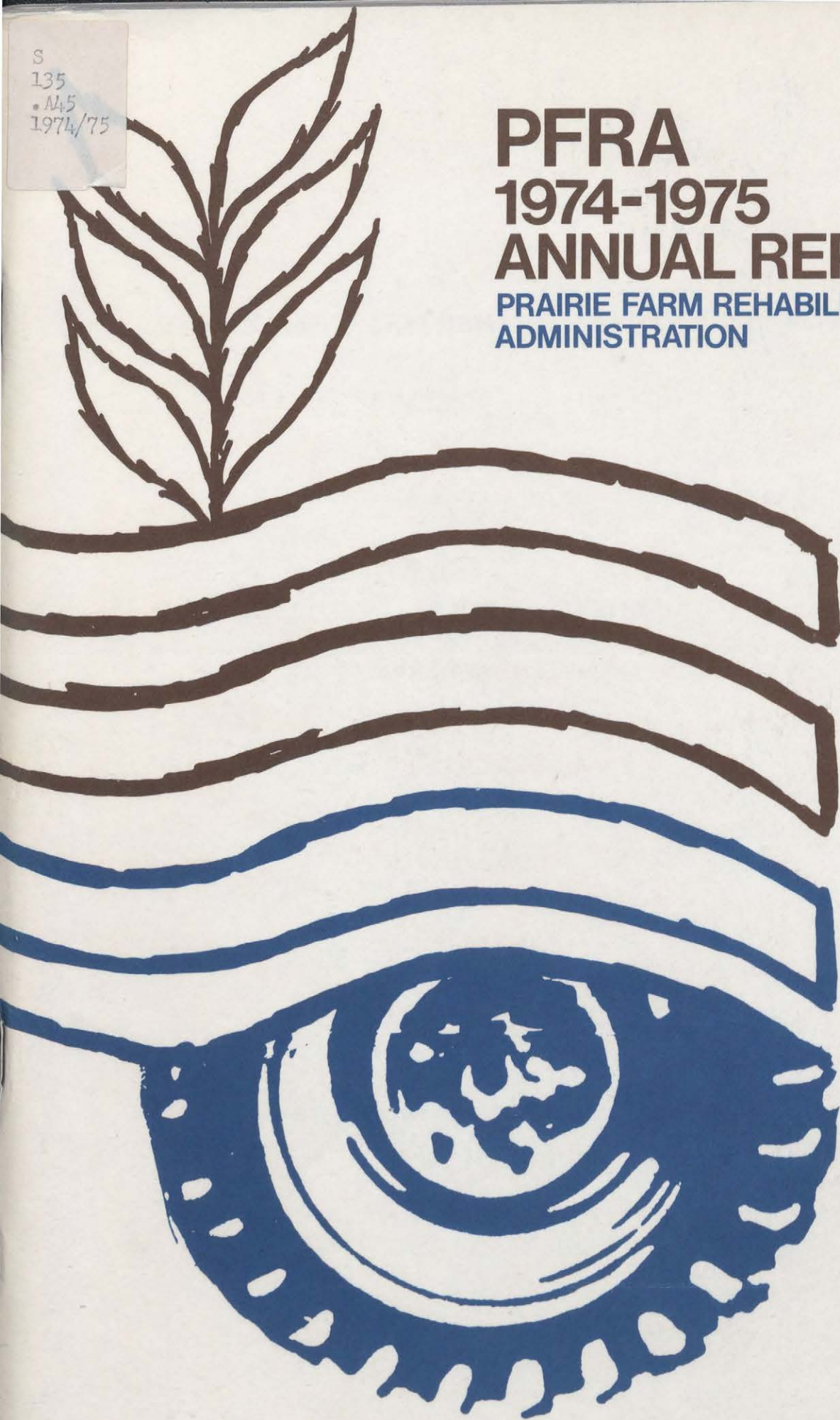


S
135
• 1145
1974/75

PFRA 1974-1975 ANNUAL REPORT

PRAIRIE FARM REHABILITATION
ADMINISTRATION



THE PRAIRIE FARM REHABILITATION ADMINISTRATION

**ANNUAL REPORT
1974-1975**

DEPARTMENT OF REGIONAL ECONOMIC EXPANSION

TABLE OF CONTENTS

| | |
|---|-------|
| Introduction | 1 |
| Land Use Service | 2 |
| Pasture Operations | 2 |
| Pasture Improvement and Development | 2 |
| Water Development Service | 3 |
| Water Development Division | 3 |
| Construction of Large Water Storage Projects | 3 |
| Technical Services to Other Agencies | 3 |
| Irrigation Projects | 3 |
| Construction, Equipment and Services Division | 4 |
| Demonstration Farm | 4 |
| Tree Nursery | 4 |
| Engineering Service | 6 |
| Major Projects | 6 |
| Regional Offices | 7 |
| Technical Divisions | 8 |
| Administration Division | 11 |
| Appendices | |
| I. Summary of Land Inventory to March 31, 1975 | 13 |
| II. Services Provided by Water Development Division, 1974-1975 | 14 |
| III. Water Development Projects Completed and Assistance Paid, 1935 to March 31, 1975 | 15 |
| IV. Development and Operation of Community Pastures Under PFRA, 1938-1975 | 16 |
| V. Major Projects — Irrigation, Reclamation and Water Storage, 1935 to March 31, 1975 | 17-18 |
| VI. PFRA Expenditures by Activities, 1935 to March 31, 1975 | 19 |

INTRODUCTION

The Prairie Farm Rehabilitation Act was passed by Parliament in 1935 to legislate assistance in the reclamation of agricultural lands seriously affected by drought and soil drifting in Manitoba, Saskatchewan and Alberta. Subsequent amendments to the Act widened the scope of PFRA activities and extended indefinitely the life of the original legislation.

Furthermore, the boundaries for PFRA activities were expanded to include all agricultural areas of the three prairie provinces.

Water conservation and development, and land use adjustment have long been major concerns of PFRA; its activities have included the development of large-scale irrigation, reclamation and community pasture operations. These activities continued during 1974-75.

In addition to operating its long-standing programs, PFRA was engaged in activities under

Agricultural Service Centres Agreements negotiated with Manitoba, Saskatchewan and Alberta for the improvement or extension of waste disposal and water supply facilities in 54 designated centres. The cost of such projects is being shared, with Canada contributing half the cost and providing the balance in the form of loans to the provinces. PFRA is responsible for the implementation and supervision of construction.

Another item of significance in the year under review was the continuation of major construction of irrigation works in Alberta under the terms of the Alberta Irrigation Agreement signed on March 29, 1973.

The following is a summary of the activities of the Prairie Farm Rehabilitation Administration for the year ending March 31, 1975.

LAND USE SERVICE

The Land Use Service originated in 1937 when an amendment to the Prairie Farm Rehabilitation Act included the removal of submarginal land from cereal crop production. Such land was to be regrassed and otherwise developed for grazing.

PFRA is now operating 95 community pastures, including the Suffield Pasture in Alberta, which has been operated intermittently since 1961. One new pasture near Roblin, Manitoba, was under construction in 1974.

Pasture Operations

Established pastures in the 1974-1975 fiscal year covered 2 409 220 acres. Livestock carried in these pastures totalled 242 176, an increase of 7 688 over the previous year. The animals were owned by 5 998 patrons. Grass and water conditions were generally satisfactory.

The breeding service required the use of 4 089 bulls including 3 450 owned by PFRA; the remainder were rented. A total of 107 772 cows were serviced.

Grazing Fees

Pasture and breeding fees were unchanged from the previous year. In lieu of taxes, local governments continued to receive one cent per day for each adult animal grazed. The rate schedule for the 1974 pasture year was:

Cattle — 8¢ per day (including 1¢ tax levy)

Calves — \$4.50 per head (of current season)

Horses — 10¢ per day (including 1¢ tax levy)

Colts — \$6.50 per head (of current season)

Sheep — 2¢ per day (including 0.3¢ tax levy)

Breeding Service — \$7.50 per cow

Minimum grazing fee per head per season — cattle \$7, horses \$9.

Fees for grazing in pastures on Indian Reserves are the same as regular pasture fees; however one-third of the grazing revenue is turned over to the Indian Bands involved. In 1974, 15 bands received \$61 975 as their share of the revenue. For the first time, an Indian Reserve pasture was turned over to an Indian Band to operate on an independent basis. This is provided for in the pasture agreements with the Bands.

Pasture Improvement and Development

Haying

Hay harvested on pastures and irrigation projects associated with the pasture program amounted to 8 371 tons, an increase of more than 2 000 tons over the previous year. This hay is used for winter feeding of PFRA bulls.

Pasture Construction

Approximately 125 miles of fence were constructed and 100 miles rebuilt. The pastures are now enclosed or divided by 6 418 miles of fence. Six buildings were constructed and three repaired during the year.

Pasture Improvement

Water development activity consisted of the construction of 51 dugouts, the drilling of 14 wells, the relocation of four windmills, and the installation of 146 irrigation structures and 175 water troughs.

There has been an extensive land improvement program to increase pasture carrying capacity; land clearing on 55 300 acres is at various stages of completion. In addition, 3 700 acres were broken, 6 215 acres seeded, and 40 060 acres sprayed for weed and brush control.

WATER DEVELOPMENT SERVICE

The Water Development Service consists of four divisions which provide technical and financial assistance for the development of water and land resources for agricultural purposes; operate irrigation projects in southwest Saskatchewan; produce and distribute shelterbelt material to rural users; provide a repair, maintenance and transport service; and construct small water development projects.

Water Development Division

Above-average runoff occurred across most of the prairie region during the spring of 1974. Storage reservoirs were generally filled to capacity and substantial flood damage occurred to roads, bridges, buildings and, to a lesser degree, to some storage reservoirs in certain areas of Saskatchewan and Manitoba.

Dugout construction decreased by 32 per cent from the previous year, due mainly to the wet conditions. The number of stockwatering dams increased by 12 per cent, while the number of individual irrigation projects remained approximately the same as in the previous year.

The farm wells program was again popular. The number of wells constructed during the year increased 40 per cent over 1973-74. In total, 6 297 farm wells were completed. The Water Development Program was used more in Alberta where 46 per cent of the total projects constructed during the year were recorded.

Twenty-four small community projects were authorized and 16 were constructed. Shortages of available contractors affected this program to some extent.

Construction of Large Water Storage Projects

No large community projects were constructed by the Water Development Division during the year. However, negotiations have taken place with Manitoba and Saskatchewan for the construction of several of these structures in each province.

Technical Services to the Other Agencies

The Water Development Division provided technical services to organizations such as provincial Water Rights Agencies, the federal Department of Indian Affairs and Northern Development, and to provincial Rural Water Development Programs operating in each of the three prairie provinces.

Appendix II indicates the services provided by the Water Development Division for fiscal year 1974-75. Appendix III shows the number of projects and amount of financial assistance paid by the Water Development Division since the inauguration of the program.

Irrigation Projects (Developed, Operated and Maintained by PFRA)

Rehabilitation, Southwest Saskatchewan

Since 1938, PFRA has constructed 27 storage reservoirs in southwest Saskatchewan. These reservoirs continue to be operated by PFRA to provide water for some 40 000 acres of irrigable lands and to regulate the flows of international streams to meet Canadian commitments under the Boundary Water Treaty of 1909. Of the total irrigated area, some 25 000 acres are in six irrigation projects operated and managed by PFRA. The remaining irrigable area is apportioned among seven provincially-operated projects and privately-operated schemes. In the spring of 1974 all reservoir storages were low, however snow melt, combined with heavy precipitation in May, provided sufficient water for all uses. Releases to the United States as designated by international treaty were apportioned and delivered with no problems.

The projects managed by PFRA produced an estimated 46 500 tons of forage on 23 212 acres. The yield was affected by poor growing conditions in the spring and early September frosts. Livestock on the project included 54 965 cattle and 2 484 sheep. These numbers are approximately the same as in the previous year.

Land levelling was carried out on four of the six PFRA-operated projects as part of a continuing program to improve irrigable lands and increase production. A total of 740 acres of land was

levelled, a decrease of 318 acres from the previous year. PFRA provides technical services for this operation.

Construction, Equipment and Services Division

Construction and repair services are provided by this division to all sectors of PFRA. Through its personnel, equipment and repair depot, the division constructs and maintains buildings and engineering works, and repairs, fabricates and stores equipment and supplies required by PFRA.

During the year, the field construction section completed 153 job assignments having a total value of \$567 539. Major activities included completion of the second outlet works on the West Cypress Dam (initiated the previous year); reconstruction of portions of the Val Marie and West Val Marie irrigation projects; reconstruction of the diversion canal from the Gap Creek Weir to Maple Creek; the construction of an outlet works on the Cadillac Dam and the regrading of 663 miles of community pasture access roads. In addition, the water reservoir for the town of Hudson Bay was dredged and approximately 1 800 acres of hay lands at the Gardiner and Qu'Appelle damsites were harvested.

The Moose Jaw Service Depot undertook 2 543 work assignments having a total value of \$903 004, an increase of approximately 44 per cent over the previous year. Transport trucks travelled 286 178 miles in handling 1 040 work assignments. The Service Depot also constructed seven heavy-duty range land seeders and four large horse trailers. Several other trailers were extensively modified.

Demonstration Farm

The purpose of the 155-acre demonstration farm at Outlook, Saskatchewan is to demonstrate specific enterprises associated with irrigated farming. People involved in farming, research, education, tourism, government and industry are making use of the farm's facilities.

The farm is used to demonstrate and evaluate various cropping and livestock procedures to assist farmers and others associated with the South Saskatchewan River Irrigation Project at Outlook, in making advantageous choices of crops and production methods.

In 1974, an irrigated pasture project provided useful information on natural grazing. A vegetable demonstration project, conducted on the farm by the Saskatchewan Department of Agriculture and the Horticultural Department of the University of Saskatchewan, provided significant data on suitable varieties and attainable yields of horticultural crops in the area. Fields of cereal grains, field peas, winter wheat and silage corn were grown in 1974 and information of value to farmers planning their 1975 crops was obtained. Additional specialty crops are planned with the aim of determining their usefulness under irrigation.

As a service to Environment Canada, the farm collects meteorological data. The information obtained aids in identifying crops which are suitable to the area and provides a basis for scheduling the application of water.

In addition to 10 tour groups which visited the farm during the year, there were visits from tourists, research and university personnel, agribusiness representatives, area residents and 4-H clubs.

Detailed information on methods used, cost factors involved and results obtained in all farm operations is available to interested parties.

Tree Nursery

Since its establishment in 1903, the Tree Nursery has supplied 382 million trees, mainly for farm plantings. In 1974, 4 887 260 plants were distributed to 7 775 eligible applicants. In 1974 applications for six species of trees (14 are available) exceeded supplies by 500 000, indicating an increasing demand for material and services.

Of the tree material distributed, 87 per cent was planted as shelterbelts (farmstead plantings, field and roadsides, and small rural holdings), while 13 per cent was used for development programs of various federal, provincial and municipal agencies. Of the 37 760 bales of trees distributed, 27 800 were delivered "in bulk" through 78 agricultural representatives to 5 738 planters. Another 4 000 bales of trees were shipped directly to individuals, and 724 applicants picked up their tree orders at the nursery.

Spring plantings included 621 900 conifer seedlings and 1 470 000 poplar and willow cuttings. Forty-three acres were seeded with four tree

species in June, and 21 acres were seeded with 12 species in the fall. Some 202 tons of hay were harvested from 51 acres.

Fall harvesting of deciduous tree species began September 18 and was completed by October 29. A total of 5 840 000 plants were harvested and stored. Harvesting and storage of 1 543 000 hardwood cuttings continued to December 17. Fall harvests of seed yielded 3 700 pounds of 12 tree and shrub species.

Applied research, carried out at the nursery, has provided efficient herbicidal weed control for nursery production of the eight tree species which make up 70 per cent of the production total.

In 1974, promising results were obtained for herbicidal weed control for three other species.

In 1974, the Tree Nursery responded to 814 requests for technical and public information services in Manitoba and Saskatchewan. These services included shelterbelt inspections, technical and maintenance assistance, and attendance at various meetings. Other services included: 16 tours of the nursery for 426 visitors; a field day for 21 prairie nurserymen; 15 slide talks for organized meetings; and the supervision of tree displays at seven fairs in Saskatchewan. In addition, 175 specialized inquiries were answered by mail.

ENGINEERING SERVICE

The PFRA Engineering Service is engaged in the investigation, planning, design, construction and maintenance of various works pertaining to water development, irrigation and community infrastructure programs in Manitoba, Saskatchewan and Alberta. It provides technical assistance to other PFRA offices responsible for the operation and maintenance of projects in which the federal government retains an interest, and to several outside agencies engaged in planning and implementing major works in large river basin developments of interprovincial or international scope. These agencies include the International Joint Commission, the Canadian International Development Agency and the Prairie Provinces Water Board.

Specialized engineering units are maintained to provide basic services in hydrology, design, geology and air surveys, soil mechanics and materials, construction, planning, and investigation.

Project offices are located at Lethbridge and Cutbank to administer the Alberta Irrigation Rehabilitation Program and to operate and maintain the South Saskatchewan River Project. There are regional offices at Winnipeg, Regina and Calgary, and a regional sub-office at Swift Current. The Soil Mechanics and Materials Division is located on the University of Saskatchewan campus in Saskatoon. Other specialized divisions are headquartered in Regina.

The project offices supervise construction, maintenance and operation of the work at large projects. The regional offices direct field investigations and the construction of projects ranging from small water development projects to large community water storage works that involve provincial participation. Technical assistance is provided by the technical divisions in the detailed planning, designing and other engineering work necessary for implementing such projects.

Major Projects

Alberta Special Programs

Under the Alberta Irrigation Rehabilitation Agreement, Canada will spend \$26.3 million to rehabilitate four major structures in existing irrigation

districts in southern Alberta. Under this agreement, PFRA is providing all engineering services required for the work.

The first project, Carseland Weir, has been completed. It was constructed to divert water from the Bow River to the Bow River Irrigation Project. A second structure, the Western Irrigation District (W.I.D.) Headworks at Calgary, was essentially completed during 1974-75. A start has been made on a structure to replace the Brooks Aqueduct, with work to continue for at least another two years. Investigation on a fourth structure, the Bassano Dam, is continuing although reconstruction has not yet begun.

Field supervision of construction for three of the projects is being provided by the Lethbridge Special Projects Office, while the PFRA Alberta Regional Engineering Office is supervising construction of the W.I.D. Headworks. Another activity of the Lethbridge office involves survey and damsite evaluation work associated with the Oldman River Basin Study.

South Saskatchewan River Project

The two main structures on this project are the Gardiner and Qu'Appelle River Dams. Gardiner Dam is the largest earthfill dam in Canada and is situated midway between the towns of Outlook and Elbow. The two dams create an 8 million acre-foot capacity reservoir that provides water for irrigation and power production for industrial, domestic and recreational use. The cost of construction was approximately \$120 million, of which Canada paid \$95 million and Saskatchewan \$25 million.

Under a 1958 federal-provincial agreement, Canada was responsible for planning, designing and constructing the works necessary to create the reservoir and continues to be responsible for the maintenance of the structures. Making the most efficient use of the water through development of appropriate distribution works is a provincial responsibility.

During 1974-75, PFRA continued observations to assess the performance of the structures and carried out maintenance of the works and property as required. Readings were also taken

throughout the year at piezometer installations in the Riverhurst area for the Inland Waters Branch of Environment Canada.

Regional Offices

The regional offices of the Engineering Service at Winnipeg, Regina and Calgary, and the sub-office at Swift Current, carried out diverse engineering functions including field surveys and investigations, office design and cost studies, construction supervision and writing of preliminary or construction reports for a variety of projects during the year. In addition, the regional offices provided planning services and supervision of repairs or renovations to existing projects. Engineering assistance was rendered to other divisions of PFRA, the Department of Regional Economic Expansion, the Prairie Provinces Water Board, and to various other federal and provincial departments.

Manitoba

Repairs to the Assiniboine River dikes were not as extensive as usual because the Portage Diversion functioned well, thus relieving strain on the Portage la Prairie to Winnipeg diking system. Only one portion of the dike was seriously eroded and had to be rebuilt.

The proposed McEachern Dam was redesigned in an effort to reduce costs of this structure. On the Vermilion Dam Project, land acquisition plans and reservoir clearing specifications were prepared and information gathered for detailed design of the dam.

Infrastructure construction on The Pas Indian Reserve related mainly to road and street improvement. On the Sandy Bay Indian Reserve, topographic surveys and drainage ditch design were carried out. The Roseau River Basin Study on behalf of the International Joint Commission was continued, as was activity related to silt deposition at the Wilson Creek Experimental Watershed.

Activities continued in 16 centres under the Agricultural Service Centres Program. Construction was in progress in eight centres while various investigations and planning activities were underway in several others.

Saskatchewan

Under the Agricultural Service Centres Program,

numerous contracts were administered and monitored, and construction work was supervised at 14 centres. Water supply source investigations under the program were completed at Assiniboia, Unity and Weyburn, and continued at Canora, Humboldt, Melfort, Melville and Moose Jaw.

Modifications to the west outlet of Cadillac Dam were undertaken and construction of the Semans Community Reservoir was completed. Engineering studies or reports were concluded on Russell Creek, Gull Lake, slough drainage near Unity, drainage of Gordon and Sink Lakes, the Cedoux Dam and Sinfield Project.

The Swift Current district office provided engineering supervision for the operation and maintenance of the six irrigation projects in southwest Saskatchewan in which Canada retains an interest. Surveys were performed on 846 acres for the purpose of land levelling. About 508 acres were levelled, 670 acres regraded, border dike systems laid out around 191 acres, and an additional 630 acres staked. In southwest Saskatchewan, 40 small control structures were placed, 440 lineal feet of culvert installed, more than four miles of supply ditches provided and almost two miles of field drains constructed.

The PFRA Tree Nursery at Indian Head received engineering assistance for various projects. Operations associated with the control and distribution of water in the Qu'Appelle Valley continued.

Alberta

Supervision of construction of the Western Irrigation District Headworks on the Bow River in Calgary continued under the federal-provincial Irrigation Rehabilitation Agreement.

Investigation continued and a draft report was prepared for the Grett Lake Project near Pincher Creek. The Alberta office also processed 250 small water project plans for submission to the Water Resources Branch. Water testing and treatment evaluations and proposals related to the Slave Lake Special Area were carried out.

On behalf of Environment Canada, various engineering studies and investigations were undertaken on the Peace-Athabasca Delta Project and construction supervision was provided for a large contract on the project. Engineering investigations were conducted for the Oldman River Basin Study in search of alternatives for improving flow conditions at Lethbridge.

Activities ranging from investigation and planning to construction supervision were undertaken for work in 12 of the 13 communities involved under the Agricultural Service Centres Agreement.

Technical Divisions

Design Division

Final designs, contract drawings and specifications were completed and a contract tendered for a reinforced concrete syphon pipe to replace the Brooks Aqueduct. No contract was awarded as costs were deemed to be excessive. New feasibility studies and cost estimates were then undertaken for a number of alternative proposals for the Brooks Aqueduct replacement. Contract drawings and specifications were prepared and a contract awarded for a portion of the railway-syphon crossing and the outlet canal components.

Final design and hydraulic model studies were completed for the construction of a submerged rock-filled weir on the Rivière des Rochers, construction of a rock-filled plug on the Revillion Coupe, and the removal of an existing rock dam at Quatre Fourches.

A contract was awarded for the construction of the Western Irrigation District Headworks weir and sluiceway. The design, contract drawings and specifications were finalized and a contract awarded for the supply and installation of gates, hoists and related equipment for the headworks.

Final designs, contract drawings and specifications were prepared for the construction of Vermilion Dam and appurtenant works including the pump-house substructure. No tenders were called for this work because the Province of Manitoba has not yet obtained land control for the project.

Final design and contract drawings for Gilbert Plains Dam, prepared in 1967, were reviewed and the cost estimates updated. An investigation of damage to the LaFleche Dam spillway was made and a report prepared on recommended temporary repairs. Damage to the Gouverneur Dam spillway was inspected and a report prepared including recommended repairs. A report on preliminary studies and cost estimates for raising the existing CPR Dam and constructing the proposed Golden Sheaf Dam was compiled for the town of Gull Lake water supply study. A report on the inspection of the Welwyn Dam was prepared. Contract drawings and specifications were completed for

construction of a sheet pile and rockfill overflow structure at McEachern Dam. A study was made on repairs and modifications needed to ensure the safety of Craik Dam, and construction drawings and specifications were prepared. Final designs for Patterson Dam, originally done in 1970, were reviewed and the cost estimate updated. Preliminary designs and cost estimates were started for dams at seven new sites in the Oldman River basin. The Boundary Dam spillway was inspected and a report was prepared documenting its condition and recommended maintenance procedures. Design for a new power supply for a pump at the Outlook Demonstration Farm was completed.

In accordance with the Agricultural Service Centres Agreements in Alberta, Manitoba and Saskatchewan, final plans and specifications, prepared by consultants for approximately 100 contracts, were reviewed and tendered. Supply contracts were also drawn up and tendered for equipment needed for the construction contracts.

Facilities of the Hydraulics Laboratory were utilized for new documentation of completed hydraulic model testing for the Western Irrigation District Headworks. Detailed hydraulic testing on both a two-dimensional and a comprehensive model basis for a rock weir on the Rivière des Rochers, was also completed.

Geology and Air Surveys Division

Geological investigations, photogrammetric mapping and air photo interpretation studies were carried out mainly in connection with water resource projects, Agricultural Service Centres programs, and community pasture improvement programs.

In Manitoba, detailed air photo interpretation and field reconnaissances were completed in the areas of the proposed McEachern and Vermilion Dams. Small-scale maps were prepared by photogrammetric means to show the location and extent of dikes along the Assiniboine River between Portage la Prairie and Headingly. Recommendations for aerial photography to be obtained by contract were forwarded to the Manitoba Department of Mines, Resources and Environmental Management. Field control requirements were identified prior to the beginning of photogrammetric mapping of the Souris River Valley for Environment Canada.

In Saskatchewan, surficial geology studies were completed for a damsite on the Souris River

downstream from the Weyburn Dam, and studies for sources of fieldstone for slope protection completed the geology studies of a damsite near Assiniboia.

Studies on the groundwater hydrology and results of the pumping tests of the aquifer at Akerlund Lake, in connection with the Unity water supply, were concluded. Brief groundwater studies were made for areas adjacent to Maple Creek, Gull Lake and Kerrobert.

In Alberta, additional photogrammetric mapping, relevant to the Brooks Aqueduct, was completed. Aerial photography was obtained through contract, and large-scale topographical plans were compiled by photogrammetry for the area surrounding the Little Rapids site on the Rivière des Rochers. Surficial geology mapping was carried out and refraction seismic profiles were run of bedrock exposures at the site. In connection with the Oldman River Basin study, the identification and the geotechnical evaluation of new potential sites in the basin were begun.

The program of preparing large-scale mosaic base plans of all community pastures was concluded and the first set of map overlays showing pasture services and operational facilities was completed. Throughout the year, large-scale air photo mosaics and air photo enlargements were prepared for the Water Development Service to assist it in planning and investigating small projects.

Soil Mechanics and Materials Division

During the year, the division worked on 123 engineering studies involving 86 project studies and 37 research, testing and evaluation studies. Fifty-nine of the studies were completed. Four hundred plans were prepared in connection with studies and reports.

The project studies ranged from investigations of individual dugouts to the preparation of plans and specifications for a major embankment. They also included soil and aggregate investigations for 35 Agricultural Service Centres. Performance and investigation summaries were prepared for federal projects being transferred to Province of Alberta jurisdiction. Ten test installation reports were completed and five more were in progress for structures on the Bow River and St. Mary Irrigation Projects. Five investigation summaries of project structures to be transferred to Alberta were also prepared.

Research studies varied from a short-term testing program to calibrate a nuclear density meter to the continuing study of concrete in a sulphate environment.

Close to 24 000 lineal feet of test hole drilling was carried out at 41 sites, with 7 250 soil samples being recovered. Twelve full-scale pump tests were completed. In the main laboratory, 32 225 tests were performed on samples of soil, bedrock, concrete, cement, aggregates and construction materials.

Technical assistance during construction was provided at seven sites, and performance observations and inspections continued at 38 sites. Effective January 1, 1975, the division assumed responsibility for instrumentation observations on the South Saskatchewan River Project.

The division continued to represent the Department of Regional Economic Expansion on the Soil Mechanics Subcommittee of the National Research Council's Geotechnical Research group, and the Canadian Standards Association Subcommittee on Concrete Aggregate Testing. It also sponsored a seminar for PFRA staff on materials inspection and testing.

Hydrology Division

During the year under review, this division continued to supply hydrologic information for the planning, design and operation of PFRA projects. It also continued to offer its services to several other federal and provincial agencies in the prairie region, and participated in meetings of the Prairie Provinces Water Board, the Churchill River Study group, and the Saskatchewan Committee on Hydrology.

Fourteen formal reports were completed in the past year and 50 study requests were answered. Work was completed and a report prepared on the hydrologic component of the Roseau River Study on behalf of the International Joint Commission, and work continued on four International Hydrologic Decade projects. Two major water supply studies were begun on the Oldman River basin and the Souris River basin. Reports were completed on the proposed Coronach Reservoir, City of Weyburn surface water supply and the Swift Current Creek basin surface water supply potential.

Legal Surveys Division

All surveys, except for two contracts on the Brooks Aqueduct Project, were performed by division personnel. Field surveys undertaken and concluded consisted of right-of-way, subdivisions, parcels, road diversions, retracements, topographic and horizontal control surveys in connection with Elfros and Semans Community Projects; Gouverneur, Thomson Lake and Consul Storage Projects; Mariposa and Lomond Community Pastures; Eastend, Maple Creek and Val Marie Irrigation Projects; South Saskatchewan River Project; City of Moose Jaw; Indian Head Tree Nursery; and the Oldman River Basin.

Office activities consisted of plotting, drafting, calculating and processing plans for registration in the provincial land registration system; preparing summaries of land control requirements and related procedures for five surveys; beginning a comprehensive review of the descriptions, titles and plans affecting all lands under sale agreement in the southwest Saskatchewan irrigation area; and approving or preparing 363 descriptions, related sketch plans and computations for easements, sales agreements and submissions.

ADMINISTRATION DIVISION

The Administration Division, operating through seven sections, coordinates the administrative activities of PFRA, provides Headquarters' administrative services and gives support on request to the departmental program in western Canada.

General Services Section

This section provides transcription, records management and office services to Headquarters' offices; and is responsible for centralized administration including accommodation, communications, data processing, Crown Assets Disposal, secretarial services and related activities. Particular attention in the past year has been given to matters of communication, including detailed planning for a consolidated Centrex telephone system and the installation of a Vu Com computer terminal.

Finance Section

The Finance Section is responsible for the financial control of all budgetary and non-budgetary expenditures and revenues. Expenditures for PFRA programs exceeded \$32 million, while revenue totalled approximately \$4 150 000 for the year under review. The section administers payment authority in accordance with the Account Verification and Payment Requisition Regulations, the classification of accounts, the preparation of commitment certificates and financial reports and statements for all PFRA programs.

It is also responsible for the preparation of the Program Forecast and Final Estimates for the Branch. Emphasis continues to be given to the financial management of the Agricultural Service Centres Program in relation to cost-sharing, loan amortizations and the recovery of the provincial contributions in accordance with subsidiary agreements entered into with each of the prairie provinces.

Management Services Section

This section provides an advisory service for management at all levels. Its primary function is to study management and operational problems and to make recommendations for improvement. The main work areas are organization analysis, systems and procedures studies, feasibility studies for data processing applications, forms design

and control, and appraisal of requests for office equipment. During the past year, considerable attention was given to studies and reports related to the forthcoming introduction of computer-based Management Information Systems.

Library Section

Complete library facilities and services are provided to all PFRA activities and support is given as required to other departmental programs in the west. Over the year, statistics showed an increased use of reference and loan services; and progress continued on special projects such as the Book Catalogue, with 5 600 titles listed; the Union List of Serials, and the Federal Shared Library Services program. Research has begun on the introduction of computer-based retrieval systems.

Information Section

This section provides a full range of information and technical support services. Numerous reports, brochures, news releases and related items were made available to the public during the year. Displays and exhibits were supplied to fairs and special events, and general support was given to the departmental information program in western Canada.

The Photographic Unit, as well as providing coverage for information purposes, continued to give assistance to the technical program of PFRA through exact-scale reproduction work, hydraulic test photography, rescaling of mosaics and other specialized photographic techniques. Over the past year, emphasis has been given to audio-visual presentations depicting the programs and activities of the Branch.

Materiel Management Section

The section provides a central service for requisitioning materiel requirements from the Department of Supply and Services; operates a supply depot; and provides related services, such as preparation of specifications, cataloguing, and the maintenance, distribution and disposal of materiel. Acquisition of materiel through DSS Regional Offices in Calgary, Winnipeg and Regina totalled \$3 836 000. During the year, an average inventory of \$158 250 was maintained in the Moose Jaw

supply depot. Stock issued was \$275 900, resulting in a turnover ratio of 2.5 to 1.

The program for identifying and disposing of surplus and obsolete equipment was continued. During the year, 355 items of equipment, with a book value of \$50 700, were disposed of through the Crown Assets Disposal Corporation. The Equipment Distribution Record at March 31, 1975, contained 8 193 items, having a book value of \$7 545 636.

At year end, the motor vehicle fleet consisted of 369 units, valued at \$1 560 673. Monthly computer statements of vehicle statistics were distributed to line management, with emphasis placed on increased utilization and lower operating costs.

Land Section

The acquisition of all lands required for PFRA projects, including the appraisal, negotiation and the drafting of Treasury Board and Privy Council submissions is the responsibility of this section. In addition, it is responsible for the administrative management of lands under PFRA jurisdiction, which includes the issuing of permits, acquiring and completing easements, land exchanges, disposal of surplus land and the maintenance of a land and real property inventory.

A major event of the past year involved the transfer of approximately 130 000 acres of land on the St. Mary and Bow River projects to the Province of Alberta, including all the related titles, agreements, easements, leases and other forms of land control. A summary of the PFRA land inventory to March 31, 1975 is shown in Appendix I.

APPENDIX 1

SUMMARY OF LAND INVENTORY TO MARCH 31, 1975

| | <i>Title</i> | <i>Reservation Order-in-Council Lease, Easement (acres)</i> | <i>Total</i> |
|-------------------------------------|--------------------|---|--------------------|
| I. WATER DEVELOPMENT SERVICE | | | |
| A. Water Conservation | | | |
| Manitoba | 1.3 | — | 1.3 |
| Saskatchewan | 10 328.6 | 96.4 | 10 425.0 |
| Alberta | 107.6 | 198.6 | 306.2 |
| B. Irrigation Projects | | | |
| Southwest Saskatchewan | 49 419.0 | 325.6 | 49 744.6 |
| C. Tree Nursery | 160.0 | 480.0 | 640.0 |
| D. Demonstration Farm | 169.5 | — | 169.5 |
| | <u>60 186.0</u> | <u>1 100.6</u> | <u>61 286.6</u> |
| II. LAND USE SERVICE | | | |
| A. Community Pastures | | | |
| Manitoba | 4 744.4 | 397 640.8 | 402 385.2 |
| Saskatchewan | 1 237 250.4 | 563 377.9 | 1 800 628.3 |
| Alberta | — | 154 437.0 | 154 437.0 |
| | <u>1 241 994.8</u> | <u>1 115 455.7</u> | <u>2 357 450.5</u> |
| III. ENGINEERING SERVICE | | | |
| A. Assiniboine River Diking | 1 077.9 | 27.9 | 1 105.8 |
| | <u>1 077.9</u> | <u>27.9</u> | <u>1 105.8</u> |
| IV. MISCELLANEOUS | | | |
| A. Hydrometric Site | 10.0 | — | 10.0 |
| B. Service Depots | 24.5 | 0.5 | 25.0 |
| C. Bow River Exchange Lands | 7 581.4 | — | 7 581.4 |
| | <u>7 615.9</u> | <u>0.5</u> | <u>7 616.4</u> |
| SUMMARY | | | |
| I. Water Development Service | 60 186.0 | 1 100.6 | 61 286.6 |
| II. Land Use Service | 1 241 994.8 | 1 115 455.7 | 2 357 450.5 |
| III. Engineering Service | 1 077.9 | 27.9 | 1 105.8 |
| IV. Miscellaneous | 7 615.9 | 0.5 | 7 616.4 |
| TOTAL | <u>1 310 874.6</u> | <u>1 116 584.7</u> | <u>2 427 459.3</u> |

APPENDIX II

SERVICES PROVIDED BY WATER DEVELOPMENT DIVISION
1974-1975

| Agency | Dugout | | S.W.D. | | Irrigation | | | Drainage | | | Community Projects | | | Wells | | | Other | | Total Services to Date | | | | |
|-----------------------------------|----------------------------|---------------------|----------------------------|----------------|---------------------|----------------------------|----------------|---------------------|----------------------------|----------------|----------------------------|----------------|--------|---------------------|----------------------------|---------------------|-------------------|----------------------|---------------------------|-------|-------|--------|--------|
| | Technical Investigation | Final Inspection | Technical Investigation | Survey Plan | Final Inspection | Technical Investigation | Survey Plan | Final Inspection | Technical Investigation | Survey Plan | Technical Investigation | Survey Plan | Report | Final Inspection | Technical Investigation | Final Inspection | Other Services | Meetings Attended | | | | | |
| PFRA Program | 1 076 | 1 890 | 765 | 303 | 273 | 163 | 934 | 313 | 254 | 93 | 217 | 38 | 8 | 523 | 27 | 16 | 15 | 19 | 754 | 6 296 | 1 164 | 15 141 | |
| Federal Request | 9 | | | | | 1 | 1 | | | | 1 | 1 | | 2 | 1 | | | | 13 | | 97 | 126 | |
| Provincial Request | 2 | | 107 | 25 | 26 | 1 | 96 | 11 | 18 | 4 | 26 | 20 | 11 | 14 | 5 | 5 | 1 | | | 1 | 85 | 458 | |
| Municipal Rural-Urban | 3 | | | | | | 3 | | | | 3 | 1 | | 6 | 3 | 2 | | | 3 | | 23 | 47 | |
| Other Groups or Individuals | 8 | 1 | 35 | 2 | 3 | 1 | | | | | 8 | 2 | 1 | 6 | | | | | | | 13 | 80 | |
| Meetings Attended | | | | | | | | | | | | | | | | | | | | | | 471 | |
| TOTAL | 1 098 | 1 891 | 907 | 330 | 302 | 166 | 1 034 | 324 | 272 | 97 | 255 | 62 | 20 | 551 | 36 | 23 | 16 | 19 | 770 | 6 297 | 1 382 | 471 | 16 323 |

Total Capital Expenditure on Individual Projects \$2 400 110.16

Total Capital Expenditure on Small Community Projects \$ 99 382.13

APPENDIX III

WATER DEVELOPMENT PROJECTS COMPLETED AND ASSISTANCE PAID
1935 - 1975

| | <i>DUGOUTS</i> | | <i>STOCKWATERING DAMS</i> | | <i>IRRIGATION PROJECTS</i> | | <i>WELLS</i> | | <i>TOTAL</i> | |
|---------------------------------|-------------------------|----------------------|---------------------------|----------------------|----------------------------|----------------------|-------------------------|----------------------|-------------------------|----------------------|
| | <i>Completed Number</i> | <i>Assistance \$</i> | <i>Completed Number</i> | <i>Assistance \$</i> | <i>Completed Number</i> | <i>Assistance \$</i> | <i>Completed Number</i> | <i>Assistance \$</i> | <i>Completed Number</i> | <i>Assistance \$</i> |
| <i>Manitoba</i> | | | | | | | | | | |
| Individual | 19 031 | 2 832 845.64 | 357 | 34 049.81 | 354 | 150 046.06 | 2 616 | 589 931.95 | 22 358 | 3 606 873.46 |
| Neighbour Small Community | 77 | 21 852.05 | 18 | 6 445.01 | 23 | 14 799.99 | | | 118 | 43 097.05 |
| | 44 | 135 584.73 | 25 | 134 401.87 | 2 | 30 582.54 | | | 71 | 300 569.14 |
| TOTAL | 19 152 | 2 990 282.42 | 400 | 174 896.69 | 379 | 195 428.59 | 2 616 | 589 931.95 | 22 547 | 3 950 539.65 |
| <i>Saskatchewan</i> | | | | | | | | | | |
| Individual | 55 967 | 9 084 174.40 | 6 145 | 735 521.29 | 3 587 | 1 056 323.03 | 3 479 | 1 057 474.72 | 69 178 | 11 933 493.44 |
| Neighbour Small Community | 433 | 137 580.03 | 65 | 15 040.62 | 193 | 115 711.62 | | | 691 | 268 332.27 |
| | 583 | 1 081 783.13 | 225 | 1 169 530.44 | 74 | 697 438.92 | | | 882 | 2 948 752.49 |
| TOTAL | 56 983 | 10 303 537.56 | 6 435 | 1 920 092.35 | 3 854 | 1 869 473.57 | 3 479 | 1 057 474.72 | 70 751 | 15 150 578.20 |
| <i>Alberta</i> | | | | | | | | | | |
| Individual | 19 567 | 3 726 457.62 | 4 276 | 616 927.56 | 1 704 | 525 448.32 | 4 421 | 1 137 957.15 | 29 968 | 6 006 790.65 |
| Neighbour Small Community | 68 | 26 955.65 | 18 | 7 108.10 | 32 | 18 661.65 | | | 118 | 52 725.40 |
| | 229 | 620 141.89 | 131 | 839 370.94 | 68 | 752 421.49 | | | 428 | 2 211 934.32 |
| TOTAL | 19 864 | 4 373 555.16 | 4 425 | 1 463 406.60 | 1 804 | 1 296 531.46 | 4 421 | 1 137 957.15 | 30 514 | 8 271 450.37 |
| GRAND TOTAL | 95 999 | 17 667 375.14 | 11 260 | 3 558 395.64 | 6 037 | 3 361 433.62 | 10 516 | 2 785 363.82 | 123 812 | 27 372 568.22 |

APPENDIX IV
DEVELOPMENT AND OPERATION OF COMMUNITY PASTURES
UNDER PFRA, 1938 - 1975

| Fiscal Year | No. of Pasture Units in Operation | Area of Land in Pastures (acres) | Total Cost of Construction of Pastures \$ | Livestock Units Carried on Pastures | Acres Per Unit of Livestock | Cost of Operation | | Net Operating Cost Per Unit of Livestock \$ | Average Charge Per Unit Livestock to Farmers \$ | Municipal Tax Levy Collected \$ |
|-------------|-----------------------------------|----------------------------------|---|-------------------------------------|-----------------------------|-------------------|--------------------|---|---|---------------------------------|
| | | | | | | Revenue \$ | Operating Costs \$ | | | |
| 1938-1939 | 14 | 189 800 | 165 995 | 3 231 | 58.7 | 6 340 | 10 186 | 3.15 | 1.96 | |
| 1939-1940 | 26 | 612 300 | 663 471 | 11 522 | 53.1 | 21 633 | 20 946 | 1.82 | 1.82 | |
| 1940-1941 | 35 | 884 500 | 1 004 306 | 23 245 | 38.1 | 43 452 | 35 291 | 1.52 | 1.87 | |
| 1941-1942 | 38 | 936 548 | 1 187 361 | 33 230 | 28.2 | 65 435 | 50 607 | 1.52 | 1.97 | |
| 1942-1943 | 45 | 1 261 100 | 1 298 488 | 51 127 | 24.7 | 98 292 | 79 907 | 1.56 | 1.92 | |
| 1943-1944 | 46 | 1 268 140 | 1 558 055 | 54 472 | 23.3 | 111 114 | 107 535 | 1.97 | 2.04 | |
| 1944-1945 | 49 | 1 337 320 | 1 699 012 | 59 997 | 22.3 | 151 461 | 117 065 | 1.95 | 2.52 | |
| 1945-1946 | 50 | 1 361 440 | 1 857 020 | 67 778 | 20.1 | 167 045 | 136 567 | 2.01 | 2.46 | |
| 1946-1947 | 53 | 1 412 860 | 2 072 274 | 68 493 | 20.6 | 198 115 | 145 293 | 2.12 | 2.89 | |
| 1947-1948 | 53 | 1 417 320 | 2 208 919 | 66 347 | 21.4 | 203 888 | 161 471 | 2.43 | 3.07 | |
| 1948-1949 | 54 | 1 436 480 | 2 486 277 | 71 393 | 20.1 | 204 012 | 175 666 | 2.46 | 2.86 | |
| 1949-1950 | 54 | 1 439 680 | 2 809 196 | 70 308 | 20.5 | 211 624 | 172 255 | 2.45 | 3.01 | |
| 1950-1951 | 56 | 1 521 080 | 3 237 331 | 68 858 | 22.1 | 221 129 | 217 867 | 3.16 | 3.21 | |
| 1951-1952 | 57 | 1 574 642 | 3 426 586 | 77 240 | 20.4 | 335 327 | 237 742 | 3.08 | 4.34 | |
| 1952-1953 | 59 | 1 652 020 | 3 754 098 | 94 137 | 17.5 | 438 514 | 373 737 | 3.97 | 4.66 | |
| 1953-1954 | 60 | 1 678 736 | 3 963 573 | 109 583 | 15.3 | 507 179 | 490 808 | 4.48 | 4.55 | |
| 1954-1955 | 60 | 1 696 900 | 4 273 917 | 106 322 | 16.0 | 496 806 | 466 154 | 4.38 | 4.66 | |
| 1955-1956 | 60 | 1 728 700 | 4 509 669 | 108 499 | 15.9 | 499 045 | 501 541 | 4.62 | 4.60 | |
| 1956-1957 | 61 | 1 759 570 | 4 832 863 | 117 441 | 15.0 | 548 601 | 508 003 | 4.33 | 4.67 | |
| 1957-1958 | 61 | 1 796 275 | 5 119 317 | 119 398 | 15.0 | 552 938 | 607 129 | 5.08 | 4.63 | |
| 1958-1959 | 62 | 1 815 265 | 5 509 958 | 117 032 | 15.5 | 542 607 | 686 449 | 5.87 | 4.64 | |
| 1959-1960 | 64 | 1 818 464 | 5 800 342 | 124 812 | 14.6 | 705 785 | 742 915 | 5.95 | 5.65 | |
| 1960-1961 | 65 | 1 896 173 | 6 254 224 | 122 813 | 15.4 | 656 709 | 716 467 | 5.83 | 5.35 | |
| 1961-1962 | 68 | 2 088 704 | 6 845 656 | 146 672 | 14.2 | 860 808 | 952 359 | 6.49 | 5.87 | |
| 1962-1963 | 71 | 2 114 412 | 7 283 658 | 139 643 | 15.1 | 871 955 | 847 753 | 6.07 | 6.24 | |
| 1963-1964 | 75 | 2 149 292 | 7 677 379 | 141 723 | 15.2 | 1 168 641 | 981 506 | 6.93 | 8.25 | 145 631 |
| 1964-1965 | 83 | 2 318 477 | 8 826 041 | 156 978 | 14.8 | 1 460 279 | 1 156 912 | 7.37 | 9.30 | 157 763 |
| 1965-1966 | 84 | 2 325 564 | 9 274 172 | 158 434 | 14.7 | 1 431 952 | 1 099 382 | 6.94 | 9.04 | 167 493 |
| 1966-1967 | 85 | 2 337 113 | 9 965 500 | 154 742 | 15.1 | 1 353 112 | 1 215 711 | 7.86 | 8.74 | 147 475 |
| 1967-1968 | 86 | 2 362 671 | 10 846 862 | 162 482 | 14.5 | 1 380 678 | 1 341 258 | 8.25 | 8.50 | 144 258 |
| 1968-1969 | 88 | 2 382 456 | 11 543 616 | 172 629 | 13.8 | 1 570 652 | 1 554 688 | 9.01 | 9.10 | 170 000 |
| 1969-1970 | 88 | 2 386 799 | 12 465 226 | 172 624 | 13.8 | 1 652 165 | 1 666 223 | 9.65 | 9.57 | 160 959 |
| 1970-1971 | 90 | 2 431 784 | 13 469 740 | 182 689 | 13.3 | 1 754 194 | 1 900 158 | 10.40 | 9.60 | 162 974 |
| 1971-1972 | 93 | 2 430 940 | 14 227 399 | 205 611 | 11.8 | 1 954 604 | 2 002 379 | 9.74 | 9.51 | 176 435 |
| 1972-1973 | 94 | 2 431 420 | 14 878 288 | 216 708 | 11.2 | 1 912 347 | 2 368 818 | 10.93 | 8.82 | 182 373 |
| 1973-1974 | 95 | 2 419 100 | 15 798 792 | 234 488 | 10.3 | 3 217 128 | 3 014 999 | 12.86 | 13.72 | 182 680 |
| 1974-1975 | 95 | 2 409 220 | 19 110 434 | 242 176 | 9.9 | 3 116 880 | 3 549 388 | 14.66 | 12.87 | 188 854 |
| | | | | | | 30 692 446 | 30 413 135 | | | |

APPENDIX V

MAJOR PROJECTS — IRRIGATION, RECLAMATION AND WATER STORAGE*
1935 TO MARCH 31, 1975

| <i>Name of Project</i> | <i>Location</i> | <i>Type of Project</i> | <i>Date Completed</i> | <i>Irrigated Acres</i> | <i>Storage Capacity Acre Feet</i> | <i>Costs \$</i> |
|---|-----------------|------------------------|-----------------------|------------------------|-----------------------------------|-----------------|
| MANITOBA | | | | | | |
| Assiniboine River Diking and Cut Off | Brandon | River Control | Not yet complete | — | — | 1 743 026 |
| Northwest Escarpment Reclamation Project — Riding Mt. Area | Dauphin | Watershed Control | 1966 | — | — | 1 313 103 |
| Fairford River Project | Lake Manitoba | Flood Control | 1960 | — | — | 287 751 |
| Saskatchewan River Reclamation — Pasquia Area | The Pas | Reclamation | 1960 | 135 000 | — | 2 256 388 |
| Shellmouth Dam and Portage Diversion | Russell | River Control | 1970 | — | 430 000 | 14 729 027 |
| Agricultural Service Centres | | Water and Sewer | Not yet complete | — | — | 2 025 334 |
| The Pas West | The Pas | Water and Sewer | Not yet complete | — | — | 891 447 |

17

SASKATCHEWAN

| | | | | | | |
|----------------------------------|----------------------|--------------------|------------------|--|-----------|-------------|
| South Saskatchewan River Project | Outlook | Multi-purpose | 1969 | 312 650 (Including 24 000 in Qu'Appelle Extension) | 7 591 000 | 120 123 235 |
| Buffalo Pound Project | Qu'Appelle Valley | Urban Water Supply | 1960 | — | 42 000 | 2 293 145 |
| Eyebrow Lake Diversion | Eyebrow | Water Supply | 1960 | — | — | 98 376 |
| Agricultural Service Centres | | Water and Sewer | Not yet complete | — | — | 2 075 592 |

(Above includes ONLY Construction Costs)

Handwritten signature

APPENDIX V (Continued)

MAJOR PROJECTS — IRRIGATION, RECLAMATION AND WATER STORAGE*
1935 TO MARCH 31, 1975

| <i>Name of Project</i> | <i>Location</i> | <i>Type of Project</i> | <i>Date Completed</i> | <i>Irrigated Acres</i> | <i>Storage Capacity Acre Feet</i> | <i>Costs \$</i> |
|--|-----------------|------------------------|-----------------------|------------------------|-----------------------------------|-----------------|
| ALBERTA | | | | | | |
| Bow River | Medicine Hat | Irrigation | | 235 000 | 408 862 | |
| (a) Purchase of Canada Land and Irrigation Company | | | | | | 2 353 517 |
| (b) Development and Construction | | | | | | 24 941 316 |
| St. Mary | Lethbridge | Irrigation | | 510 000 | 320 000 | 25 160 993 |
| Sawridge Creek | Slave Lake | Flood Control | 1973 | — | — | 248 377 |
| Alberta Irrigation Rehabilitation | | Irrigation | Not yet complete | — | — | 8 105 621 |
| Agricultural Service Centres | | Sewer and Water | Not yet complete | — | — | 496 956 |
| BRITISH COLUMBIA | | | | | | |
| Cawston Benches | Keremeos | Irrigation (pump) | 1951 | 629 | 2 000 | 185 491 |
| Chase & Johnston — Western Canada Ranching | Kamloops | Irrigation | 1951 | 755 | — | 98 243 |
| Western Canada Ranching (No. 2) | Kamloops | Irrigation (pump) | 1950 | 54 | — | 58 069 |
| Lillooet — Pemberton | Pemberton | River Control | 1953 | — | — | 1 056 539 |
| South Thompson-Niskonlith Gravity Project | Kamloops | Irrigation | 1951 | 1 030 | 1 200 | 12 282 |
| Westbank Project | Kelowna | Irrigation | 1950 | 1 200 | 2 500 | 537 450 |
| Bankhead Irrigation Project | Kelowna | Irrigation | 1951 | 92 | — | 32 229 |
| Penticton West Bench | Penticton | Irrigation (pump) | 1953 | 800 | — | 66 362 |
| B. C. Fruitlands | Kamloops | Irrigation | 1966 | 2 000 | — | 200 000 |

*Funds for certain of these projects were provided by special votes of Parliament.

APPENDIX VI

PFRA EXPENDITURES BY ACTIVITIES
1935 — March 31, 1975

| ADMINISTRATION | <u>1974 - 1975</u> | <u>1935 - 1975</u> |
|--|---------------------|----------------------|
| Regina Administration | \$ 1 358 432 | \$ 13 077 672 |
| | | |
| LAND USE SERVICE | | |
| Cultural Work — Soil Drifting, etc. (Exp. Farm Service) | — | 4 966 394 |
| Community Pastures — Construction, Operation and Maintenance | 8 254 749 | 66 882 524 |
| Movement of Settlers | — | 227 841 |
| | | |
| WATER DEVELOPMENT SERVICE | | |
| Supervision, Individual Dugouts, Wells, Community Large Water Storage and Irrigation Projects | 4 509 249 | 80 730 060 |
| Equipment — Purchase and Repairs, Service Depot | 1 395 996 | 22 002 767 |
| Tree Nursery Station | 836 951 | 7 564 901 |
| Bow River Irrigation Project | — | 47 353 798 |
| | | |
| ENGINEERING SERVICE | | |
| Surveys, Design, Soil Mechanics, Drainage Studies, Legal Surveys, Supervision of Construction | 4 269 794 | 53 201 029 |
| St. Mary Irrigation Project | — | 33 928 864 |
| South Saskatchewan River Project | 350 599 | 138 024 113 |
| Assiniboine River Diking | 23 509 | 1 743 026 |
| Shellmouth Dam and Portage Diversion | 34 968 | 14 729 027 |
| B.C. Reclamation and Development, including Lillooet Project | — | 3 310 182 |
| Land Protection and Reclamation, Manitoba and Eastern Canada | — | 4 136 021 |
| Alberta Irrigation Rehabilitation | 3 578 608 | 8 105 621 |
| Agricultural Service Centres | 2 831 761 | 4 597 884 |
| Miscellaneous Projects — Construction | 288 317 | 5 264 474 |
| | <u>\$27 732 933</u> | <u>\$509 846 196</u> |

PFRA REVENUES BY ACTIVITIES, 1935 - 1975

| | | |
|--|---------------------|----------------------|
| Community Pasture Operations | \$ 3 116 880 | \$ 30 692 446 |
| Irrigation Project Operation and General Revenue | 1 020 492 | 21 679 043 |
| | <u>\$ 4 137 372</u> | <u>\$ 52 371 489</u> |

