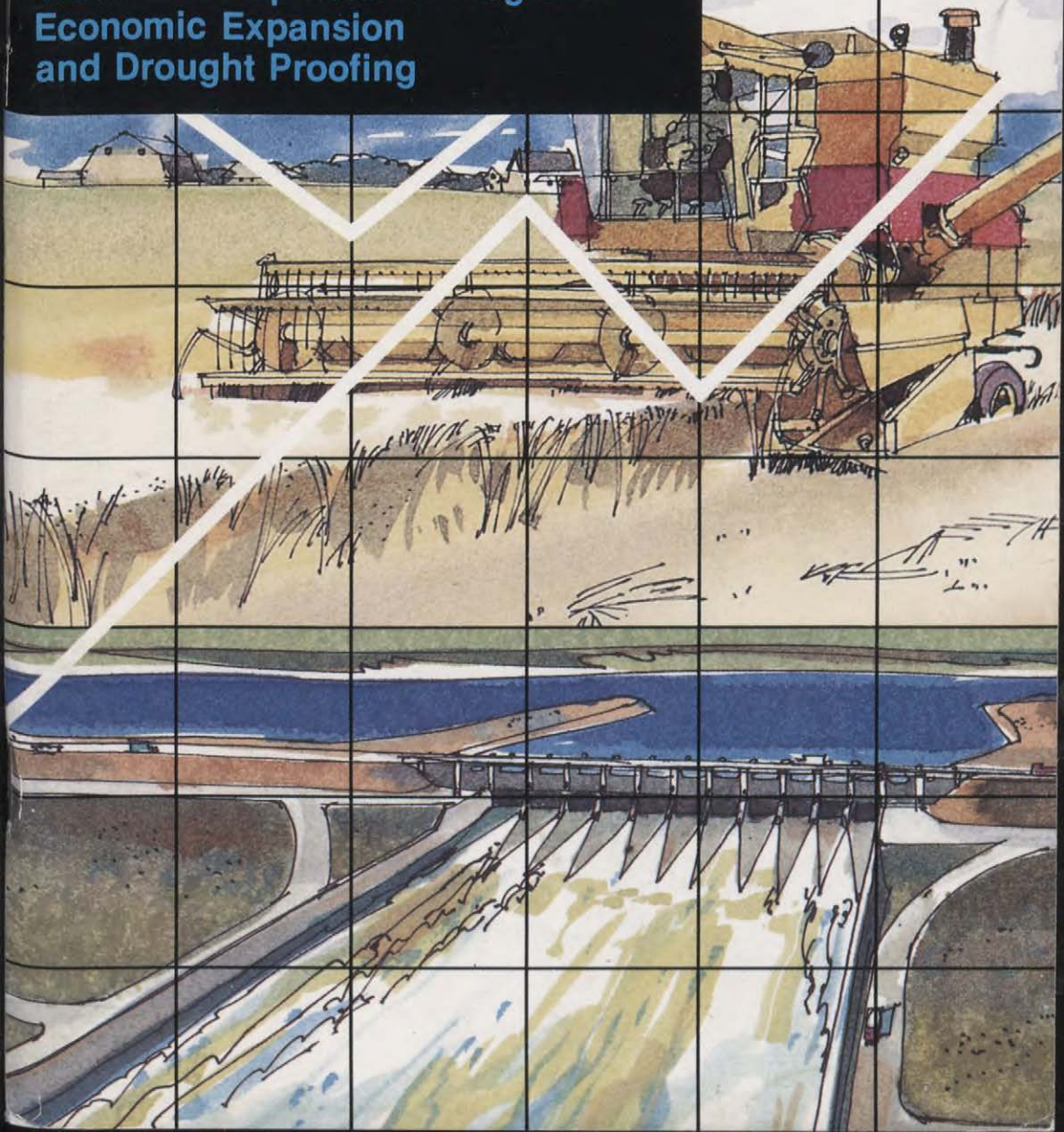


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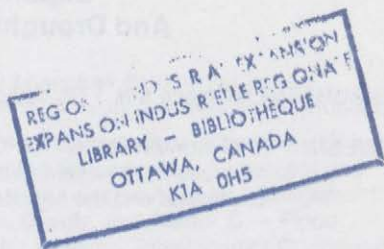


Saskatchewan

Canada — Saskatchewan
interim subsidiary agreement on
Water Development for Regional
Economic Expansion
and Drought Proofing



subsidiary agreement May 17, 1979



Canada-Saskatchewan
interim subsidiary agreement on
water development for regional
economic expansion
and drought proofing



Canada



Saskatchewan

**Canada-Saskatchewan
Interim Subsidiary Agreement
On Water Development For Regional Economic
Expansion
And Drought Proofing**

THIS AGREEMENT made this 17th day of May, 1979.

BETWEEN: THE GOVERNMENT OF CANADA (hereinafter referred to as "Canada"), represented by the Minister of Regional Economic Expansion and the Minister of the Environment,

OF THE FIRST PART

AND: THE GOVERNMENT OF THE PROVINCE OF SASKATCHEWAN (hereinafter referred to as the "Province"), represented by the Minister of the Environment, the Minister of Municipal Affairs, the Minister of Agriculture and the Minister of Industry and Commerce,

OF THE SECOND PART.

WHEREAS Canada and the Province have entered into a General Development Agreement (hereinafter referred to as the "GDA") dated February 11, 1974, under which they agree to co-operate jointly in selecting initiatives for the economic and socioeconomic development of Saskatchewan; and

WHEREAS Canada and the Province recognize the constraint that current levels of water supply impose on provincial economic performance; and

WHEREAS Canada and the Province recognize further the destructive effects of flooding on the socioeconomic and economic life of the province; and

WHEREAS Canada and the Province, to support the objectives of the GDA, have identified a number of water development and flood damage reduction measures that can be taken to strengthen economic performance and have agreed that there is a major need to study the scope and scale of water development that may be required to support economic growth in the longer term; and

WHEREAS the Governor in Council by Order in Council P. C. 1979-10/1358 of the 2nd day of May, 1979, has authorized the Minister of Regional Economic Expansion and the Minister of the Environment to execute this Agreement on behalf of Canada; and

WHEREAS the Lieutenant Governor in Council by Order in Council No. 696/79 of the 15th day of May, 1979, has authorized the Minister of the Environment, the Minister of Municipal Affairs, the Minister of Agriculture and

the Minister of Industry and Commerce to execute this Agreement on behalf of the Province;

NOW THEREFORE the parties hereto mutually agree as follows:

SECTION 1 — DEFINITIONS

1. In this Agreement:

- (a) "capital project" means any project as determined by the Management Group in which construction activities are involved;
- (b) "development opportunity" means the several initiatives which the Ministers have agreed to implement under this Agreement and which are more fully described as Sector A Water Management Activities, Sector B — Water Supply, and Sector C — Flood Damage Reduction, under the heading "Development Opportunity" commencing at Page 8 of Schedule "A" attached to and forming a part of this Agreement;
- (c) "eligible costs" means those costs outlined in subsections 5.4, 5.5 and 8.3 of this Agreement;
- (d) "Federal Ministers" means the Minister of Regional Economic Expansion and the Minister of the Environment and includes any person authorized by them or either of them to act on his or their behalf;
- (e) "fiscal year" means the period commencing on April 1 of any year and terminating on March 31 of the immediately following year;
- (f) "Management Group" means the group to be established pursuant to subsection 3.1;
- (g) "Ministers" means the Federal Ministers and the Provincial Ministers;
- (h) "non-capital project" means any project as determined by the Management Group which does not involve construction activities;
- (i) "program" means a component of a Sector as outlined in the development opportunity;
- (j) "project" means any specific initiative which by itself or together with other initiatives constitutes a sub-division of a program; and
- (k) "Provincial Ministers" means the Minister of the Environment, the Minister of Municipal Affairs, the Minister of Agriculture and the Minister of Industry and Commerce and includes any persons authorized by them or either of them to act on his or their behalf.

SECTION 2 — PURPOSE AND OBJECTIVES

2.1 The purpose of this Agreement is to enable Canada and the Province, in accordance with the objectives and strategy outlined in the GDA, to improve the potential for economic and socioeconomic development in Saskatchewan by alleviating the constraints imposed on economic performance by recurrent water shortages, droughts and flooding.

2.2 Canada and the Province agree that the implementation of the

development opportunity shall be according to the strategy outlined in Schedule "A" and in pursuit of the following objectives:

- (a) to develop a strategy to improve the effectiveness of future water management activities, especially in the drought sensitive areas;
- (b) to provide analysis into the availability of and requirements for water in selected areas and to undertake the construction of such water supply and delivery schemes as may be identified as being consistent with the intent of this Agreement; and
- (c) to undertake in the Saskatchewan portion of the Souris River Basin, the review and improvement of existing flood forecasting, warning and emergency action programs, the purchase of flood-prone lands and the construction of such flood damage reduction and channel improvement works as can be identified as being viable and consistent with the intent of this Agreement and the applicable provisions of the Canada-Saskatchewan General Agreement Respecting Flood Damage Reduction through Flood Area Management and its subsidiary agreement.

SECTION 3 — ADMINISTRATION AND MANAGEMENT

- 3.1 The development opportunity shall be implemented subject to general direction and supervision of, and in accordance with standards and procedures set by a Management Group comprised of three federal and three provincial members. For Canada, the Management Group shall consist of two representatives of the Department of Regional Economic Expansion, one of whom shall be the Director General of the Prairie Farm Rehabilitation Administration (PFRA) who shall act as the federal co-chairman, and a representative from the Department of the Environment. For the Province, the Management Group shall consist of one representative of the Department of the Environment, who shall act as provincial co-chairman, and one representative each from the Department of Municipal Affairs and the Department of Agriculture. The federal and provincial co-chairman may appoint designates to act in their stead; however in such instances the designate shall be afforded the same authority as his co-chairman for undertaking projects and programs and for approving expenditures under this Agreement. In the event of any disagreement in the Management Group, the matter shall be referred to the Ministers whose decision shall be final.
- 3.2 The Management Group shall be responsible for the overall management and administration of this Agreement, and its duties shall include the following:
 - (a) ensuring that the intent and the terms and conditions of this Agreement are carried out;
 - (b) approving projects under this Agreement;
 - (c) transferring of funds from one program to another where appropriate and consistent with the intent of this Agreement;
 - (d) recommending to the Ministers any changes in the financial limit of the Sectors shown in Schedule "B";
 - (e) recommending annually to the Ministers, on or before September 1

of each year, a work plan and estimates of expenditures concerning proposed programs and projects to be undertaken under this Agreement for the subsequent fiscal year;

- (f) providing a progress report to the Ministers prior to the annual GDA meeting;
- (g) appointing one federal and one provincial official to assist with the overall liaison and the co-ordination of projects under this Agreement;
- (h) establishing advisory and co-ordination committees as required, or requesting the presence of representatives from other departments or agencies, including non-governmental bodies, where it is considered that their presence would contribute to the effectiveness of the Management Group; and
- (i) establishing standards and procedures required for the approval and efficient implementation of projects and such other procedures as may be required for the administration and management of this Agreement.

- 3.3 The Management Group shall meet annually with the Canada/-Saskatchewan Consultative Committee on Water to review programs and inform the said Consultative Committee concerning activities undertaken under this Agreement.
- 3.4 All projects to be undertaken under this Agreement shall be jointly approved and authorized for implementation by Canada and the Province through the Management Group and shall be consistent with the objectives set forth in subsection 2.2.
- 3.5 Each project shall be described in an appropriate project authorization document which shall include the project name and description, the purposes and objectives, an outline describing the manner in which the project is to be carried out and progress reported, the anticipated completion date, performance data as appropriate, the total cost and share of the cost to be borne by each party and whether revenue accruing from the project is shareable between Canada and the Province. The project authorization document shall also name the federal or provincial agency responsible for implementing the project.
- 3.6 In addition to the requirements contained in subsection 3.5 each capital project which is implemented under the PFRA contract (hereinafter described) shall include an outline of the terms and conditions under which the Province will assume responsibility for it.
- 3.7 The provincial Department of the Environment shall be responsible for the financial co-ordination of the provincial expenditures relating to this Agreement.

SECTION 4 — IMPLEMENTATION PROCEDURES

- 4.1 This Agreement shall commence on April 1, 1979, and shall expire on March 31, 1982, but projects approved in writing on or before March

31, 1982, may be implemented as though the Agreement had not terminated. Canada shall not make any contribution in respect of the delivery of goods, the performance of work or the rendering of services unless the goods have been delivered, the work has been performed or the services have been rendered on or before March 31, 1983, and Canada will not pay any claim in respect of such costs unless it is received on or before March 31, 1984.

- 4.2 (1) The Province, consistent with the objectives outlined in subsection 2.2, shall undertake the implementation of the development opportunity.
- (2) In implementing the development opportunity, the Province may, subject to subsection 4.2(3), choose whether it will do so directly or whether it will award contracts or utilize its agencies for that purpose.
- (3) In implementing the Drought Sensitivity Analysis being Project 1.2 of Sector A, and in implementing Program 3 — Water Supply Investigations, Program 4 — Multiple Purpose Water Storage Projects, Program 5 — Community Water Storage Projects, and Program 6 — Sub-Regional Water Delivery Schemes of Sector B, the Province shall utilize the services of the Prairie Farm Rehabilitation Administration (PFRA) and shall enter into a contract with PFRA (herein sometimes referred to as the PFRA contract) for that purpose.
- (4) The PFRA contract shall be entirely consistent with this Agreement and in the event of any ambiguity or uncertainty, the provisions of this Agreement shall determine the rights and obligations of the parties.
- 4.3 Nothing in this Agreement prevents either party or their implementing departments or agencies from arranging with the other party to this Agreement for the delivery of all or part of a project.
- 4.4 The Province shall:
- (a) acquire or cause to be acquired and make available, as may be required for the construction of approved projects, lands and buildings, or rights and interests therein, together with the required water rights, flood easements, rights of way, rights of access, permits, licenses and approvals, and notify Canada, as required, when the necessary lands and buildings, or rights and interests therein, permits, licenses and approvals have been acquired;
 - (b) make available, free from all encumbrances, land owned by Her Majesty the Queen in Right of Saskatchewan that is required for approved projects;
 - (c) make or cause to be made the legal surveys necessary for approved projects; and
 - (d) make the necessary administrative and legal arrangements to effect the closure and diversion of roads where required by the construction of approved projects.

- 4.5 The financing by Canada of the projects to be implemented under this Agreement shall not confer upon Canada any proprietary interest in the physical assets constructed or acquired pursuant to this Agreement.
- 4.6 Upon completion of a project, or at such time after its completion as may be specified by the Management Group and shown on the appropriate project authorization document, the Province agrees to accept full responsibility for the project's operation, maintenance and repair, except in cases where other federal-provincial arrangements specifically apply.
- 4.7 All contracts shall be awarded in accordance with appropriate provincial government practice and regulations, except that contracts awarded by PFRA shall be prepared, awarded and administered in accordance with federal government contract regulations and procedures. All announcements of contracts shall be made jointly by Canada and the Province.
- 4.8 The following conditions relevant to employment shall apply in respect of all projects carried out under this Agreement:
- (a) labour shall be recruited through Canada Employment Centres unless the Management Group considers that this service cannot reasonably be provided after consultation with the Canada Employment and Immigration Commission;
 - (b) in accordance with Human Rights Legislation of Canada and the Province, there shall be no discrimination by reason of race, sex, age, marital status, national origin, colour, religion or political affiliation in the employment of persons on a project; and
 - (c) with regard to the applicability of labour standards, the parties agree as follows:
 - (i) rates of pay shall be those prevailing in the area of employment for each classification of work subject to the minimum wage specified in provincial legislation;
 - (ii) in building and heavy construction the rates of pay for overtime shall not be less than time and one-half the specified prevailing rate of pay after the hours stipulated for purposes of overtime payment in the relevant federal or provincial standards; and
 - (iii) labour conditions shall be specified in all tendering documents and shall be posted conspicuously in the work place;it being expressly understood and agreed that to the extent to which there are higher federal or provincial standards applicable to particular occupations or regions, these higher standards may apply.
- 4.9 Reports, documents, plans, maps and other materials prepared pursuant to any contract entered into under this Agreement shall become the property of the parties to the Agreement.

SECTION 5 — FINANCIAL

- 5.1 Subject to the appropriation of funds by the Parliament of Canada, the maximum contribution by Canada in respect of jointly approved projects shall not exceed seven million nine hundred thousand dollars (\$7.9 million).
- 5.2 Subject to the appropriation of funds by the Legislative Assembly of Saskatchewan, the maximum contribution by the Province in respect of jointly approved projects shall not exceed seven million three hundred and fifty thousand dollars (\$7.35 million).
- 5.3 During the life of this Agreement, Canada and the Province shall contribute to the eligible costs hereof in accordance with the ratios indicated in Schedule "B". Upon the full and complete implementation of the development opportunity the total contribution by Canada hereunder shall not exceed sixty percent (60%) of the total eligible costs. Should there be, at the conclusion of the life of the Agreement, any discrepancy between the amounts paid out by Canada and the amounts payable in accordance with this clause, an appropriate financial adjustment shall be made promptly.
- 5.4 Subject to subsections 5.6, 5.7 and 5.8 the eligible costs of capital projects comprising a part of the development opportunity are all direct costs which in the opinion of the Management Group have been incurred and paid by the Province for the implementation of the projects or which represent the costs to the Province and incorporated into the project. Direct costs include costs relating to public information but do not include administration costs.
- 5.5 Subject to subsection 5.7 and 5.8 the eligible costs of a non-capital project described in the development opportunity are all costs which in the opinion of the Management Group have been reasonably and properly incurred and paid by the Province for the supply of goods, the performance of work or the performance of services for the implementation of any such project.
- 5.6 (1) Eligible costs do not include any costs relating to the acquisition of land for the construction of capital works or any interest therein and without restricting any generality of the foregoing, eligible costs do not include:
 - (a) the costs of easements, rights of way, rights of access, riparian rights, legal surveys and costs arising from claims for losses and damages related thereto;
 - (b) the costs of acquiring permits, licenses or other approvals which may be required prior to proceeding with each project;
 - (c) the costs of surveys and engineering and architectural design associated with investigation, design and construction relating to projects; and
 - (d) legal fees.

- (2) The costs of engineering work, including surveys associated with the investigation, design and construction of the work described in the PFRA contract, shall not be considered as eligible costs and shall be borne entirely by Canada.
- 5.7 The salaries and fringe benefits as well as travel, removal and other employee related expenses of employees of Canada or the Province who are assigned to the implementation of this Agreement shall not be included as eligible costs.
- 5.8 Unless the Management Group otherwise agrees, the costs for accommodation and related services in federal or provincial premises including costs of telephones and utilities shall not be included as eligible costs.
- 5.9 (1) Subject to subsection 5.9(2) and 5.9(3), payments by Canada for approved projects shall be made promptly to the Province on the basis of progress claims setting out the eligible costs actually incurred and paid. Claims shall be submitted in a form satisfactory to the federal Ministers and the provincial Minister of the Environment, and certified by a senior officer of the provincial Department of the Environment. The final progress claim for any fiscal year shall include a provincial audit certificate for expenditures incurred in that fiscal year.
- (2) In order to assist with the interim financing of Canada's share of eligible costs for programs and projects listed in Sectors A and C of Schedule "B" of this Agreement Canada may make, if the Province so requests, interim payments of Canada's share of claims submitted, based on estimates of costs of work actually completed, prepared by the Province, certified by a senior officer of the provincial Department of the Environment and submitted in a form satisfactory to the federal Ministers and the provincial Minister of the Environment.
- (3) The Province shall account for each interim payment received under the provisions of subsection 5.9(2) by submitting to Canada within the first 60 days of the following quarter a detailed statement of the expenditures actually incurred and paid, submitted in a form and verified in a manner satisfactory to the federal Ministers and the provincial Minister of the Environment, certified by a senior officer of the provincial Department of the Environment. Any discrepancy between the amount paid by Canada by way of interim payments and the amount actually payable by Canada shall be promptly adjusted between Canada and the Province.
- (4) No interim payment shall be made in a subsequent fiscal year until the interim payments made in the previous fiscal year have been accounted for by claims for expenditures actually incurred and paid, certified by a senior officer of the provincial Department of the Environment and bearing a provincial audit certificate, and any outstanding balance of the payment has been repaid or accounted for in a form or in a manner satisfactory to the federal Ministers and the provincial Minister of the Environment.

5.10 Canada and the Province agree that each will maintain full records of the eligible cost to it of carrying out its undertakings under this Agreement, together with all proper documents and vouchers relating thereto, and each will make all such records, documents and vouchers available to authorized representatives of the other for examination and audit, and will afford to them all reasonable assistance and explanation in connection with such examination and audit. Any discrepancy between the amounts paid by either party and amounts actually payable by it as disclosed by any such audit shall be promptly adjusted between the parties.

SECTION 6 — EVALUATION

6.1 During this Agreement, Canada and the Province shall effect an assessment of the programs listed in Schedule "A" with regard to stated objectives. Each party shall provide the other with such information as may reasonably be required to undertake such assessments.

SECTION 7 — ENVIRONMENTAL ASSESSMENT

7.1 The intent of both the federal Environmental Assessment and Review Process and the provincial Environmental Assessment Review Process shall be followed for all capital projects or groups of capital projects jointly funded under this Agreement. All projects or groups of projects shall be reviewed in the early planning stages according to the Screening Guide provided by the Office of the Chairman, Environmental Assessment Panel, Canada Department of the Environment and the screening criteria of the Department of the Environment of Saskatchewan. If review indicates possible adverse environmental effects, the procedures specified in the federal Environmental Assessment and Review Process and the procedures of the provincial Environmental Assessment Review Process shall be adhered to for further evaluation of project impacts.

SECTION 8 — PUBLIC INFORMATION

- 8.1 Canada and the Province agree to co-operate in the development of a program of public information respecting the implementation of this Agreement and further agree to supply, erect and maintain on the direction of the Management Group:
- (a) during the course of construction of capital projects, a project sign or signs consistent with federal-provincial identity graphics guidelines, and in both official languages, specifying that the relevant project is a Canada-Saskatchewan Regional Development Project, financed by contributions from the Department of Regional Economic Expansion of the Government of Canada (and any other federal agency, where relevant), and the Government of the Province of Saskatchewan, or such other wording to the like effect as may be agreed upon by the Ministers; and
 - (b) where relevant upon completion of each project, a permanent sign or plaque to the effect set forth in 8.1(a).

- 8.2 Any public announcement of the programs and projects undertaken pursuant to this Agreement, as well as any official opening ceremony for any project under this Agreement where such ceremony is indicated and appropriate, shall be arranged jointly by the Ministers.
- 8.3 Where it is determined by the Management Group that public discussion is vital to successful implementation of a project the costs of public involvement will be recognized as an eligible cost of the project.

SECTION 9 — GENERAL

- 9.1 No member of the House of Commons of Canada or of the Legislative Assembly of Saskatchewan shall be admitted to any share or part of any contract, agreement or commission made pursuant to this Agreement or to any benefit to arise therefrom.
- 9.2 The terms and conditions of the GDA shall apply to this Agreement.
- 9.3 This Agreement may be amended from time to time by the written agreement of the Ministers, but no amendments to the financial limitations expressed in subsections 5.1, 5.2 or 5.3 shall be made without the approval of the Governor in Council and the Lieutenant Governor in Council.

IN WITNESS WHEREOF this Agreement has been executed on behalf of Canada by the Minister of Regional Economic Expansion and the Minister of the Environment, and on behalf of the Province of Saskatchewan by the Minister of the Environment, the Minister of Municipal Affairs, the Minister of Agriculture and the Minister of Industry and Commerce.

IN THE PRESENCE OF

GOVERNMENT OF CANADA

Witness

Minister of
Regional Economic Expansion

Witness

Minister of the
Environment

PROVINCE OF SASKATCHEWAN

Witness

Minister of
the Environment

Witness

Minister of
Municipal Affairs

Witness

Minister of Agriculture

Witness

Minister of
Industry and Commerce

CANADA-SASKATCHEWAN INTERIM SUBSIDIARY AGREEMENT ON WATER DEVELOPMENT FOR REGIONAL ECONOMIC EXPANSION AND DROUGHT PROOFING

SCHEDULE "A"

INTRODUCTION

Development objectives for Saskatchewan are identified in the General Development Agreement between Canada and the Province. These include increased aggregate economic growth, increased value added processing and the manufacturing of resources. The purpose is to reduce Saskatchewan's dependency on primary production and to increase the number, range and type of employment opportunities within the province.

Development goals include broadening the economic base through industrial growth and value added processing of resources to provide employment opportunities and increase capital investment in a range of sectoral developments. While a variety of internal factors affect the limits and pace of development in Saskatchewan, a number of regional constraints can be altered to improve the opportunities for economic development and growth.

One of the major constraints is water, a variable upon which the economic performance of the Province of Saskatchewan is dependent. Water is generally a scarce resource as most of the prairie region is located in the semi-arid zone of North America. The quantity and quality of water available within the region varies widely, from year to year and within the year. In general, the northern portion of the prairies, where population and industrial opportunities are more limited, has the more reliable water resources. The southern part of the region where most of the population lives in urban and secondary centres has potential for industrial development and diversification but often has limited and unstable water supplies.

Widespread development since World War II in hydro-electric power, irrigation, urbanization and industrialization have all combined to increase per capita water usage and to reduce the region's ability to withstand a drought of two or more years duration. Water development will continue to be a key concern, not only in the performance of resource industries in the province but also in determining what industrial development and value added processing can actually take place within the limitations imposed by the quantity and quality of available water.

Disruption of socioeconomic activity in many communities in southern and central Saskatchewan has occurred in recent years as a result of alternating periods of drought and spring flooding. This has placed a substantial burden on all levels of government and has led to increased pressures for corrective measures. During the temporary drought of 1977, a number of large secondary centres and some urban centres encountered difficulties in obtaining adequate water for domestic and industrial purposes. Also flooding of communities along many rivers in southern and central Saskatchewan as a result of spring runoff has caused substantial social and economic disruptions in the recent past. Contingency plans by governments can provide some

emergency relief for such occurrences, but the need for stable, dependable and controlled water supplies through such means as new storage facilities, pipeline, inter-basin water transfers and flood damage reduction measures has frequently been demonstrated. The problems associated with alternating periods of drought and flood have emphasized the requirement for a concerted attack on these constraints to economic growth through improved long-term development and management of the ground and surface water resource.

The patterns of economic development in southern and central Saskatchewan are influenced by the availability of potable water and its management. The most reliable sources of substantial water supplies are the main river systems, although some areas of the province do have significant ground water resources. Surface water supplies annually exhibit a wide variation in both spatial distribution and yields. The average annual precipitation of Saskatchewan is a bare 18 inches, with substantially less than 3 inches occurring as runoff into prairie streams. This runoff has varied widely over a 50-year period — anywhere from zero to massive flooding — no flow was recorded more than 20 percent of the time over the period while flooding in 1974 caused damage to property in excess of \$8.5 million. The erratic nature of the flows and extended periods of drought have created immense water supply and management problems. Ground water can be obtained from deeper aquifers but the water quality is often poor due to high salt content.

During dry periods, the chief area of concern is the southern part of the province, particularly the southwest. The Frenchman River and Swiftcurrent and Battle Creeks in the extreme southwest and the Souris and Qu'Appelle Rivers in the southeast do provide limited sources of supply during sustained drought periods. Diversions from Lake Diefenbaker are a major source of water for Moose Jaw and Regina and can be used to a limited extent to augment supplies in the Qu'Appelle system. Several secondary centres within this general area provide attractive locations for industrial processing and manufacturing. Additionally the most suitable land resources for specialized crop production which can be processed in Saskatchewan occur in the southern and central parts of the province. The productivity of these lands is constrained by many related factors which can be offset to a large degree by improved water management. It follows that the prospects for medium term economic growth of rural regions and balanced development for the province can be substantially enhanced by water management planning and the development of the water resource.

Early recognition of the land and water problems resulted in the PFRA legislation. The Act provides for a range of activities to improve economic security of the prairie region. Since the inception of PFRA many projects have been undertaken in Saskatchewan to alleviate the impact of drought, particularly on the agricultural sector. Similarly, activities at the provincial level in the area of municipal water supply have done much to improve conditions. However, experience during the recent dry period indicated that much remains to be done to relieve local drought problems and to expand economic performance through the provision of dependable water supplies.

Given the recognized constraint that present levels of water supply impose on provincial economic performance, water development is one of the major priority opportunities which must be pursued to enhance regional development. The initiatives called for under the General Development

Agreement cannot be effectively accomplished without accompanying activity in water resource planning and development. Although a small number of water development measures can be taken immediately to strengthen economic performance and offset drought sensitivity, there is a major requirement to study the scope and scale of water development that may be needed in the medium term to support economic growth. There is also a need to determine the measures that must be taken to provide a buffer against the adverse effects of recurrent floods.

An improved knowledge is a necessary prerequisite in order to effectively combat the many adverse effects of the naturally recurring phenomenon of drought. In recognition of this need, relevant studies and research are to be undertaken in the near future by Environment Canada. These will include investigations of the likelihood, severity and persistence of future droughts, investigations of the extent of potential drought related water quality degradation and possible remedial actions and investigations of the extent to which water conservation practices can be improved. Efforts will be made to develop a better understanding of the potential effects of conservation practices on water demand and to increase knowledge of the impact of drought and drought alleviation measures on the environment and studies of future demand. Full use will be made of the results of Environment Canada's work in the drought proofing studies to be conducted under this Agreement.

CIRCUMSTANCES

The suitability of much of Saskatchewan's natural resource of soil, topography and climate for agriculture attracted the first settlers to the province. The raising of grain and cattle were the first major industries. Through increases in size, diversification and mechanization agriculture still holds first place as the Province's largest individual source of income.

The Province's economic structure is undergoing certain structural changes. From an almost entirely agricultural economy in the early 1900s, the non-agricultural component now represents up to 50 percent of the value of the Province's net commodity production. The changeover started slowly in the post-war era with the discovery of oil. It grew as service and supply industries were generated to support development of this resource, and increased still further with the development of coal and forestry, the production of natural gas and the discovery of potash, uranium and heavy oil.

Industrial service complexes have developed in the potash, oil and mining areas as well as in the larger urban centres where labour and living accommodations are available. Secondary manufacturing and value added processing have also grown steadily over the years, establishing in major urban and larger secondary centres.

All of this development has increased competition among water users (industrial, domestic and agricultural) which in turn limits the economic development potential of the province. Those areas in the south and central portions of Saskatchewan which are favoured by adequate water supplies have experienced substantial economic growth, led by expansion in the primary resource sector. This expansion is characterized by increased agricultural output in the rural areas, and by processing, manufacturing and commercial activity in the larger secondary centres. Adequate water supplies are vital for power production and for the potash and petroleum industries in Saskatchewan.

Much of the industrial growth in communities outside of Regina and Saskatoon has been in light manufacturing requiring low water consumption. While growth in the food and beverage industry was broadly distributed, most other developments with major high water consumption requirements were located in Saskatoon or in centres where surface or groundwater resources are in good supply.

The larger secondary centres which offer the best locations for industrial sites also provide a broad range of commercial and other service facilities necessary to the growth and vigour of the primary resource sector. Adequate water supplies and services are key factors in strengthening and maintaining the vigour of these centres and the performance of the rural economy. In support of rural development, PFRA has, since inauguration of the program, developed sources of surface water supply in the form of dams and dugouts for about 887 communities, ranging in size from the smallest hamlet to major towns. Since 1967, the Province has constructed a network of canals, reservoirs and pipelines to distribute water from the South Saskatchewan River to communities, industries and potash mines in central Saskatchewan under a program managed by the Saskatchewan Water Supply Board. Additionally, 459 towns, villages and hamlets have been assisted since 1961 in the supply, storage, treatment and distribution of water under the Municipal Water Assistance Act. Since 1972, a portion of this program has been operated co-operatively with DREE in accordance with the Canada-Saskatchewan Agricultural Service Centres Agreement. Activities under this Agreement, which is scheduled to expire in 1981, have taken place in centres having populations in excess of 2 000 (excluding the cities of Saskatoon and Regina). To date, technical and financial assistance has been provided to the 28 designated centres in Saskatchewan for the construction or improvement of water treatment, storage and distribution facilities. During the 1972-78 period, the Province continued its program of assistance by improving or developing facilities, including storage, treatment and delivery works, in 285 smaller communities.

The problems of maintaining adequate water supplies in rural areas and small communities are exacerbated in periods of drought. The scale of the problem may be illustrated by a consideration of several water supply activities of PFRA. In addition to the construction of major water storage projects such as the Gardiner Dam on the South Saskatchewan River, PFRA has, since its inception, provided technical and financial assistance for the development of some 59 000 farm and small community dugouts, 6 500 stockwatering dams, 4 000 irrigation projects and 9 350 wells in Saskatchewan. This assistance has been for both drought buffering and developmental purposes.

Despite this activity some centres require new or enlarged water supply capability due to industrial expansion, growth in size and increased per capita consumption. As many of these centres are located in parts of the province with limited water resources, careful attention is needed in reviewing the overall water needs of the economic sub-areas surrounding and including these centres and in designing efficient and effective projects to meet the needs identified.

Particular areas sensitive to water shortages are the Regina, Moose Jaw, Weyburn and Estevan areas in the southeast, the Swift Current and Maple Creek areas in the southwest, the west central Kindersley, Kerrobert, Rosetown areas and the Humboldt area in Central Saskatchewan. These

areas are dependent on surface waters or shallow aquifers, both of which are unreliable in dry periods. During the 1977 drought period, some relief from water shortages was achieved through joint federal-provincial emergency water supply measures when 157 community wells were assisted and 52 short pipelines were constructed.

Although these measures were of local value, there remains a substantial need to examine the level of drought sensitivity of areas and sub-areas of the province and to evaluate the costs and benefits of developing water resources to provide economic security and growth potential.

Problems associated with inadequate water supplies, recurrent spring flooding and variations in water quality have retarded economic development in the Souris River Basin and the Qu'Appelle Valley in southeastern Saskatchewan. In response to pressures arising from these problems both in Manitoba and Saskatchewan, the Canada-Manitoba-Saskatchewan Souris River Basin Study Agreement was entered into in October 1974. The objective of the study was to conduct an assessment of the water and related resources of the Souris River Basin and of the demands being made, and likely to be made upon them. The study was to set objectives relative to the management of these resources in Canada and develop an appropriate plan to meet these objectives. The study was completed in June 1978 and the resulting report presented a number of recommendations pertaining to the solution of flood, drought and water quality problems in the Saskatchewan portion of the Souris River Basin.

In response to the perennial hindrance to urban and rural development in the Qu'Appelle Basin resulting from spring flood damage, inadequate water supply and deteriorating water quality, the Canada-Saskatchewan Subsidiary Agreement on the Qu'Appelle Valley was signed in October, 1975. Under this Subsidiary Agreement, one of the objectives is to reduce the losses incurred through flooding and to control the supply and quality of water through better management of land and water resources. This Subsidiary Agreement emphasizes the need to reduce agricultural flood damage and flood damage to urban centres, particularly Regina, Moose Jaw, and Lumsden. Canada and the Province are implementing an integrated package of programs over a ten-year period to solve the urgent environmental problems, establish effective management practices and develop the potential of the Qu'Appelle Basin.

In response to the escalating potential for flood damage, particularly in the urban centres of southern Saskatchewan, the Canada-Saskatchewan General Agreement Respecting Flood Damage Reduction Through Flood Area Management was signed in April 1977 by the Canada Department of the Environment and the Saskatchewan Department of the Environment. Under this general Agreement, a number of mutually acceptable, comprehensive long-term strategies to reduce the potential for flood damage have been agreed upon by Canada and Saskatchewan. The Agreement places emphasis on the need to reduce flood damage potential in urban centres and provides for subsidiary agreements to implement activities leading to the achievement of the goals and objectives of the general Agreement. One of these Subsidiary Agreements was signed in April 1977 and calls for the production of flood hazard maps for some 30 flood-prone Saskatchewan communities. The main purpose of this exercise is to identify the extent of the flood hazard in each community, to jointly designate flood hazard zones where no further flood vulnerable development should take place and to ensure that the public

is made aware of the flood hazard in each community. It also provides for planning studies to determine the most suitable measures to adopt, or land use restrictions to impose, in order to reduce the potential for flood damage and determine appropriate land use in flood-prone areas. In the case of the Souris Basin, in view of the detailed planning related to flood damage reduction that has been completed under the Souris River Basin Study, certain steps toward implementation can be taken as soon as the flood hazard zones have been designated.

STRATEGY

The recurring drought conditions in Saskatchewan have led to a recognition of the need for arrangements designed to improve water supplies and management practices through a co-ordinated federal-provincial approach. In Saskatchewan, these co-operative arrangements are particularly essential due to the extensive areas of the province which suffer from variable and often deficient water supplies.

Past government programs have significantly increased the ability of the province to withstand drought: however, spacial distribution, economic diversification and widespread development over the past 30 years have resulted in an increased dependency on reliable water supplies and their effective management.

The economic performance of Saskatchewan can be enhanced by water management practices, leading to stabilized and augmented water supplies in areas possessing potential for growth. Such a strategy applied in Saskatchewan will relieve the constraints of unreliable water supplies and periodic flooding on the economic development of the province.

Although specific projects are required at this time to solve known water supply problems, the main focus of the strategy will be the development of a thorough appreciation of the underlying factors which continue to render the economy of Saskatchewan overly susceptible to the pervasive limiting effects of drought. The recent improvements in climatic conditions have eased the situation but meteorological records illustrate that drought can be expected to recur periodically in the prairie region. During this period of improved water availability, which is undoubtedly temporary, the professional planning resources of Canada can be utilized, in co-operation with those of the Province, to evaluate the drought proofing stock of the province and to analyze and formulate projects which can be put in place to meet economic development demands and offset the impact of drought periods.

Existing drought proofing measures and proposed projects designed to meet economic development demands in periods of drought can only be successful if they are based on a sound knowledge of drought and its characteristics. To this end, programs on conservation research, climate forecasting research and research related to renewable aquatic resources are proposed.

With respect to the flooding problems and the related solutions that have been identified and recommended by the Souris River Basin Study Board, this Agreement would provide an effective and efficient vehicle for the early implementation of flood damage reduction measures in urban communities along the Souris River. These activities will solve some of the pressing urban flooding problems in southeastern Saskatchewan.

During the life of this Agreement, the strategy for longer term water

management will be worked out jointly by the federal and provincial participants and consideration will be given to the various available options.

DEVELOPMENT OPPORTUNITY

The development opportunity under this Agreement will be carried out under three sectors. The first sector provides for water management activities which will focus on the development of a longer term strategy for water development and drought proofing based on a sound knowledge of drought and its characteristics. Under the second sector, water supply projects will be put in place to provide for immediate needs to improve water supplies and offset water shortages. The third sector, entitled "Flood Damage Reduction", provides for the implementation of the flood damage reduction recommendations for the urban centres along the Souris River in Saskatchewan made in the Souris River Basin Study Report of June 1978. The estimated costs of the projects which are shown in Schedule "B", do not include the salaries or related expenses of federal and provincial employees. The costs indicated are for the hire of third-parties, including consultant and other specialist services, and for the construction of capital works.

SECTOR A.

Water Management Activities

Under this sector programs will be aimed at developing a strategy to improve the effectiveness of future water management activities in the province with particular attention on water-short and drought-sensitive areas.

Program 1:

Drought Proofing Studies

The objective of this program is to evaluate the current and longer term water development needs in the province and to investigate the effectiveness of the water supply and drought proofing measures. A further objective is to provide an overall assessment of economic prospects related to supply and development options consistent with a long-term strategy for economic development and drought proofing. All of the projects listed below will be jointly managed and supported by the parties. Projects 1.1 and 1.3 will be led by Saskatchewan and project 1.2 will be led by Canada.

Project 1.1:

Economic Development Analysis

The objective of this project is to identify current economic activity, to isolate areas and sub-areas which have the prospects for growth, and to develop overall scenarios for Saskatchewan's economic development. This will include studies to examine the economic prospects of further development of irrigation on the South Saskatchewan River Irrigation Project.

Project 1.2:

Drought Sensitivity Analysis

The objective of this project is to analyze the overall sensitivity of areas and sub-areas to drought conditions, to investigate the impact of drought and potential drought conditions and to identify the most effective methods of alleviating drought and securing more effective economic performance. Included in this activity will be analysis of the effectiveness of existing drought proofing works.

Project 1.3:

Long-Term Strategy

This project will develop a long-term water development strategy, consistent with economic performance and projections in areas and sub-areas of the province, to ameliorate the impacts of drought periods on the economy. The project will be carried forward, utilizing federal and provincial participation, with particular attention given to the concept of multiple purpose utilization of the resource and the compatibility of federal and provincial water management programs.

Program 2:

Water Management Investigations

The objective of this program is to investigate and analyze systems of ground and surface water development and conservation in selected target areas. This program will be co-operatively managed and financed but the Province will take the lead role in implementation.

Project 2.1:

Water Resources Development

This project will provide for the analysis of surface and ground water interrelationships and will particularly focus on the geo-hydrological aspects of water availability. Activities will include ground water investigations, encompassing considerations of availability, quality and methods of extraction to serve a variety of purposes. For example, ground water investigations recommended in the 1978 Souris River Basin Study Report which relate to a need for supplemental cooling water for the Boundary Generating Station in periods of low runoff would be included. Efforts will be directed to the establishment of criteria providing for the optimum development of both surface and ground water supplies to meet existing or predicted needs. Federal capability in this field will be utilized to the fullest extent possible, consistent with the availability of resources.

SECTOR B.

Water Supply

Activities under this sector will result in the construction of a number of water supply and conservation projects, the need for which is now apparent. Analyses will be performed on the availability and requirement for water in specific areas, followed by field investigations and designs of identified works. Over the life of the Interim Agreement, at least one larger (\$4-5 million) storage project will be undertaken as well as a number of less costly schemes. The latter may involve storage or minor diversion works, ground water development, and water delivery systems to supply the needs of small groups of communities together with their related rural areas. In sizing these projects, due consideration will be given, via joint consultation between the parties, to all types of water requirements, exclusive of large scale irrigation.

Program 3:

Water Supply Investigations

This program will entail comprehensive, joint examinations of water supply and requirements in specific problem areas, and the investigation and design of projects. Areas which have been identified to date include Humboldt, Weyburn, Kipling, Radville, Birch Hills, Ceylon, Manor, Canora, Kerrobert,

Melfort and Grenfell. While this program like the others will be subject to overall joint management by the parties, Canada will take the lead role in field investigations and design. Provincial resources will be called upon for the identification of demands and related benefits. Environmental assessments will be the responsibility of Canada, and existing federal and provincial environmental review processes will be utilized as required. Third-party costs will be borne by Canada, while staff time and costs related thereto will be contributed by the parties as required to meet their particular obligations.

Project 3.1:

Water Demand and Supply Analysis

Federal and provincial knowledge and planning capabilities will be used to quantify all aspects of water demand in a project area and to evaluate the availability of sources of potable surface and ground water. Benefits will be identified and evaluated for use in determining the worth of specific proposals for development.

Project 3.2:

Site Investigations

Detailed investigations of available options will be completed under this project. Field work, including mapping and geotechnical activities, will be performed. Full use will be made of the considerable bank of existing data, including topographic mapping and earlier studies. Detailed drilling and subsequent soils analyses will be done at dam and diversion sites and along pipeline routes. Preliminary designs will be prepared of attractive alternatives, and environmental assessments will be conducted, using either in-house or third-party expertise depending on the complexity of the particular scheme.

Project 3.3:

Detailed Evaluation and Design

In this phase, various alternatives will be evaluated by comparing associated benefits and costs based on preliminary designs. Environmental impact statements on selected projects will be completed as necessary, and detailed designs and cost estimates will be prepared.

Program 4:

Multiple Purpose Water Storage Projects

Under this program, the Weyburn Dam, which has been recommended by the Souris River Basin Study, will be constructed. Preliminary design and cost estimates for this project have already been completed. Specific activities include land acquisition (a provincial responsibility), final design, contract tendering, award and construction management (to be done by Canada) and, finally, transfer to and acceptance by the Province of responsibility for operation and maintenance. Costs, excluding those for land and engineering, will be shared equally by Canada and Saskatchewan. Canada will not retain any proprietary interest in completed works, the ownership of which shall be vested in the Province.

Project 4.1:

Weyburn Dam

The proposed Weyburn Dam would be located on the Souris River approximately two miles downstream of the existing dam at a site in-

vestigated by PFRA and known as Site B1. The scheme would include an earth dam, a concrete chute spillway and a gated, low level water outlet. The associated reservoir would contain about 17 500 acre-feet of water and would be capable of providing a dependable annual yield of some 3 000 acre-feet for municipal, industrial and agricultural uses.

Program 5:

Community Water Storage Projects

Program 3 will identify viable water supply schemes of priority interest in Saskatchewan. A limited number of community storage projects which emerge from this process or for which planning is already advanced, will be built under Program 5 of this Interim Agreement. Specific activities will include land acquisition (a provincial responsibility), contract tendering, award and construction management (to be done by Canada) and, finally, transfer to and acceptance by the Province of responsibility for operation and maintenance. Costs, excluding those for land and engineering, will be shared equally by Canada and Saskatchewan. It is the intention of the parties that the federal authority will not retain any proprietary interest in completed works, and that ownership will be vested in the Province.

Project 5.1:

Projects to be Designated

Preliminary studies carried out by PFRA and the Province since the early 1970s have examined the feasibility of water storage projects in a number of centres and areas of south and central Saskatchewan. Detailed investigations to be conducted under Program 3 will provide the information required to evaluate and design storage works. Projects which can be justified on technical, and environmental bases and are economically viable will be constructed in this category.

Program 6:

Sub-Regional Water Delivery Schemes

Water delivery schemes, depending upon such sources as reservoirs, reliable streams and wells will be constructed under this program. The development of ground water sources to supply the delivery schemes will be a part of this work. It is emphasized that the facilities to be provided here are envisaged as being relatively modest in scale. For example, a project capable of meeting the needs of an entire region, would not be constructed under the Interim Agreement. Rather, a number of small to medium projects are suggested, each to provide for the needs of rural centres and their related farming areas. The respective responsibilities of the parties under this program would be as identified for Program 5.

Project 6.1:

Projects to be Designated

The need exists for the development of a comprehensive network of community water supply systems, including related sources, in the south and central areas of Saskatchewan. Some works of this sort exist in the area, and the integrated investigations to be completed under Program 3 will produce the details of the extensions, upgrading and interconnections required. Opportunities for supplying the sub-region include combined ground and surface water sources throughout

the area. Projects which can be shown to be technically and environmentally sound and are economically viable will be constructed.

SECTOR C.

Flood Damage Reduction

This sector will provide for the implementation of the recommendations of the Souris River Basin Study related to flood damage reduction along the Saskatchewan reach of the Souris River. During the Study, flooding problems were identified and remedial measures were proposed and evaluated. Subject to a detailed economic evaluation of specific work items, the measures recommended for the Cities of Weyburn, River Parkview, Estevan, village of Roche Percee, Beaver Park near Oxbow and rural flood damage reduction, form the basis for the work to be performed under this sector.

Program 7:

Dyking

Under this program the urban dyking recommended in Saskatchewan by the June 1978 Souris River Basin Study Report will be constructed. The preparation of flood-hazard maps and the introduction of zoning and land use regulations relating to future flood-prone development in the floodplain as set out in the Canada-Saskatchewan General Agreement Respecting Flood Damage Reduction Through Flood Area Management will be a prerequisite to the provision of physical works. Detailed field investigations, and final designs are also required before construction begins. Overall management will be by both parties, but Saskatchewan will be responsible for engineering, land acquisition and construction contract administration. Costs, exclusive of the foregoing, will be shared equally by the parties.

Project 7.1:

Dyking at Weyburn

After a flood-hazard map for the City of Weyburn has been published, the flood-hazard areas have been designated and appropriate zoning and land use regulations have been established to prevent further flood-prone development in the floodplain below the level of the 500-year flood, a dyke along the north side of the Souris River will be constructed to protect the central business area of Weyburn, Highway 39 will be raised and the Tindall Coulee Division will be constructed.

Project 7.2:

Dyking of Water Treatment Plant at Estevan

After a flood-hazard map for the City of Estevan has been published, the flood-hazard areas have been designated and appropriate zoning and land use regulations have been established to prevent further flood-prone development in the floodplain below the level of the 500-year flood, a ring dyke to protect the Estevan Water Treatment Plant during flood periods will be constructed.

Program 8:

Raising Bridges

The Souris River Basin Study identified the need to raise certain bridges to assure access during flood periods and to assist in the reduction of flood stages. Costs for this program will be borne by Saskatchewan.

Project 8.1:

Raising Highway 35 Bridge at Weyburn

Access to essential services will be ensured by raising Highway 35 bridge. This action will also reduce the water levels upstream by about 1.0 foot, during the 1:500 flood.

Program 9:

Flood Proofing and Relocation

Following publication of flood-hazard maps, designation of flood-hazard areas and implementation of appropriate zoning and land use regulations to prevent further flood-prone development below the level of the 1:500 flood in each centre, this program will provide for the introduction and conduct of activities aimed at financially supporting flood proofing of buildings and other developments in the floodplain of the Souris River at Weyburn, Estevan, Roche Percee and Oxbow in situations where this method of flood damage reduction is feasible. The voluntary removal of flood-prone improvements for which flood proofing is not practical is also included. Responsibility for management, implementation and cost-sharing will be as for Program 7 except that, where land acquisition is a feasible flood proofing alternative, the cost of land will be shared equally.

Project 9.1:

Flood Proofing and Relocation in Weyburn

The voluntary removal of flood-prone buildings from the floodplain will be encouraged and incentives provided for this purpose.

Project 9.2:

Flood Proofing and Relocation
in the River Park Area Near Estevan

The voluntary removal of flood-prone buildings from the floodplain will be encouraged and incentives provided for this purpose.

Project 9.3:

Relocation in Roche Percee

The voluntary removal of flood-prone buildings from the floodplain will be encouraged and incentives provided for this purpose.

Project 9.4:

Flood Proofing and Relocation at Beaver Park Near Oxbow

The voluntary removal of flood-prone buildings from the floodplain and the flood proofing of buildings and developments located below the 500-year flood level will be encouraged and incentives provided for this purpose.

Program 10:

Flood Forecasting

Under Program 8 the present flood forecasting, warning and emergency action programs which have been developed over the years for the Saskatchewan portion of the Souris River Basin will be carefully assessed, and where such action is indicated, improved in order to increase their effectiveness. Interjurisdictional exchange of information and co-ordination of activities, will be a particular feature of this program. Saskatchewan will be

responsible for the implementation of the work, but management and costs will be shared as will federal and provincial technical expertise.

Project 10.1:

Flood Forecasting and Warning

Existing flood forecasting, warning and emergency action programs will be reviewed and action taken to increase the effectiveness of these activities.

Program 11:

Agricultural Land Purchase and Flood Proofing

The Souris Study identified areas where agricultural lands are subject to losses as a result of floods. The Province proposes to implement a program to purchase flood-prone lands offered for sale on a voluntary basis. The Souris Study also identified the need for flood proofing, relocation or dyking to protect farmsteads and farm buildings. Costs for this program will be borne by Saskatchewan.

Project 11.1:

Agricultural Land Purchase

Lands subject to economic losses due to flooding will be purchased, when offered for sale, on a voluntary basis. The areas to be included in the program are approximately 1 600 acres between McDonald Lake and Highway No. 18 and approximately 1 000 acres between Nickle Lake and Dead Lake. Any revenues arising from the purchase of the lands will accrue to the Province.

Project 11.2:

Flood Proofing and Relocation

Information and financial assistance will be provided for dyking, flood proofing, or voluntary removal of farmsteads and farm buildings subject to flooding.

Program 12:

Channel Improvements

The need for improved conveyance capacity has been examined throughout the length of the Souris River in Saskatchewan. While channel improvements along the total length of the river cannot be justified there is a need to improve conveyance capacity immediately above Weyburn. A project will also be undertaken to clear the channel and remove obstructions on a regular bases. Costs of this program will be borne by Saskatchewan.

Project 12.1:

Channel Improvements above Weyburn

The Province will undertake to improve conveyance capacity immediately upstream of Weyburn to 200 cfs to reduce damages arising from summer rains.

Project 12.2:

Channel Clearing and Snagging

The Province will undertake a periodic program to remove fallen trees and debris particularly in areas of severe localized obstructions.

WATER DEVELOPMENT FOR ECONOMIC EXPANSION AND DROUGHT PROOFING

SCHEDULE "B"

Summary of Costs 1979-1982
(\$000's)

	<u>DREE</u>	<u>Environment Canada</u>	<u>Total Federal Share</u>	<u>Total Provincial Share</u>	<u>Federal Provincial Cost Sharing Ratio</u>	<u>Total Costs</u>
A. WATER MANAGEMENT ACTIVITIES						
1. Drought Proofing Studies						
1.1 Economic Development						
Analysis	500		500		100/0	500
1.2 Drought Sensitivity Analysis	600		600			600
1.3 Long-Term Strategy	400		400			400
2. Water Management Investigations						
2.1 Water Resources						
Development (including Boundary Reservoir*)	<u>500</u>		<u>500</u>	<u>500</u>	50/50	<u>1 000</u>
	2 000		2 000	500		2 500
B. WATER SUPPLY						
3. Water Supply Investigations						
3.1 Water Demand and Supply						
Analysis						
3.2 Site Investigations	100		100		100/0	100
3.3 Detail Evaluation and Design						
4. Multiple Purpose Water Storage						
Projects						
4.1 Weyburn Dam*	1 850		1 850	1 850	50/50	3 700
5. Community Water Storage Projects						
5.1 Projects to be Designated	1 650		1 650	1 650	50/50	3 300
6. Sub-Regional Water Delivery						
Schemes						
6.1 Projects to be Designated	<u>1 800</u>		<u>1 800</u>	<u>1 800</u>	50/50	<u>3 600</u>
	5 400		5 400	5 300		10 700

C. FLOOD DAMAGE DEDUCTION

7. Dyking						
7.1 Weyburn*	330	330	330	50/50	660	
7.2 Estevan*	10	10	10		20	
8. Raising Bridges						
8.1			330	0/100	330	
9. Flood Proofing and Relocation						
9.1 Weyburn*	25	25	25	50/50	50	
9.2 Estevan*	78	78	78		156	
9.3 Roche Percee*	20	20	20		40	
9.4 Beaver Park*	34	34	34		68	
10. Flood Forecasting						
10.1 Flood Forecasting and Warning	3	3	3	50/50	6	
11. Agricultural Land Purchase & Flood Proofing						
11.1 Agricultural Land Purchase*			500	0/100	500	
11.2 Flood Proofing and Relocation*			80		80	
12. Channel Improvements						
12.1 Channel Improvements above Weyburn			50	0/100	50	
12.2 Channel Clearing and Snagging*			90		90	
Sub-Total		<u>500</u>	<u>500</u>		<u>1 550</u>	<u>2 050</u>
TOTAL	<u>7 400</u>	<u>500</u>	<u>7 900</u>		<u>7 350</u>	<u>15 250</u>

* Recommended for implementation by Souris River Basin Study Board

N.B. The delivery of the projects listed above will entail federal and provincial expenditures for staff time and related costs which are not shown in the table.

