta, Saskatchewan and Manitoba;

AND WHEREAS the parties hereto recognize the continuing need for consultation and co-operation as between themselves and with Alberta with respect to the matters herein referred to so that the interests of all said Provinces are best served;

NOW THIS AGREEMENT witnesseth as follows:

1. IN THIS AGREEMENT:

- (a) "Natural flow" means the quantity of water which would naturally flow in any watercourse had the flow not been affected by human interference or human intervention.
- (b) "Watercourse" means any river, stream, creek, or other natural channel which from time to time carries a flowing body of water from the Province of Saskatchewan to the Province of Manitoba and includes all tributaries of each such river, stream, creek or natural channel which do not themselves cross the common boundary between the Provinces of Saskatchewan and Manitoba. Such tributaries as do themselves cross the said common boundary between the Provinces of Saskatchewan and Manitoba shall be deemed to be "watercourses" for the purpose of this agreement.

2. (a) The parties hereto shall mutually establish a method by which to determine the natural flow of each watercourse flowing across their said common boundary.
- (b) For the purpose of this agreement, the said natural flow shall be determined at a point as near as reasonably may be to their said common boundary.
3. Saskatchewan shall permit in each watercourse the following quantity of water to flow into Manitoba during the period from April 1 of each year to March 31 of the year following: A quantity of water equal to the natural flow for that period determined at the point referred to in paragraph 2(b) hereof, less
 - (a) one-half the water flowing into Saskatchewan in that watercourse from Alberta, and
 - (b) any water which would form part of the natural flow in that watercourse but does not flow into Saskatchewan because of the implementation of any provision of any subsisting water apportionment agreement made between Alberta and Saskatchewan and approved by Manitoba, and
 - (c) one-half the natural flow arising in Saskatchewan.

The actual flow shall be adjusted from time to time by mutual agreement on an equitable basis during such period but this shall not restrict or prohibit Saskatchewan from diverting, storing or consuming any quantity of water from any watercourse provided that Saskatchewan diverts water to which it is entitled of comparable quality from other streams or rivers into such watercourse to meet its commitments to Manitoba with respect to each watercourse.
4. Saskatchewan shall be entitled during such period to consume or to divert or store for its consumptive use the water it is not required to permit to flow into Manitoba in each watercourse under paragraph 3 hereof, but such consumption or diversion shall be made equitably depending on the actual flow of water in each watercourse and the requirements of each Province from time to time, but Saskatchewan shall permit sufficient water to flow into Manitoba to meet its commitments during such period under paragraph 3 hereof.
5. The parties hereto shall work together and co-operate to the fullest extent, each with the other, for the use of waters flowing from the Province of Saskatchewan into the Province of Manitoba, including the construction and operation of approved projects of mutual advantage to the said Provinces on a cost-share basis proportionate to the benefits derived therefrom by each Province (the approval of which projects shall not be unreasonably withheld by either of the parties hereto) and shall enter into such other arrangements, agreements or accords with each other, and with the Governments of Canada and other Provinces to best achieve the principles herein agreed upon.
6. If at any time any dispute, difference or question shall arise between the parties or their representatives touching this agreement or the construction, meaning and effect thereof, or anything therein, or the rights or liabilities of the parties or their representatives thereunder or otherwise in respect thereto then every such dispute, difference or question shall be referred for determination to the Exchequer Court under the provisions of The Exchequer Court Act of Canada, and each of the parties hereto agrees to maintain or enact the necessary legislation to provide the Exchequer Court with jurisdiction to determine any such dispute, difference or question in the manner provided under The Exchequer Court Act.

7. This agreement shall become effective upon the execution of an agreement by Canada, Alberta, Manitoba and Saskatchewan relative to the apportionment of waters referred to in this agreement.

IN WITNESS WHEREOF Saskatchewan has caused these presents to be executed by its Minister in charge of The Water Resources Commission Act, and Manitoba has caused these presents to be executed by its Minister in charge of The Water Control and Conservation Branch Act on the day and year first above mentioned.

"Harold W. Pope"

Witness to the signature of the Minister in charge of The Water Resources Commission Act

"Allan R. Guy"

Minister in charge of The Water Resources Commission Act

"Thomas E. Weber"

Witness to the signature of the Minister in charge of The Water Control and Conservation Branch Act

"Leonard S. Evans"

Minister in charge of The Water Control and Conservation Branch Act.

SCHEDULE C

PRAIRIE PROVINCES WATER BOARD AGREEMENT

THIS AGREEMENT made this THIRTIETH day of OCTOBER, 1969, A.D.

BETWEEN:

THE GOVERNMENT OF CANADA,
hereinafter called "Canada"

- and -

THE GOVERNMENT OF MANITOBA,
hereinafter called "Manitoba"

- and -

THE GOVERNMENT OF SASKATCHEWAN,
hereinafter called "Saskatchewan"

- and -

THE GOVERNMENT OF ALBERTA,
hereinafter called "Alberta"

1. Manitoba, Saskatchewan, Alberta and Canada agree to establish and there is hereby established a Board to be known as the Prairie Provinces Water Board to consist of five members to be appointed as follows:

- (a) two members to be appointed by the Governor General in Council, one of whom shall be Chairman of the Board, on the recommendation of the Minister of Energy, Mines and Resources,
- (b) one member to be appointed by the Lieutenant Governor in Council of each of the Provinces of Manitoba, Saskatchewan and Alberta.

2. Functions

The Board shall oversee and report on the Master Agreement (including the First and

Second Agreements thereunder) executed by Canada, Alberta, Manitoba and Saskatchewan for the apportionment of waters flowing from one Province into another Province; shall take under consideration, comprehensive planning, water quality management and other questions pertaining to water resource management referred to it by the parties hereto; shall recommend appropriate action to investigate such matters and shall submit recommendations for their resolution to the parties hereto.

3. Composition of Board

The members of the Board shall be chosen from those engaged in the administration of water resources or related duties for Manitoba, Saskatchewan, Alberta or Canada, as the case may be, and shall serve as members of the Board in addition to their other duties.

4. Duties of the Board

In accordance with its functions, the duties of the Board shall be as follows:

- (a) to review, collate, and analyze stream-flow data and prepare reports and recommendations on the apportionment of water,
- (b) to review water quality problems, particularly such problems located at the interprovincial boundaries, and to recommend to the parties hereto, appropriate management approaches for their resolution including the establishment of new institutional arrangements,
- (c) to develop recommendations on other water matters, in addition to problems on water quality, referred to the Board by any party hereto including the review and analysis of existing information and the requesting of additional studies and assistance by appropriate governmental agencies to provide information for formulating its recommendations,

- (d) to promote through consultation and the exchange of information the integrated development of water resources of inter-provincial streams,
- (e) to cause to be prepared with the consent of the parties involved factual reports on disputes arising out of the water apportionment for consideration by the parties hereto,
- (f) to ensure the co-ordination of such technical programs as water quantity and quality monitoring and streamflow forecasting required for the effective apportionment of water.

5. Confirmation of the Board's Recommendations

A recommendation of the Board with respect to any matters referred to it under Section 2 shall, subject to the Master Agreement for the apportionment of water, become effective when adopted by Orders-in-Council passed by Canada and each of the Provinces.

6. Authority of Board

The Board shall have authority to correspond with all Governmental organizations and other sources of information in Canada or abroad concerned with the administration of water resources, and such other authority as may be conferred on the Board from time to time by agreement between the parties hereto; all agencies of the four governments having to do with the water and associated resources in the area covered by the Agreement shall be required to supply the Board with all data in their possession requested by the Board.

7. Records

The records relating to the water resources of the three provinces collected and compiled by the P.F.R.A. organization at Regina shall be made available to the Board.

8. Meetings of the Board

The Board shall meet at the call of the Chairman and meetings shall be called at least twice annually; the expenses of the members shall be borne by their respective governments.

9. Reports

The Board shall submit an annual progress report outlining work done and work contemplated in the agreed program to each of the responsible Ministers of the parties hereto and such other reports as may be requested by any one of such Ministers.

10. Operation of the Board

The Secretary for the Board and such other technical and clerical staff as may be required, with a headquarters at Regina, shall be Federal or Provincial public servants. The cost of administration, excluding the cost of monitoring as described in Section 7 of the Master Agreement, but including staff, accommodation, supplies and incidental expenses of the Board, shall be borne by the parties hereto on the basis of one-half by Canada and one-sixth by each of the Provinces. The Board shall prepare for approval of the parties hereto, work program, staff requirements, annual budgets and five-year forecasts and such other reports as may be required in the operation of the Board.

11. Any water development project already constructed or to be constructed by any one of the parties shall be so operated as to maintain the apportionment of water as set out in the Master Agreement (and the First and Second Agreements thereunder) for the apportionment of waters of interprovincial streams.

SCHEDULE D

PREVIOUS ALLOCATIONS OF INTERPROVINCIAL WATERS
 APPROVED BY ORDERS-IN-COUNCIL BY THE GOVERNMENTS OF
 CANADA, ALBERTA, MANITOBA, AND SASKATCHEWAN

<u>Item</u>	<u>Order-in-Council</u>			
	<u>Canada</u>	<u>Alberta</u>	<u>Saskatchewan</u>	<u>Manitoba</u>
Allocation of water for specific projects in Alberta	4030/49	857/49	1307/51	1121/49
Allocation of water for specific projects in Saskatchewan	1874/51	1091/51	1310/51	1264/51
Allocation of water for South Saskatchewan River Project in Sask- atchewan	973/53	991/53	1271/53	924/53

BY-LAWS

PART I

1. In these By-Laws:

- (a) "Agreement" means the Prairie Provinces Water Board Master Agreement (including the First and Second Agreements thereunder) executed the Thirtieth day of October, 1969, A. D. by Canada, Alberta, Saskatchewan and Manitoba.
- (b) "Alternate" means Alternate Member of the Prairie Provinces Water Board.
- (c) "Board" means the Prairie Provinces Water Board.
- (d) "By-Laws" means the ordinances adopted by the Board for the regulation of the Board's internal affairs.
- (e) "Chairman" means Chairman of the Prairie Provinces Water Board.
- (f) "Executive Director" means the senior officer of the Secretariat.
- (g) "Member" means Member of the Prairie Provinces Water Board.
- (h) "Ministers" means the responsible ministers of the governments which are party to the Agreement.
- (i) "Secretariat" means the operational unit established by the Board to carry out the day-to-day affairs of the Board.
- (j) "Schedule C" means the Prairie Provinces Water Board Agreement under the Master Agreement (1969) executed by Canada, Alberta, Saskatchewan and Manitoba establishing the Prairie Provinces Water Board.

PART II

The following shall be the By-Laws of the Prairie Provinces Water Board.

1. Objectives

The objectives of the Board shall be to promote the integrated development and use of water and related resources to support economic growth according to selected social goals and priorities, and to participate in the formulation and implementation of comprehensive planning and development programs according to their national, regional and provincial interest and importance.

In general, the Board will provide coordination and liaison between water resource agencies and will advise governments on the planning, development and management of interprovincial waters.

In particular, the Board will ensure the equitable apportionment of water flowing from one province into another province in accordance with the Agreement and will promote effective water quality management of interprovincial streams relative to standards and procedures adopted by the Board from time to time.

2. Membership

In accordance with Section 1 of Schedule "C", the Prairie Provinces Water Board shall consist of five Members to be appointed as follows:

- (a) two Members to be appointed by the Governor General in Council, one of whom shall be Chairman of the Board;
- (b) one Member to be appointed by the Lieutenant Governor in Council of each of the Provinces of Manitoba, Saskatchewan and Alberta.

3. Alternate Members

Each Member, including the Chairman, shall arrange for the appointment of an Alternate Member to act on his behalf during his absence, in which case the Alternate shall enjoy all the rights and privileges conferred on the Member.

4. Meetings and Notice

The Board shall meet at least twice a year by the call of the Chairman. Any Member may request a meeting of the Board at any time, in which case the Chairman must call the meeting within one month (30 days).

Meetings of the Board shall be called with at least 14 days notice unless every Member agrees otherwise.

5. Quorum

Meetings of the Board shall be official when all Members or their appointed Alternates are present.

6. Voting

All recommendations to government, all By-Laws and budgets-in-total shall require unanimous approval. The majority of votes determines a question on any other matter. In the event of a tie, the Chairman shall cast the deciding vote.

7. Powers

In accordance with the duties, functions and operations of the Board, as contained in Schedule "C", the Board shall have the power to authorize expenditures within the limits of approved budgets for the operations of the Secretariat, for the employment of staff, or for any other purposes necessary for administering the Agreement and furthering the objectives of the Board.

8. Authority

Within the general responsibilities given to it, the Board shall determine its technical and administrative functions from time to time and

shall decide all matters regarding the authority of the Board and the delegation thereof.

9. Financial Year

The financial year shall end on the 31st day of March in each year.

10. Budgets

The Chairman shall submit fiscal year program and budget estimates to the Board and to the parties to the Agreement for their approval. Such estimates shall be submitted not later than the first day of August preceding the financial year to which they pertain.

11. Secretariat

(a) There shall be a permanent Secretariat with offices at Regina, Saskatchewan.

(b) The Secretariat shall be the "operational arm" of the Board, charged with the responsibility of conducting programs approved by the Board for collating and analyzing data and reporting the apportionment and water quality of interprovincial streams; for conducting approved studies, and for furthering the policies and objectives of the Board.

(c) Except as otherwise provided for under subsection (f) herein, employees of the Secretariat shall be federal civil servants, subject to federal public service regulations and classification and collective agreements.

(d) The chief officer of the Secretariat shall be the Executive Director whose actions shall at all times be subject to the approval of the Board.

(e) The Board shall approve the establishment of salaried positions within the Secretariat and shall approve job descriptions prior to submission to the appropriate federal authority. The Board shall be consulted on the appointment of employees to the Secretariat which role may be delegated to the Executive Director.

- (f) The Board may arrange by agreement for secondment to the Secretariat, the employees of the agencies of those party to the Agreement, at cost, whenever in the opinion of the party concerned the services of such employees are available. Such employees shall remain under the administrative control and public service regulations of the appropriate party.

12. Assignments to Associated Agencies and Consultants

- (a) The Board shall have the authority to engage agencies of those party to the Agreement, at cost, to undertake assignments from the Board, whenever in the opinion of the party concerned, the services of such agencies are available.
- (b) Agencies may enter into sub-contracts with consultants for purposes of professional interpretation subject to the approval of the Executive Director. Sub-contracts for the collection of basic data shall not require the approval of the Executive Director.
- (c) The Board may engage consultants to undertake assignments from the Board where such services are deemed necessary.
- (d) The services of consultants and of agencies of those party to the Agreement shall be engaged under a contractual arrangement. Contracts shall be entered into by the Chairman and/or the Executive Director subject to delegated authorities under the federal government contract regulations. Contracts for services shall also be subject to budgetary appropriations and any other controls imposed by the Board for the conduct of the work.

13. Terms of Payment for Services Provided by Associated Agencies

- (a) Canada, through the Board, shall reimburse the Provinces of Alberta, Saskatchewan and Manitoba on a monthly basis, for expenditures made pursuant to the Agreement and approved by the Board. Payment for such expenditures will be made by Canada upon the submission of a claim in a mutually agreed manner and form.

- (b) Canada, and the Provinces of Alberta, Saskatchewan and Manitoba shall keep complete records of all expenditures made severally pursuant to the Agreement and shall support such expenditures with proper documentation. Canada and the Provinces of Alberta, Saskatchewan and Manitoba shall make these records and documents available to auditors appointed by the other.

14. Cost of Administration of the Board

- (a) In accordance with Section 10 of Schedule "C", all budgeted expenditures, which shall not include the cost of monitoring, as described in Section 7 of the Master Agreement, but including staff, accommodation, supplies and incidental expenses of the Board, shall be borne by the parties to the Agreement on the basis of one-half by Canada and one-sixth by each of the Provinces.

15. Financing the Operations of the Board

- (a) Canada shall assume responsibility for financing the operations of the Board.
- (b) Subject to the cost sharing provisions of the Agreement, the Provinces of Alberta, Saskatchewan and Manitoba shall pay to Canada their shares of approved expenditures made by Canada for the operations of the Board.
- (c) On or before July 1st of each year, Canada shall prepare and submit to each of the provinces party to the Agreement, statements of claim respecting provincial shares of monies due Canada for financing the operations of the Board during the previous financial year. Statements of claim shall be certified by a senior official of Canada and bear a Canada audit certificate.
- (d) Within sixty (60) days after receipt of a claim by Canada, submitted as prescribed in Article 15(c), the Provinces of Alberta,

Saskatchewan and Manitoba shall reimburse Canada for their shares of expenditures incurred during the previous financial year for the operations of the Board.

16. Annual Report

Within three (3) months after the end of the financial year, the Chairman shall submit to the Ministers the Annual Report of the Board.

17. Amendment of By-Laws

By-Laws may be enacted, amended or repealed by unanimous approval of the Board. "Notice of Motion" to enact, amend or repeal By-Laws must be served on Members at least sixty (60) days prior to a vote on such issue.

18. Rules and Procedures

The Board shall formulate and adopt "Rules and Procedures" governing the day-to-day affairs of the Board and the operations of the Secretariat. These "Rules and Procedures" may be amended, adopted or repealed in accordance with Article 6 of these By-Laws.

PART III

EXECUTIVE DIRECTOR

1. Functions

- (a) The Executive Director shall be the senior employee of the Secretariat; subject to the Board's direction, he shall be responsible for the technical and administrative activities of the Secretariat and the day-to-day management of the Board.
- (b) He shall record or cause to be recorded all votes and minutes of all proceedings in books to be kept for that purpose.
- (c) He shall give or cause to be given notice of all meetings of the Board.
- (d) He shall keep the Board informed at all times of matters pertinent or relevant to the programs and operations of the Board.
- (e) He shall have charge of all records of the Board, together with copies of all reports made by the Board and such other books or papers as the Board may direct.
- (f) He shall implement all orders and resolutions of the Board and perform any other duties that the Board may prescribe.

Approved at PPWB Meeting No. 5
- November 2nd, 1971

RULES AND PROCEDURES

SECRETARIAT

The Prairie Provinces Water Board hereby adopts the following Rules and Procedures governing the operations of the Prairie Provinces Water Board Secretariat.

Financial Administration

1. The Executive Director is authorized to make disbursements of funds in conformity with the main items of expenditure allotted in the budget estimates approved by the Board, subject to those restrictions specified elsewhere in these Rules and Procedures.
2. The Executive Director shall prepare the annual program and budget estimates for the operations of the Prairie Provinces Water Board. Such estimates shall be submitted to the Chairman not later than the first day of July preceding the financial year to which they pertain.
3. Contracts with private consultant firms and individuals shall conform to accepted practices and procedures of the Federal Treasury Board.
4. A contract for services with a person or persons may be undertaken by the Executive Director providing that no such contract is made with a single person, a single firm of persons, or government agency exceeding \$5,000 without the approval of the Board.
5. Contracts not exceeding \$5,000 shall be executed on behalf of the Board under the signature of the Executive Director. Contracts exceeding \$5,000 shall be executed under the signature of the Chairman of the Board.
6. Payment of accounts will be made only after they have been approved by the Executive Director.

Establishment of Salaried Positions, Appointments and Administration of Salaries

7. The establishment of salaried positions in the Secretariat shall be approved by the Board.
8. The Board shall approve the duties of all positions in the Secretariat including those of Executor Director.
9. The classification and remuneration of salaried positions within the Secretariat shall be governed by the appropriate federal authority.
10. The financial and personnel administration of the Secretariat shall be carried out in accordance with federal government practices.
11. To facilitate the operations of the Secretariat, personnel and financial administrative support services shall be provided, at cost, by the Federal Department of the Environment.

Board Offices

12. The Executive Director is authorized to lease and maintain property within which to conduct Board affairs providing that terms of such leasing shall be sanctioned by the Board.
13. Costs for the operation of the Board offices shall include, but shall not necessarily be limited to, expenditures for the following items:
 - (a) Salaries and wages and related benefits of Board employees or personnel seconded to the Board offices, including removal expenses, both at the commencement and termination of the appointment, where applicable, and living expenses for seconded personnel where approved by the Board.

- (b) Field surveys and investigations including travel and living expenses when applicable, by personnel engaged in conducting studies or field investigations.
 - (c) Rentals for office space and equipment and charges for utilities and related services for the operation of Board offices.
 - (d) Purchases of furniture, and equipment not available on a rental basis.
 - (e) Operating, maintenance and transportation expenses for equipment.
 - (f) Contracts awarded by the Board including, where applicable, arbitration, settlements, legal fees and other matters, made in accordance with the provisions of the contract.
 - (g) Settlement and legal fees arising out of property damaged or public liability made or incurred by an employee of the Secretariat or a party to the Agreement working for the Secretariat and engaged in the activities of the Board offices.
 - (h) Other items required for conducting the work and for operations of the Board offices which have been approved by the Board.
- (c) Normal operating maintenance and transportation expenses for equipment where such expenses are not included in the rental rate.
 - (d) All contracts as provided under the provisions of Article 12(b) of the By-Laws.
 - (e) Other items required for conducting the work of the Board and approved by the Executive Director.

Board Members, Alternates and Advisory Committees

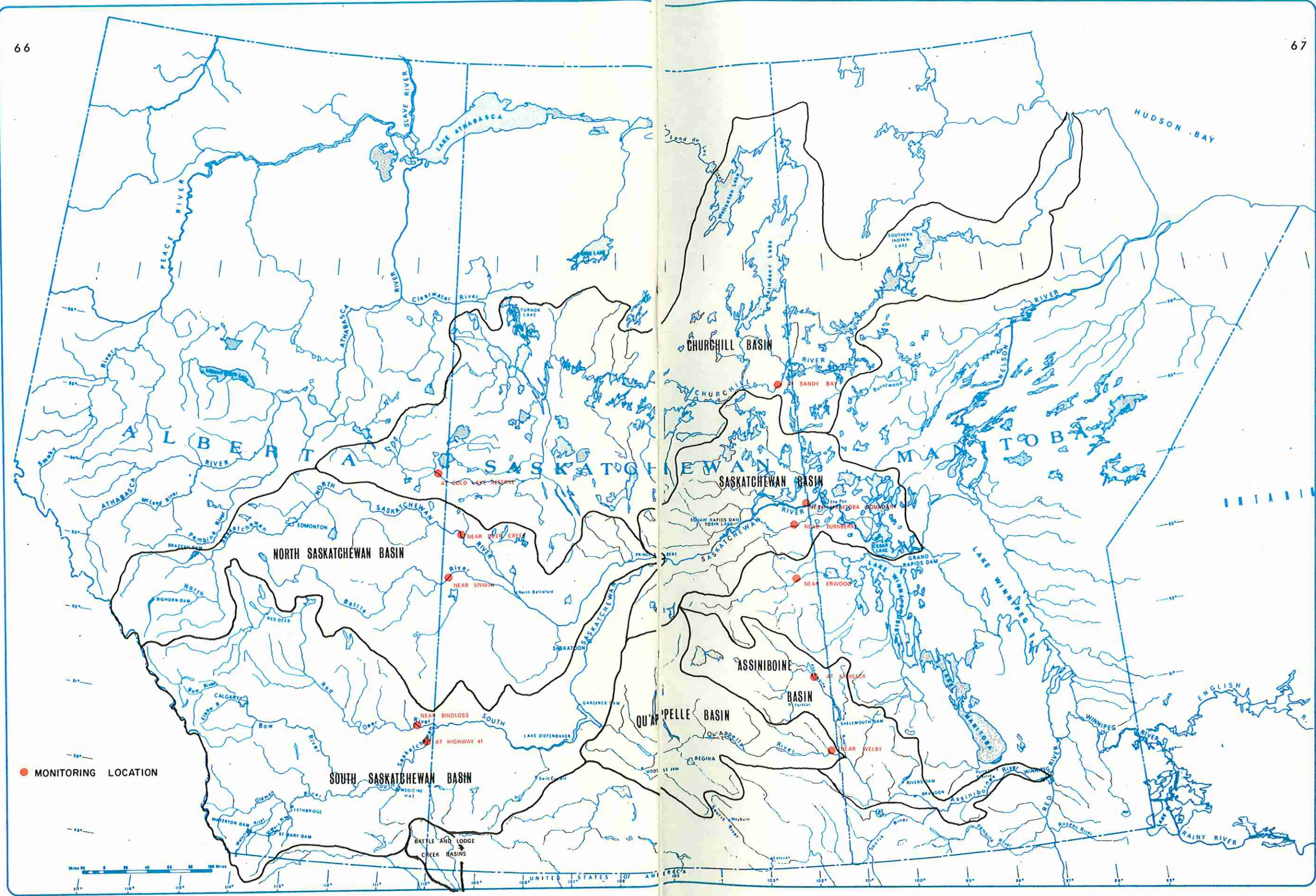
15. The costs incurred by Board Members and their Alternates in representing their respective governments at Board functions shall be paid for by the appropriate government. The salaries and travelling expenses of government officials appointed to represent those party to the Agreement on Committees established to advise the Board and/or the Executive Director shall be paid by the appropriate party.

Approved at PPWB Meeting No. 5
- November 2nd, 1971

Payment for Services Provided by Participating Government Agencies

14. Costs of participating government agencies for services, field investigations, planning studies, etc., specifically requested by the Board shall include the following items:
- (a) Salaries, wages, travel and living expenses for employees engaged in providing the service.
 - (b) Rental charges for equipment and operators.

MAP



● MONITORING LOCATION



UNITED STATES OF AMERICA