

PRAIRIE PROVINCES WATER BOARD

FIFTEENTH

ANNUAL REPORT

1962

o/o P.F.R.A.
Motherwell Building
Regina, Saskatchewan

(1)

C O N T E N T S

Personnel

Warrant and Function of Board

Review of Activities

Figure

Historical Flows and Diversions

Appendix A

Summary of Allocations and Reservations
in good standing

P E R S O N N E L

The Prairie Provinces Water Board is composed of five members. Three provincial members represent the Provinces of Alberta, Saskatchewan, and Manitoba, and two Federal members represent the Departments of Agriculture, and Northern Affairs and National Resources. The Engineering Secretary for the Board is provided by the P.F.R.A. (Canada Department of Agriculture).

Board Members

G.L. MacKenzie (Chairman)	Special Assistant, P.F.R.A.
R.H. Clark	Chief Hydraulic Engineer Water Resources Branch Ottawa, Ontario
F.L. Grindley	Director, Water Resources Branch Edmonton, Alberta
B.W. Boyson	Chief Engineer, Water Rights Branch Regina, Saskatchewan
J.A. Griffiths	Director Water Control and Conservation Branch Winnipeg, Manitoba
E.F. Durrant	Engineering Secretary to the Board Chief, Hydrology Division P.F.R.A. Regina, Saskatchewan

WARRANT AND FUNCTION OF BOARD

On July 28th, 1948, the Prairie Provinces Water Board was established by the Governments of Canada, Manitoba, Saskatchewan, and Alberta; consisting of two members appointed by Canada and one from each of the three provinces.

The Board's function is to recommend the best use to be made of interprovincial waters in relation to associated resources in Manitoba, Saskatchewan, and Alberta and to recommend the allocation of water as between each province of streams flowing from one province into another province.

The Board's duties are: To collate and analyze the data now available relating to the water and associated resources of interprovincial streams; to determine what other data are required from time to time and to make recommendations to the appropriate governmental organizations concerned for the carrying out of such surveys and studies which the Board considers necessary to supply information required for the performance of its duties; upon request of any one of the three provinces or Canada, to recommend the allocation of the water of any interprovincial stream among the respective provinces; and to report on any questions relating to specific projects for the utilization or control of common river or lake systems at the request of one or more of the Ministers or authorities charged with the administration of such river or lake systems.

REVIEW OF ACTIVITIES
IN 1962

THE SASKATCHEWAN-NELSON STUDY

In 1960 the Board adopted a resolution requesting that the Governments of Alberta, Saskatchewan, Manitoba, and Canada undertake jointly to implement a study which would lead to the formulation of an integrated development plan for the water resources of the Nelson River Basin.

During 1962 this matter was still being considered by the governments concerned, and, although some concern was expressed by Board members that no final decisions regarding the proposed study had been made, the Board took no official action concerning the matter.

WILLIAM PEARCE PROJECT

In May 1962 representatives of Saskatchewan, Alberta, and P.F.R.A. met to discuss the present status of the William Pearce Project studies in Alberta and the possibility of joint action in the future. A working committee was set up, to meet at the request of either group, for future discussions.

RESERVATION FOR SMALL PROJECTS

Work continued on the inventory of small projects in the Saskatchewan River Basin, and it was expected that it would be available to Board members early in 1963. The matter of renewal of the reservation was left in abeyance until the completion of the inventory.

SOUTH SASKATCHEWAN RIVER TO QU'APPELLE RIVER DIVERSION

Since it had been pointed out that it was technically feasible to install, at some future date, additional conduit capacity in the Qu'Appelle Valley Dam above the 1300 c.f.s. initial capacity, it was decided that a study for the sole purpose of defining capacity was not necessary.

However, the Board agreed that it would be desirable to make a study to provide the Board with some basis for apportioning the waters of the Qu'Appelle and Assiniboine Rivers, and to arrive at a figure for Manitoba's and Saskatchewan's future needs for water from the South Saskatchewan River Reservoir.

A motion was passed at the September 1962 meeting that the Board Secretariat undertake such a study. It was agreed that Manitoba and Saskatchewan would participate in some phases of the work.

Work was initiated on this study at once.

PRAIRIE PROVINCES WATER BOARD ALLOCATIONS

During the year considerable discussion took place on the subject of Water Board allocations. Drought conditions in 1960, 1961, and 1962 had drawn attention to the fact, that in some irrigation districts the amount of water in the authorized allocations was apparently insufficient for operation of the districts under such drier-than-normal conditions. An examination of the methods of calculation of the various allocations indicated that there had been no uniform or standard method used in their calculation, with the

result that they were not all, so to speak, on the same "datum." At the September meeting of the Board, it was decided that before the next meeting the Secretary would prepare material describing the problem and the type of information the Board would need in order to make definite recommendations regarding revision of the method of calculating allocations, and possibly amending the allocations themselves.

OFFICIAL RECORD OF PROJECTS

It was agreed to drop the list of projects officially recorded with the Board, since publications regarding power developments, published by the Water Resources Branch, Department of Northern Affairs and National Resources, together with the Board's proposed small-project inventory, would serve the same purpose.

METEOROLOGICAL SERVICES FOR HYDROLOGY

As a result of a report on future prairie needs for hydro-meteorological data forwarded to the Meteorological Branch early in the year, Storm Advisory Services are now available from the Meteorological Branch, as follows:

To - P.F.R.A. offices in Winnipeg and Regina;
 Manitoba Water Control and Conservation Branch;
 Alberta Water Resources office in Edmonton;
 Water Resources Branch (Canada) in Calgary;
 Saskatchewan Conservation and Development Branch in Regina.

AMENDMENT TO WATER POWER REGULATIONS

The 1959 Board recommendation to the Governments of Alberta, Saskatchewan, Manitoba, and Canada concerning amendment of Water Power Regulations was approved in 1960 by the Governments of Saskatchewan and Manitoba, and in 1961 by the Government of Canada. Approval of the Alberta Government not having been given, no further action in this matter can be reported for 1962.

RIVER CLOSURE OPERATIONS AT SQUAW RAPIDS DAM ON THE SASKATCHEWAN RIVER

Late in the year, closure was effected at the Squaw Rapids Dam. Some members of the Board felt that a wider circulation of information prior to closure would have reduced the number of downstream complaints reported in the newspapers. To improve interprovincial exchange of information for similar situations in the future, the Board instructed the Secretary to obtain and distribute such information. In this way members of the Board will be in a better position to answer public enquiries from time to time on matters of interprovincial river control and operation.

CURRENT WATER BOARD STUDIES

1. Mr. George Underhill's report entitled "The Effect of a Change in Vegetation on the Runoff Characteristics of Alberta Streams" was published in 1962.
2. The Unit Runoff Study being made by the Water Board Secretariat continued during the year, with substantial progress being made. Anticipated completion date is in the autumn of 1963.

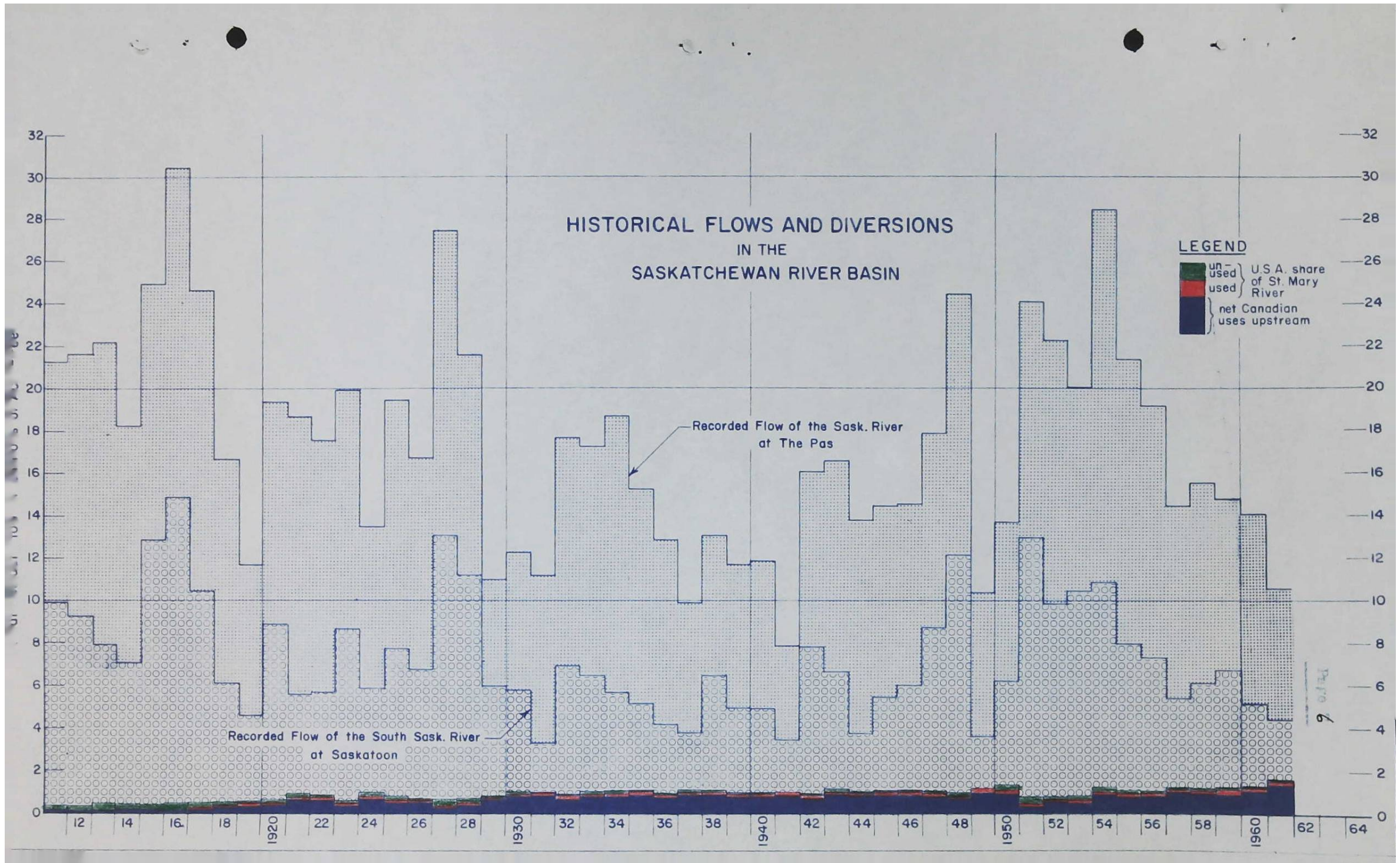
3. The final draft of Dr. Laycock's report on "The Aridity of the Canadian Prairies" was not received by the Board in 1962.

4. Current depletions

A record is maintained by the Secretary of current streamflow depletions in the Saskatchewan River watershed. The chart on the next page shows depletions in comparison with the recorded flow of the Saskatchewan River at The Pas.

MEETINGS

Only one Board meeting was held during 1962, on September 19, 1962, in Calgary, Alberta.



APPENDIX A

Definitions of Final Allocation, Tentative Allocation, and Reservation as agreed to January 26, 1950:

FINAL ALLOCATION

Procedure under which the Board may be requested to recommend to the governments represented in the Agreement a final allocation of water for a specific project.

TENTATIVE ALLOCATION

Procedure under which the Board may be requested to recommend to the governments represented in the Agreement a tentative allocation of water for a specific project; such an allocation to be subject to review and possible subsequent modification or cancellation, either in whole or in part, prior to final allocation.

RESERVATION

Procedure under which the Board may make a "reservation" of probable water requirements of specific projects. This will not comprise an allocation but shall represent an undertaking by the Board to the effect that, while the reservation is in good standing, no subsequent action will be taken by the Board which will have a detrimental effect upon the stipulated water without first thoroughly reviewing the status and requirements of the project for which the reservation was made and without affording to the representatives of the interested jurisdictions ample opportunity to make representations and to be heard. The Board shall, in making such a reservation, fix a period of time during which sufficiently complete plans and reports are to be prepared to enable the Board to consider further the allocation of water for this purpose: provided first, that if further information is not forthcoming in the stipulated period of time the reservation will lapse, and second, that the Board may, in its discretion, from time to time extend any period fixed for the production of such further information.

APPENDIX A (Cont'd)

SUMMARY OF FINAL ALLOCATIONS
IN THE SASKATCHEWAN RIVER BASIN

PROJECT	PROV- INCE	Irrig- able Acreage Acres	Alloca- tion Ac-ft.	Recom- mended by Water Board	Recommen- dation approved by O.I.C. from all Govern- ments
St.Mary-Milk River Project.	Alberta	465,000	796,000	6-5-49	4-7-51
Western Irrig. District.....	"	50,000	85,700	"	"
Eastern Irrig. District.....	"	281,000	562,000	"	"
Bow River Irrig. District...	"	240,000	478,534	"	"
United Irrig. District.....	"	54,000	51,000	"	"
Leth. Northern Irr. District	"	96,135	150,000	"	"
Mountain View Irr. District.	"	3,600	6,000	"	"
Leavitt Irrig. District.....	"	4,400	7,000	"	"
Aetna Irrig. District.....	"	7,300	13,000	"	"
MacLeod Irrig. District.....	"	5,000	8,000	"	"
Private Projects.....	"	70,000	80,000	"	"
Saskatoon - Municipal.....	Sask.		11,426	18-12-50	8-8-51
- Steam Plant.....	"		31,260	"	"
Caron - Moose Jaw Div.....	"		12,600	"	"
Swift Current Irr. Project..	"	21,000	55,000	"	"
<u>Small Projects</u>					
- Main Stem.....			1,500	"	"
- Swift Current Basin.			5,600	"	"
- Other Tributaries...			4,500	"	"

SUMMARY OF TENTATIVE ALLOCATIONS
IN THE SASKATCHEWAN RIVER BASIN

Regina-Moose Jaw Div.....	Sask.		29,000	18-12-50	8-8-51
French Flats-Valley Park....	"	6,502	11,140	"	"
South Sask. River Project...	"	470,000	960,000	15-5-53	-53

SUMMARY OF RESERVATIONS IN GOOD STANDING

IN THE SASKATCHEWAN RIVER BASIN

Red Deer (Wm. Pearce).....	Alberta	250,000	700,000	18-12-58	(Original Reservation)	EXPIRED Dec.1960
				1-12-60	(Renewed)	EXPIRED Dec.1962
				16-1-63	(Renewed)	EXPIRES Dec. 1964
Small Projects.....	(Alberta & Sask.)		1,000,000	2-12-59	(Original reservation)	EXPIRED Dec.1960
				1-12-60	(Renewed)	EXPIRED Dec.1961
				6-12-61	(Renewed)	EXPIRED Dec.1962
				16-1-63	(Renewed)	EXPIRES Dec. 1963

BATTLE CREEK B.SIN

PROJECT	Province	Irrigable Acres	Allocation A.c.Ft.	Recommended by Water Board	Recommendation approved
<u>FINAL ALLOCATIONS</u>					
Small Projects	Sask.	-	10,946	18-12-50	8-8-51
Richardson-MacKinnon Project	Sask.	-	3054	18-12-50	8-8-51
<u>TENTATIVE ALLOCATIONS</u>					
Small Projects	Sask.	-	2000	18-12-50	8-8-51
Vidora Project	Sask.	2136	3360	18-12-50	8-8-51
Consul Project	Sask.	1500	2400	18-12-50	8-8-51

MIDDLE CREEK B.SIN

PROJECT	Province	Irrigable Acres	Allocation A.c.Ft.	Recommended by Water Board	Recommendation approved
<u>FINAL ALLOCATIONS</u>					
Small Projects	Sask.	-	1027	18-12-50	8-8-51
Middle Cr. Reservoir Losses	Sask.	-	2335	18-12-50	8-8-51

LODGE CREEK B.SIN

PROJECT	Province	Irrigable Acres	Allocation A.c.Ft.	Recommended by Water Board	Recommendation approved
<u>FINAL ALLOCATIONS</u>					
Small Projects	Sask.	-	600	18-12-50	8-8-51
Spangler Project	Sask.	1322	2970	18-12-50	8-8-51

QU'APPÉLLE RIVER B.SIN

PROJECT	Province	Irrigable Acres	Allocation A.c.Ft.	Recommended by Water Board	Recommendation approved
<u>FINAL ALLOCATIONS</u>					
Small Projects	Sask.	-	20,000	18-12-50	8-8-51