

# *Manitoba Natural Resources*

1930  1990



Natural Resources

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*When contemplating the design for the 60th anniversary logo for Natural Resources I felt that the logo should represent something that both the staff and general public could easily and readily identify with. Since parks, fisheries, wildlife, and forests have a high visibility with the public and are most associated with the public's perception of what natural resources consist of, I felt that these branches of Natural Resources must, as a minimum, appear on the logo. Obviously Natural Resources consists of many more branches, however, all could not appear on the logo without it becoming jumbled and confusing people.*

*The bars running through the logo represent the land and water with which all natural resources are inextricably linked. They serve to remind us that the health and sustainability of our natural resources are very much dependent upon our ability to protect and manage our land and water resources, since what we do on our land and in our water will impact all our natural resources. The bars also serve as a unifying theme that tie all branches of Natural Resources together, and give the impression of many branches, working together, for a common goal.*

*A. G. Maslowski*

***Published by the Manitoba Department of Natural Resources  
1990***

***Allan Murray, Editor***

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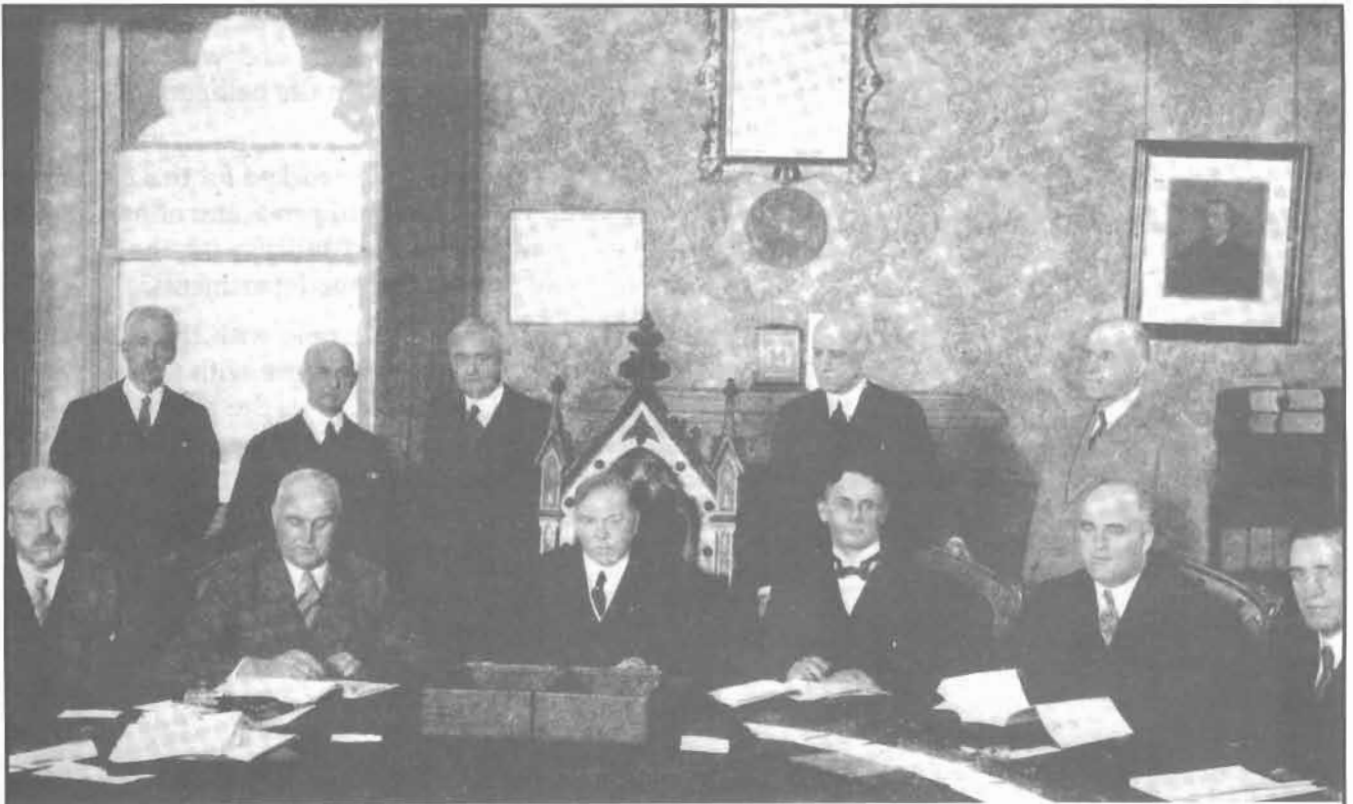
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*Confidence in the future of Manitoba is from every point of view justified more than abundantly. No one who knows Canada can have any doubt of Canada's progress, and no one who knows Manitoba can fail to have faith in the future of this central province of the Dominion. The prosperity of Canada as a whole depends very largely on the development of the prosperity of the west; and Manitoba's resources are of a diversity which will prove increasingly serviceable in furthering Canada's development by uniting the more distinctive interests of West and East.*

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Excerpt from Manitoba's Diamond Jubilee published July 15, 1930

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Seated (left to right): Hon. Robert Forke, Minister of Immigration and Colonization; Hon. Charles Stewart, Minister of the Interior; Rt. Hon. W. L. Mackenzie King, Prime Minister of Canada; Hon. John Bracken, Premier of Manitoba; Hon. D. G. Mackenzie, Minister of Mines and Natural Resources, Manitoba; Hon. W. J. Major, K.C., Attorney-General of Manitoba.  
Standing (left to right): Col. O. M. Biggar, K.C., Chairman, Interdepartmental Committee, Ottawa; Hon. J. C. Elliott, K.C., Minister of Public Works; Hon. J. H. King M.D., Minister of Pensions and National Health; Hon. James Malcolm, Minister of Trade and Commerce; Hon. J. L. Ralston, K.C., Minister of National Defence.

***The signing of the agreement for the transfer of the natural resources of Manitoba from the Dominion to the Province.***

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Cabinet Chamber at Ottawa, December 14, 1929





**Honourable John Bracken**  
*Premier of Manitoba and first  
Minister of Natural Resources*

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## *A Message from the Minister*

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There have been 17 ministers of this department since its creation in 1930. I have had the honour of being its minister three times, and each time it has been an enjoyable challenge.

The natural resources of this province have been the very basis of our prosperity and well being. Changing times and the growth of technology have not decreased their value. Indeed, the newly-found sensitivity for environmental protection is old hat in the Department of Natural Resources where the protection, conservation, and wise use of water, land, fish, and wildlife have been the hallmark of our stewardship for the past 60 years.

Many thousands of people have worked for this department over those years and it is their diligence and effort that have given the department its credibility with the people of Manitoba and among government departments.

In the final analysis, it is the people with the shovels who put out the forest fire, it is the people with the axes or the rods who survey the boundaries, it is the people in the fisheries patrol boats, or the Natural Resource Officers in trucks who make this department function. It is all the people whose names don't appear in this book who made it possible to celebrate 60 years of success this year.

It is to those people that we dedicate this book with respect and thanks for a job well done.



**Honourable Harry Enns**  
*Minister Of Natural Resources, 1990*

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A handwritten signature in dark ink, appearing to read 'Harry Enns'.

Harry Enns

Minister of Natural Resources

## *A Message from the Deputy*

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A wise person once suggested that in order to look forward with confidence, one must look back with knowledge. As we look forward to the 90's and on to the next century, with the challenge of a change a constant in our lives, it seems appropriate to cast our thoughts back over the past sixty years.

We remember where the department has come from, recognize its accomplishments and look forward to the future. This book was written to record some of the events and changes that have occurred over the last sixty years.

W.L. Morton, in his history of Manitoba, tells us that at the time of the transfer of the resources to the Province in 1930, the Civil Service was "...one of great ability and loyalty..." and its "...response was quick and effective..."

This commitment and sensitivity has continued as sound resource management has been provided by dedicated men and women, many of whom served our country in the two World Wars. The skills have changed to capture the challenges of the day. The people who serve and have served in our department have continuously converted problems into possibilities, obstacles into opportunities.

The management of our resources has demanded outstanding efforts and versatility in providing water and dealing with the ravages of floods, planting trees and fighting devastating forest fires, evacuating communities, restoring fisheries, building budgets and paying bills, establishing boundaries, protecting herds and flocks, providing outdoor recreation, and caring for people.

No province has had more competent or devoted people who continue to lead with personal initiative and common sense. Some have provided national and international leadership in their field.

This brief history reveals sixty years of achievement and learning. Having personally worked with many of the "originals" I have learned, first hand, of integrity and dedication. The first sixty years are worthy of celebration.

Many people have worked hard to write this history, produce the historic map, and put together the events to make 1990 a year of celebration. One individual deserves specific mention. That person is Bob Gould. He was chosen to co-ordinate our anniversary because of his knowledge, energy, and personal commitment.

As you read of the outstanding contributions made by the men and women during these past years, I believe you will feel the strength they have brought to their tasks — transforming intention into reality. They have established a high standard to build upon so we may face the future with confidence.

This record of happenings is dedicated to all those who served during the first sixty years.



A stylized, handwritten signature of Dale Stewart in dark ink.

## *Ministers of Natural Resources*



**Hon. John McDiarmid**  
1934—1954  
Deputies: C. H. Attwood  
D. M. Stevens  
J. G. Cowan



**Hon. John Bracken**  
First Minister of Natural  
Resources



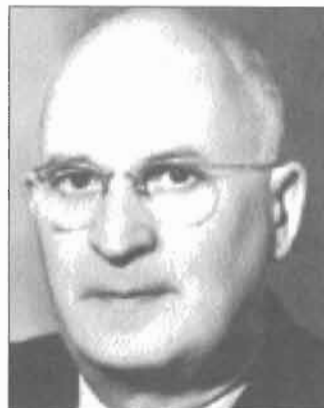
**Hon. Donald G. McKenzie**  
1929—1934  
Deputy: C.H. Attwood



**Hon. E. Gurney Evans**  
1958—1960  
1966—1968  
Deputies: J. G. Cowan  
J. S. Anderson  
W. W. Mair



**Hon. Charles E. Greenlay**  
1954—1957  
Deputy: J. G. Cowan



**Hon. Francis C. Bell**  
1957—1958  
Deputy: J. G. Cowan



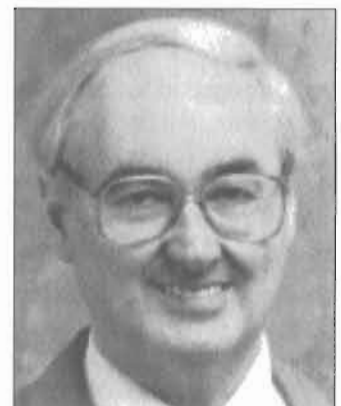
**Hon. Charles H. Whitney**  
1959—1963  
Deputies: J. G. Cowan  
J. S. Anderson



**Hon. Sterling R. Lyon**  
1963—1966  
Deputy: J. S. Anderson



**Hon. Donald Craik**  
1968—1969  
Deputy: W. W. Mair



**Hon. Len S. Evans**  
1969—1970  
1981—1982  
Deputy: W. W. Mair

## *Ministers of Natural Resources*



**Hon. Brian Ransom**  
1978 — 1981

Deputies: J. S. Roper  
P. Jarvis



**Hon. Sidney Green**  
1969 — 1978

Deputies: W. W. Mair  
J. T. Crawley



**Hon. Harvey Bostrom**  
1975 — 1977

Deputies: J. M. D. McDonald  
Al Murray



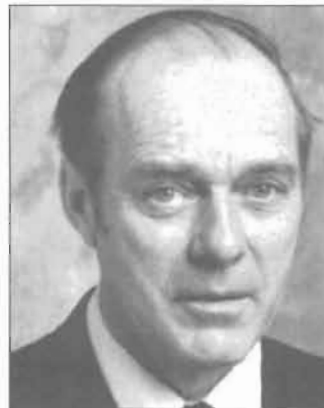
**Hon. Ken McMaster**  
1977 — 1978

Deputy: P. Jarvis



**Hon. Harry J. Enns**  
1981 — 1982

Deputy: J. D. McNairmay



**Hon. Al H. Mackling**  
1981 — 1982

1983 — 1985  
Deputy: Nick Carter



**Hon. Sam Uskiw**  
1985 — 1986

Deputy: Nick Carter



**Hon. Leonard Harapiak**  
1986 — 1987

Deputies: Nick Carter  
Dale Stewart



**Hon. John Plobman**  
1987 — 1988

Deputy: Dale Stewart



**Hon. Jack Penner**  
1988 — 1989

Deputy: Dale Stewart



**Hon. Harry J. Enns**  
1989 — present

Deputy: Dale Stewart

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*" The acquisition of the natural resources in 1930, which at the time seemed rather a transfer of responsibilities than of resources, had produced in the Department of Mines and Natural Resources and throughout the government service a spirit of stewardship, proud of its responsibility and increasingly enlightened in its administration. "*

*" During the depression that spirit had fused with the pragmatic character of the government, and the need of government to lead and initiate, to change the character of governmental activity from that of a caretaker to that of a manager. It was not that the principle of private enterprise had been replaced with socialism: neither extreme of doctrine entered into the matter. It was rather that government and people formed a working partnership to conserve and develop the wealth of Manitoba's rugged natural heritage. That partnership was the result of the easy and intimate union of a democratic people with a government they made their own in outlook and manner, and the response of the civil service, now one of great ability and loyalty, was quick and effective."*

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W. L. Morton, *Manitoba, A History*, U. of T. Press (1957) pages 435-436

Quoted with permission of University of Toronto Press

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# Introduction

*"We trained hard...but it seemed that every time we were beginning to form up into teams we would be reorganized... I was to learn later in life that we tend to meet any new situation by reorganizing; and a wonderful method it can be for creating the illusion of progress while producing confusion, inefficiency and demoralization."*

Petronius Arbiter, 66 A.D.

Organizations, like people, develop a personality. Over time that personality will change as the organization matures, grows, faces new challenges, and gets a regular infusion of new ideas and new styles. Like people, organizations are subject to the push and pull of their environment. Changes about them bring changes within. Often these changes are circular; what once was becomes reality again as old ideas are rediscovered and put into place again. Look at how closely today's organizational structure resembles the one from 1930.

As you read this chronicle of the life and times of the Department of Natural Resources you will see how events, both man-made and natural, have brought about changes. Governments change and with each new government comes new ministers and often new deputy ministers, each with their own agenda and their own style. Some of the changes are far reaching and long lasting. Others are as ephemeral as the smoke of a forest fire or the bugling of an elk. But they all helped to shape the organization into what it is now.

Changes were relatively few and minor in the early years of the department. Changes of senior staff were also rare; people joined the organization and worked their way up the ladder until retirement. Senior managers were not usually

brought in from "outside", instead they were nurtured from within the organization. But changing times brought changing management styles, both in ministers and senior advisers. The greatest flurry of organizational change took place in the 1960's and early 1970's.

One description of what happened was included in the 1972-73 annual report.

*"The department has undergone a number of significant organizational changes during recent years, some of which were of a pioneering nature in the history of resource management ...Despite changes in organization, however, the objectives of the department are best summarized ...as follows."*

*"Our objective as husbands of the resources of our Province has been, and remains, to ensure that each of the resources in our trust contributes in the fullest sense to the economic, social, scientific and cultural growth of the citizens of our province. We are charged with developing and managing our resources; programs planned to the fulfillment of this charge are our expressed objective."*

*"Considerable emphasis has been placed on the concern for social and aesthetic values. Conjunctive with this expressed objective is our concern with the economics of our management programs. The true measure of our achievement will be the success we have in combining these two principles."*

The beginning of the decentralization thrust began in 1961 with the amalgamation of the field staffs of game, fisheries and forestry into one Renewable Resources Field Division with eight



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administrative regions. This union of the field staff and their renaming as Conservation Officers was of major significance. In addition to their former duties as forest rangers, game guardians and fisheries officers they now had responsibilities in land management and environmental matters. The total departmental permanent establishment was 406 persons broken into two main groups:

- (1) Renewable Resources consisting of Fisheries, Forestry (including Parks), and Game plus field administration and an engineer in charge of construction,
- (2) Non-Renewable Resources and Service consisting of Lands, Mines, Surveys, and Air Service. The Accounts Branch reported directly to the Deputy Minister.

In July of 1962, Deputy Minister J.C. Cowan, Q.C. became Deputy Minister of Public Utilities and Stuart Anderson became Deputy Minister of this department.

The annual report for 1963-64 shows that with the retirement of J.G. Somers as Director of Forestry, the Forest Service was split into two separate branches; Forest Protection, and Forest Management. For the first time Parks was shown as a separate branch. The organization chart for 1964-65 shows several more changes. The Non-Renewable Division was now headed by an Assistant Deputy Minister, M.J. Gobert, as was the Renewable Resource Division, S.W. Schortinghuis.

Two new units were added to the organization reporting directly to the Deputy Minister: 1. Economics and Planning, and, 2. Conservation Education. This marked the first formal recognition of planning in the department. The department establishment stood at 498 persons. Among the many undertakings of the Economics and Planning group over the years was the development and overseeing of two crown corporations devoted to the creation of mechanized logging operations in two remote communities: Moose Lake and Berens River. The corporations were

designed to create jobs for local residents and ultimately to turn over the management of the operations to local leaders. The Conservation Education branch developed a program of public information involving films, radio programs, publications, and exhibitions. Before its eventual demise it was also responsible for developing and running the only training school for commercial fishermen in inland waters. It also ran the Wilderness Corps, a summer program designed for high school students.

The 1968-69 annual report introduced the Canada Land Inventory as a separate entity in the department. The Economics Branch took on an additional role under the new name Project Development and Economics Branch.

The most significant changes at this time came about in 1970-71, under the Hon. Sidney Green, Q.C., Minister, and Deputy Minister W. Winston Mair. The department was renamed the Department of Mines, Resources and Environmental Management. It was also reorganized along functional lines. The old branches were broken up and their various specialists deployed into new branches. There was created a Field Operations Division (ADM - W.K. Webster). There was also a Resource Planning Branch, a Management Services Branch and a Research and Development Branch.

The new Research and Development Branch was to;

*"provide information, principles, and recommendations derived from research, as aids in the application of management strategies to achieve optimum use of natural resources."*

This branch conducted research for all parts of the department.

The annual report for 1970-71 said;

*"This organizational structure enables us to plan, research, and undertake resource programs consistent with the "multiple resource use" concept to which we are philosophically committed. Through these changes, we are now in a position to more positively identify and react to emerging new thrusts."*

In 1975, another major change took place. Departmental responsibilities were divided between two ministers. Hon. Sidney Green, Q.C., was responsible for water resources, mineral resources, and environmental management. Hon. Harvey Bostrom became responsible for lands, forests, fisheries and wildlife. A single administrative service division served both ministers and reported to the single deputy minister, James T. Cawley, P.Eng.

Organizationally, according to the 1974-75 annual report,

*"The establishment of a series of divisions with well defined responsibilities, and a general reorganization of the department, has resulted in greater diversification of activities and more direct contact with resource users, at all levels."*

The new divisions were:

**Resources Management** (ADM-W.K. Webster) responsible for field management of the three renewable resources, fisheries, wildlife, forestry.

**Operational Policy Division** (ADM - Allan Murray) responsible for;

*"initiating the development of resource management program and for ensuring that they are integrated with other resources activities, consistent with the provincial government policy of multiple use."*

**Planning Division** (ADM - Arni Barr) responsible for;

*"development of resources programs on an integrated basis through definition and quantification of goals on a macro scale."*

**The Water Resources Division** (Senior ADM - T.E. Weber) was essentially the Water Resources Branch renamed.

**Mineral Resources Division** (ADM - Dr. Ian Haugh)

**Environmental Management Division** (ADM - Dr. W. George Bowen).

Later, in 1975, a further and even more significant change saw the creation of the Department of Renewable Resources and Transportation Services. It was justified on the ground that

*"...innovations and changes are a constant necessity within the department to keep pace with socio-economic and technical changes. It became necessary to divide resource management responsibilities into two separate departments in order to give greater emphasis to the concerns of the public."*

The new department functioned with two Associate Deputy Ministers, each reporting directly and independently to the Minister, Hon. Harvey Bostrom. The two were: John McDonald — Transportation Services, and Allan Murray — Renewable Resources.

The old department consisted of four divisions, each headed by an ADM;

**T. E. Weber** — senior ADM responsible for Water Resources

**Dr. I. Haugh** — Mineral Resources


**Dr. W.G. Bowen** — Environmental Management

**W. J. Podolsky** — Administrative Services.

In 1976-77, further realignment took place. The Crown Lands Branch, the Forest Protection Branch and the Forest Management Branch were combined into the Lands and Forest Branch. The fisheries and wildlife program sections were united to form the Fisheries and Wildlife Branch. The Resource Extension Service was disbanded and staff reassigned to one of two branches or to a region.

As a result of the government's emphasis on resource development a development coordinator was established reporting directly to the Associate Deputy Minister responsible for Renewable Resources. An Assistant Deputy Minister (Arni Barr) was responsible for Economics and Planning, Surveys and Mapping, Research Branch, and Forest Inventory Section.





Another ADM (W. K. Webster) was responsible for program evaluation, while a third ADM (F.W. Stewart) was responsible for Administrative Support Services for both divisions.

Finally, in 1990, after all these organizational wanderings, the department is almost back to where it started. It contains separate branches for wildlife, fisheries, forestry, lands, parks, water resources, engineering and construction, and surveys and mapping. There is a regional services directorate and an administrative division. Not much different than the original configuration in 1930 which consisted of a Game and Fisheries Branch, a Forest Service, a Lands Branch, a Water Resources Branch, a Mines Branch and a Surveys Branch plus an accounts section, all reporting to a Deputy Minister.

What will the next sixty years of organizational meanderings hold for the Department of Natural Resources? Changes for certain because new challenges and circumstances will demand them. Mistakes? Of course, because decision makers are only human. Progress? Probably.

As one deputy minister said;

*"Good people can make any organization work but there's no reason why good people should be burdened by a bad organization."*

It's likely that the next sixty years will see a repeat of some of the lessons not learned well enough in the past six decades. Perhaps the looking backwards of this book will help guide future decision makers as they contemplate "reorganization".

But through it all we can be reasonably sure that in the next sixty years, as in the past sixty years, good intentions and dedication to better resource management will continue to be the paramount motivation.



***Long Service Awards***

Left to right: Tom Weber, Craig McKenzie, Betty Thompson, Hon. Russ Pauley, J. M. D. McDonald, R. A. Wallace



***Conservation Education Branch circa 1970's***

Front row (left to right): Jane Jamieson, Al Graham

Back row (left to right): Don Keith, Helgi Tomasson, Bob Burns, Betty Struthers, Nelson Scribe, Paul Hale, Nancy Mair, Unknown, Dale Donaldson, Allan Murray, Kip Park, Al Campbell, Don McTavish

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***Directors of the Crown Lands Branch***

- ☐ R.W. Gyles
  - ☐ F. B. Chalmers
  - ☐ Merv McKay
  - ☐ Arni Barr (Acting)
  - ☐ A. C. Roberts
  - ☐ Al Murray
  - ☐ Harry Laws
  - ☐ Arni Barr
  - ☐ R. W. (Bob) Winstone
-

# Crown Lands Branch

Manitoba became a province in 1870 and in 1886 1,160,840 acres of swamp land were transferred to Manitoba from the federal government. Full control of the land resources of the province did not come about until the transfer of resources in 1930.

There were three Natural Resources Transfer Acts, one for each prairie province. They came about because, then as now, westerners thought they were being treated as second-class citizens by the federal government. The federal government had taken the position it needed control of natural resources, especially the land resource, to facilitate and speed up the national goal of filling the west with immigrants. National goals superseded regional wishes, at least until the federal government felt compelled by public pressure to transfer the resources. The actual transfers were quite popular with the west which saw them as recognition of equality of jurisdiction for all Canadian provinces.

On October 22, 1928, Donald G. McKenzie was sworn in as Minister of Mines and Natural Resources by Premier John Bracken who relinquished the portfolio. With a small staff, the department functioned quietly while making preparations for the organization of a departmental staff.

The natural resources were transferred to the province on July 15th, 1930, with the key positions of the departmental staff being:

Deputy Minister .....C. H. Attwood  
Ass't Deputy Minister .....T.W. Laidlaw  
Accountant and Chief Clerk ....J.L.R. Sutcliffe  
Directors:  
Forestry .....H.I. Stevenson, DSO  
Game and Fisheries .....A.G. Cunningham  
Lands .....F.G. Freer, MC.,  
Assistant.....R.W. Gyles, DSO  
Mines .....G.E. Cole  
Surveys.....S.E. McColl

Assistant .....H.E. Beresford, MBE  
Water .....C.H. Attwood  
Assistant.....B.B. Hogarth

Shortly after the organization of the department, F.G. Freer resigned as Lands director and was succeeded by R.W. Gyles. Mr. Gyles was director until he retired November 30, 1960. He was succeeded by F.B. Chalmers who served as Director until 1968 when he was made a special adviser to the Deputy Minister.

Subsequently the branch had a number of directors, in this order: Merv McKay, Arni Barr (acting director), Allen C. Roberts, Harry Laws, Arni Barr, and finally, Bob Winstone, appointed in December of 1984. Mr. Winstone is still branch director.

The *Manitoba Provincial Lands Act* was given Royal Assent on June 10th, 1887, and came into force July 1st, 1887. This Act provided for the administration of public lands acquired by the province by statutes or orders-in-council (federal or provincial) relating to swamp lands or granting of swamp lands to the province for public purposes; lands foreclosed under mortgages or acquired for tax arrears and all other lands in any way vested in the province. It dealt with all transactions prior to 1930.

A new *Provincial Lands Act* was proclaimed July 15th, 1930, and was repealed when the *Crown Lands Act* came into force March 6th, 1934.

With the transfer of the natural resources to the province, it was necessary for the Lands Branch to develop a system for recording both the lands which had already been patented or otherwise disposed of by the federal government and those being transferred to Manitoba. All land files and other records transferred by the federal government were researched and a series of ledgers was set up by township and range and by settlements. This was an extremely time-consuming

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ing task which was completed over a number of years.

The accuracy of the initial recording and interpretation of the details of original dispositions was considered paramount, as a thorough knowledge of the rights conveyed under different legislation and different types of grants was required to ensure that the details in the registers could be relied upon.

The Lands Branch Registry staff has been relied on by Land Titles Offices, legal firms, other branches, agencies and departments of government and by the general public to maintain and interpret dispositions of Crown land dating back to the 17th century.

The original manually-updated, bulky register books were replaced in the early 1980's by a computerized record which allows for improved accuracy and access to the information contained in the registers. The computerized system has evolved into a Crown Land Information System which accommodates a variety of related land administrative functions such as automatic invoice and permit processing, accounting, statistical reporting and so forth.

Various information needs such as the lease, permit and facilities management functions for Parks Branch and the Crown Lands Classification Committee coding have been incorporated into the Crown Land Information System without the need for the creation of separate computer systems. Work has been initiated to develop a central Crown Land registry which will provide a central record of all land owned by the Crown, whether administered under the *Crown Lands Act* or under some other act.

Until the establishment of the Land Acquisition Branch in July, 1965, all acquisitions of land for the Department of Natural Resources were completed by Lands Branch staff, including expropriations for other departmental purposes.

From the 1960's to the 1980's Lands Branch administered Local Government District lands in trust under the LGD program. During the late 1970's and into the 1980's, Lands Branch negotiated with other resource branches and with the Local Government Districts to exchange crown lands for LGD lands required for resource pur-

poses such as Wildlife Management Areas and Provincial Forests.

In recognition of the improved ability of LGDs to take charge of their own affairs, many parcels of land were returned directly to the LGDs or transferred to the agricultural lessees at LGD direction. All required appraisals of land and the related land transfers have been done by Lands Branch staff on behalf of the LGDs.

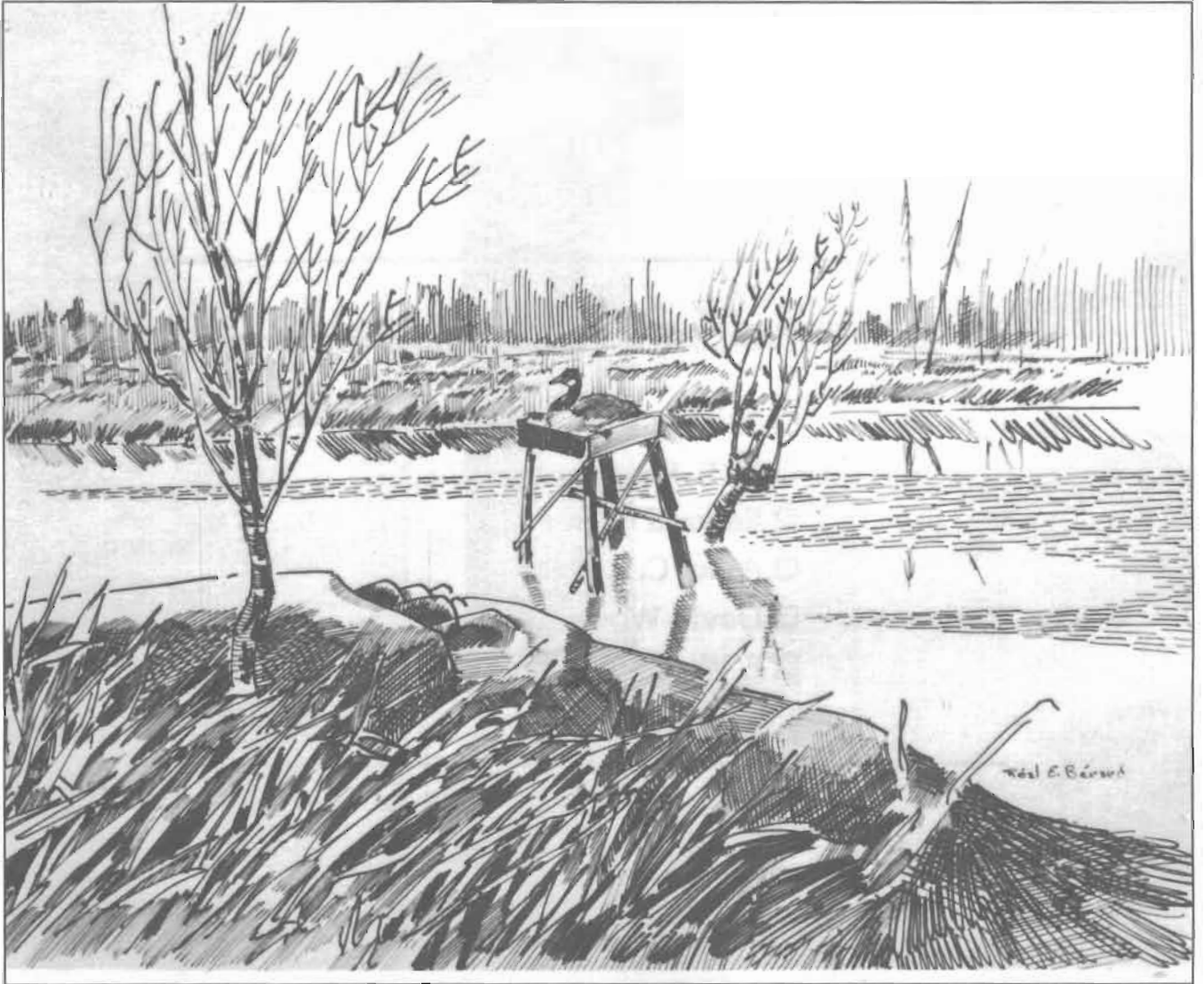
Lands Branch was originally responsible for administering all types of dispositions of crown lands. In the early 1970's, responsibility for administering parkland dispositions and agricultural leasing was transferred to Parks and to Agriculture respectively. The land files and record-keeping functions for land under agricultural lease remain with Lands Branch, which also assumes delivery for the agricultural land sale program.

In automating the Parks records, their leases and permits were again transferred to Lands Branch for administration in the early 1980's but, once the automated system was operationally functional, administration again reverted to the Parks Branch.

Lands Branch registry and file information, both current and historic, are widely used by other departments and agencies as well as the general public. One area which continued to gain interest in recent years is the use of Lands Branch file information for genealogical research, since these records contain copies of actual documents completed by and about original land grants, particularly homesteads.

Over the years members of the Lands Branch staff played key roles in various resource development projects. Mr. Chalmers, who had spent many years in The Pas, was a member of the Grand Rapids Forebay Committee which oversaw the flooding of Cedar and Moose Lakes resulting from the hydro development at Grand Rapids.

Important participants in both the Special ARDA and the FRED programs were soils specialists and planners such as Ted Poyser, Merv McKay, Lynn Chambers and Al Borys.



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***Directors of the Surveys and Mapping Branch***

- ☐ Samuel E. McColl
  - ☐ H. E. Beresford
  - ☐ Edward Gauer
  - ☐ Allan C. Roberts
  - ☐ David W. Crandall
  - ☐ F. Wayne Leeman
-

# Surveys and Mapping Branch

For sixty years after the formation of the Province of Manitoba in 1870, the surveying and mapping of its lands was solely administered by the Federal Department of the Interior.

There remained the fact that little was known of the unsurveyed northern 70% of the province. Any existing maps of "wilderness" areas prepared from exploration survey reports lacked topographical detail and therefore reliability. With the advent of aerial photography in the 1920's, it became apparent that, in such large areas using some form of geodetic control, topographical detail of an entire region could be filled in from air photos with a speed and accuracy unobtainable from ground surveys. It was inevitable that aviation would play an increasing role in the surveying and mapping of this vast country.

At the time of the transfer of the natural resources to the province in 1930, only about one quarter of the province had been surveyed and less than one half had been mapped. The prospect of exploration and the development of resources required that this shortcoming be corrected.

On October 15th, 1930, the Surveys Branch was established and became the agency responsible for the continuation of those services in surveying and mapping. Those services are reflected in the policy statement printed in the branch's first annual report:

*"to supervise, direct and control all surveys of Provincial Lands, surveys of all Mineral Claims; boundaries of Parks, Forest and Game Reserves, Timber limits, Townsites and Summer Resorts; Topographic Surveys and levelling operations, land classification and soil surveys, control surveys for*

*mining areas and aerial mapping; retracement, restoration and perpetuation of original surveys, together with the preparation, compilation and keeping up to date all plans and records, the filing, indexing, recording, checking and examining of plans of survey, preparing town planning schemes for Northern Townsites, drawing up descriptions and furnishing areas and other information required for the transfer or lease of Provincial Lands."*

In the same year as the transfer, a ceremony was held on the Principal Meridian near Headingley to commemorate the inception, in 1871, of the Dominion Land Survey system of western Canada. It was described as *"the Greatest System of Land Survey Throughout the World."* This was the tradition and standard that the fledgling Surveys Branch had to maintain under the most difficult field conditions imaginable.

History shows that the new branch did just that. From the first Director of Surveys, Samuel E. McColl, B.A. to the current Director, F. Wayne Leeman, the high standard inherited from the federal surveys has been kept and indeed, enhanced.

But it would be improper to credit the directors alone for the quality of surveys and mapping. The hundreds of draughtspersons, surveyors, levelers, instrument men, field engineers, clerks, chainmen, rodmen, axemen, teamsters, and on and on — too numerous to identify by name — were, as the employees of today are, the backbone of the branch and the heroes of the story.

One of the first tasks of the new branch was to publish the first map of the whole province "of a useful size" on a scale of 25 miles to the inch. The annual report said one of the two draughts-



men was;

*"wholly engaged on the compilation and revision of the sectional mining sheets on which are placed all mineral claims located and surveys and such other information as may be of use to the prospector and mining engineer."*

An early and interesting project, that Dr. N. Sharpe, staff surveyor and engineer, was assigned to investigate and survey, was the Dauphin River Power Scheme. The Scheme would involve diversion of the Saskatchewan River and storage in Lakes Winnipegosis, Manitoba, Cedar, and St. Martin. The study showed the scheme to be "practicable."



**Ed Gauer — Director**

Other significant projects undertaken in the first couple of years were the townsite survey of Churchill and the survey of the International Peace Garden.

The tasks of surveying unknown and unmapped territory were enormous. The first major northern survey was undertaken in 1932-33 in the Island Lake-Gods Lake region of the province. The survey report indicates that one man was sent to Cross Lake and Norway House to hire dog teams and axemen. The remainder of the party (12 men) was flown to Island Lake together with all supplies including 2 1/2 tons of fish for dog food. A final tally of costs for meals

including freight and supplies was \$1.50 per man!

On another survey, more particularly on December 23, 1934, when most people were busy thinking of Christmas, eight men boarded a plane at Stevenson Field and flew off to Gods Lake to produce a base line across the unknown, unmapped territory east of Gods lake. On Christmas day the crew ate beans and bacon.

The first day on line was particularly trying. They went 14 miles on snowshoes across a wind-swept lake in 45 below zero weather, on feet unaccustomed to the extra weight and binding thongs. Lunch consisted of sandwiches burned on the outside with frozen bacon as filling. The project lasted for 106 days without a break.

A comment in the branch history reads;

*"... except for minor technical and mechanical adaptations — the duration, organization, accommodation, and transportation on northern winter surveys were unchanged until the late 1960's."*

One of the first boundary surveys was carried out in 1936 when it was learned that the mining plant at Flin Flon was astride the Manitoba-Saskatchewan boundary. That same year the Manitoba-Ontario boundary was surveyed from the east end of Island Lake to Echoing River. The annual report stated:

*"The survey was made during the winter and for the first time on record the sole means of transportation used was the aeroplane."*

Besides surveying and its attendant responsibilities, the branch also provided from 1937 to the present day, the provincial representative on the Geographic Board of Canada, now known as the Canadian Permanent Committee on Geographical Names.

In 1940, the branch director Samuel E. McColl, B.A., D.L.S., M.L.S., S.L.S., died at the age of fifty-four. The Minister, the Honourable J.S. McDiarmid, said of him *"... from a small beginning, Mr. McColl, brought the Surveys Branch to a high state of efficiency and usefulness."* H.E.

Beresford, M.B.E., M.L.S., D.L.S., M.E.I.C., P. Eng. was named the new director. He had joined the branch in 1930 as Chief Inspector of Surveys.

Restricted expenditures, brought about by the depression and later by the war, curtailed branch activities. In 1944-45, the RCAF released aerial camera equipped planes for non-military work and photos were taken of an area east of Flin Flon where active prospecting was taking place. After the war the branch gave high priority to projects for other branches in the department; topographic and legal surveys for fur projects in Netley and Delta Marshes, preliminary surveys at Meadow Portage to appraise the possibilities of controlling the level of lake Winnipegosis and utilizing the head for power development, township subdivisions for veteran land settlement, and surveys of 107 additional summer resort sites in the Whiteshell Provincial Park.



**Map Layout room**

Meanwhile, on the Manitoba-Ontario boundary survey the position of the line could not be considered final until it was completed. In 1947-48, Ed Gauer led the party that completed the 168 mile run from Echoing River to Hudson Bay. At one point he wrote, rather despondently,

*"Everything seemed to go the hard way. Each load brought into camp was made with poor weather and the pilots deserve credit for getting the camp and initial supplies in when they did ... Not one of the dog-drivers speaks English and they have persisted in keeping a hot fire whenever they were in the tent ... They have been a*

*very difficult crew to handle, complaints almost daily and up until 10 days ago had always carried a threat to return home. The line is now up to mile 146. It's been a struggle all the way, and as it is now 2:00 A.M. I am about to retire."*

The 1949-50 annual report highlights the importance of aerial photography and the air photo library:

*"The function of the Air Photo Library is analogous to that of the mapping service. Aerial photographs are of prime importance to any survey, investigation or planning which is contingent on service features on the ground. Extensive use is now made of photo-prints on all engineering investigations and in forestry, geology, agriculture, town planning and many other enterprises."*

Following a decade of war-effort and uncertainties in the economy, the branch operations returned to the basics during the fifties as the province continued its growth. It is necessary to note the significant contribution of the office staff which was often highlighted in the annual reports:

*"The office work embraced the usual large variety of duties and included the compilation, drafting and tracing of numerous plans of survey; examination of plans of survey of mining claims; drawing up and checking legal descriptions for all dispositions of Crown Lands; calculating areas and preparing sketches; daily revision of the sectional mining claim sheets; filing of files, field notes and aerial photographs; attending to map requests, sales of maps and blue prints; answering enquiries regarding surveys and maps and performing the many other duties devolving on a Branch which endeavors to give efficient service to all Branches of the Department, all Departments of the Government and to the general public."*

In 1950-51, the Manitoba-Ontario boundary survey was judged so accurate that both provinces passed legislation accepting it as the

true border. Permanent reinforced concrete monoliths were constructed at 12 mile intervals between Island Lake and Hudson Bay at sites accessible by aircraft or canoe. The Manitoba Government Air Service dropped tons of cement and gravel at these sites so that construction of the monoliths could be completed.



**Survey monument marking the Manitoba — Saskatchewan border**

In this 1951 survey, a tent used by the party surveying the 22nd base line burned to the ground destroying many personal effects. H.E. Beresford's letter, to the Deputy Minister, J.G. Cowan, Q.C., resulted in a change in government policy concerning replacement for loss of personal equipment. He said the fire occurred through no fault of the men, but because of a faulty air tight heater. As a result of his appeal, cabinet approval was obtained for two thirds reimbursement to the men.

This same year, a new surveyor from New Zealand, Allen C. Roberts was to join the Branch

and eventually become the fourth Director of Surveys. Just two years later, while the province enjoyed a buoyant economy, the branch suffered from a shortage of technical personnel. One of the two surveyors it obtained from Nova Scotia was David W. Crandall, a future director.

Later in the fifties, major projects included summer home sites on Crown Land with lake frontage and the survey of the Manitoba-Northwest Territories Boundary.

The survey of the northern boundaries of Alberta and Saskatchewan (60th parallel) had reached the northwest corner of Manitoba in 1957. This work continued eastward through Manitoba with Allen Roberts heading the party.

The first leg of the survey (109 miles) got off to a stormy start when the party was snow bound on Lynn Lake for a few days. Eventually their aircraft picked up the men and took them to the northwest corner of the province. One member of the party said the minus 62 degree temperature was "so cold you hear your breath crackle as it froze."

It was not easy surveying. In his diary Roberts wrote:

*"Chainmen chained about 1/2 mile but wind over barren hills, impossible to work, both chains and plumbobs badly blown by strong winds. Leveller went about 1 mile but even with only eight foot rods, they couldn't hold them straight."*

Nonetheless, the crews carried on over the barren lands and the second leg (140 miles) of the survey was completed in 1959-60. Something new had been added — a tractor train consisting of two D6 tractors, three freight sleighs, three sleeping cabooses and one freight caboose proceeded up the coast to provide better accommodation for the crews.

Mr. Beresford retired on July 31st, 1959, and Edward Gauer, B.Sc. (CE), D.L.S., M.L.S., became the third Director of Surveys and led the branch into a decade of technological advancement to enhance surveys and mapping programs. The use of tellurometers for distance measuring, two

way radios for on-line communication, helicopters for transportation, computers for calculations, stereo plotters and scribing technique for mapping are some indicators of this advancement during the sixties.

On August 16, 1963, the Hon. C.H. Whitney, the Minister, represented Manitoba at a ceremony to dedicate a special survey monument at the intersection of Manitoba-Saskatchewan and the Northwest Territories.

Another ceremony took place on June 21st, 1967. It was the Centennial Survey Monument dedication in Memorial Park, Winnipeg, and the Hon. Gurney Evans, Minister of Mines and Natural Resources, in placing a survey post at the monument, said:

*"It will commemorate the considerable contribution by surveyors during the past 100 years; from the early surveys in the Red River Settlement, through the immense task of subdividing the prairies ahead of the persistent waves of settlers, to the present day urban communities, super-highways and northern development."*

On October 31st, 1967, the Director, Edward Gauer and H.P. (Pat) Baldock retired. Mr. Gauer began his career with the branch in 1936. D.N. Sharpe, M.L.S., wrote of Mr. Gauer in 1934 "100% efficient and very agreeable to work with on a party illustrated his worth then; it never changed." Allen C. Roberts, N.Z.L.S., M.L.S., became the fourth Director of Surveys.

Mr. Baldock was affiliated with the branch in 1931 and spent a total of 46 years in survey related work. Mr. Baldock had a favorite quote from Mr. Evans as he was placing the survey post for the Centennial Survey Monument,

*"This is the first time a politician knew exactly where he stood."*

A ceremony took place on June 25th, 1970, this time at the southwest corner of Manitoba when a plaque and special survey monument was erected at the intersection of the 49th parallel and the Manitoba-Saskatchewan boundary. Manitoba Premier Edward Schreyer said:

*"...We are here to commemorate the fixing of the boundaries themselves, to pay tribute to the surveyors, the chainmen and their whole retinue of helpers whose arduous labors under conditions that were often adverse, defined the boundaries that shaped our lands."*

*"The monument we are here to dedicate marks this work and recalls as well the vision, courage and pioneering spirit of our early surveyors..."*



***Tellurometer Tower***

The seventies were for the most part years of expansion for the branch witnessing several changes in organization, personnel and technology.

The techniques of surveying have changed immensely in the past 100 years. The "electronic" age had arrived and the surveying profession was now moving into a period of transition. The introduction of electronic distance measurement,



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gyroscopic directional measurement, electronic computers and the rapidly expanding science of photogrammetry revolutionized the ancient profession of surveying.

The increasing demand for land information and the expanding technology resulted in the hiring of graduates in Survey Engineering and Survey Technology from the University of New Brunswick and Red River Community College, respectively.

Highlights of the seventies include the International-Provincial Boundary Monument Ceremony, the physical move to 1007 Century Street, the establishment of the Manitoba Remote Sensing Centre and the participation in the Federal-Provincial Toponymy Field Research Project and the Manitoba Northlands DREE Program.

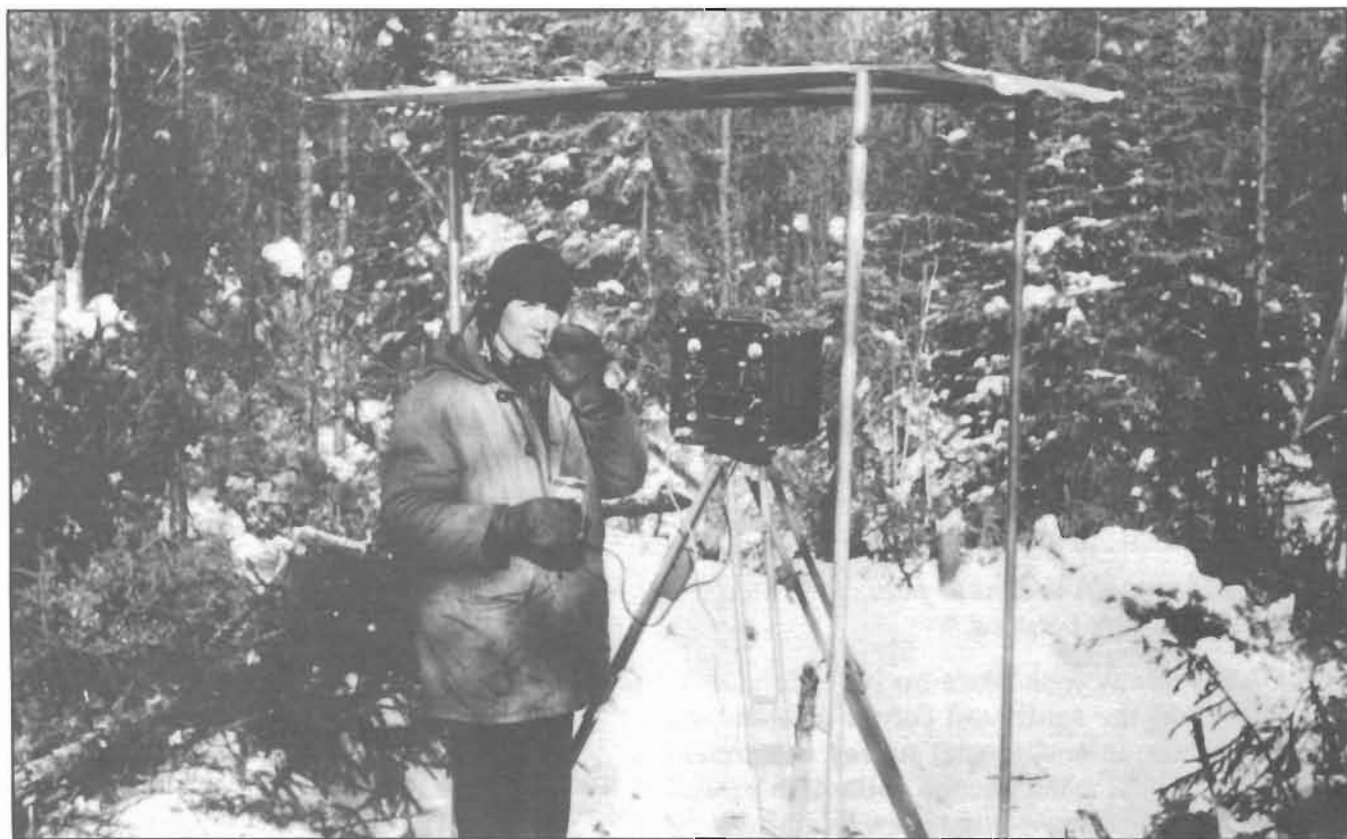
In February, 1974, a Remote Sensing Centre was established to provide a coordinating role in the use of this technology which permits the

detection and study of objects from a distance without contact. The method in which this is accomplished is with imagery taken from varying heights above the earth using aircraft or satellites.

A major new project was the Community Base Map series showing building locations, lot lines, contours and topographic information on a 1:2,000 overprinted aerial photo mosaic base. This series provides detailed map coverage for many of the northern or isolated communities.

By 1979-80, the Control Surveys and Mapping Section was involved in producing mapping required under the Northern Flood Agreement, the Flood Damage Reduction Program, the DREE (1:2,000) Mapping Program and other miscellaneous projects. Approximately 240 map sheets were produced and made available to government and industry through the Map Office.

The Computations and Data Unit, in addition to providing the required support for mapping



*Tellurometer photo target*

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programs, continued with their program of mathematically assessing the quality of existing surveys, establishing a positional data file and disseminating this information to government and industry.

The Eighties were the years of updating existing technology to the new standards of the decade and of responding to increasing demands for more maps and services.

The highlights included the promotion of a multipurpose land information network for Manitoba; the purchase of Global Positioning System (GPS) receivers which use satellite positioning technology; the installation of an in-house computer; and the conversion to a computerized mapping operation.

On October 31st, 1983, Mr. Roberts retired and David W. Crandall, N.S.L.S., M.L.S. became the fifth Director of Surveys.

Before the end of the decade the branch would be exploring new frontiers in information technology with initiatives in GIS (Geographic Information System) and the World Crop monitoring system. The development of an integrated surveys and mapping system was off to a good start with the signing of agreements with related government agencies.

Today, the mission of the Branch has not changed significantly from the original policy as reflected in its current mission statement.

*"To provide provincial surveying and mapping systems that support the efficient management of Manitoba's land mass to ensure achievement of the department's missions and roles."*

The Surveys and Mapping Branch provides positional and descriptive information about the Manitoba land mass through a broad range of services which support public and private sector programs. These Branch services include legal and geodetic surveys, computations and data management, topographical and geographical mapping, map distribution, remote sensing and geographical names management.

On December 31, 1989, Mr. Crandall retired and F. Wayne Leeman, B.Sc.E., M.L.S., one of the Survey Engineering graduates who joined the branch in 1974, became the sixth Director of Surveys.

This brief history conveys some achievements of the first sixty years and honours those dedicated staff who performed unheralded, yet essential, surveys and mapping services.

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***Directors of the Forestry Branch***

- ☐ H. I. Stevenson
  - ☐ J. G. Somers
  - ☐ W. K. Webster
  - ☐ H. P. Laws
  - ☐ C. D. Rannard
-

# Forestry Branch

Manitoba Indians, when the first white explorers met them had a migratory way of life, roaming almost continuously in search of game. Their lack of iron tools and their migratory habits prevented them from developing any extensive use of wood except in the form of tipi poles or firewood.

Their lodges or tipis consisted of a framework of poles, placed in a circle sloping inward to meet at the top, forming a cone-shaped structure. Slim black spruce or jack pine poles from trees killed by fire a year or two earlier were ideal for this purpose, although if they were not readily available, aspen poplar, green or dry, would serve.

Wood was also used in the form of spear and arrow-shafts, to which stone heads were attached, and also for bows. Henry Kelsey, the first white man to travel far inland from Hudson Bay, reached the Saskatchewan River in 1690 and speaks of the Indians using ash for their bows, or, in his own rhyming account:

*".....wood  
Poplar & Birch with Ash that's very good  
For the Natives of that place which knows  
No use of better than their wooden bows."*

Incidentally, this statement proves that Kelsey did reach the Saskatchewan because ash (green ash) is not found further north on his route from York Factory.

The forest Indians contributed three important wooden articles to the white man's culture, — the birch bark canoe, the snowshoe, and the toboggan. Wood, of course, was used as fuel for cooking and heating, and as far as bulk is concerned, this would be its main use. Considering the sparseness of the population and the vast extent of the forest, the total use of wood by the Indians could not have been significant.

For almost exactly two centuries the area now known as the Province of Manitoba was owned by the Hudson's Bay Company as part of the territory of Rupertsland granted it by charter by Charles II in 1670. Timber was not specifically mentioned in the charter but it may be assumed that it went with the soil. The forests of Rupertsland were too far from the sea to allow the export of forest products, and the territory was granted primarily for the development of the fur trade, and in the hope that exploration would lead to the discovery of a Northwest Passage to the Pacific.

The fur-traders often used timber in the round for stockades erected around their posts. Logs used in buildings might be squared by the broad axe, as in the re-establishment of York Factory in 1715. Boards sawn by the whipsaw were used in finishing buildings, for furniture, and in the construction of York boats which plied the main rivers.

In 1811, Lord Selkirk secured title from the Hudson's Bay Co. to what was known as the District of Assiniboia. Settlers were brought across the Atlantic by the Hudson Bay route and an agricultural community was established along the Red River and the lower Assiniboine.

The settlers were able to secure logs of bur oak, elm, green ash, basswood, cottonwood, and poplar from along the rivers, either on their own leased lots or from their neighbours.

Historians of the Red River settlement nowhere state under what forest regulations, if any, Lord Selkirk, or the Hudson's Bay Company, (which resumed title from the Selkirk estate in 1835), granted the right to cut timber on lands outside the settlement lots. It may be presumed from the lack of recorded complaints settlers were allowed to cut timber free of dues for their





# **FOREST SERVICE**

# **NOTICE**

**Settlers and other persons are warned against cutting timber on Provincial Lands without first having obtained a Permit.**

**Persons cutting timber without a Permit will be subject to such penalties as are provided in the Forest Act.**

**Applications for Permits may be made to:--**

**The Forest Ranger at** GRANDVIEW

**or the**

**District Forester at** DAUPHIN

**or the**

**Provincial Forester at Winnipeg**

**C. H. ATTWOOD**  
**Deputy Minister**

own use, and also for public works purposes, such as bridges and buildings.

The natural resources of Manitoba, including land, forests, water resources, and fish, (but not fur and game) were administered by, and for, the Dominion of Canada from July 15, 1870, to July 15, 1930, a period of 60 years.

Dominion policy from the start centered around colonization, and to forward this policy free homesteads of 160 acres were granted to applicants who would live on the land and cultivate a certain acreage. However, since land settlement was so important, and because the country in the main was looked on as prairie, it was natural that Dominion Land officials should treat the forest resource as important only insofar as it assisted in the immediate development of the country.

In the early days it was hardly realized that the forests were on non-agricultural lands, and should be treated as a permanent and self-sustaining resource. Indeed, the idea of barring homesteading on lands unsuited for agriculture was not given much thought with the result that settlement spread onto much land which later would have to be reclaimed by the Crown for forestry development. Historians have criticized timber administration on Dominion lands, stating that;

*"the ravages of the portable sawmill, the hard driven settler, and the lumber operator alike — threatened to denude whole areas of forest growth which by every principle of sound forestry ought to have been conserved with every precaution known to science".*

The first *Dominion Land Act* was enacted in 1872, and from this date until 1907 the Dominion Lands Branch of the Department of the Interior dealt with all aspects of forestry administration.

In 1911, a *Forest Reserves and Parks Act* was enacted and the technically trained staff of the Forestry Branch was increased, but in 1912 the administration of licensed timber berths inside forest reserves was taken from the Forestry Branch and handed over to the Timber and

Grazing Branch (in effect a sub-branch of the Dominion Lands Branch).

The forest reserves at this time consisted of the Turtle Mountain, Spruce Woods, Riding Mountain, Duck Mountain, and Porcupine Mountain, a considerable area, but small in relation to the whole Crown land forest area.

As a result of this division of authority, a peculiar situation arose. The Forestry Branch, which had a considerable staff of professionally trained foresters and a sufficient number of forest rangers, had very little mature timber to administer since by this time all large blocks of good timber were in timber berths. Fire protection, however, on all Crown lands was the responsibility of the Forestry Branch. In contrast, the Timber and Grazing Branch with no professional foresters, and indeed a very small field staff of any kind, had charge of practically all the revenue-producing timber areas both within and without the forest reserves.



*Loading up for field trip*

On the transfer of the natural resources to the province in 1930, a Forest Service was formed as part of a Department of Mines and Natural Resources. The Forest Service, under authority of the provincial *Forestry Act* enacted March 12, 1930, took over the administration of forestry affairs on Crown land areas both within and without the forest reserves, including fire protection, timber disposal, reforestation, summer resorts and other uses (in forest reserves only).

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The first Provincial Forester was Col. H.I. Stevenson, a veteran of both the Boer War and World War 1, who worked his way to director from being a federal forest ranger. He remained as Provincial Forester until 1942-43.

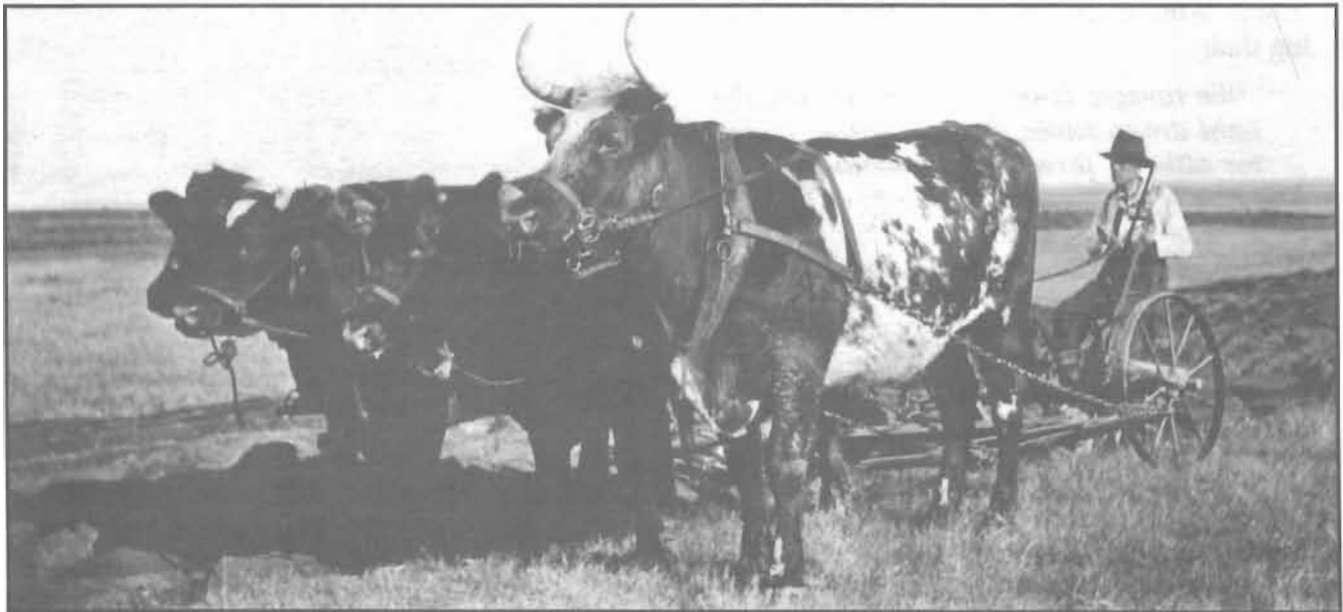
He was succeeded by J.G. Somers, a native of New Brunswick, who was severely wounded in World War 1. He took a special course in forestry at the University of New Brunswick and in 1923 became a scaler with the Dominion Forest Service on the Pasquia Forest in Saskatchewan. He joined the Manitoba Forest Service in 1930 as district forester in the eastern district. He was made acting director in 1943 and permanent director in 1945. He was retained as a consultant to the service from the date of his retirement in 1963 until early 1964. The Forest Service as originally organized was headed by the Provincial Forester, and the province was divided into four Forest Districts, each headed by a District Forester. The Forest Districts were again divided into Ranger Districts each with a Forest Ranger. The number of Forest Rangers gradually increased as the country developed until there were about 50 in 1960. The head office staff also increased, there being finally four divisions: Protection, Management, Timber Sales, and Recreation, each

headed by a Chief or senior official.

On April 1, 1961, a reorganization took place in the Department of Mines and Natural Resources under which components of three branches dealing with enforcement (Forestry, Game and Fisheries) were united into one Field Administration Branch headed by a Chief of Field Personnel and Operations, A.P. Davey. The Provincial Forester retained his function as administrator of forestry affairs, and a Parks Branch was added with responsibility for provincial parks, both within and without forest reserves.

In 1960, the Forest Service was the biggest branch in the department with 117 positions. In 1961, following the reorganization and the establishment of a field service, the Forest Service was reduced to a total establishment of 33 positions.

Upon the retirement of Mr. Somers, the responsibilities for forestry was split in two. W.K. Webster was made Director of Forest Management and A.W. Braine was made Director of Forest Protection. In the 1969-70 reorganization, W.K. Webster became Assistant Deputy Minister of the Field Operations Division and the majority of the Forest Management and Forest Protection Branches went into this division. Some



*Tree Planting — early 1900's*

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staff, however, went into a Research and Planning Branch and some into the Surveys Branch. Because the *Forestry Act* required that there be a Director of Forestry, Mr. Webster retained that position and, in fact, had the dual titles of ADM and Director. At about this time, Mr. Braine retired and the position and title of Director of Forest Protection was dropped. Mr. Webster retained the dual role until his retirement in 1976.

At that time the Branch concept was re-introduced and H.P. Laws was appointed Director of Forestry. The branch also included a Crown Lands Section for a time until Arni Barr was named Director of Lands. Mr. Laws remained as Director of Forestry until his retirement in 1983 when Dave Rannard was appointed Director of Forestry, a position he still holds.

### **Forest Insect and Disease Management**

Following the closure of the federal pest research lab, provincial involvement in forest pest management gradually increased. Major infestations of jack pine budworm, spruce budworm, forest tent caterpillar and Dutch Elm Disease in the mid 1970s greatly increased the need for a provincial commitment.

The provincial Parks Branch, Forestry Section, became involved in surveys and foliage protection programs for both budworms and forest tent caterpillars. A major program to manage Dutch Elm Disease (D.E.D.) was initiated in 1976. In 1980, the responsibility for Dutch Elm Disease and the management of forest pests was amalgamated under the Forestry Branch with the formation of the Forest Protection Section. Staff and funds were transferred from the Department of Agriculture and the Provincial Parks Branch.

The impact of this program was to keep losses to a manageable level of about 1%.

### **Timber Administration**

Timber administration from 1930 to the present has been along the lines established by the Dominion Forestry Branch before that date. It

is true that provision for licensed timber berths, portable sawmill berths, and cordwood berths, was made in the 1930 *Forest Act*, but no grants were made under these provisions, and the clauses about portable sawmill berths and cordwood berths were deleted from the *Forest Act* by 1933.

### **Licensed Berths**

On April 30, 1931, licensed berths in good standing had an area of 839 square miles. These berths were gradually cancelled as saw timber was cut, until the last were terminated in 1973. At the same time the Provincial Forester was given authority to grant permits to the licensee to cut smaller timber (such as pulpwood) at the regular permit rate, if considered advisable.

### **Timber Sales**

Under provincial administration the amount of saw timber cut on timber sales gradually increased while the cut on timber berths decreased. The great bulk of railway ties and transmission line poles also came from timber sales. As for pulpwood, about 60 percent of the quantity cut outside the pulpwood berth, came from sales, the balance mainly from timber permits.

An important amendment was made in 1950 allowing stumpage appraisal rates to be introduced at higher than basic rates where it was considered fair and reasonable to do so. In setting an upset price on timber sales, stumpage was appraised on: 1. Logging chance; 2. Accessibility; 3. Financial conditions. The average stumpage actually paid over the five-year period, 1956-57 to 1960-61 has worked out at \$8.58 per M ft.b.m. for white spruce saw timber.

### **Timber Quota System**

In the early 1960's the "Committee on Manitoba's Economic Future" (COMEF) highlighted the forestry sector as offering promising potential for increased development and utilization.

The government and the Department of Natural Resources embraced many of the development opportunities proposed by the COMEF forestry sector report. In 1965, the department initiated appropriate strategies towards implementing the goals and objectives of the report.

One of the primary objectives was to promote increased investment and the ensuing benefits of forest based employment and production. To meet this objective, the *Forestry Act* was revised to provide for tenure, flexible stumpage charges and business cooperation between the government and industry to stabilize an uncertain industry and promote positive development.

Accordingly, a new *Forest Act and Regulations* was proclaimed in 1965. Immediately following, Manitoba introduced a new system of timber allocation encompassing the small and medium-sized sectors of the industry, called the "Quota System".

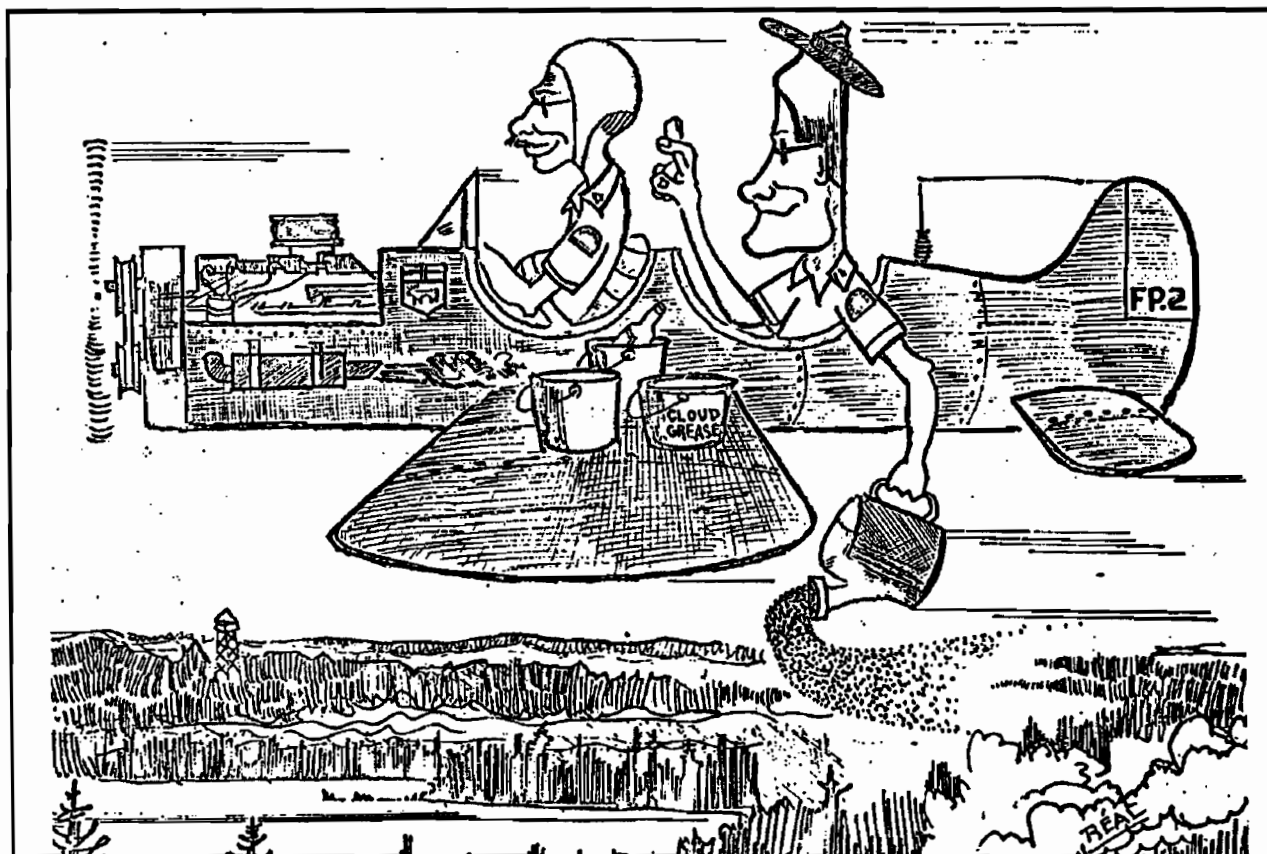
The Quota System was designed to provide

security of tenure, to enhance capital financing and also encourage consolidation of uneconomic holdings into operations of viable size.

One of the major problems prior to 1965 was the large number of timber sales and pulpwood permits which were operated on a part-time or periodic basis due to uncertainty in timber supply, fluctuating markets, and Crown charges.

Prior to 1965, timber cutting rights were granted by public auction which provided no continuity to future cutting rights. Often unrealistic bidding on Crown royalty charges caused difficulties in capital financing and business development.

With the introduction of the Quota System, timber sale and permit holders active in operations three years prior to 1965 were granted timber sale agreements and pulpwood permits for a 15-year period. They could also assign cutting rights from one operator to another as provided for in the revised *Forest Act*.



*Réal Berard's cartoon of Went Braine (pilot) and Bob Ross*



In 1965, when the quota system was initiated, the total number of quotas granted were:

Timber Sale Quotas .....	631
Pulpwood Permit Quotas .....	1,895

In 1980, a review of the Quota System showed the number of quotas had been reduced by assignment and consolidation to:

Timber Sale Quotas .....	241
Pulpwood Permit Quotas .....	474

These reductions provided for individual growth and thereby improvements in economic viability, capital investment and increased production.

The overall benefits to those remaining in the industry were most positive. Accordingly, the quota holders fully endorsed the continuation of the timber quota system. The department also supported this view with some changes relative to utilization and performance based on five year reviews. The "use it or lose it" principle would be applied.

By March 31, 1988, the timber quotas in force reduced to the following:

Timber Sale Quotas .....	201
Pulpwood Permit Quotas .....	35

Further reductions are anticipated in 1990.

Since 1965, considerable consolidation and capital investment has evolved creating more profitable holdings, increased production and improved job stability as well as product improvement and forest utilization.

### **Paid Permits**

Settlers were originally eligible for lumber permits for their own use up to \$50.00 worth in dues, (equivalent of 16,666 ft.b.m. at \$3 per M ft.b.m. in 1930). These permits could be granted yearly without any time limit. A good many changes were made in the regulations governing these permits and by 1960 the conditions were as follows: settler must own and occupy at least 40

acres; he could obtain an annual permit for amounts up to 7,500 ft.b.m. spruce and jack pine and 7,500 ft.b.m. balsam or poplar, or, if this was his first application, he could obtain double this amount; the maximum amount to be granted since 1930 was 15,000 ft.b.m. spruce and pine and 15,000 ft.b.m. balsam or poplar.

As a result of the depression of the 1930s, a ruling was made in 1933-34 that persons applying for permits for pulpwood to be delivered to the Manitoba Paper Co. could obtain these on credit. This ruling which is still in force has had a considerable bearing on the number of pulpwood permits issued.

### **Free Permits**

Free homestead permits were not permitted under the 1930 provincial regulations but free permits could be granted for construction of various institutional buildings, also 25 cords of fuelwood per year for such buildings.

### **Pulpwood Berth**

The depression of the 1930s resulted in the closing of the Pine Falls mill in March, 1932. To allow pulp cutters a market elsewhere, the embargo on export from Canada of unmanufactured wood, (which had been in force since the mill opened in 1927), was suspended by the Manitoba government. Although the mill reopened in July, 1935, the embargo remains suspended.

The Manitoba Paper Co. in 1930 held 23 large pulpwood blocks and 146 small blocks scattered all the way from the Ontario border to the north end of Lake Winnipegosis. It also held a number of licensed berths in the latter area. It was to the advantage of all concerned to consolidate these holdings by abandoning distant areas and given other areas closer to the mill in exchange.

Consolidation of the scattered pulpwood blocks into four large blocks with the same area as the original (2,745 sq. mi.) took place on February 25, 1953. In 1955, the *Forestry Act* was amended to allow the holder of a pulpwood





*Forest Lookout Tower — 1914*



*Forest Lookout Tower — 1915*



*Forest Lookout Tower — 1980*



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license to exchange this for a management license, provided he agreed to practice sustained yield management, and to submit a working plan to be approved by the Provincial Forester.

### **Forest Management Licence**

Forest Management Licences grant long-term (20-year renewable) exclusive rights to timber and to the annual allowable harvest over a specified area. The rights apply to the forest only and not to the land. In return for the rights to harvest timber under sustained yield management, Forest Management Licence holders are responsible for forest renewal and forest stand management and most aspects of forest administration. The province retains the responsibility for maintaining the forest inventory, determining annual allowable harvest volumes, assessing and implementing insect and disease protection programs and protecting the forest from wildfire with appropriate company co-operation.

There are now two Forest Management Licences in existence. Forest Management Licence number one was signed in May, 1979, with Abitibi-Price Inc., Forest Management Licence number two was signed in May, 1989, with Repap Manitoba Inc.

### **Forest Reserves**

At the transfer of the resources in 1930 the Riding Mountain Forest Reserve became a National Park, and thus was not transferred to the province. The province established the Whiteshell as a forest reserve in 1931. This area in the Precambrian rock country on the Ontario border had recreational as well as forest values. Another area with recreational as well as timber values, the Cormorant forest reserve, was established in 1947, in the limestone and lake country north of The Pas. A third area, also with recreational possibilities, was set aside in 1956 as the Northwest Angle forest reserve, this being located on Lake of the Woods where Manitoba, Ontario, and Minnesota join.

Other new forest reserves, mainly sand hill

areas with much abandoned farm land, were: Sandilands extension (1950); Agassiz (1954); and Belair (1954). The eastern part of the Turtle Mountain was lost to forestry, and was developed as a community pasture, (possibly a retro-grade step because the natural climax vegetation is not grass but woody growth).

The total provincial forest area is now 25,101 sq. kilometres. Following soil surveys in 1952, a line was established between Lakes Winnipeg and Winnipegosis north of which no land was to be sold for agricultural development.

### **Construction and Maintenance**

Forest ranger stations were gradually modernized and equipped with plumbing and electricity. Policy was to establish rangers' headquarters near towns and highways wherever possible.

Forest access roads have been modernized or extended in forest reserves and other forest areas, much of the work being done as part of the provincial highway system.

Immediately after the transfer of resources the Provincial Forest Service initiated a program of extending the lookout tower system (mainly concentrated on the forest reserves) into the unorganized northern and eastern forest. The total number of towers in the province was more than 100 at maximum.

### **Fire Protection**

In accessible areas perhaps the greatest progress in fire protection has been in the use of heavy crawler-type tractors equipped with bulldozer blades for clearing fire-lines, also the use of tractor-drawn, fire-line ploughs. Experiments in the control of incipient forest fires by water-bombing and by chemical spraying from the air were conducted with success and with the development of new aircraft the procedures are operational.

Standards of fire protection have been established in the various forest districts based on

accessibility and forest values. Combinations of circumstances such as prolonged drought, extreme temperatures, high winds, and lack of night cooling may still result in catastrophic fires such as those which occurred in the Whiteshell and Duck Mountain forest reserves in 1961, the east side of Lake Winnipeg during the 1980s and the province in general in 1989.



*Fire fighter with pack pump*

### **Sustained Yield Management**

The first overview of the province's forest resources was assembled in the Dept. of Interior - *Canada Forest Service Bulletin 85* in 1934. The Provincial Forest Service has gradually brought into operation working plans based on sustained yield management for all Forest Management Units in the forest zone of the province.

The whole forested area of Manitoba was mapped under the *Canada Forestry Act* agreement in 1951 and 1956. This new inventory based on aerial photography and on extensive checking on the ground, gave a good basis for the establishment of working plans. By 1955, most of south-eastern Manitoba had plans in operation and similar plans were made later for the remainder of the forest zone.

The second overview of the province's forest resources was assembled in 1974 and published in July, 1975, by Manitoba Renewable Resources and Transportation Services, Renewable Resources Division. Five year reviews, the first published for the year ending March 31, 1986, will be developed by Manitoba Natural Resources, Forestry Branch, as a continuing update of the province's forest resources.

### **Silviculture**

Planting of potentially productive or non-stocked areas on forest reserves was continued by the province after 1930, with nursery stock obtained from a main nursery at Shilo in the Spruce Woods, and from secondary nurseries at Marchand in the Sandilands (where a seed extraction plant was also located), Lake Max in the Turtle Mountain, and Birch River in the Porcupine Mountain Provincial Forest.

The initiation of the *Canada Forestry Act* agreement on reforestation by which Canada agreed to pay one-half the cost of capital expenditure on new nurseries, and to pay a portion of planting and seeding costs, provided certain levels of production were maintained, resulted in the construction of Pineland Forest Nursery in 1953. At that time the Spruce Woods, Turtle Mountain and Porcupine Mountain forest nurseries were abandoned.

Pineland Nursery continued to expand its production capability. In 1965, nearly 3.4-million seedlings were planted which increased to 3.6-million in 1966, dropping back to 2.6- million in 1967, and then back to a high of 6-million in 1969. In 1988, both Pineland and Clearwater, Provincial Nurseries provided stock permitting 15.7-million trees to be planted.

The first experimentation with growing containerized seedlings in greenhouses began at Pineland in 1965. Operational production levels increased steadily from 13,000 seedlings in 1967 to a high of 1.5 million in 1975. However, the original seedlings, grown in paperpot containers, were found to constrict root development on certain sites. As a result the province changed its

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container system to grow the seedlings as container-free plugs for planting.

In 1982, the Clearwater Provincial Forest Nursery was established a few kilometres from The Pas airport. By 1983, 400,000 black spruce containerized seedlings were shipped from the facility. The Clearwater Nursery underwent a major expansion in 1984 when funds from a five-year Canada-Manitoba Forest Renewal Agreement enabled expanding the facility to a total of 20 greenhouses capable of growing 6.5-million containerized seedlings a year.

The urgent need to keep pace with the demands of the expanding field programs is easily understood after reviewing the tree planting figures. The first 50 years (1930-1979) of the provincial planting program saw 77-million trees planted in Manitoba. Increases in the involvement of forest industry, the use of container stock and the funding levels provided through the Canada-Manitoba Forest Renewal Agreement resulted in more than 81-million seedlings being planted in the 1980s alone. The future shows even more promise as the current planting stock projections indicated over 160-million seedlings will be planted in the 1990s.

Cone collections, to supply the seed requirements for planting and seeding programs, have also increased greatly over the past sixty years. Initially cones were collected from shelterbelts, squirrel caches and forest cutovers throughout the province. Seed zones, to restrict the movement of tree seed and planting stock to an area of similar environment, were established for Manitoba in 1973. In the late 1970s, work was initiated on identifying above-average stands from which to collect seed. This work was enhanced in the late 1980s with the use of a cone rake hanging from a helicopter and lowered onto the tops of selected trees, to get the best seed possible.

Stand tending or stand improvement in Manitoba from 1962 to 1989 has been directed to establishment and maintenance of plantations.

Tree improvement programs to develop genetically improved seed for planting stock in Manitoba were initiated in 1967. The first pro-

gram developed by Forestry Canada, with the department's assistance, has concentrated on improving jack pine. The department began selecting superior "plus" trees of black and white spruce in 1974.

The major thrust in the provincial program has occurred in the last five years with the building of a state of the art tree improvement facility at Pineland Nursery, the development of a tree improvement strategy and the establishment of the Manitoba Tree Improvement Co-operative with the Department, Abitibi-Price and Repap Manitoba. By the year 2000, one quarter of all planting stock produced will be from genetically improved seed sources which will increase the yield and quality of wood produced from plantations in Manitoba.

## **The Lumber Industry**

The beginning of steamboat navigation on the Red River in 1859 followed by the first railway train in 1878 signalled the beginning of a rapid settlement of the prairies. There was an immediate demand for timber in the form of lumber for settlers' farmsteads, and for the building of towns, while the railways needed large quantities of cross ties. W. L. Morton, in his book, *"Manitoba History"*, states;

*"the lumber industry was the first, and for some years the largest, of Winnipeg industries".*

When the main line of the Canadian Pacific was extended across the province, sawmills were built on the Assiniboine and its tributaries, at points suitable for receiving logs driven down the rivers from the Riding Mountain and the west side of the Duck Mountain. The railway reached Brandon in 1881 but records show that in the previous year, 1880, sawmills were being operated on the Minnedosa River at Minnedosa and Rapid City and on the Assiniboine River itself at Millwood and Brandon.

In the Northern Forest District, lumbering on a large scale had to wait until the Canadian Northern Railway reached The Pas in 1910 when a mill was erected on the Saskatchewan River.

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This mill operated yearly until 1958 producing as much as 50-million feet in a peak year. In later years, Manitoba logs cut on Moose Lake were hauled on truck-drawn sleighs over iced roads for distances of 45 and 60 miles.

Some reference should be made here to other non-pulp products; railway ties, poles, posts, fuelwood, etc.. Records are not available for the railway tie cut before 1930, but the peak year of production since that year was 1940 with 487,000 pieces, followed by a decline to 90,000 in 1961. The pole cut was practically all cedar from south-eastern Manitoba until the Manitoba Power Commission began using jack pine in its rural electrification program.

### **The Pulp and Paper Industry**

Dominion Lands records indicate that Manitoba's first pulpwood cut was in 1924-25, with a gradual increase in the Crown Lands cut in later years. The embargo on export of unmanufactured wood from Crown Lands meant the earlier cut went to western Ontario where seven pulp mills were operating or being built by 1927.

The total cut of Manitoba pulpwood from all sources seems to have been about 100,000 cords in 1926-27, the year the Manitoba Paper Company's mill opened at Pine Falls, about half of this wood going to the Manitoba mill.

The mill at Pine Falls opened on February 5, 1927, with one paper machine in operation (capacity 100-125 tons of newsprint per day). Production of newsprint reached a peak production of 71,308 tons in 1929 and then fell away. The mill was closed for more than three years during the depression, opening again in 1935, and gradually building up production to a second peak of 81,394 tons in 1937, which was succeeded by a falling-off of production during the war years.

In the early 1950s, from 40-50% of the total pulpwood cut in Manitoba came from private lands. When the embargo on export from Crown lands was suspended and the depression ended the proportion from Crown Lands increased and the private cut gradually decreased until the latter is now only about 5% of the whole.

Two small fibreboard plants operate in Winnipeg. A particleboard plant using trembling aspen and jack pine was constructed in Transcona by Palliser Furniture Ltd. in 1989 with production expected to commence in 1990.



### **The 20-Year Forest Management Plan, 1981-2000**

On December 31, 1981, the Forestry Branch and Forestal International, a forestry consulting firm, completed the 20-Year Forest Management Plan for Manitoba.

The plan is a prescription for sound and responsible management of the province's forest resources to the year 2000. It is a blueprint for forest utilization, industrial development, road access, sophisticated forest monitoring, improved fire management, forest renewal and developing tending programs. Five-year assessments on the status of the resource are an integral part of the plan.

Since the completion of the 20-Year Forest Management Plan, a number of significant events have occurred. Of note was the signing of the Canada-Manitoba Forest Renewal Agreement on March 15, 1984.

Another significant decision took place when the Government of Manitoba added an additional \$15.8 million from the Jobs Fund Sectoral Project for the same five-year period.

The signing of the Forest Renewal Agreement between Manitoba Natural Resources and



Manfor Ltd. on February 14, 1984, was also noteworthy. Under this agreement, Manfor Ltd. assumed the responsibility for carrying out forest renewal on all lands harvested by the company under its annual operations.

The Abitibi-Price Inc.-Manitoba Forest Management Licence Agreement was signed in May, 1979, and has been implemented efficiently and satisfactorily. Under this agreement, Abitibi has responsibility for full utilization of the forest resources within the licensed area, including the allocation of timber to other parties.

Another notable event was the installation and full operation of the Forestry Geographic Information System. For the first time, the Forest Inventory Program can be updated on a continual basis. Previously, the province's forests had to be re-inventoried on average every 18 years, depending on the forest area and level of activity. Each re-inventory was just a snapshot overview

of the forest. The resulting data soon became dated. The Geographic Information System, known as FORIST, annually measures forest change and growth so that the inventory of any particular forest area entered into the FORIST system is current.

This system also has the capability of measuring impacts of a variety of events before they actually are put into place, or occur naturally.

The Timber Quota System, initiated in 1965, revamped in 1980 and placed on a 10-year evergreen cycle, underwent its first five-year review during the 1985-86 operating year. The decade long five-year evergreen cycle is provided to ensure continuity of the system from one five-year period to the next.



**Seated (left to right):** P. W. Carmichael, A. W. Braine, J. G. Somers, C. B. Gill  
**Standing (left to right):** Mike Kaye, Walter Danyluk, W. K. Webster, Cece Patterson, C. K. Smith, A. O. Jardine, T. B. Vermilea, E. A. Koons, D. A. Jellicoe



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***Directors of the Wildlife Branch***

- ☐ A. G. Cunningham
  - ☐ Gerald Malaher
  - ☐ Ken Doan
  - ☐ Richard C. Goulden
  - ☐ Art Hoole
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# Wildlife Branch

Following a period of unrestricted hunting in the early 1800's the first "Act for the Protection of Game" was passed in 1876. The act did not apply to persons in state of actual want nor to Indians on their reserves. In 1878, a special act provided for a bounty on wolves. The revised *Game Protection Act* of 1879 provided for the appointment of voluntary guardians to enforce provisions of the act. Their payment was the game they seized.

The act of 1879 also allowed granting of charters for carrying out provisions of the act, thus the Manitoba Game and Fish Protection Association was formed in 1892. That organization, now known as the Manitoba Wildlife Federation, has been a leading public advocate of wildlife protection and management in Manitoba throughout the years to the present day.

It may surprise some of the present wildlife branch staff that the *Game Protection Act* of 1876 was administered by the federal Department of Agriculture. Its annual reports for the late 1920's emphasized two programs in game conservation: one consisted of activities such as game preserves and regulation enforcement, to protect against over-harvest; the other consisted of positive or constructive methods to replenish the supply of game such as introduction of depleted stocks. That advice from the 1920's was to resurface in the 1980's in the form of roadside refuges, elk transplants, bison and musk-ox restocking and game ranching.

Reports from the 1920's stressed the importance of wildlife and mourned the fact that the resource was dwindling due to unscrupulous hunting, agricultural expansion, predators, disease, and poaching. Those concerns are as valid today as they were in the 1920's. The 1983 and 1987 five year reports to the legislature on

wildlife reiterate those early concerns.

In 1930, the *Game Act* was transferred from the federal government to the newly created provincial Department of Mines and Natural Resources. One of the parting statements said;

*"a genuine love of wildlife by the people of our province is the only permanent source of protection worth very much".*

Some 53 years later those words were echoed in the 1983 five-year report to the legislature,

*"an awakened public awareness is the best (and perhaps only) security wildlife resources have. No significant protective effort can be sustained without public backing".*

In 1930, wildlife became the responsibility of the Game and Fisheries Branch created under the new *Game and Fisheries Act*. The goals of the new branch were as follows:

- (1) Protect wildlife
- (2) Produce more game and furbearing animals
- (3) Establish and patrol game preserves and bird sanctuaries
- (4) Provide public shooting grounds
- (5) Develop public interest
- (6) Urge clean sportsmanship
- (7) Promote respect for owners or occupants of land, and,
- (8) Encourage farmers to assist in increasing game populations.

The goals of 1930 are remarkably similar to those reflected in the policies and mission statements of the Wildlife Branch of today. This, perhaps more than any other fact, indicates that the basic mandate of the Wildlife Branch has not changed over the years despite the changing trend in wildlife use and appreciation by the public.

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The lore and history of wildlife management prior to 1930 is rich and fascinating but we are most concerned with the post 1930 period. Since 1930 there have been several rather distinct eras of policy and activity in the branch; for example, the 1930's and '40's were a time of development in the wild fur industry, in marsh management, in stocking of wild game, and in hunting season management.

E.F. Bossenmaier, in his publication "*100 Years of Wildlife Protection and Development in Manitoba*", describes some of the more notable events of the 1930's and 40's;

*"Several major government initiatives in wildlife management were in the wings in 1930: leases of crown lands for muskrat ranches, promotion of commercial fur ranches, a government experimental fur farm, introductions of exotic game birds, registered traplines, marsh development and rehabilitation and biological investigations in support of management programs."*

The 1930's and '40's saw wildlife population changes that influenced wildlife management programs in Manitoba. White tailed deer flourished. The conservation of barren-ground caribou was identified as an integral part of northern development. Ring-necked pheasants prospered in southwestern Manitoba as a result of several mild winters and as an aftermath of the "dirty thirties" which left much farm land in a semi-wild state. The same drought severely reduced duck populations and was largely responsible for the birth of Ducks Unlimited in 1938. The Delta Waterfowl Research Station was established on the southern shore of Lake Manitoba the same year.

There were many other noteworthy events and dates during this period. The new experimental fur farm opened on the campus of the University of Manitoba in 1936.

Saskatchewan River delta development for muskrats commenced the same year. Legislation was passed in 1936 limiting the capacity of repeating shotguns used in bird hunting to three

shells. Large plantings of ring-necked pheasants were made in the province in 1934 and 1936, and chukar partridges were released in 1937. The first registered trapline district was set up in 1940, the same year that the number of fur farms in the province neared 1,000, today there are only a small handful.

A fur advisory committee, consisting of federal and provincial representatives, was established in 1941 to assist in the administration of fur rehabilitation blocks and registered trapline districts. Amendments to the *Game and Fisheries Act* in 1945 allowed the minister to enter into fur agreements with the federal government. A ten-year agreement signed in 1945 was a forerunner of numerous wildlife cost-sharing programs between the federal government and the province.

One of the best examples of such cost-sharing arrangements is exemplified by an arrangement between the Department of Indian Affairs and Manitoba Natural Resources for the conservation and development of wildlife resources, especially fur bearing animals. Begun in 1949, and still active after 41 years, this partnership is now addressing new issues such as cooperative management and important economic activities.

The first aerial deer surveys were flown in 1947 and in a way this heralded the era of wildlife surveys, inventories and biological studies that typified the 1950's and '60's. Routine activities of this period were spring breeding surveys of ruffed and sharp-tailed grouse, habitat surveys, beaver house counts, and big game counts to track population trends. It was during this era that the Wildlife Branch engaged biologists to prepare management recommendations and to undertake field studies on various species of wildlife. Wildlife graduates working for the Wildlife Branch remember those as the golden years of field biology.

Provincial resource ministers at the "*Resources for Tomorrow Conference*" in the early 1960's focused on resource based inventories and land use adjustments. Large federal-provincial cost shared programs were set up to carry out this work. Thus, for the Wildlife Branch, late 1960's

and 1970's was an era of land form surveys, land purchase, adjustments in land use, and a time of increase in lands being set aside for wildlife management areas. Acronyms abounded during this period such as C.L.I. (Canada Land Inventory), A.R.D.A. (Agricultural Rehabilitation and Development Act), F.R.E.D. (Fund for Rural Economic Development), A.L.U. (Alternate Land Use), and, of course, P.P.B.S. (Planned Program Budgeting System). This was also the era when the wildlife resource technician became an integral part of the Wildlife Branch.

It was a pivotal point for wildlife staff in southern Manitoba because they had to switch much of their focus from species monitoring and management to land management tasks. Staff became members of multi-discipline teams of resource managers. The focus was on habitat and to that end a habitat section was added to the Wildlife Branch. Deer hunting was closed during 1974, '75, and '76. This was the stimulus for more sophisticated deer survey methods and programs to help deer survive the harsh Manitoba winters. Deer licence fee increases were pledged in part for deer habitat purchase and development and for deer feeding. In the north, the mid '60's saw the beginnings of an ongoing research and management program for polar bears.

The late 1970's and early '80's brought with them the consultative era of wildlife management called by some "co- management". This was a type of "management by consensus" that involved staff in seemingly endless meetings with client groups, advisory boards and the like. Typical of this thrust was the Barren Ground Caribou Management Board which brought native people to the table to discuss the problems associated with that species. This period also saw the birth of numerous mega- agreements involving Oak Hammock Marsh, the heritage marshes, and Delta Marsh to name a few.

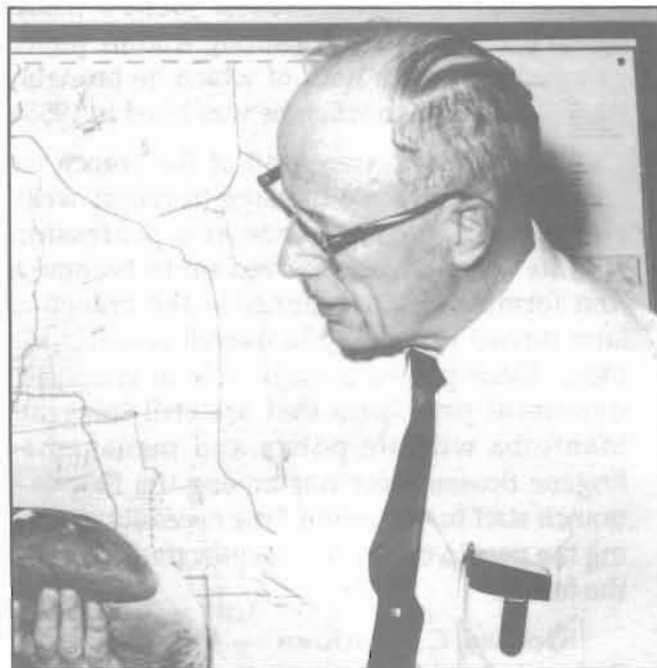
It was during this time that several institutions were set up at arm's length from government to expedite wildlife programs, e.g. Wildlife Habitat Canada, Manitoba Habitat Heritage Corporation, the Manitoba Wildlife Federation Habitat Trust, and the Fur Institute of Canada.

All of these changes determined, in part, how staff spent their time because wildlife management was now as much a matter of boardroom finesse as it was of field biology wisdom. Meetings often replaced field work as the wildlife manager's stock in trade, much to the irritation of many staff members.

In the history of the Wildlife Branch several individuals have made exceptional contributions in leadership, in policy direction, and the development of activities to fulfill the mandate of the Wildlife Branch. There were also people who were "product champions" in the branch. Following are brief biographical notes on some of these individuals and descriptions of their activities.

### ***Leaders:***

**Gerald Malaher** — 1940's, 50's and 60's. G.W. Malaher or "Gerry" as he was known to his friends, was an English immigrant and forester by profession who joined the department in 1932 and was the Director of Wildlife from 1946 to 1967. Gerry presided over the Wildlife Branch in its transition from a strictly enforcement-regula-



***Gerald Malaher in 1965***

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tory role to an integrated wildlife management agency. It was Gerry who saw the need for management to accompany enforcement in the stewardship of wildlife. Gerry was quick to recognize the value of the fur rehabilitation block and registered trapline programs. He encouraged field staff to develop these concepts and lead by example: even as director he was never far away from the field.

Gerry was relentless in his mission to have his staff track down poachers and he was instrumental in the restoration of beaver which had been nearly extirpated by the 1930's. One of Gerry's chief strengths was his ability to enlist ministerial support for various programs. He was master of the written word; his letters and memoranda were works of art, both grammatically and artistically. Throughout the late 1940's; the '50's and into the '60's Gerry Malaher was the Wildlife Branch.

**Eugene F. Bossenmaier** — 1950's, '60's, and '70's. Gene led the Wildlife Branch into the era of wildlife management based on scientific principles and biological information. A native of Minnesota, he was a respected scientist whose work was published in The Wildlife Society's first wildlife monograph (*"Field Feeding of Waterfowl in Southwestern Manitoba 1953"*). Gene's wildlife training instilled in him a strong wildlife philosophy and land ethic both of which he brought to the Wildlife Branch when he was hired in 1958.

Many of the current staff of the branch were influenced by Gene's tutelage in report writing and in seeking excellence as a professional wildlife manager. He moved on to become the first formal wildlife planner in the branch and later turned his energy to overall resource planning. Gene played a major role in enunciating important principles that are still integral to Manitoba wildlife policy and management. Eugene Bossenmaier was among the first of the branch staff to understand the necessity of studying the past in order to more effectively deal with the future.

**Richard C. Goulden** — 1970's and '80's. Rich, a University of Manitoba graduate in agriculture with post-graduate training in wildlife

resource management at Utah State University, came through the summer student program which produced many of the biologists with the branch in the 1960's and '70's. He headed up the wildlife sector of the Canada Land Inventory Program in the late 1960's and in 1971 became Chief of Wildlife. He was director of the branch from 1979 to 1986 and he is currently Assistant Deputy Minister of the department.

Rich recognized the issue of habitat as being pivotal to the survival of wildlife in Manitoba and to that end created a "habitat section" in the branch. Rich moved the Wildlife Branch beyond the "biology for biology's sake" to operations that better reflected the client's needs and the trends in public use of the resource. Perhaps Rich's chief skill was developing in staff a sense of commitment that produced many of the "product champions" of later years. He fostered this commitment by formally introducing a "creed" for wildlife branch staff. He laid the groundwork for current cooperative management with native people and he was quick to recognize the need to move beyond the local level to national and international levels to solve many of the critical issues facing wildlife.



**Rich Goulden receiving the Wildlife Officer of the Year Award from the Hon. Len Haraplak, minister of Natural Resources**



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**A. Brian Ransom** — 1960's, '70's and '80's. Brian, a farm boy from the north escarpment of Turtle Mountain began his career in wildlife as a student biologist in the late 1950's. He graduated with a degree in agriculture in 1962 and attained a masters in 1964 from the University of Alberta. His thesis work on white tailed deer reproduction in Manitoba remains a classic piece of wildlife research.

Although Brian worked in the wildlife branch for several years in the 1960's and as an environmental consultant during the 1970's, he made his most significant contribution to wildlife management as a politician from 1978 to 1981. It was during this period as Minister of Natural Resources that he required staff to write policy statements on the management and use of wildlife. These statements reflected the rights of various users to the resource, reflected sound ecological principles, and promoted ethical hunting behaviour. As such, they have stood the test of several changes in political administration.

It was during his term that the *Wildlife Act* was rewritten to include legislation that protected landowners' rights of access to their land for the purposes of hunting. This change alone altered the conventional way in which many hunters treated private land and caused them to more carefully account for their actions. Brian Ransom's work during that period has had major influence on how the branch has done business since.

**Allan Murray** — 1960's and 70's. Al was the first chief of Conservation Education (1966) in the department, and later became Associate Deputy Minister of Renewable Resources. Perhaps his main contribution among many that he made during his time in the department was his influence in moving the Wildlife Branch from a policy of management for the sake of wildlife alone to management for the sake of people as well.

Al oversaw the first major effort in the department to bring the conservation message to the public. He urged wildlife branch staff to write for the trapper, the hunter and the public at large in language they could understand rather than the technical jargon commonly used in official

writing. He established as a hallmark of departmental operations the need to understand and relate to people, a philosophy that is to this day practiced in the Wildlife Branch.

## ***Product champions :***

**Chief Albert Sinclair** — 1930's. In the winter of 1938 this chief of the Cross Lake Band journeyed from his remote village to Ottawa to petition Interior Minister T.A. Crerar to bring a program of conservation for furbearers to northern Manitoba. He asked Crerar to;

*"conserve our fur, legislate against its destruction. Put the beaver in the north-land. Create preserves or sanctuaries, give us trapping areas and formulate a form of supervision which will bring back the Indian to his status as a natural conservationist"* (Winnipeg Free Press, March 15, 1938).

The Chief's efforts set the stage for the government's interest in the registered trapline system which has been the cornerstone of fur management in Manitoba to the present day.

**Tom Lamb** — 1930's. Tom Lamb, more than any other individual, was responsible for the fur rehabilitation block system which was Manitoba's first wildlife management program. Working with people like Harold Wells and Gerry Malaher he designed the essence of the system and was tireless throughout the 1930's in urging it on government. When government demurred, Tom, with his own resources, began marsh management and trapping programs on a scale significant enough to convince government to follow his lead in moving from a purely regulatory direction to a management role.

**Harold Wells** — 1930's and 40's. This former trapper and employee of Tom Lamb was the architect of the Registered Trapline (R.T.L.) System. Harold was an ingenious individual whose work with trappers in setting up R.T.L.'s resulted in the Wildlife Branch gaining a reputation for working with producers in a cooperative, fair and impartial way. In fostering a long histo-



ry of cooperation between Manitoba and the Department of Indian Affairs, Harold set a tone for the province's leadership in programs involving native people. Harold understood that if programs were to succeed out on the land, they had to be based on and expressed in terms relative to local situations rather than on terms conceived in Winnipeg meeting rooms without the practical knowledge of and requirements of the bush.

**W. R. (Bob) Burns** — 1950's and 60's. Bob joined the department as a Conservation Officer in 1952, serving at various posts before going to The Pas as Manitoba's (and Canada's) first full-time Trapper Education Officer. Heavily influenced by Well's method of working with native and non-native northerners, Bob had a major role in putting together Manitoba's wild fur development program (1975-80). It was during this era that the highest fur harvest returns ever (\$10 million) were recorded. The first real steps in co-management (now thought to be a contemporary concept) at the field level occurred under Bob's direction in the north. He was instrumental in setting up the Manitoba Registered Trappers Association. Bob was a living example of the philosophy that while engaged in serious work one could still have a lot of fun.

**Allan J. Pakulak** — 1970's. Al was the quintessential product champion and in this case the product was the construction of Oak Hammock Marsh. During his employment with a land use adjustment program under A.R.D.A. delivered by a multi-discipline technical group called "resource projects," Al was obsessed with the idea of constructing a major marsh complex from a rather unproductive sedge-meadow area known locally as Saint Andrews Bog. His ability to "wheel and deal", his access to development funds, and his sheer enthusiasm saw this bog area transformed to a world-class marsh that now hosts half a million staging geese and more than 80,000 visitors annually. Al connived with everyone from senior administrators to bulldozer operators to get the job done. He was the right person, in the right place, at the right time. Al would be the first to declare that there are many other individuals who share the credit for the development of Oak Hammock, but it was his

drive, more than any other factor, that made it happen. Al and a fellow biologist, Claude Holmstrom, were tragically killed in an aircraft accident in 1973.



*Duck shaped pond at Oak Hammock Marsh — Designed by Allan Pakulak and constructed in 1971/72*

**Robert W. Nero** — 1970's and '80's. Bob is a veteran of the Wildlife Branch but the meaning of his work is only now becoming clear. By his own admission, "a Ph.D in blackbirds", Bob, while a dedicated hunter himself, saw a need for the Wildlife Branch to move beyond its preoccupation with game and trapping to a more holistic approach to wildlife management. Bob recognized the whole spectrum of values that wildlife brings to society and eloquently articulated those values to fellow workers and to the public. Bob did much to coach and inspire his peers to promote, both in writing and lectures, the intrinsic values of wildlife. His work on all wildlife species is clearly a labour of love but he is most famous for his research on great grey owls. Bob spent countless hours of his own time and his own resources on studying this magnificent bird.

Accompanied by his great grey owl companion, Bob prowled dozens of shopping malls and entertained children in classrooms over many years to raise money to augment the department budget for work on his beloved owls. In so

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doing, he turned thousands of people on to wildlife in general and to great grey owls in particular (now Manitoba's provincial bird). Whether it is in front of the minister and his staff or at a remote town hall in the backwoods, or in his writings, Bob has that rare ability to bring to every individual the recognition of, and the human need for, wild creatures and wild places.

One inevitably takes a risk in singling out certain individuals as being particularly influential in the development of the organization—and this is a case in point. The Wildlife Branch has consistently produced individuals whose zeal for their work qualifies them as leaders or product champions but due to the constraints of this exercise they must go unmentioned. It is sufficient to say that the standards set by the individuals highlighted here are being met and challenged consistently by contemporary Wildlife Branch staff.

It is also important to point out that there are many non Wildlife Branch people both within and outside of government who have had a significant impact on the activities of the branch and more particularly on wildlife management itself.

Perhaps the most outstanding feature of the Wildlife Branch during the last decade or more is the recognition that many of the critical problems facing wildlife are really national or international in scope and must be tackled on those playing fields rather than on the local scene. Manitoba has taken a leadership role in such initiatives as the Fur Institute of Canada, the Barren Ground Caribou Management Board, the Polar Bear Technical Committee, the North American Waterfowl Management Plan, Wildlife Habitat Canada, the International Association of Fish and Wildlife Agencies and the Federal-Provincial Committee on Humane Trapping.

The critical task facing wildlife managers in the decade ahead is to delineate clearly for user groups and governments alike the fundamental issues facing wildlife resources. Some profound alterations in human-wildlife interactions must occur if issues such as habitat loss and animal rights are to be resolved. Human and financial resources will continue to be limited for wildlife management tasks therefore it is in the best inter-

est of all who 'use' wildlife, consumptively or non consumptively, and of those who manage it — politician and biologist alike — to focus attention on the basic issues that have the strongest implications. We must look ahead, we must take into account the broad spectrum of wildlife and we must plan for the long term. Wildlife management will become a much different science and art than it is today but the challenge of change has always been with us.

More than ever before, wildlife managers will have to enlist non-traditional means of preserving and enhancing the resource and its use. This counsel notwithstanding, the mandate of the Wildlife Branch stands as clear today as it did when the first legislation was enacted in 1876.

This mandate is perhaps best reflected in contemporary terms in the last segment of the Manitoba Wildlife Branch Creed;

*"...finally, we have a responsibility for the natural resources over which we are privileged to function as guardians. We shall endeavour always to manage, use and protect this priceless heritage to the best of our professional abilities, guarding always to err on the side of ensuring the viability of eco-systems and the wildlife populations they support. We shall strive to ensure that our actions preserve the integrity, stability and beauty of the biotic community and consider our actions wrong when they tend otherwise."*

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***Directors of the Fisheries Branch***

- ☐ A. G. Cunningham
  - ☐ Gerald Malaher
  - ☐ S. Sigurdson
  - ☐ Burt Kooyman
  - ☐ K. H. Doan
  - ☐ Worth Hayden
-

# Fisheries Branch

In the beginning, in 1930, fisheries was part of the newly created Game and Fisheries Branch. But it was the junior partner. The policies of the new branch listed 13 items but only the last four involved fish. They were:

- "(10) Improve commercial fishing conditions.*
- (11) Create a greater local demand for Manitoba fish.*
- (12) Introduce and increase game fish throughout the Province.*
- (13) Carry out scientific investigations of fish life."*

The Minister was Hon. J. S. McDiarmid; the deputy minister was C. H. Attwood. The first director of the branch was A.G. Cunningham who remained in that position until 1947 when he was replaced by Gerald Malaher. S. Sigurdson, who had been fisheries assistant to Mr. Cunningham, was later made Director of the full-fledged Fisheries Branch in 1955.

In 1930, the fisheries component consisted of the assistant to the director, one scientific investigator ( Dr. A. Bajkov), a chief inspector of fisheries, four permanent inspectors and one clerk stenographer. Temporary employees were hired from time to time on the lakes.

When it became an independent branch in May, 1955 it consisted of a director, a chief inspector, a supervisor of fish culture and sport fishing, a fisheries biologist, a laboratory technician, two clerks, three clerk stenographers, and a field staff of 21.

Mr. Sigurdson remained as director until 1960 when he was succeeded by Burt Kooyman, a biologist in the branch. Mr. Sigurdson had joined the department in 1940 as office manager of the Game and Fisheries Branch.

Mr. Kooyman remained as director until 1966 when he took up a position with the Canadian Wildlife Service. He was succeeded by Dr. K.H. Doan, who had been the chief biologist since 1959, following a successful career with the Fisheries Research Board of Canada.

Long before the province took over management of the fishery it had been plagued with problems. The first regulations were recommended by the Council of Assiniboia to curb fishing in the rivers. Studies of the fishery, especially to improve the conditions for fishermen, took place regularly including the McIvor Commission of 1966 which brought about the most significant change in the fishing industry by recommending a freshwater fish marketing board.

The Manitoba government and the Fisheries Branch had been active proponents of the need for a study of the marketing side of the industry.

Solutions to fishermen's problems did not always require a study or commission. In 1943, the branch opened God's Lake to commercial fishing because the gold mine closed down that same year and local men needed employment. But the employment didn't pay a decent wage.

Gerry Malaher, who was later to become branch director, visited the lake in his capacity as northern supervisor of fish and game, found that fishermen were being paid a "ridiculously low price". His radio message to the Assistant Deputy Minister, J.C. Cowan, who later became Deputy Minister, resulted in the fish buyers being called into a government office and presented with an itemized list of each fisherman's production. They were told that the underpayment was about \$5,000 and that the government wanted that amount from the buyers so it could pay the fishermen what they deserved. And if the money was not forthcoming the government would can-

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cel all the buyer's licences. The money was promptly paid.

During the late 1950's, the province appointed the first Fisherman's Representative in Canada. The annual report of 1958 said the Fisherman's Representative;

*"...will assist the commercial fishermen in the introduction of improved methods of commercial fishing and will instruct them in the use of modern equipment. He will advise them concerning marketing problems, and act as a liaison officer between the government and the fish companies for the fishermen."*

The first and only appointee to the position was Helgi K. Tomasson, a native of Hecla Island, son of a fisherman and a commercial fisherman himself. He served until his death in 1971.

One of the many problems that faced governments and their fisheries managers was whether commercial fishing should be organized along capital intensive lines or maintained as a labour

intensive industry. In its *Five-year Report to the Legislature* in 1989, the branch said its principal objective was;

*"...to establish and maintain a viable commercial fishing industry wherein participants can earn a reasonable return for their investment and time with limited social disruption."*

The implication in the first annual report of the department was that fishermen were suffering for a number of reasons, not the least of which was their inability to produce enough fish to maintain an adequate income. In that report it said fishermen were not buying new equipment because the companies which bought the fish had

*"given little encouragement toward extensive fishing operations by declining to advance credit to any appreciable extent for equipment.."*



*Lake Winnipeg fishing boats at Gimli, Manitoba*

The tide had turned by the time of the 1989 *Five-Year Report*, in which the branch said one of the challenges of the 1990's was to;

*"remove or reduce incentives to overcapitalize."*

When the resources were transferred, the story goes that federal fish hatchery personnel in Manitoba were sent a telegram telling them to report to a provincial official on the following working day. Hatcheries were a major part of the fisheries management scheme in 1930. In the fall of 1931 the branch successfully hatched 242,735,000 whitefish and pickerel eggs and the fry were distributed in Lakes Winnipeg, Manitoba, and Winnipegosis.

Today, they still play a significant role in fisheries management. But in the five years from 1984 to 1989 the branch stocked many fewer fish than in the first years of operation; about 415-million fish of which 310-million were to improve commercial fishing.

Increasingly important in the branch's activities is the provision of sport fishing opportunity. The province's first biologist, Dr. Bajkov, did research on sport fishing opportunities in Manitoba in the early 1930's and recommended stocking a number of lakes and streams with game fish. He recommended that a pond be constructed for rearing bass.

Dr. Bajkov also exalted the mooneye as a game fish;

*"Not very many fishermen know this fact...I tried an experiment, dry-fly fishing. The result was amazing! These fish bite as voraciously as rainbow trout. They are also good fighters, due to the deepness of their body. The meat is splendid."*

That first annual report goes on to state:

*"No efforts in connection with the Fishery Administration will give better returns for what is taken than angling, and nothing will give greater satisfaction to a large majority of the citizens of the Province than a successful effort to establish the better and more popular varieties of game fish*

*in suitable lakes and streams in the Province."*

Revenue from angling licences in the year ending March 31, 1932, was \$970. The total expenditure for fisheries administration in that same year was \$60,287.14. In 1987-88, revenue was \$1,716,661.50 for 193,813 licences.

Angling licence sales in recent years have remained more or less constant but anglers are spending more money on their sport and they are releasing more of the fish they catch. The two things that contribute to an anglers enjoyment, by their own admission, are water quality and, natural beauty of the surroundings.



***Fish distribution truck — Whiteshell Hatchery***

Licensing has been the traditional method of curtailing catch by anglers but it has not been an incentive for anglers to participate in the conservation of the resource. For this reason the branch introduced an innovative new licence in 1985 called the Conservation Licence. It allows smaller creel limits for highly valued species but costs only half as much. Almost half of both resident and non-resident anglers buy the Conservation Licence.

One of the opinions of the Committee on Manitoba's Economic Future (COMEF) in 1963 was that fishermen needed to increase their efficiency and the quality of their products. To



achieve this the report recommended that fishermen be given training and financial assistance so they could obtain and use better equipment.

The McIvor report of 1966 also recommended that fishermen;

*"...be trained in the ways and means of up-grading his catch. In this connection, there is a need for a long-term educational program which will show the fishermen how to produce the best quality possible."*



*Commercial fisherman on Lake Winnipeg*

As a consequence of these recommendations and with the financial help of the Manitoba Manpower Corps a residential training facility was built in 1968 at Hnausa on Lake Winnipeg. This educational facility operated successfully for a number of years before being closed down in the late 1970's.

Another innovative way of helping fishermen run their operations as successful small businesses was the Fish Management Program under which extension officers worked closely with volunteer fishermen teaching them good bookkeeping and financial management. This program was started as a result of the Fisheries Adjustment Study of 1971 which indicated that many fishermen could increase their net return by up to 40% through improved business methods.

Fisheries became a separate branch in 1955 and in 1970 it underwent another organizational change of major magnitude. It ceased to exist. This reorganization saw the department structured along more functional lines rather than the traditional single resource approach.

The new organization saw fisheries matters handled by several different organizational units. Research was in the Research and Development Branch, planning fell to Resources Planning Branch, and training and extension came under the Conservation Extension Branch. A separate field operations division was established to house regional staff.

But that didn't last either. In 1976 another change took place. A new Fish and Wildlife Branch was established within the Department of Renewable Resources and Transportation Services. Dr. K.H. Doan became director. The Chief of Fisheries was George Adams. A year later, Adams was made Senior Fisheries Planner and Gordon Prouse was made Chief of Fisheries programs.

The branch was divided into two separate branches again in 1979. At that time, Worth Hayden was appointed Director of Fisheries, a position he still holds.



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***Directors of the Parks Branch***

- ☐ Walter Danyluk
  - ☐ Don Cline
  - ☐ Denis Moffat
  - ☐ Frank Berry
  - ☐ Derek Doyle
  - ☐ Ed Wong
  - ☐ Jim Potton
  - ☐ Rich Goulden
  - ☐ Claudia Engel
  - ☐ Gordon Prouse
-

# Parks Branch

At the time of the transfer of natural resources to the province in 1930, five forest reserves were already established by the federal regime. These were the Duck Mountain, Porcupine Mountain, Riding Mountain, Turtle Mountain and Spruce Woods.

It is unlikely that the people who set these areas aside for forestry purposes appreciated that their foresight also established and provided protection to areas that would eventually form the core of the Manitoba parks system. In those early days outdoor recreational use was basically non-existent except for some campground and cottage developments in the Riding and Turtle Mountains. Also a number of cottage areas were established by railroad employees on crown lands at Brereton and Florence Lakes within the area which was later to form part of the Whiteshell.

Following the 1929 designation of the Riding Mountain as a national park, the Whiteshell, which was also under consideration, was established in 1931 as a forest reserve. This latter area was recognized as having significant potential for outdoor recreation. It marked the province's initial efforts in park development per se. Commensurate with the construction of highway access through the Whiteshell into Ontario, the province undertook intensive surveys and reconnaissance work to pinpoint the area's potential for development.

Between 1932 and 1933, campground and cottage lot surveys were carried out at West Hawk, Caddy and Falcon Lakes. Ironically, the great depression of the 1930's contributed the major development thrust through relief camp programs. Three hundred men in three major camps administered by the Forest Service at the three Whiteshell sites were involved in various projects

such as road and subdivision construction, and design and construction of docks, buildings and infrastructure. Of note is a quote from the 1932-33 *Annual Report of the Forest Service*:

*"....the work of the relief camps was well done and of great future benefit in the development of the Forest Reserve as a tourist center".*

During this era, the Whiteshell was part of the Eastern Forest District, managed by the late J.G. (Jim) Somers, who subsequently became the Provincial Forester or Director until his retirement in 1963.

By 1933, camps were established in other parts of the province by both federal and provincial governments. Work was proceeding on the Riding Mountain National Park under the direction of the late James Smart who later became Director of the National Parks Branch in Ottawa. Early records pinpoint the significance of the Riding Mountain development as sowing seeds for the fledgling provincial park system under the Forest Service. A second major provincial relief camp in the Duck Mountain, although not established for park development as in the Whiteshell, contributed immeasurably in providing recreational opportunities later on.

Immediately after World War II in 1945, park demand and development accelerated with the province establishing ambitious programs of developing and improving access to forest areas with park potential. These roads included extension of the Whiteshell central road to the Winnipeg River and Seven Sisters Falls, interior Duck Mountain roads that gave access to Wellman, Glad, Childs and Laurie Lakes and in the Porcupine Mountain (in conjunction with the water control projects) road access was provided to Bell and Steep Rock Lakes.

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In the north, a road was constructed from The Pas to Flin Flon; a development of major significance in opening the area to outdoor recreation. While governments of the day were sympathetic to the need for park development they were slow to realize the importance of planning. Nevertheless greatly expanded park development programs were carried out by the Forest Service on reserve lands in the Whiteshell, Duck Mountain, Turtle Mountain, Porcupine Mountain, the Cormorant Lake area and the Northwest Angle. To meet public demands beyond what was provided by the Forest Service, the Lands Branch began outdoor recreational developments on Crown Lands outside of Forest Reserves. This consisted of a system of subdivisions, campgrounds and picnic sites. At the same time the Department of Public Works became active in the development of highway or wayside parks.

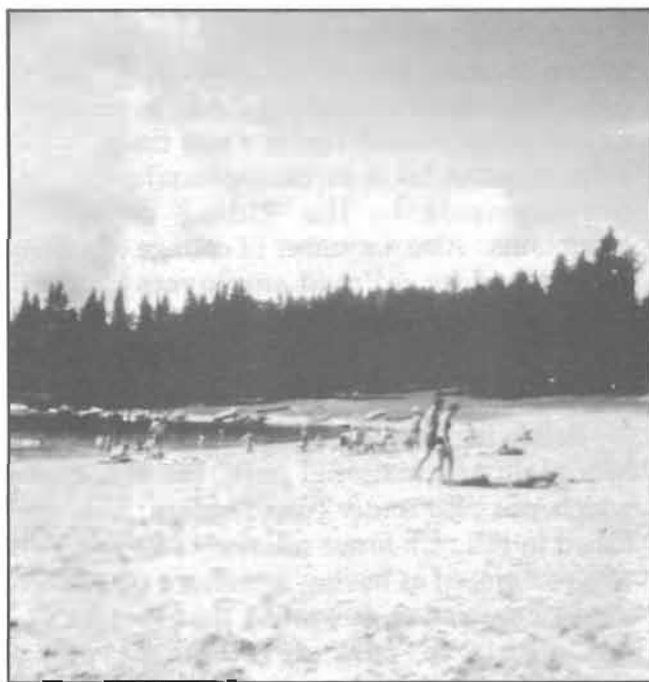
In the mid fifties, when the decision was made for the Trans Canada Highway to traverse Ste. Anne and Falcon Lake, the opportunity and need for a major park development at Falcon was recognized. To handle the complexities of planning and co-ordinating the project on behalf of the various provincial agencies involved in park developments throughout the province government established a Recreational Development Committee with representation from the various agencies involved.

Its job was to co-ordinate and recommend programs, policies and procedures. The committee oversaw the Falcon Lake Townsite development as per plans and designs drawn up by consultant, James Smart, who at that time had retired as Director of the National Parks Branch. Between 1955 and 1959, work at Falcon Lake resulted in the construction of sewer and water installation, hydro, phone service, shopping center, service buildings and the first nine holes of the golf course officially opened by the Premier of the Province, the Honourable Duff Roblin on July 19th, 1958.

A Parks division was formed in the Forest Service in 1959. At the same time an agreement was reached with the federal government to establish roadside campgrounds and picnic sites

along the Trans Canada Highway. All roadside parks previously developed and administered by the Department of Public Works were taken over by the Forest Service.

January 1st, 1961 a new challenge emerged with the province's acquisition of Grand Beach from the Canadian National Railway. Also, in mid 1961, the Forest Service assumed responsibility for all park developments previously handled by the Lands Branch and thus became responsible for park planning, development, maintenance and operations on all provincial Crown Lands (except for the issuance of permits, leases and revenue collection which remained with the Lands Branch).



In 1960, the *Provincial Park Act* was passed, followed by *Regulations* under the Act in 1962. This Act provided for the formal establishment of a system of provincial parks and recreational areas and afforded much needed control and regulation over the lands so designated. This initial legislation covered six of the present day major provincial parks covering a total of 2,744.5 sq. miles, namely Whiteshell, Grand Beach, Turtle Mountain, Duck Mountain, Clearwater and Grass River. In addition, 40 recreational areas were declared under the *Parks Act*, ranging from five



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acres to over 2,000 acres and comprising a total of 7.5 sq. miles.

By 1962, recreational development had extended to Grand Rapids with the opening of the road and hydro electric complex at that location. Also a start was made at Paint Lake to provide recreational facilities for the fast growing town of Thompson.

This era, guided by the stewardship of Jim Somers and another notable executive of the department, the late S.W. (Bill) Schortinghuis, Assistant Deputy Minister, established the foundation for the further development and growth of Parks into the 60's under Walter Danyluk.

Following the 1959 establishment of the Parks Division in the Forest Service, Walter Danyluk was appointed Chief, and subsequently became Director in 1964 when the Parks Branch was established within the Department of Mines and Natural Resources. Mr. Danyluk remained as Director for eight years prior to being appointed Assistant Deputy Minister.

The Parks Branch's mandate was simply;

*"...to establish and maintain parks and recreation areas for the use, benefit, enjoyment, recreation and education of the citizens of Manitoba and visitors to the Province.*

*"...to manage, operate and develop parks, so as to preserve to the greatest extent possible their value and use thereof for recreational purpose".*

These objectives recognized the increased demand for outdoor recreation and led to the development of the Manitoba provincial park system, consisting of four major classifications of outdoor recreational development, namely, Provincial Parks, Provincial Recreational Areas, Waysides, and Heritage Areas.

In 1964, the province announced a major park development initiative, called the Centennial Park Program. This program provided for the establishment of three new parks - Birds Hill Provincial Park (9,000 acres), Spruce Woods Provincial Park (57,700 acres), Assessippi

Provincial Park (6,000 acres) — along with substantial improvements and expansion of existing park and recreation areas throughout Manitoba. Significant management steps were also taken during this period, which included affirmation of the concept of multiple use for the management of park system sites; a concept previously practiced in forest reserves. Park planning, reconnaissance surveys and special studies of significant areas were also major activities of the Branch.

On July 22nd, 1966, the Manitoba Legislature proclaimed the new *Tourism and Recreation Act* which established the Department of Tourism, Recreation and Cultural Affairs. As a result, the Parks Branch was transferred to the new Department, along with the Tourism Branch from Industry and Commerce, and Fitness and Amateur Sports from Welfare. The Department's 1966-67 *Annual Report* summarizes the reason for the new Department;

*"...each of the fields of Parks, Tourism and Community Recreation is currently one of tremendous growth...and the new Department is required to meet the responsibilities of a dynamically challenging situation."*

With its renewed mandate, Parks further developed and expanded its policy and planning initiatives by finalizing its park system guidelines, zoning regulations to ensure the protection of park land recreational values and a master recreational plan to accommodate and provide for the variety of outdoor recreational demands placed upon public lands. Of some note in the mid sixties was the rapid increase of interest in winter sports activities throughout the province. As a result, the Parks Branch was required to address the recreational demand and responded by enhancing developments at the Falcon downhill ski area and establishing trail systems to accommodate power snow toboggans. Several years later the program was expanded by the development of cross country ski trails in all major provincial parks.

On July 17th, 1967, Bird's Hill, the first of the three new provincial parks, was officially opened for public use by Premier Duff Roblin. As the



60's came to a close the park system could reflect back on a period of record growth in all phases of tourism and recreation. To meet demands, park facility development and expansion was at a record pace, fueled by a prosperous economy, increased leisure time and a mobile population. This era also saw parks responsibilities expanded into providing historical research and the management of historical and archaeological programs for the department.



The late 60's also saw the establishment of a Park Regional Administrative and Service delivery structure comprising four separate regions, each administered by a Regional Supervisor with park offices located in a district set-up. This development, along with the previous establishment of the Parks Branch, led to the transfer of many previous Forest Service personnel to new careers as Park Officers and Supervisors. Some of these staff, amongst others, included Bruce Vermilyea, Glen Parsons, Bruce Emes, Jim Wright, Pat Fitsmaurice, Vern Jeffries, Gordon Bates, Doug Drysdale, Doug Donald, Ray Foubert, Ed Wong, Rod MacFadyen, Art Carriere, Gord Meseman, Bill Roper, Les Harley, Al Hood, Don MacKinnon and Adam Boyachek.

In addition, some administrative and professional technical who were part of the early pioneering era of the Branch included Gerry Schnepf, Dick Cooper, John Bissinger, Joe MacCarroll, Luc Joubert, Oz Dalzell, Ted Fraser, Jim Morphy, Dave Kalinowich, Real Berard, Joyce Jeffries, John MacFarland, Jean Creamer, Gord Davidson, George LaFrance, Brian Spulnick, Jim Tallosi, Phyllis Hilderman, Doug Mazur, Arnie Berg, Ross Maddar and Willard Anderson.

*(These names are provided as a token representation of the many men and women who worked for the Branch during its early days. The author may have missed many notable individuals and apologies are respectfully extended).*

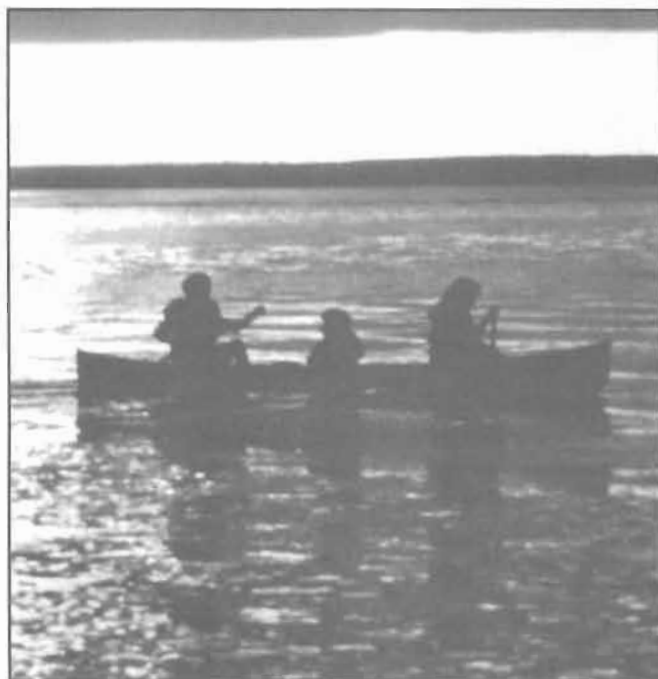
In 1974, Don Cline became Director of Parks and was followed by Denis Moffat in 1976 who remained at this post until 1980. During this period the branch made significant planning and policy advances as mandated by the 1972 new *Provincial Park Lands Act*. Significant were the developments of an updated system of Park Lands under the following designations; provincial natural parks, provincial recreational parks, provincial wilderness parks, provincial recreation travelways, provincial heritage parks and special use parks.

With the 1975 addition of Beaudry and Hecla Natural Parks and Camp Morton Provincial Recreational Park, the branch had jurisdiction of 11 major provincial parks, 44 recreational parks and 91 waysides, encompassing a total land area in excess of two million acres.

In 1979, government reorganization resulted in the transfer of the Parks Branch back to the Department of Natural Resources. What followed was several years of effort in counteracting a weakened image brought about by a restrained economy, tight fiscal policies, a perceived government indifference to objectives, and public and political pressure on park policies and programs. This era of transition was further symbolized by the fact that six different individuals assumed the directorship for various periods of time. These were Frank Berry, Derek Doyle, Ed Wong, Jim Potton, Claudia Engel, and Rich Goulden.

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Notwithstanding the problems associated with the many leadership changes the period was highlighted by the development and publication of a system plan covering all of Manitoba's Provincial Parks and the designation of Manitoba's first wilderness park, Atikaki.



Also commensurate with the return of Parks to the Department of Natural Resources, a Regional Services Branch was established to deliver all Departmental field programs including the operation and maintenance of Parks. With this development Parks Branch's mandate was clarified to enhance the administration, planning and management of Manitoba's provincial park system.

By mid 1980, the overall internal and external indifference to parks began to abate and staff responded with renewed vigor, enthusiasm and commitment. With the 1988 appointment of Gordon Prouse as Director, a further stabilizing effect took place with all staff coming together to meet its challenges and responsibilities.

As the decade of the 80's came to a close, two major highlights are recognized, namely the branch's dramatic growth over the years and its sustained outstanding reputation as a contemporary park management agency. Without doubt, the branch's accomplishments and superior performance in managing the park system reflects the heritage, vision and commitment of staff towards meeting its legislative mandate for present and future generations.

As a step towards maintaining its leadership position and to maximize its organizational effectiveness, a branch restructuring in 1988, under Director Gordon Prouse, has brought about strengthened priorities in the issues of system and master plans, public education and interpretation, and overall dedication towards protection of park resources. Also in keeping with concerns expressed on global environmental problems, as reflected in the World Conservation Strategy, parks has established a solid foundation as a major player in addressing these issues and their associated goals of improving the overall "well being" of people. In this context the Parks Branch is dedicated towards maintaining its strong growth and continuing as a pace setter in achieving excellence in the sustainable development and innovative management of Manitoba's park resources.

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***Directors of Manitoba Government Air Service***

- ☐ Jim Uhlman
  - ☐ Hugh Smith
  - ☐ Norm McCoy
  - ☐ Victor R. Bantle
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# Manitoba Government Air Service

The first role of the government-owned aircraft in Manitoba was fighting forest fires. But the usefulness of aircraft soon became apparent to other branches in the Manitoba Department of Mines and Natural Resources and its role expanded to everything from delivering gravel to remote locations to dropping hay to starving cattle.

In 1930, with the country "blanketed" by the great depression, governments at all levels sought to cut their spending. The Manitoba government's plans for an air service were scrapped for want of money and then a deal was struck between the province and the federal government. The Canadian government pared its budget by cutting military spending, part of which had involved the RCAF in fighting forest fires for the newly created Manitoba Forest Service.

The deal was that Manitoba would buy five Vickers Vedette flying boats for one dollar each, providing the province employed five RCAF officers to fly them. This little group of planes and pilots became part of the Manitoba Forest Service under Colonel H.I. Stevenson.

The first patrol under this new arrangement took place on May 3, 1932.

Lac du Bonnet was chosen as headquarters and main base of operations with Cormorant lake, an RCAF station at mile 42 of the Hudson Bay Railway, as summer base.

The Vickers Vedette was a biplane flying boat of wooden construction with open cockpits and powered with a 165 HP Armstrong Sidley Lynx engine. Despite its limited payload the aircraft performed yeoman service all across Canada in the 1920's and early 1930's. They continued in service in the MGAS until 1937 when the last one — "MAG" — was forced to land due to engine

failure on a shallow lake near Cormorant. The plane was stripped of parts and the body burned.

In 1934, the service bought a second-hand Fairchild 51 cabin aircraft for \$1,500. A year later it bought a new Fairchild 82B which was equipped for year-round service. This was the beginning of an new era for the Air Service.

But growth was not to last. In 1939 the impending war halted further purchase of aircraft and by mid 1940 the staff was reduced to the assistant branch director and Hugh P. Smith, one of the pilots who later became director of the branch.

After the war, in 1946, the air service, by an act of the legislature, was separated from the Forest Service and became a branch in its own right — the Manitoba Government Air Service.

Jim Uhlman who had been chief pilot and assistant director now became director of the newly formed branch, a position he held until 1962 when he retired and was replaced by Hugh Smith who remained with the branch until 1974.



*One of the original Vickers Vedettes*

[illegible]

Norm McCoy became director of flight operations in 1971 and retired following an illness in 1984. Victor R. Bantle is the current director.

The call letters CH8E The Pas were recognized by short wave operators as the call sign for the radio station at Grace Lake, near The Pas. They often represented a call for help from one of the remote communities of Manitoba.

When the call for help came in the caller would outline the symptoms of the case, a rough diagnosis as it were, and the radio operator at Grace Lake would then contact the appropriate doctor who would check his files and compile a prescription which would be relayed back to the community by radio. When the illness was more serious than a radioed prescription could handle one of the two aircraft kept at Grace Lake would fly in and bring out the patient.

The radio link was also essential in fire protection and fighting operations. When the whole province was hooked up into a single coordinated system it meant fire protection officers could determine where every fire was, the size of the fire and how best to deploy fire fighting equipment. This coordinated system was finally realized in 1963.

One of the strangest missions carried out by the air service was in May, 1950, when it was called upon to save nearly 1,000 head of cattle from starvation during the Red River flood. From an emergency seaplane base at Selkirk on the Red River, two MGAS planes flew dawn-to-dusk from May 12 to June 1 dropping feed to cattle left behind on high ground in the flood-swollen province.

During the 21 days of flying it is estimated that 900 cattle worth \$125,000 were saved by the five tons of hay dropped from aircraft. The planes flew about 12,000 miles during the mission.

Another heavy-duty operation was supplying cement, sand, and gravel, dropped by burlap parachutes, to surveyors who were marking the Ontario-Manitoba boundary. The material was used for erecting concrete boundary markers.

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After touring the MGAS complex at Lac du Bonnet a group of Grade 2 pupils wrote letters of appreciation to the Director. One of them said:

*"Thank-you for showing us your planes. I liked the plane that had the strings hanging down from it best of all."*

Actually the MGAS maintained a fully-equipped in-house servicing unit that kept the aircraft completely air worthy at all times for all conditions. The maintenance staff were certified by the federal Department of Transport. Strings hanging down from aircraft were not allowed even if little boys did like them.



**Aztec — CF MAD**

MGAS maintained a virtually spotless safety record, due in part to sound maintenance practices and safety-conscious crews. The only deaths in the MGAS history were in 1952 when a Norseman aircraft on a routine flight from Lac du Bonnet to Norway House crashed north of Berens River killing the pilot and all six passengers, who were government employees.

At that time MGAS had flown, in more than 20 years, more than 2,600,000 flight miles without a loss of life or serious injury.

Patients in northern Manitoba requiring medical transportation have been transported via the Northern Patient Transportation Program since 1971. The MGAS was involved until 1985 with the majority of these medivacs, utilizing equipment and escorts from the northern facilities.

The need to provide a specialized dedicated aeromedical transport aircraft was recognized and in 1985 the Lifelight Program was born. Lifelight continues to be administered by the Manitoba Health Services Commission and is operated by the Government Air Service.

A specially designed and equipped Cessna Citation II Jet, highly trained flight nurses, skilled pilots and engineers, and physicians when required, are all part of the Lifelight Program. Non-critically ill patients from northern Manitoba continue to be transported via the Northern Patient Transportation Program.

In 1977, the Air Services operated its first Canadair CL215 Waterbomber for the Department of Natural Resources. With the acquisition of the last water bomber in 1989, the CL215 fleet totals five.

Over the years MGAS was served by many skilled and selfless personnel, men who braved bad weather to save lives, and men who understood the importance of their role in the life of the remote areas of Manitoba, especially in the early years.

The MGAS was part of the Department of Mines and Natural Resources, renamed in 1970-71 the Department of Mines, Resources, and Environmental Management. In 1972-73 air, radio and technical services were transferred to the Department of Northern Affairs until 1974-75 when they were transferred to the Department of Renewable Resources and Transportation Services.

In 1977, they were transferred to the Department of Highways and Transportation where they remain to this date.



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***Directors of the Regional Services Branch***

- ☐ Al Jeffrey
  - ☐ Ernie Psikla
  - ☐ Joe Nespor
  - ☐ Ed Wong
  - ☐ Harvey Boyle
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# Regional Services Branch

Regional Services Branch is one segment of the Department of Natural Resources that was known by various names and lodged in various branches during the last 60 years. It was in the Game and Fisheries Branch, Forest Service, Resource Management Division, and the Field Administration. It has witnessed many changes, and not only in name; work loads and responsibilities have altered as the times and political whims dictated.

At one time, almost all field activities were carried out by a modest staff of forest rangers, game guardians, fishery inspectors, supervisory and support staff. Duties involved technical and management work in direct contact with the resource and with resource users.

References to "forest keepers" and "game guardians" can be found documented well back in history. One of the earliest references dates back to King Edgar of England, who reigned from 959 to 975 A.D. The King prohibited hunting of his deer and appointed officers to preserve "all Game of the Table" in his woods. These officers were probably the first conservation officers. In 1016, King Canute published Forest Laws and appointed forest officers.

In North America, game guardians and forest rangers existed for about 300 years. The first were in the United States.

In Canada, the first wildlife legislation was in 1794 when Nova Scotia passed an act for preservation of "partridge and blue-winged duck."

## A Manitoba Overview

In 1876, Manitoba proclaimed its first *Game Preservation Act*. The Act of 1879 permitted the appointment of guardians having the power of constables to enforce the Act. Management of game fell under the Bureau of Agriculture and Statistics.

By 1883, local game guardians were at work

in Manitoba but it was not until 1902 that a Provincial Game Guardian was appointed. He was C. Barber and he occupied the position until 1919. In 1905, an additional employee was added, and, in 1909, John Keyes and William H. Joyce were hired as deputies. Later, six to eight game guardians were appointed and 18 or more extra game guardians and inspectors were hired for intervals of up to three months during hunting seasons. By May 1, 1920, prosecutions of game matters were handled by seven inspectors and game guardians of the Manitoba Provincial Police.

Routine activities of the Game Branch were administered by the Ministry of Agriculture until they were taken over by Mines and Natural Resources in 1930-31.

In 1895, the first Forest Reserves were established in what is now Manitoba. Forest Reserves were created and controlled by the Forestry Branch of the federal Department of the Interior which was created for this purpose. Federally appointed forest rangers exercised control over the Forest Reserves until the *Natural Resources Transfer Agreement* took effect and the Province of Manitoba assumed control in 1930.

A short time prior to this Agreement, the Manitoba Legislature had passed *The Forest Act* and *The Game and Fisheries Act*, thus permitting the establishment of the Forest Service and the Game and Fisheries Branch upon the *Resource Transfer Agreement* coming into effect.

Forests had been cared for under the Dominion Forest Service. Fisheries matters were administered by the federal Department of Marine and Fisheries. "Protection of Game" had previously been administered by the provincial Department of Agriculture.

That changed on July 15, 1930, when the Department of Mines and Natural Resources took over the control and administration of Forestry, Fire Protection, Game and Fisheries.

Many of the Dominion Forest Officers were given the option of remaining in the federal service or working in the newly-formed provincial Forestry Service. Many chose to work for the new provincial organization, bringing with them the methodology and field practices in use at the time. Of the 104 permanent departmental staff in 1930, 71 were former Dominion employees.

The Provincial Forestry Branch was now responsible for the administration of forestry affairs on crown land areas both within and without the forest reserves, including fire protection, timber disposal, reforestation; summer resorts, and other uses.

Game management personnel from the Department of Agriculture were transferred to the newly formed Department of Mines and Natural Resources.

In 1932, Game and Fisheries Branch policies were;

- (1) Protect wildlife.
- (2) Produce more game and fur-bearing animals.
- (3) Establish and patrol Game Preserves and Bird Sanctuaries.
- (4) Provide public shooting grounds.
- (5) Develop public interest.
- (6) Urge clean sportsmanship.
- (7) Promote respect to the owners or occupants of land.
- (8) Encourage farmers to assist in increasing game.
- (9) Develop a Fur Farm Experimental Station.
- (10) Improve commercial fishing conditions.
- (11) Create a greater local demand for Manitoba fish.
- (12) Introduce and increase game fish throughout the Province.
- (13) Carry out scientific investigations of fish life.

It was the responsibility of the field staff to implement these policies and provide field support. In 1990, the purpose of the Regional Services Branch were defined as:

*"This branch enforces resource Acts and Regulations; delivers resource management programs to the public and other government agencies; operates and maintains provincial parks; manages the forest fire*

*prevention, detection and suppression programs."*

Initially, each Branch had its own field staff. That has changed. Today, Regional Services has eight regions with one regional manager, in charge of each two regions. A regional superintendent is responsible for each region. There are a number of Natural Resource Officer detachments in each region staffed by Natural Resource Officers (NRO). A senior NRO is in charge of each detachment and is responsible for day-to-day operation and supervision of the detachment. These staff members include various combinations of the following seasonal and permanent personnel: natural resource officers, clerks, special officers, fire rangers, patrolmen, fire tac crews, resource management assistants, park foremen, park patrolmen, park attendants, visitor services personnel and other parks and resources personnel as required to complete the work force.

As recently as 1989, NROs were commonly called Conservation Officers and Park Rangers, two different names for the same job. An NRO with responsibility for a major park was referred to as a Park Ranger and an officer outside the park was known as a Conservation Officer.

The titles and the responsibilities of this job have changed many times over the past sixty years. In 1930, the common titles were forest ranger, game guardian, fisheries inspectors and fisheries guardians. Other common names included game warden, park warden, park officer, park ranger, fisheries officers and conservation officers.

In 1930, when the province first took over responsibility for natural resource management, there were few regulated hunting seasons and the legislation was quite basic. One of the major responsibilities of game guardians was to patrol game refuges. All hunting seasons took place during a relatively short time in the fall. Today seasons, such as for wild turkey, which at that time did not exist in the province, begins early in the spring. Hunting seasons now carry on virtually year round.

But by the same token, closing a season also has an impact. In the 1974, 1975 and 1976 seasons, hunting for white-tailed deer was prohibited. For Conservation Officers those proved to be some of the busier falls on record, because some long-time hunters refused to forego their regular deer hunt.

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When the department took over natural resources, communication from aircraft or fire towers was often carried out by the use of passenger pigeons which carried written messages. In the early years, an incomplete and unreliable communication system was implemented with radios in some towers and ranger stations during the fire season. By the end of World War II, the system had increased and expanded. By 1957, many field vehicles were equipped with radios and improvements were made to extend the range. A "repeater" was also installed. By 1966, the Whiteshell began switching to VHF - FM radios, and by 1979 the entire department had switched over. Today, radio communication is possible throughout most of the province using a system of "radio-repeaters".

Many of the NROs' vehicles are equipped with "scanner-type" radios which make it possible to monitor a number of frequencies simultaneously. Some of these radios are also equipped with MTS mobile telephones plus a "dial-up" system. The dial up enables the mobile NRO to use a system of radio tones to hook up with land lines, and distant radio repeaters.

In addition hand-held portable radios are issued to all natural resource officers. With better

communication, officers are better able to keep in touch with their co-workers, making remote travel, firefighting and law enforcement much safer.

In 1930, the field man's most common means of transportation was on foot or on horseback. Today, he uses aircraft, including fixed wing and helicopters, four-wheel drives and all-terrain vehicles. The changes in transportation have likely had the greatest impact on the job. Improved transportation has totally altered the means of fire suppression. How vastly different the initial attack of a heli-tac crew has become from a horse and wagon in the 1930's.

Vehicle use has totally altered the north. Areas that were once inaccessible are now readily reached using aircraft, snowplanes, bombardiers, snowmobiles, ATVs and four-wheel drive vehicles.

Many of the current hunting regulations are a direct result of vehicle use; designated routes, rules governing the use of vehicles to search for game and the recent addition of roadside refuges. As the poacher acquires modern transportation, the NRO requires similar equipment to keep pace. Each time a new means of transportation becomes available the field man's job changes immensely.



*Winter field trip*

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The development of such areas as forest reserves, W.M.A.'s, parks, and refuges had a significant effect on the branch. The Whiteshell Forest Reserve was established in 1931. It was obviously an area suitable for both forests and recreation. Now Forest Rangers were also responsible for recreational use and forest protection within the forest reserves. This particular area was the forerunner of our present provincial park system. In the Whiteshell today, Regional Services Branch is responsible for operation of a golf course, medical services, campground patrol and a myriad of other varied duties.

The Regional Services Branch received numerous "face-lifts" over the years. The most important of these took place in 1930, 1961 and 1980. Changes of lesser magnitude also occurred in 1955, when the Game and Fisheries Branch divided and in 1966 when some conservation officers became park officers. Here is a brief chronological overview of field services development from 1930 to 1990.

By the time Manitoba took over management of its resources in 1930 the province was already headed into a period of severe economic depression. Much of Manitoba was experiencing drought conditions. The 1929 forest fire season had been one of the most severe in history.

The *Resource Transfer Agreement* took place amidst high expectations, but the decade quickly produced a shortage of money, unemployment and, as a consequence, limited development.

Tough times placed added importance on the resources. Farmers and settlers turned to "bush-work" for materials or as a way to make ends meet. Many couldn't afford the price of a timber permit. Some of the unemployed or destitute hunted and fished to survive.

The Forest Service was established to deal with all forest matters including fire control. The province was divided into four forest districts with a district forester in charge of each and a staff of permanent forest rangers. Col. H. I. Stevenson was Provincial Forester responsible for the Forest Service. He continued to hold this position until 1942-43.

As an insight into the conditions which existed at the time, consider this excerpt from the 1930-31 annual report concerning aerial fire patrols.

*"On practically all patrols a qualified fire*

*ranger was carried whose duties were to co-operate with the pilot in locating fires. When an incipient fire was discovered which could be handled by one man, the ranger was landed with proper equipment and rations for 48 hours."*

The province had inherited an aerial fire detection system utilizing the Royal Canadian Air Force, which continued until the end of the 1930 fire season. Thinking that aerial detection costs were too high, the province embarked on a program to erect lookout towers for fire protection outside the provincial forests, *"with a reduced amount of flying to be done on a contract basis by a private company."*

Communication was a factor in fire action. *"The Royal Canadian Corps of Signals handled the wireless messages."* Within the forest reserves, a system of telephones had been in place under the Dominion Forest Service. This was expanded when possible and it connected many fire towers to ranger stations.

During the first year of operation, the new Game and Fisheries Branch also gained experience. The Game Branch, which was previously in the Department of Agriculture, now consisted of a director, chief game guardian, eight permanent and four temporary game guardians. To assist in administration, a five-member Game Commission was appointed to act in an advisory capacity.

A. G. Cunningham was the Director of the Game and Fisheries Branch in 1930 and remained in that post until 1947 when Gerald Malaher took over as Acting Director of Fish and Game. This was not a position requiring any game law enforcement.

Game Guardians carried out continual patrols. The main problem involved closed season hunting and poaching in game preserves and bird sanctuaries, of which there were twenty-five. The boundaries of the preserves were not well marked, making enforcement difficult. Cunningham wrote;

*"Efficient game enforcement has been rendered very difficult owing to the number of game guardians that could be employed due to the present economic situation."*

Prairie chicken and native grouse populations were on the increase. Hungarian partridge were gradually migrating in from the west. The bag limit for ducks was reduced from 200 to 150.



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The newly organized fisheries section had a chief inspector, four inspectors plus temporary employees referred to as fishery guardians.

*"One inspector was stationed at Lake Winnipeg, another at Lake Manitoba, one at Lake Winnipegosis, and a third inspector at The Pas to look after all commercial lakes in that area."*

To carry out lake patrols the department operated four gasoline power boats, a steam tug and the patrol boat "S.S. Bradbury".

The fiscal year ending April 30, 1932 was the first complete twelve month period that natural resource management fell under provincial jurisdiction. By now many of the organizational wrinkles had been ironed out.

The first steel towers erected in Manitoba went up this year. There were ten of them in total, all were 80 feet in height. They were built

at Cranberry Portage, Cormorant Lake, Thicket Portage, Norway House, Telford, Slave Falls, Milner, Murray Hill, Whisky Jack and Sassaginigak. This brought the total number of towers to 35.

The Fisheries Section was feeling the effects of lack of equipment. Their boats were rented and plans were just being formulated to obtain four bombardiers. Dog teams were the only other means of transportation during the winter.

Unemployment Relief Camps provided assistance during this time of economic hardship. These camps were supervised by the Forest Service and were located in the Sandilands, Sprucewoods, Turtle Mountain, Duck Mountain, and Porcupine Forest Reserves. In all, 160 men worked at building roads, constructing fire guards and other such duties.



**Back Row** (left to right): Francis R. De Leley, S. E. Campbell, Peter Perchuk, Hugh Guttman, Lars Porath, Franklin Anson, J. B. Norman, George Norman  
**Middle Row** (left to right): John Gass, R. C. McKenzie, John Peterson, Reg Lockee, Ed Stechishen, Clarence Lintott, Gordon Bates, Bill Mawdsley, Jim Bell  
**Front Row** (left to right): Siggie Oliver, Ben Balchen, Ray Elke, C. K. Smith, John Shelton, Brent Lees, Mike Thorvaldson, B. R. Gilmore



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By the spring of 1933, the Game and Fisheries Branch was feeling the extra burden brought on by the depression. Times were tough and many people turned to hunting as a means of survival. It was necessary for staff to maintain a vigilance against the illegal means of meeting the increased demand for game.

A need was recognized for broader responsibilities of Forest Rangers, and greater co-operation with Game and Fisheries Guardians, thus all Forest Rangers were given authority under the *Game and Fisheries Act*.

Twenty-eight game preserves now existed and the Director wrote that;

*"a very material increase in wildlife has been noted in some of the preserves that have been permanently patrolled."*

As a result of tough economic times it was necessary to reduce some licence fees. Deer licences dropped from \$5.00 to \$2.50.

Bombardiers now being used for winter fisheries patrols proved satisfactory. In early 1934, an attempt was made to use a snowplane on patrol, but the machine was found to be unsuitable due to a lack of power.

Public education was an important part of the department's responsibilities. Three Forest Conservation camps were established by the Commission for Employment and Youth Training. A total of 563 men took part. The Forest Service was responsible for detailing work and lecturing.

The Game Guardians reported using every possible means of transportation to carry out their duties, travelling a total of 196,772 miles during the year, they used dogs for 1,376 miles, horses for 3,467, and foot for 8,912 miles.

World War II had a major impact on the natural resources of Manitoba as the demand for most natural resources skyrocketed to meet the needs created by the war.

*"During the war years the importance of our Natural Resources, among which Game and Fish loom large, has more than ever before attracted public attention and the necessity for the maintenance and expansion of these resources in the public interest is fully realized by all responsible for their administration."*

In 1939, the provincial forester in charge of the Forest Service was Col. H. I. Stevenson.

It is quite understandable that the war influenced the development of the field service. Many men enlisted in the military services leaving fewer men to patrol the forests, game reserves and lakes.

New staff lacked the experience of those gone to war. Equipment was difficult to obtain, and when available, it was slow in arriving. Few new initiatives were possible.

September, 1945, saw World War II come to an end and the military began demobilization. Returned men needed jobs and housing. That, plus renewed industrial development, created a demand for forest products required for building. Veterans turned to the forests, traplines and fishing industry as a source of income and employment. Meetings were quickly set up to arrange for "post-war planning".

Economic conditions rapidly improved. Roads were being extended into undeveloped regions and sport fishing and hunting rapidly became a dominant form of recreation.

*"The ending of war and consequent releasing of tension, quite naturally resulted in turning peoples attention towards the peace of woods and lakes and streams."*

A. G. Cunningham remained as the Director of Game and Fisheries Branch, his fisheries assistant was S. Sigurdson. A. B. "Bert" Howell was Chief Game Guardian, and A. C. McMillan was Chief Warden for the northern area. Gerry Malaher was acting Superintendent in The Pas.

The Game Branch had 31 temporary Game Guardians on the payroll as needs dictated. The Fisheries Section had a supervisor of fisheries, five permanent fishery inspectors and one on a temporary basis. The Forest Service was headed by J. G. Somers, with S. W. Shortinghuis as Chief of Forest Protection.

*"In September 1945 the Department of Mines and Natural Resources entered into agreement with the Department of Veterans' Affairs to employ 25 ex-servicemen under the Training on the Job Plan. Three hundred applicants were interviewed by the Civil Service Commissioner and officers of our Department and 11 were assigned for*

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*training with the Forest Service. Another 14 were selected to train as Game and Fisheries Officers. These trainees were placed in the field with members of the regular staff and they assisted in active field work."*

A significant change took place this year, when the Game and Fisheries branch was separated into two individual branches. Mr. Malaher remained as Director of the Game Branch and S. Sigurdson became Director of Fisheries. J. G. Somers continued at the helm of the Forest Service. The intention was to maintain some integration of field staff in northern areas.

*"In the early summer of 1955, another milestone in resource management occurred when game guardians were issued with a uniform."*

The Provincial Parks Act was passed, thus formally creating the first provincial parks: Whiteshell, Grand Beach, Turtle Mountain, Duck Mountain, Clearwater and Grass River Provincial Parks. These areas continued to fall under the jurisdiction of the Forest Service.

The period from 1961 to 1980 is recalled as a period of prosperity, development and change. The 1960's will long be remembered by all; flower children, peace movements and revolutions included. The department had it's own revolution, it was a re-organization of the department,

commonly referred to as amalgamation, and it took place on April 1, 1961.

The "Field Division", Renewable Resources came into being. Supervisor of Field Personnel and Operations was A. P. Davey. The province was divided into eight regions with a regional supervisor in charge of each.

Each region consisted of a number of Conservation Officer Districts staffed with one or more Conservation Officers ranging in rank from Trainee to Conservation Officer V.

Reasons for the changes were outlined;

*"While the work loads and administrative responsibilities of the branches grew and diversified over the years, few changes in their actual administration had taken place. Advanced technical and administrative procedures evolved over the past 30 years and the big expansion in field work, especially in the field of recreation, caused the government to modify the organization of the department. The main aspect of reorganization was amalgamation of the field staffs of game, fish and forestry for a more efficient, unified yet flexible field operation than was possible with several separate field staffs. The administration of commercial fishing on Lakes Winnipeg and Manitoba has been left with the Fisheries Branch."*



**Forestry meeting, Singuisb Lake, Duck Mountain**

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Amalgamation was not welcomed by all, especially by some Game Guardians. They thought that Forest Service personnel had come out on top. Former district foresters now occupied the majority of regional supervisor positions and all but one supervisor "held university degrees". Thus the emphasis would now be on forestry matters. Some officers felt that game patrols would suffer.

Bob Huck, Regional Superintendent, said acceptance of change was slow to come but it did arrive.

*"1961 was quite a year. Suddenly, field officers were to be all things to all people. Forest Officers who had spent their careers cruising timber, running parks and fighting fire, with enforcement experience limited to trespass incidents under a weak Act, were now expected to be functioning Game and Fisheries Officers, some with only lake experience, were now to cruise timber, inspect timber sales, fight forest fires and manage parks. The new title was "Conservation Officer". 1961 was a year of drought and huge fires broke out. The forestry boys said that this was as good a time as any for the game and fisheries guys to learn and that's just what they did. In 31 fire seasons with the department I don't recall seeing a greater effort than was made that year. After a period of several years accented by timely training courses, we slowly became a unit."*

Sixty conservation district headquarters were now operational. The work week was reduced to five days, but this often proved impractical. No overtime pay was allowed.

Another major change now took place, as the Parks Branch prepared to separate from the Forest Service effective January 1, 1964. In 1966, Conservation Officers who chose to, went over to the Parks Branch and became Park Officers under the Department of Tourism, Recreation and Cultural Affairs. In the early 1970's the job title was changed once more, to Park Ranger.

After writing exams and being interviewed, 15 new trainees were taken on staff. Two of the trainees were graduates of the Resource Management Technology Course at Saskatoon. The first in a series of advanced training courses was held with 91 conservation officers in attendance.

Emphasis was now being placed on a resource school diploma as a prerequisite for employment as a conservation officer. Staff already within the system would be exempt. A diploma from a recognized resource school became mandatory.

Now called the Resource Management Division of the Department of Mines, Resources and Environmental Management, the province was divided up into four regions, all headed by a director. Each region contains foresters, biologists, conservation officers and other support staff.

Assistant Deputy Minister W. K. Webster noted the changing roles in his statement concerning conservation officers, referring to them as

*"...resource managers one minute and law enforcement officers the next".*

The first female officer was hired in June of 1976. Elaine Dingman was assigned to the Virden District.

The Regional Services Branch came into existence.

The 1980's will be remembered as another generation of major changes and remarkable progress. A common catch-phrase of the period would become the word; "anti-groups". Lobby groups would launch powerful campaigns in attempts to end traditional resource uses such as hunting and trapping and these efforts would have considerable influence over the role of the NRO. Non-consumptive users such as photographers and bird watchers move to the forefront, and environmental consciousness is heightened.

Native issues including land claims and hunting rights were major resource issues of the period. The occasional tense moment ensued between regional services personnel and native Indians, as field staff made routine attempts to monitor the harvesting of natural resources throughout the province. *The Charter of Rights* had a remarkable impact upon the operations of regional services. The most serious implication, involving dealings with offenders under varied resource legislation. The poacher took full advantage of "new rights" afforded by the charter making the NRO's job more difficult.

A definite trend developed towards the hiring of new officers who were graduates of the resource program at Lethbridge, Alberta. This

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was a departure from earlier times, when most graduates came from the Renewable Resources Program at Saskatoon. The new recruits had an enhanced law enforcement background, at the expense of training in forestry and other areas of resource management.

This decade opened with another re-organization. The Parks Branch once again became a branch of the Department of Natural Resources with Park Rangers joining Conservation Officers under a single director of the Regional Services Branch. Regional biologists and foresters reverted to a system of supervision under their respective branches.

NROs had never before played such a high profile role. Increased media attention is commonplace. Field officers are frequently called upon to provide newspaper, radio and television interviews. Serious forest fire situations often become media events, as do matters concerning park operations or law enforcement matters. Special interest groups more frequently request talks and presentations. The public in general expects more from the NRO, and all civil servants in general.

A re-organization took place during this period with a Director of Regional Services being appointed in the Department of Natural Resources. Seven regions were established, each with a regional manager and superintendent. Many of the superintendents were former field men who had worked their way up through the ranks. A new emphasis was placed on preventative enforcement. As part of a visual identity program, Park Ranger and Conservation Officer vehicles were given unique markings. The blue and white, diagonally-striped trucks were quickly nicknamed "zebra-trucks". The move was not overly popular with field people or the public.

Conservation Officers and Park Rangers had always been concerned with their image, but now a new emphasis was being placed upon it. To this end, the old uniforms were thrown aside and a new look emerged. And, to bring staff complements up to full strength, recruitments were taking place at Lethbridge Community College and Kelsey Institute. To receive a promotion within the ranks, a new system was in place involving the use of eligibility exams.

The Resource Management Assistants program was initiated. It promoted local hiring for departmental positions. These were people with no formal training in resource management.

To meet conditions of the Northern Flood Agreement seven people were hired for on-the-job training and upgrading prior to their first year in the new Resources Technology Program at Keewatin Community College. By 1990 the number of NROs had reached 151.

Officer training continued. This year, courses included Advanced Tactical Driving and Officer Safety and Self-Defence. Officer safety continued to be a prime concern.

The North American Wildlife Enforcement Officers Convention was hosted by Manitoba and the news media quickly made an issue of the "hand-gun issue" as the need for NROs to carry sidearms was debated.

As the 1990's begin, the organization is vastly different than sixty years ago. One thing which has not changed is the "*esprit de corps*" of the field men.

Chief Albert Sinclair, a northern Cree Indian, when accepting a conservation award at a Fur Advisory meeting held in The Pas in 1949 referred to the field men of the department when he said:

*"I think every one of our boys in the service has captured the great sustaining truth that, though one may be isolated in the field where his superiors cannot oversee his work, the nobility of service well done becomes a sacred duty and an inspiration. Out of this I have drawn the strength and the assurance that I am leaving my people and my beloved northland in good hands."*

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***Directors of the Water Resources Branch***

- ☐ C. H. Attwood
  - ☐ B. B. Hogarth
  - ☐ J. A. Griffiths
  - ☐ T. E. Weber
  - ☐ D. D. Doyle
  - ☐ L. J. Whitney
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# Water Resources Branch

Manitoba is unique in being downstream from everyone else, in the lower reaches of the basins of two of Canada's major river systems, the Churchill and the Saskatchewan-Nelson.

The Churchill River Basin lies between Saskatchewan-Nelson to the south and Mackenzie and Seal Basins to the west and north. The area of basin is 115,000 square miles.

The Saskatchewan-Nelson Basin extends from the Rocky Mountains on the west, from the Missouri-Mississippi on the south to the Mackenzie-Churchill Basins on the north. The overall area of the Basin is 414,000 square miles. The average flow of the Nelson River is 100,000 cfs. The average flow of the Churchill River is 40,000 cfs compared to a flow of 355,000 cfs on the St. Lawrence River from a drainage basin of approximately 380,000 square miles.

Manitoba shares these basins with Ontario, Saskatchewan and Alberta and the states of Montana, North Dakota and Minnesota in the United States.

These major rivers and their tributaries were followed by early fur traders as they went west from the Great Lakes and the Hudson Bay into the prairies of western Canada. The early settlers also followed these routes to the productive lowlands along the watercourses in south central Manitoba. The residual fine textured soils, deposited during the recession of Lake Agassiz provided excellent land for the production of good quality grains. The natural levees were built up by the depositing of silt during periods of flooding from the channels, prevented the natural drainage into the rivers. These conditions led to the formation of large swamps covered with peat, where the runoff from the upper part of the watersheds was trapped in the low areas of the

valleys. These conditions hindered the settlement on the Prairies and in 1880 the first *Drainage Act* was passed permitting the federal Department of Public Works to spend public funds of drainage works in the Red River Valley.

To assist in the development the Dominion agreed to transfer tracks of swamp land to the province on the condition that sufficient drainage was undertaken to render the land arable. The records indicate by 1883 some areas had been reclaimed under the 1880 Act.

## Groundwater Development

Records from the early history of the Province show that public opinion favoured the use of ground water although the cost in many instances was quite high. The annual report of the Department of Public Works from 1890 describes a citizens' committee in Deloraine that spent \$10,000 on a well which reached a depth of 1550 feet, but did not produce a supply of water. The high costs involved in ground water development resulted in changes in the *Municipal Act* in 1890, which made provision authorizing municipalities to purchase machinery for boring and drilling wells within the municipality.

## The Transfer 1930

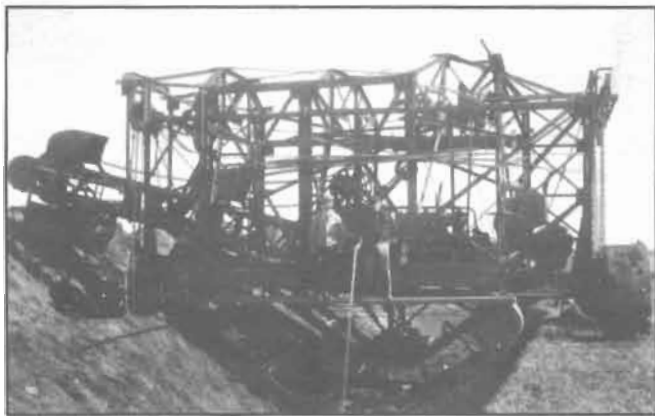
Following the transfer of the resources to the province, the Water Resources Branch was formed with C. H. Attwood, as the first Director of the branch, which had a staff of three engineers, one draftsman and one stenographer. The branch was now responsible for the administration of the *Water Rights Act* and the *Water Power Act* enshrined the same principle which was contained in the *Northwest Irrigation Act* passed by the Dominion Government in 1894, which vested



in the Crown the right to the use of all water. The Crown then may allocate water by administrative decision, through licensing, to secure the most beneficial use of available water. This principle varies from the riparian doctrine of water use by permitting the allocation of water to lands not adjacent to a watercourse.

The *Manitoba Water Power Act* was similar to *Dominion Water Power Act*. The Act required the licensing of any undertaking for the development of any provincial water power or in the transmission, distribution, or utilization of the force or energy produced from water power.

The annual report of the Branch in 1932 recorded a revenue of \$50,976.31 from water power rental compared to 31,920,543.78 reported in the 1987-88 annual report.



*Elevating grader working the Red River Valley — early 1900's*

The hydrometric surveys initiated by the Federal Government in 1911 continued. They provided an important information base essential to the management and development of Manitoba Water Resources. In 1933, a co-operative agreement between Manitoba and the federal government was signed whereby the province paid an annual lump sum towards the costs of measurement. In addition, the province paid the salaries of the majority of the gauge readers. This arrangement continued until 1975.

It was estimated that at the height of the crisis, the drought area in the Prairies was estimated to contain one-quarter of the occupied farm land

in Canada and involved close to 900,000 people.

On April 17, 1935, the federal government created the Prairie Farm Rehabilitation Administration to combat the severe drought conditions in the three Prairie Provinces. In Manitoba, close liaison was implemented immediately between Water Resources Branch and the P.F.R.A.; this close co-operation has continued on water development programs and projects for water development and conservation to the present day.

By 1936 the Drainage Districts lacked funds for maintenance, uncontrolled foreign water entering the drainage systems due to the Districts not encompassing a total watershed, and the claims of landowners of not receiving benefits relative to the debenture levees.

In 1935, the Finlayson Commission was appointed to find a mutually agreeable solution to the problems. The report of the Commission recommended that the province assume about half of the four million dollar debt of the districts, that Drainage Maintenance Districts be established comprising essentially the former drainage districts, with the province contributing one third the cost of maintenance. The district affairs were to be administered by a board of trustees appointed by the municipalities with a common chairman appointed by the province.

The *Land Drainage Arrangement Act* of 1936 created the Drainage Maintenance Districts as recommended by the Commission. The first chairman of the Board was F. Umphrey, an engineer in the Reclamation Branch. The province provided the administration staff for the operation of the boards head office. The province, however, did not accept the recommendation to provide half the cost of maintenance but limited its share to one half of one percent of capital expenditures in each district.

#### **P.F.R.A. Program.**

In 1942, an agreement was signed under which P.F.R.A. Community Dams would be transferred to the province for future maintenance and operation.

As a result of this agreement, the Water Resources Branch expanded the supervisory staff on the northern marsh program to undertake the work on the community dams in the southern portion of the province.

### Lyons Report

On April 14, 1946, representatives of the Union of Drainage Maintenance Districts asked the province for a commission to make a thorough investigation of all matters concerning drainage maintenance; watersheds should be defined so as to apportion the responsibility of foreign water and its attendant costs before reaching an outlet; the present state of maintenance investigated and the apportionment of cost between the municipalities and the province, and such other matters as would be necessary to protect the original capital expenditures.

A Commissioner subsequently recommended that the province assume:

- (a) two-thirds of the cost of construction and maintenance of drains carrying foreign water.
- (b) one-third of the cost of construction and maintenance of drains intercepting and carrying water originating in the district.
- (c) the province assume 100% of the cost of reconstruction of major floodways carrying foreign water through the districts in the Red River Valley.



*Flooded house on St. Marys Rd in Winnipeg — 1979*

In 1952, the province accepted the financial formula of the Lyons Commission for its share of the maintenance works in the district, as well if, initiated a reconstruction program on the floodways across the Red River Valley. The Drainage Branch in the Department of Public Works assumed the responsibility for the design and the construction of the floodways, with the first project being initiated in 1952.

### Prairie Province Water Board

Following the transfer of the water resources to the three prairie provinces a number of discussions took place between the provinces and federal government on a system of management and allocation of water in the shared river systems between the provinces.

In early 1940's, Manitoba became concerned with the expansion of irrigation systems in Alberta using water from the Saskatchewan River system.

In July, 1948, Canada and the provinces signed the Prairie Provinces Water Board Agreement. The function of the board was to recommend the best use to be made of inter-provincial waters in relation to associated resources in Manitoba, Saskatchewan and Alberta, and to recommend the allocation of water between all such provinces of streams flowing from one province into another province.

Each province appointed a member who in each case was the Senior Water Resource Administrator in the department responsible for water. The federal government appointed two members, one from the P.F.R.A., and one from the federal department responsible for water resources, who was designated as chairperson.

In 1948, B. B. Hogarth replaced C. Attwood as Director.

### Flood Damage and Flood Control

During the spring runoff period of 1948 large floods occurred on many streams and lakes in Manitoba.

On the Red River, the town of Morris was completely flooded and at Emerson 60% of the Town was flooded. In the Greater Winnipeg area, some 1200 homes were damaged and basements of many commercial and wholesale establishments were flooded.

In July of 1948, the Saskatchewan River at The Pas rose to the highest level on record. The spring flood merged into the summer flood and caused damage to farmlands, marsh areas and water control structures. The Carrot River flooded southerly over the farmlands and emergency action was taken to evacuate the residents and cattle.

In the Summerberry Fur Block, two major structures were demolished and many others damaged. During the spring of 1949 floods occurred along the Pembina River and Souris River.

### **Water Power**

In July, 1947, the province appointed a Water Power Commission with Dr. T. H. Hogg, a consulting engineer of York Hills, Ontario, as Commissioner. The Commission was to report on certain aspects of the hydro-electric power situation and make recommendations to guide the future policy re hydro-electric power.

The Commission's report on March 24, 1948, stressed two main facts:



***Kettle Rapids Hydro generating plant***

- (1) power demand in the province was already increasing
- (2) existing utilities were able to meet present demand only because there has been above normal flows in the Winnipeg River.

The report said a power shortage in the near future was probable unless steps were taken to bring new sources into production.

The report pointed out the difficulties that lay in the way of further expansion by the existing utilities and, therefore, recommended that the province set up an agency to take over and operate the existing utilities and to build new developments as required.

The province took immediate action towards implementing the recommendations by passing an Act in April, 1949, to provide for the generation of hydro-electric energy in the province. The Act provided authority for the province to proceed with the Pine Falls Power Development on the Winnipeg River to avoid the anticipated power shortage in 1951, and for the creation of the Manitoba Hydro Electric Board to carry out the work.

In May, 1949, work started on the Pine Falls Hydro-Electric Project.

### **Power Surveys and Investigations**

In 1931-32, the Water Resources Branch carried out a power survey for the development of hydro electric power plant on the Dauphin River. The proposal was to divert water from the Cedar Lake on the Saskatchewan River to Lake Winnipegosis to provide additional flows on the Dauphin River.

In 1946, the Power Survey Program was initiated on the northern rivers. Field and office investigations were carried out on the Nelson River from Lake Winnipeg to Hudson Bay, on the Churchill River from Granville Falls and an updating on the Dauphin River survey.

Investigations were carried out on the Nelson River from Lake Winnipeg to Hudson Bay, the

Churchill from Granville Falls to Hudson Bay, the Churchill-Burntwood River Diversion, and the Saskatchewan River at Grand Rapids. The program was phased out by 1961.

### **North-West Escarpment Agreement**

The North-West Escarpment agreement of 1949 was signed between P.F.R.A. and the Manitoba Department of Public Works. It provided for the construction works recommended as a result of the investigation carried out by the P.F.R.A. following the wide spread flooding which occurred in 1947-48 as a result of flooding along the streams flowing off the northern slope of Riding Mountains and the eastern slope of Duck Mountains. The proposed works would reclaim areas of fertile agricultural lands, prevent further soil erosion and overcome periodic flooding caused by the rivers, creek and tributaries discharging into the Lake Dauphin Basin.

During the spring runoff period of 1950, the Red River Valley was devastated by one of the greatest floods in the history of the province. The river formed a lake in the valley south of Winnipeg, 75 miles long and 20 miles wide, requiring the evacuation of the towns and the farms in the river valley between the international boundary and Winnipeg.

In Winnipeg, the river rose to an elevation of 30.2 (local datum) 12.3 feet above first flood stage and the level remained above flood stage for 51 days. The flood waters inundated 10,500 homes despite the serious efforts of thousands of volunteers dykers.

The damage to public and private property was estimated at tens of millions of dollars.

### **City of Winnipeg Dyking System**

Following the 1950 flood, the federal government established the Red River Basin Investigation in the Water Resources Division, Engineering and Water Resources Branch, Department of Resources and Development of the Government of Canada. It was to find ways to reduce the flood hazards in Winnipeg.

Preliminary design and cost estimates were prepared for channel improvements, diversion, dyke and storage measures.



*Aerial View of the Municipal Hospitals in Winnipeg flooded during the 1950 flood*

In December, 1956, the province appointed a Royal Commission on Flood Cost Benefit, chaired by H. W. Manning. The Commission was instructed to compare the costs with benefits which would accrue from the implementation of any schemes studied by the R.R.B.I. or any other methods of flood control. In addition to engineering works, the Commission included in its studies a scheme for government sponsored flood insurance.

The report was presented two years later, and recommended:

- (1) The construction of a 60,000 cfs capacity floodway around Winnipeg.
- (2) The construction of a 25,000 cfs diversion from the Assiniboine River to Lake Manitoba near the City of Portage la Prairie.
- (3) The construction of a storage reservoir on the Assiniboine River near Russell.

The Commission estimated the cost of these projects at \$72,483,000, having a benefit cost ratio



of 2.73. The projects would provide complete protection for the Winnipeg with the permanent dyking system for a flood of 169,000 cfs with a frequency of occurrence once in 161 years.

### **Flood Forecasting**

The flood on the Red River of 1950 generated an increased demand for advance information on possible flooding from lakes and rivers in the settled areas of the province. In March, 1954, a Flood Forecasting Committee was established to review, scrutinize, and approve flood forecasts on the Red River prior to their release to the provincial government and hence to the public. The first meeting of the committee was held in April, 1954.

The Chairman of the committee was the Director of Water Resources. Members were the district engineer, Water Resources Division in Canada Department of Northern Affairs, and Natural Resources, the district meteorologist of the Meteorological Division, Canada Department of Transport; the chief engineer, Greater Winnipeg Water District and the drainage engineer, Drainage Branch, Manitoba Department of Public Works.

### **Lakes Manitoba and Winnipeg Report**

On July 5, 1956, Canada and Manitoba appointed the Lakes Winnipeg and Manitoba Board with terms of reference requiring it:

- (1) to plan, supervise, and carry out a survey of Lakes Winnipeg and Manitoba and the resources of water within Manitoba flowing into and from these Lakes and it shall determine and report what further developments and controls of these water resources would appear to be physically practicable with particular reference to (a) flood control and (b) hydro-electric power.
- (2) If the Board finds that control projects are feasible for one or both of these purposes, it shall indicate in what respect other interests (whether public

or private) would be affected either adversely or advantageously.

The Board's report was completed in June, 1958, and it found that:

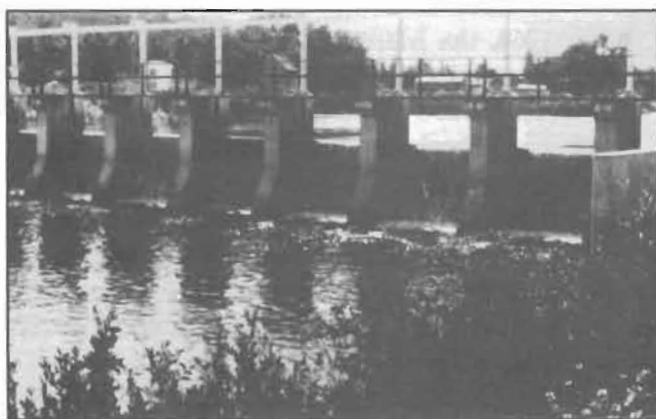
- (1) to regulate Lake Winnipeg in an artificial range of 711.4-715.0 compared to the record natural range of 708.8 to 716.4 would cost 10 million dollars. Such a regulation would reduce but not eliminate the agricultural losses of \$400,000 caused by high water in the period 1954-56. It also would have reduced but not eliminated the damage from shoreline erosion at beach resorts which, for the period 1900 to date, is estimated to have involved property losses of about \$150,000 at present day values.
- (2) that Lake Winnipeg regulation for power development on the Nelson River will be of great value to the economy of Manitoba when the total capacity of the Nelson River Hydro Plants reach a magnitude of several hundred megawatts.
- (3) because the advantages that would occur to practically all interests from regulation of Lake Manitoba for flood control, within a range of 811.0 to 813.0, at an estimated cost of \$1,600,000, the Board found the project to be practical under existing circumstances.

### **Creation of the Water Control and Conservation Branch**

The *Department of Agriculture and Immigration Amendment Act*, S.M. 1959, established the Water Control Conservation Branch in the revised Department of Agriculture and Conservation. Personnel for the new branch were drawn from Water Resources Branch in the Department of Natural Resources and the Drainage Branch in the Department of Public Works.

These branches were abolished on the formation of the new branch. There were 88 permanent positions created for the branch, 55 being engineering positions. At the end of the first year's operation there were 63 permanent employees with approximately 140 casual employees during the summer period for survey and construction work.

J. A. Griffiths, formerly Assistant Deputy Minister in the Department of Public Works, was the first branch director.



*The Gilbert Plains Dam*

### **The Manitoba Water Supply Board**

In 1959, *The Manitoba Water Supply Board Act* was passed to deal with the problems facing many smaller communities in locating, developing and financing the provision of water supplies for municipal and industrial purposes.

By 1972, 36 towns were being served by the board. In the same year the *Manitoba Water Services Board Act* was passed under the Department of Agriculture. The Water Resources Branch continued to provide services to the board on a request basis. This Act extended the mandate of the board to provide assistance for the construction of water and sewage systems in the communities, as well as water treatment plant and sewage treatment facilities.

### **Groundwater**

In 1962, the *Ground Water and the Drilling of Wells for Ground Water Act* was passed.

The purpose of the Act, which provides for the licensing of water well drillers, was to assist in the orderly and optimum development of the ground water resources of the province. Each licensed driller was required to submit a report on each well drilled outlining the type of material encountered in the drilling and indicating the thickness and depth of water bearing formations along with remarks regarding the quality and quantity of ground water encountered. These reports were collected, examined and filed by the branch. The data collected from these reports along with other geological and hydrological data made it possible to evaluate the potential of various sources of ground water throughout the province.

In 1959, an Act to provide for the establishment of Watershed Conservation Districts to conserve the water resources of the province was passed by the legislature. Boundaries of the Watershed Conservation Districts were to coincide with the natural watershed boundaries. Each district would be divided into sub-districts, based on the boundaries of all sub-water sheds.

The aims and objectives of the Board of a District were set in the Act as follows:

*"To promote the conservation and control of the water resources within the district.....it shall....study, undertake, put into effect, operate, or maintain, a scheme in respect of the district for the purpose of conserving, controlling, developing, protecting, restoring, or using,*

- (a) the water resources within or available to the district; and*
- (b) the land, forest, wildlife, and recreation resources within the district; as may be necessary or incidental to the achievement of those aims and objects".*

A Conservation District Commission was created with the following duties:



- 
- (a) advise the minister at his request in all matters relating to the administration and operation of the Act;
  - (b) give such advice and guidance if requested by a board or as the commission deems advisable; and
  - (c) review in any year the operations and budget of a board and make recommendations to the minister.

### **Construction of the Red River Floodway**

In 1960, the province decided to proceed with the construction of the Red River Floodway as recommended by the Red River Basin Investigation Report of 1953 and the Royal Commission on Flood Cost Benefit Report of 1959. Due to the magnitude of the project, a decision was made to create the floodway division in the Water Control and Conservation Branch. The division was assigned the responsibility for the general co-ordination of the planning, design and construction of the Floodway.



*The Red River Floodway*

### **Assiniboine River Flood Control and Water Conservation Projects**

A benefit-cost analysis of projects to relieve the flood threat, and ensure sufficient water to meet the foreseeable demands along the Assiniboine River, found that the construction of the Shellmouth Dam on the Assiniboine River

and the Portage Diversion from the Assiniboine River to Lake Manitoba just west of the City of Portage la Prairie were most economical.

In 1962, Canada and Manitoba entered into an agreement to construct the two projects and share equally all costs except engineering services. Canada, through the P.F.R.A., would construct the Shellmouth Dam, and the province, the Portage Diversion.

### **Provincial Waterways**

In 1964, the Manitoba Royal Commission on Local Government Organization and Finance presented its report. One of the underlying principles of the report was that there should be a clear distinction between the province and the municipalities. The municipalities should bear the full cost of direct services, with the province assuming the costs where services provide a wider provincial benefit. In 1966, the province investigated such a system for drainage services by the adoption of the Provincial Waterway System. The basic criteria for the declaration of Provincial Waterways is based on the designation of drains in the system with the first and second order drains being those in the upper reaches, and the third order and higher being those in the lower reaches, and serving in the majority of situations more than one municipality.

When this policy was initiated it was anticipated that the province would plan and carry out the construction or improvements to the drainage system or both on a watershed basis, taking into consideration any overall provincial priorities, as well as municipal requirements.

### **Change of Director**

In July, 1966, J. A. Griffiths passed away after a lengthy illness and T. E. Weber was Acting Director until April 5, 1967 when he was appointed Director.

## Transfer of the Branch

On April 9, 1967, the branch was transferred to the Department of Highways where it remained until September 24, 1968, when it was transferred to the Department of Mines and Natural Resources and renamed the Water Resources Branch.

## Prairie Province Water Board Apportionment Agreement

During the 1950's, concerns arose about the board's policy of allocating water on a project by project basis. In 1960, the board recommended a basin concept of dividing water by requiring the upstream province to pass a fixed proportion of the natural flow in a given time period to the downstream province, be used to apportion the flows.

On October 30, 1969, Canada and the three provinces signed the master agreement on apportionment, which incorporated the agreements worked out by the provinces on apportionment and a revised agreement setting out the responsibilities of the board.

In summary the agreement required:

- (1) that Alberta agree in each calendar year to pass to Saskatchewan 50% or more of the volume of natural flow of each easterly flowing water course that crossed the Alberta-Saskatchewan border on an "equitable basis". Alberta would retain the right to use 2.1 million acre feet for consumptive use in the south Saskatchewan River Basin, but must pass 1,500 cfs or one-half the natural flows whichever was the lesser to Saskatchewan.
- (2) that Saskatchewan from April 1 to March 31 of the next year, agreed that one half of the natural flow of the water arising in Saskatchewan, plus one-half of the water flowing into Saskatchewan from Alberta, would flow into Manitoba on an "equitable basis".



***Signing of the Prairie Provinces Water Board Master Agreement on Apportionment — Oct 30, 1969***

From left to right: Tom Weber, Water Resources, Mike Fitzgerald, PFRA, Hon. Leonard S. Evans, Minister of Natural Resources

The net effect of the allocation was that the total water supply potential of the Saskatchewan River Basin, containing 414,000 square miles was divided so that approximately 1/3 of the total supply on the average was available to each province.

## Agriculture Rural Development Agreements (ARDA)

The first ARDA was signed in 1962 between the Province of Manitoba and the federal government. Its objective was to provide funds for governments to use to help people develop their rural communities. The agreement provided for up to 50% of the total funds to be spent on soil and water conservation. Under this Agreement approximately \$4.5 million dollars were spent on drainage and agricultural flood control on the drainage systems in the Interlake between 1967 and 1975.

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## **Subsidiary Agreement — Canada/Manitoba Value-Added Crops Production Agreement**

At the beginning of the waterway policy, it was anticipated that the province would plan and carry out construction and improvements to the drainage systems on a watershed basis, taking account of overall provincial priorities, as well as local municipal requirements. In the first four years of the program that did not happen.

In 1975, a report entitled "*Benefit-Cost Evaluation of Improved Levels of Agricultural Drainage in Manitoba*" was completed. It provided the basis for the branch to determine the benefit-cost ratio for proposed drainage reconstruction projects.

In 1978, Canada and Manitoba signed an agreement on Value-Added Crop Production, which allocated \$7 million to remove the constraint of inadequate drainage on production in four watersheds in the Red River Valley. Each municipality in the watershed entered into an agreement with the province to construct the necessary laterals and to encourage landowners to construct on-farm drains so that benefits from the overall works would be realized at the farm level.

## **Water Quantity Surveys**

In 1975, the informal agreement between Canada and Manitoba, which had been in effect since 1933 for carrying out water quantity surveys in the province, was ended. It was replaced by a formal agreement between Canada and Manitoba for continuing co-operation in carrying out water quantity surveys in accordance with standardized procedures and cost-sharing of the annual operating costs for the system of survey stations. National guidelines have been prepared in consultation with the provinces for designating federal, federal-provincial, and provincial stations.

If requested by the province, Canada would construct and operate provincial stations and the province would reimburse Canada for the construction and annual cost of operation.

In 1989-90, there were 95 federal station, 109 federal-provincial stations, and 145 provincial stations in the Manitoba network.

## **Organizational Change**

In 1979, an organizational change occurred in the Department. An Operation Division was created and the staff in the Operation Division of the branch was transferred to form the Engineering and Construction Branch of the new Division. The Engineering and Construction Branch assumed responsibility of providing engineering, design, and construction management for the department.

In January, 1980, another organizational change took place. The Operations Division of Water Resources and the Engineering Division of Parks were separated from their respective branches and amalgamated into a new branch to be called Engineering and Construction Branch.

## **Flood damage Reduction Program**

Manitoba was one of the first provinces to participate in the national Flood Damage Program. On December 20, 1976, the General Agreement Respecting Flood Damage Reduction was signed. The General Agreement outlined the basic approach and the policies agreed to by the two governments and provided for the signing of implementation sub-agreements.

Manitoba and Canada signed the following sub-agreements:

### **(1) Agreement Respecting Flood Risk Mapping**

A flood risk mapping program was to determine and subsequently designate urban areas that are prone to flooding. The final step was the formal designation of flood risk areas.

### **(2) Agreement Respecting Flood Forecasting**

On March 31, 1980, the Flood Forecasting Agreement was signed to improve the flood forecasting capability on the Red, Assiniboine and Souris Rivers in Manitoba.

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**(3) Sub-Agreement Respecting The Construction of Flood Protection Projects in Manitoba.**

On March 10, 1983, the agreement for the up-grading of Ring Dykes in the Red River Valley was signed. The agreement provided funds to raise the existing ring dykes at Emerson, Letellier, Dominion City, St. Jean Baptiste, Morris, Rosenort, Brunkild and St. Adolphe to withstand a 100-year flood.

**Interim Subsidiary Agreement on Water Development for Regional Economic Expansion and Drought Proofing**

Canada and Manitoba signed the *Canada-Manitoba Interim Subsidiary Agreement on Water Development for Economic Expansion and Drought Proofing* on May 30, 1984. The Agreement was;

*"to improve the potential for economic and socioeconomic development of Manitoba by alleviating the constraints imposed on economic performance by recurrent water shortages and droughts".*

Funding was set at \$8.95 million, with a maximum federal share of \$5.35 million and a maximum provincial share of \$3.60 million.

**Program 1 - Drought Proofing Studies**

A series of studies were carried out to assess the impacts of drought in Manitoba and to investigate methods of mitigating or preventing these impacts.

**Project 2.1 - Water Resources Development**

This project provided for analysis of surface and groundwater inter-relationships with particular focus on the geo-hydrological aspects of water availability. Aquifer enhancement investigations were to investigate and demonstrate the feasibility of artificially recharging aquifers from surface water sources.

**Project 2.2 - Analysis of Assiniboine South-Hespeler Area Projects**

The Assiniboine South-Hespeler area of Manitoba, which has the province's best climate and soil resources for agricultural production, had its economic growth constrained by scarce or limited water supplies. The concept deemed most feasible would consist of a storage reservoir on the Assiniboine River near Holland, a pumping facility near Rathwell, and a major delivery canal running along the base of the Pembina escarpment. Such a project, which would cost in the order of \$370 million, would provide for all projected industrial and municipal water needs, as well as providing sufficient water for the irrigation of 130,000 ha (320,000 acres).

**Program 3 - Water Supply Investigations**

This program allowed the investigation of alternatives to ameliorate water supply problems. Investigations included quantification of water demands and potential benefits, sufficient field work to enable preparation of preliminary project designs and cost estimates, and, comparisons of alternatives on the basis of costs and benefits.

**Program 4 - Multi-Purpose Water Supply Projects**

In addition to carrying out studies, the Agreement provided \$5.45- million for construction of water supply and delivery facilities.

In implementing the Agreement, a total of \$8.09-million was spent; \$4.70- million by the federal government and \$3.39-million by the province.

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***Directors of the Engineering & Construction Branch***

☐ W. R. Newton

☐ U. Mital

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# *Engineering & Construction Branch*

In January, 1980, the Operations Division of Water Resources and the Engineering Division of the Parks Branch were separated from their respective branches and amalgamated into a new branch to be called the Engineering and Construction Branch. The purpose of the new organization was to provide engineering and construction services for Water Resources, Parks and other branches of the department as required. The new branch was to function as an engineering consulting group and was to do design, geotechnical, and project management of works required by client branches. The first director was W.R. Newton who had been Chief of Operations for Water Resources.

The Branch was initially divided into three division: administration, technical services, and project management. The administration division would have the responsibility for all financial and administrative matters. The technical division would be responsible for design, geotechnical services, construction supervision, and laboratory services. The project management division would be responsible for management of projects constructed by the branch, including construction, maintenance, and field surveys as well as all flood fighting. The staff of the new branch was made up of more than 200 people from Water Resources and Parks.

The branch was given new and challenging projects to carry out. In addition to all the projects previously constructed by the Water Resources Branch such as dams, drainage networks, bridges, and flood control works and the projects previously constructed by Parks such as water systems and buildings, the branch was given the responsibility for construction of diverse works for other branches within the department. Such projects as polar bear cages at Churchill and fish rearing ponds provided challenging work of a different kind than previously encountered.

Some of the largest projects were construction of greenhouses and shade-frame buildings at the forestry complex at Hadashville and the forestry complex at The Pas. In addition to the greenhouses and shade-frame buildings, the staff arranged for construction of other works such as a cold storage building and an irrigation system at Hadashville.

The branch was also given responsibility for flood fighting and the operational control of the Winnipeg Floodway and the Assiniboine diversion. In times of flood, employees of the branch deal directly with the Emergency Measures Organization in protecting the province from rising flood waters. This involves long hours of work constructing emergency dykes and blasting ice jams. One major flood has occurred since the formation of the branch. As well, some localized flooding occurs almost every year. When flood waters have receded the Engineering and



*W. R. Newton — Director, 1980 to 1985*



Construction Branch works directly with the Disaster Assistance Board in assessing damages.

During the 1970's, the concept of Watershed Conservation Districts was inaugurated in Manitoba. In the 1980's, the Engineering and Construction Branch was asked to be liaison between the Conservation District Boards and the province. Regional engineers therefore meet regularly with district boards to determine their requirements and to carry out requested projects.



***Engineering and Construction field crew***

Left to right: Bob Bodnaruk, Larry Steinke, Phil Kendall, Ed Arthur, Keith Marington, Don Fenuik

Towards the end of the 1980's the number of clients served by the branch has increased significantly. While the soils laboratory has always done a great deal of testing for other government departments such as highways and the Manitoba Water Services Board, in recent years the whole branch has been involved in a few projects for other government departments. Design and construction has been arranged for small projects such as waterway crossings on sewage treatment systems for the Department of Northern Affairs as well as some works for Tourism and Government Services.

The branch can now count among its clients the following agencies:

- Water Resources Branch
- Wildlife
- Parks Branch
- Northern Affairs
- Forestry Branch
- Government Services
- Fisheries Branch
- Highways
- Crown Lands
- Agriculture
- Regional Services
- Conservation Districts (5)
- Disaster Assistance Board
- Most municipalities

In 1985, U. Mital was appointed director when W.R. Newton retired after more than 35 distinguished years of public service.

In recent years, the branch has started moving into new technology to carry out assigned projects. Computer Aided Drafting equipment has recently been obtained and drafting personnel are currently completing some projects on the computer. Automatic surveying equipment has also been obtained and is being used for some projects. In the future it is expected that the use of this equipment will continually increase.



*Heating Bombardier so that it will start in the morning*



*E & C survey crew moving camp*

Left to right: Stu Fawcett, Matt (last name unknown), Maxim Grouette, Churchill Klump, Cliff Pokrant

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***Directors of the Mines Branch***

- ☐ George E. Cole
  - ☐ George Mitchell Furnival
  - ☐ Jim S. Richards
  - ☐ Jack S. Roper
  - ☐ Ian Haugh
-

# Mines Branch

## *The Beginning (1928-1930)*

### Commissioner of Mines

The Mines Branch of the Department of Mines and Natural Resources dates its official existence from May 1, 1930; however, it actually came into existence with the creation of the Department on May 9, 1928. During this interval, the control of mining operations and fostering of the industry of Manitoba came under the direction of Dr. R.C. Wallace, Commissioner of Mines. Wallace, who was also head of the geology branch of the University of Manitoba, resigned on September 1, 1928 to become President of the University of Alberta.

Dr. J.S. De Lury succeeded Wallace as Commissioner. The entire staff was one secretary and, as of November 1, 1928, a Chief Inspector of Mines, George Edward Cole. A major initiative of De Lury and Cole was the production of the "First Annual Report on Mines and Minerals" which pre-dated the Department's "First" Annual Report by two years. The report, published in hard and soft covered editions in 1930, reviewed not only the events of the later two-thirds of the year 1928, but also was expanded to present "a brief history of mineral resources, a series of abstracts of reports and papers that have been published on geology and mineral resources, also a short outline of the geological features of the Province" and "a bibliography comprising a list of papers, reports and maps relating to these topics".

### The Transfer

In anticipation of the transfer of the mineral resources to the Province, on May 1, 1930, George E. Cole became the first Director of Mines and Dr. De Lury was appointed Provincial

Geologist. De Lury retained his position as head of the Department of Geology, University of Manitoba, during his transition from the position of Commissioner of Mines.

Until July 15, 1930, the mineral resources of Manitoba were administered by the Mineral Lands Division of the Federal Department of the Interior. To permit the transfer of the mineral resources to the Province, the Legislative Assembly in the session of 1930 passed *The Mines Act*, Chapter 27. J. P. de Wet, a contemporary writer and promoter of Manitoba's mineral resources, noted:

*"In drawing up the Mines Act of Manitoba and the regulations for its administration, reference was made to the Mines Acts of the Dominion, of Ontario, and of British Columbia, and an act was framed that took in the best features of all and in addition provided some useful administrative novelties, notably a mining board to provide a quick and inexpensive substitute in the place of the mining courts of other provinces."*

On July 15, 1930, the mining recording offices at Winnipeg, The Pas and Cold Lake (Kississing), together with the offices of the Supervisory Mining Engineer at Winnipeg and The Pas were taken over by the Mines Branch.

The following persons were transferred to the Provincial Civil Service; Supervisory Mining Engineer, Winnipeg, A.J. McLaren; Mining Recorder's Office, Winnipeg, J.G. Webber, Richard Cox, Trevor Morgan; Mining Recorder's Office, The Pas, W.B. McLellan, Doris Burton, Pauline Karloske, Irene MacIntosh, Simone LaLonde; Mining Recorder's Office, Cold Lake, R.G. Mackey.

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## ***The Cole Era (1930-1945)***

This era of the Mines Branch's history was marked by the longest period of stability in the ranks of the Ministers and Deputy Ministers in the department. Only two changes occurred in this 15 year interval in each of the jobs. In 1932, the Hon. D.G. McKenzie was succeeded by the Hon. J.S. McDiarmid as Minister and in 1938 C.H. Attwood was followed by D.M. Stephens as Deputy Minister.

However, the timing of the transfer of the resources to the province in mid-1930 was unfortunately concurrent with the beginning of the Great Depression. This was evident in industrial activities within the province and is shown by mineral claims recorded in the five year period from 1928 to 1932. In 1928, a total of 10,853 claims were recorded compared to only 1,348 in 1932.

At the 1932 annual meeting of the Natural Resources Bureau of the Board of Trade, the Hon. D.G. McKenzie stated *"that the Mines Branch was doing exceptionally good work; certainly they had much to do"* and with reference to his entire Department *"that there is a general appreciation of the outstanding executive and technical qualifications of the personnel of the various Branches"*.

### **Director of Mines**

Mr. Cole, in 1938, produced *"The Cyanide Process in Simple Terms"* and *"Principles of Flotation Explained"* for The Pre-Cambrian magazine. These detailed four-page articles showed his ability in describing complex processes in terms acceptable to the layman. Cole also compiled a book entitled *"The Mineral Resources of Manitoba"* for the Economic Survey Board which summarized all available geological and mineral information to 1938.

To assist in the wartime effort Mr. Cole was appointed for two years to the War Time Bureau of Technical Personnel in 1941. During his absence, his duties were undertaken by Dr. De Lury.

In 1941, Mr. Cole was asked for predictions on the future of Manitoba's mineral industry by the Engineering and Mining Journal. In the August issue he predicted:

*"The most promising future lies in metals to be produced from the high-temperature, deep-seated type of vein and replacement deposit. The metals expected from these deposits are mainly gold, silver, copper, and zinc. Smaller quantities of lead and cadmium may be produced as byproducts in the development of ores of the former metals. There are potentialities in nickel and notably in the rare metals, such as lithium and beryllium. Tin, molybdenum, and tungsten are possibilities, and prospects of these metals are known."*

In his prediction, lead was indicated as a byproduct which was promising, and in 1960 lead was produced at the Chisel Lake mine in the Snow Lake area. The nickel potential was realized at Lynn Lake in 1953, and at Thompson in 1960; and the lithium and beryllium potential at Bernic Lake in southern Manitoba in 1959.

Mr. De Lury published his "Auto-traction Hypothesis" in 1932 in several issues of the Canadian Mining Journal. His hypothesis was a forerunner of the currently popular theory of "Global Plate Tectonics" in which large crustal plates separate and collide during geologic time producing a variety of features including volcanic island arcs deep sea troughs, and mid-ocean ridges.

The work of the geological survey in the Department and its relationship to the Federal survey was described in detail in a June 2, 1938 newspaper article from The Northern Miner:

*"Both the Ottawa and the Manitoba governments work in close harmony in regard to geological surveys, and there is no duplication of effort. Under the terms of the Manitoba Act, 1870, creating the province a part of the Dominion, the act provided that the federal government would assume the costs for the services of a geological survey in this province, and the provincial department of Mines and Natural*

*Resources, being in closer touch with the geological requirements of the mining industry, is in a position to make recommendations to the Dominion government as to the work to be undertaken. There is now said to be a complete understanding on this matter between the two governments."*

At the Forty-fourth Annual General Meeting of the Canadian Institute of Mining and Metallurgy, considerable discussion ensued on the relationship between the federal and provincial geological surveys with agreement that co-operative effort could be attained by both agencies meeting annually to formulate plan mapping strategies. In 1940, the Canadian Geological Survey again placed two survey parties in areas recommended by the province. For Manitoba, the geological policy was indicated as being:

*"The Provincial Mines Branch strives to maintain close contact with the requirements of prospectors, operators, and other parties interested in the mineral development of the Province in order that the information gained through close personal contact may be directed to the proper sources at Ottawa. In this manner, programmes of work may be instituted where they are most required. The Provincial Mines Branch has at all times striven to maintain the closest co-operation between the Federal and Provincial bodies. It would, therefore, be entirely in accord with any programme that was designed to strengthen the hand of the parent geologist organization in Canada, the Geological Survey."*

In the spring of 1942, officials of the Mines Branch and those of the federal Department of Mines and Resources discussed the change in emphasis from widespread reconnaissance mapping programs to that of investigating strategic mineral occurrences to better utilize the talents of government geologists in wartime. As a direct result, a joint Federal-Provincial program of investigation headed by Dr. J.D. Bateman and

A.S. Dawson was conducted in the West Hawk-Falcon and High Lakes area for tungsten and molybdenum; and in the Bird River area for tin, lithium, copper and nickel. In the latter area, Mr. Shepherd had suggested that there was chromium potential, and two simultaneous discoveries were made during the summer of 1942. Dr. Bateman of the federal survey recognized a chromite-bearing horizon north of Bird River and G.M. Brownell confirmed a find by prospector John Lapin. Early in July, A.S. Dawson on accepting a commission in the Royal Canadian Navy, resigned his position.



**Oil Rig — southwest of Mafeking, 1924**

The stress of wartime production was recognized as having an adverse effect on number of ore-bodies which would be available after the war. A joint Federal-Provincial policy was developed in 1943 of performing detailed investigations in the vicinity of producing base metal mines, with the objective that continued study would provide information indicating the occur-



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rence of other ore deposits. However, because of the difficulty in obtaining trained geologists and student assistants, the Mines Branch left this job to the federal survey.

In 1944, Dr. George Hanson, Chief Geologist of the federal Department of Mines and Resources estimated that only 11 percent of the Dominion had been adequately mapped geologically, and that at the then rate of progress it would take several hundred years to complete the job.

In the provincial Legislature on March 22, 1944, the Hon. J.S. McDiarmid outlined a five-year plan of his department for reconstruction and rehabilitation immediately following the Second World War. These plans included:

- (1) Aerial mapping of unmapped portion of Province (96,000 square miles) at \$100,000 per year for five years in co-operation with Federal Government
- (2) General geologic mapping, at a scale of one inch to four miles, to produce 2 or 3 maps per year requiring 25 to 30 persons at an annual expenditure of \$35,000 to \$50,000 for ten years and financed by the federal government under the provisions of "The Manitoba Act".
- (3) Detailed geologic mapping of mineralized area requiring at least three parties at an annual expenditure of \$25,000 to \$30,000 for beyond ten years, again financed by the federal government.
- (4) Research, particularly in the extraction and use of some of the rarer metals as well as industrial minerals, by the addition of at least three full time, fully trained geologists and chemists at a cost of \$20,000 annually.
- (5) Reactivation of the program of prospectors field training which had operated in 1939 and which would include placement of prospector students on geological survey parties for

varying periods where their experience could be broadened and their training further intensified.

- (6) Employment of three resident engineers or geologists as an aid to prospectors as was also done in 1939.
- (7) Follow-up of detailed geological surveys by some form of systematic prospecting if opportunities for private prospecting or for employment are not sufficiently encouraging, or if there is an untoward lag in the replacement of known mineral reserves.

Dr. De Lury resigned his twin positions of Provincial Geologist and Head of the Department of Geology, University of Manitoba in 1944. Dr. Wallace, previous Commissioner of Mines before De Lury, paid tribute to him upon his election as President of the Canadian Institute of Mining and Metallurgy for 1930-31. Wallace said:

*"De Lury has made a permanent contribution to the mineral industry of Manitoba. A sound mineralogist, with a keen sense of economic values, and a sympathetic appreciation of the difficulties of the man in the field, he has been the confidant of all and sundry in the initiation of mining ventures, and his advice always has been sound. He has enjoyed to a supreme degree the confidence of the prospector and the mining engineer."*

The end of the war in 1945 gave additional impetus to the search for gold which had developed in 1944. Geological mapping of a detailed nature was confined chiefly to those areas regarded as favourable for gold deposition by the federal survey. The provincial Mines Branch again could not obtain trained geologists and student assistants.

### **Inspection and Engineering**

The duties of Inspector of Mines and Supervisory Engineer, including the updating of claim maps, were combined under A.J. McLaren

from the Winnipeg office. From July 15, 1930, to April 30, 1931, 168 mineral claims were inspected for certificates of improvements and 100 of these were approved for lease.

During the early 1930s, staffing levels remained fairly constant with the only exception being A.J. McLaren who left the branch in 1934 to work for a private mining company.



**Lasthope Lake — July, 1954**  
Clint Milligan packing into camp

Mines rescue courses were begun for miners in the Flin Flon Mine starting in 1933. Instruction was directed and given by the Mines Branch in conjunction with Hudson Bay's safety engineer. Proficiency certificates were granted by the branch on the results of practical and theoretical examinations.

In 1936, Mr Paton, one of the most prolific writers employed by the Mines Branch was hired as Inspector of Mines. Over the following eight

years he produced a series of twelve lessons on safe mining for the underground worker and a safety letter "Safety Sifter" begun in 1937 (over 2000 copies were distributed monthly throughout the Province and outside "to give the mining industry the benefit of Manitoba's accident and safety experience").

In mid-1940, the Department engaged in a thorough overhaul of the regulations under "The Mines Act". There had been a great change in mining operations, and mining practice altered a lot in adapting itself to new conditions brought about by deeper mining and larger operations. New rules were devised setting out how the Mines Branch was to be notified of accidents from various causes, and other matters concerned with commencing, closing down or resumption of operations of a mine.

Mr. Paton resigned his position of Inspector of Mines in 1944 to become an inspector of explosives for the Bureau of Mines in the Federal Department of Mines and Resources.

"The Safety Sifter", the official safety organ of the Mines Branch, was initiated by Mr. Paton. C.M. Campbell writing in *The Miner* of June, 1942, paid this tribute:

*"The Safety Sifter, a magazine that has for its mission the keeping of Accident Prevention ever before the mining population of that province. The author presents his subject in a refreshingly original manner and displays the rare combination of unusual familiarity with all the details of mine operation with an ability to express his message along unstereotyped lines. One comes to the conclusion that Mr. Paton could write a mining text-book that would be worthwhile, not only on account of its accident prevention features but for the value of its practical mining details."*

Paton was succeeded by Leslie G.R. Crouch in October, 1944, who himself resigned his position as Inspector of Mines in September 1945. Mr. Crouch was succeeded by Mancil J. "Bert" Gobert in November. Mr. Gobert ended his career in the department as Assistant Deputy Minister.

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## Recording Offices

On April 30, 1931, the Mining Recorder's Office at Cold Lake was closed and the records transferred to The Pas Mining Recorder's office supervised by W.B. McLellan. The Winnipeg office was made the central office for all mining records and J.G. Webber was appointed Chief Mining Recorder.

With the retirement of Webber, Trevor Morgan was appointed Deputy Recorder. Mr. McLellan, Mining Recorder in The Pas Mining District retired in 1943.

Mrs. Doris Allen was appointed Acting Deputy Recorder upon McLellan's retirement. She was the first woman to serve in the position of a full Mining Recorder in Canada; although Pauline Karloske had been appointed Acting Deputy Recorder a year earlier in the Winnipeg office.

## Assay Office

The Mines Branch added an assaying laboratory for the processing of prospector's samples and those from exploratory investigations. In 1930, Assayer J.S. Richards analyzed 57 samples of clay, iron, lignite, limestone, marble, pegmatite, phosphate and shale in addition to identifying numerous other samples.

In 1936 assaying courses in gold and silver were given to 15 persons in the new lab building in response to the demand for assayers from the mining industry; several of those trained received employment at mines.

In 1945, the Provincial Assay office handled the largest volume of work than in any year since 1930 with a marked predominance for gold assays (1,819 out of 1,880).

## Public Information

The Mines Branch in its first year of operation received numerous inquiries for information of a variety of details concerning mining and mineral resources. Maps, publications and reports were sent in answer to inquiries from Canada and the United States.

Five years after the transfer of the resources, the Hon. J.S. McDiarmid reviewed his Department in the January, 1936 issue of the *Precambrian* magazine in which he said:

*"The more important branches of the Department dealing with the Mining development of the province are the Mines and Surveys Branches, which are closely correlated in their work and in their efforts to provide the maximum service to those engaged in such development. In particular he praised the value of the 150 claim maps compiled by the Surveys Branch. The value of these maps is shown by the constant and increasing demand for them" over 400 monthly; and the "examination by the Surveys Branch of all plans of survey of mineral claims submitted for approval."*

With regard to Mines Branch information dissemination he stated:

*"Files and records of all phases of mining activity in the province are kept and a large volume of letters of inquiry are answered involving in many cases the furnishing of reports, maps and publications. Articles of technical and current interest are prepared for publication in financial and technical journals. The services of the Branch are at all times available to those seeking information regarding the mineral resources of the province."*

In April, 1939, the department published a new map of the Province which was prepared by Surveys Branch in collaboration with the Mines Branch. Shown on the map were:

*"railway lines, winter freighting routes, air routes, hydro-electric power plant sites and transmission lines, mining districts and divisions, where mineral occurrences are found and the mineral deposits indicated, sites of producing mines and forest reserves."*

## Prospecting Assistance

Courses in mineralogy and geology for prospectors, in cooperation with the University of Manitoba, were given in 1930 to 259 participants under the direction of G.M. Brownell in Winnipeg, The Pas, Sherridon, Flin Flon and Pointe du Bois. Prospecting for gold in 1934 led to a peak in staking activity with almost 4,000 claims being staked. In 1935, the popularity of prospecting courses was demonstrated by 482 registrants for classes held in Winnipeg, Brandon, The Pas and Flin Flon.

Mr. Shepherd was hired as Inspector and Resident Engineer and produced in 1936, the first formal publication of the Mines Branch, excluding the annual report on Mines and Minerals, entitled "A Guide For Prospecting in Manitoba" using material collected by himself and from A.J. McLaren.

The *Eleventh Annual Report* on Mines and Minerals said that the falling off of prospecting in 1938 was due in part to:

*"The timidity of large organizations to vote any sum of money towards exploratory programmes at a time when economic unrest was so prevalent due to world conditions as a whole. This attitude was in turn reflected down the line through many smaller organizations with the result that the independent prospector found it almost impossible to raise money for a grubstake".*

In an attempt to correct the problem of decreased prospecting activity, a plan to train young men in this occupation was announced by Hon. J.S. McDiarmid. Under his plan, young men would be given instruction in the field by geologists and experienced prospectors using part of a \$3,000,000 offer of the federal government for the training of youth.

Three major thrusts to increase exploration were unveiled in mid-1939 by the Department.

The first was the making of numerous changes in the Mining Regulations to make prospecting more attractive by reducing fees.

The second measure was to increase the pro-

duction of the geological survey.

The third was to put out more field parties.

## End of an Era

George Edwards Cole retired as Director of Mines on November 30, 1945. *The Eighteenth Annual Report* on Mines and Minerals commented that:

*"Mr. Cole's tenure of office was coincident with the transformation of mining in the province from an experiment, engaged in by a few venturesome people, to an established industry making an important contribution to the economy of both the province and the Dominion. His co-operation with, and counsel to, prospector and professional man alike during this period was a vital influence in the expansion of the new industry."*

## The Furnival Years (1946-1948)

### Director of Mines

Dr. George Mitchell Furnival was appointed Director of Mines on February 1st, 1946. Dr. Furnival, a Manitoban, graduated from the University of Manitoba with a B.Sc. in 1929 and later obtained a Ph.D. from Massachusetts Institute of Technology in 1935. Over a ten year period, after obtaining his Ph.D., he worked in "hard and soft rock areas" for private industry and for the Geological Survey of Canada.

Recommendations of the Advisory Committee on Co-ordination of Post-War Planning, included:

- "(1) Early completion of topographical mapping and geological reconnaissance of the province.*
- (2) Vigorous prosecution of the detailed geological mapping of the areas favourable for the occurrence of metal deposits.*

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- (3) *Survey and inventory of non-metallic resources.*
  - (4) *Establishment of prospector training classes.*
  - (5) *Provision of two field geologists to aid prospectors and collect data obtained in development.*
  - (6) *Stiffening of Mines Act regulations with respect to staking and assessment work to prevent abuse.*
  - (7) *Increased publicity on mineral possibilities and advantages in Manitoba, both in and outside the province.*
  - (8) *Research on marginal and low grade ores, metallurgical waste products and non-metallics.*
  - (9) *Appointment of a permanent committee to study what measures can be taken to extend the life of northern mining communities."*

## Geology

During the summer of 1946, two four-man geological survey parties were placed in the field, the first since 1941.

In 1947, the largest programme of geological surveying in the history of the branch to that time was undertaken and completed. The staff of the Mines Branch was increased by the appointment in May of four geologists to the permanent staff: J.D. Allan, G.P. Crombie, G.D. Springer and M.S. Stanton.

## Recording Offices

Claims inspection and assessment work became significant areas of Mines Branch work in 1946. Trevor Morgan, who had returned from the army with rank of Captain (having been given a leave of absence from his position of Deputy Recorder in 1941) conducted inspection of Falcon Lake, Long Lake and Rice Lake areas from April to June. In September, 1946, Morgan was appointed Mining Recorder in The Pas, assisted

by Mrs. Doris Allen who continued in the office as Acting Deputy Recorder.

Early in 1947 one of the biggest staking rushes in the province occurred as a result of the discovery, by Sherritt Gordon Mines Limited, of the "EL" orebody, at Lynn Lake, of much higher grade in both nickel and copper than any previously revealed in this area. In the first three months of the year, 1,593 claims were recorded, the most intensive period of winter staking ever undertaken to that time. During the entire year 6,732 claims were recorded, far exceeding any annual recordings since the transfer of the natural resources in 1930.

## Chemical Laboratory

During 1946, the Mines Branch Chemical Laboratory (formerly, the Assay Office) handled a larger volume of work than in any year since its establishment in 1930. The marked predominance of gold assays indicated that this metal continued to hold the premier interest of the prospector. In 1947 there was a marked decrease in the number of gold assays completed in the Chemical Laboratory; although an interest in base metals was indicated by the number of copper and nickel analyses.

## Wells and Stratigraphy Laboratory

The increasing interest in the oil and natural gas possibilities of southwestern Manitoba led to a review of the information available for this area from previous drilling and surveys. The setting up of a wells and stratigraphy laboratory and the updating of regulations governing the disposal of oil and natural gas rights on Crown lands became priority items in the Mines Branch.

Following Dr. Furnival's resignation, J.S. Richards was made Acting Director of Mines. Richards had entered provincial service as Assayer on July 15, 1930 concurrent with the transfer of the natural resources; after having received a B.Sc. in science and geology from the University of Manitoba. He became Resident Engineer about 1939 and also administrative



assistant to Dr. Furnival in 1945. His study of mining tax legislation in Canada and other countries laid the foundation for "*The Mining Royalty and Tax Act*" passed by the Manitoba Legislature on April 22, 1948.



### Geological Division

J.D. Allan became the first Chief Geologist, effective with the resignation of Dr. Furnival, and in June 1948, A.P. Fawley was appointed to the position of geologist.

In 1950, the exploration highlights consisted of the continuation of the widespread search for new occurrences of the non-ferrous metals. In addition an unprecedented program of geophysical investigation and deep test drilling was conducted in southwestern Manitoba to test the oil and natural gas potential.

G.H. Charlewood resigned his position of Chief Geologist in June 1957, and shortly thereafter J.F. Davies was appointed to the position. In May 1958, Barry B. Bannatyne was appointed Industrial Minerals Geologist.

In the spring of 1962, an agreement was signed by the Manitoba and Federal Governments to share equally the cost of making an aeromagnetic survey of some 30,000 square

miles of the Precambrian during the summer. The work commenced in May and covered an area between Thompson and Lynn Lake. This was the first year of a three-year program.

The Mines Branch suffered its first serious and fatal accident in the summer of 1962; the first in the 32 years since its establishment. Walter P. Brandt, summer assistant drowned while crossing a stream about six miles south of Mynarski Lake. His parents established the Walter Brandt Memorial Award to assist deserving students entering the honours geology course at the University of Manitoba.

### Engineering Division

Effective June 1, 1948 after Dr. Furnival resigned, Mr. Gobert was promoted from Inspector of Mines to the new position of Chief Mining Engineer.

The first provincial Mine Rescue Competition was held by the Mines Branch in 1961. Following local station eliminations, mining teams competed for the top position. This became an annual event in following years.

The Petroleum Engineering Division was created in 1954 out of the former Engineering Division which included the sections of Oil and Gas Engineering, Industrial Minerals, Mine Inspection, Claim Inspection and Mining Engineering. This was in response to the great increase in drilling in 1954 with 310 wells being started compared to 102 in 1953.

Late in 1954, two new appointments were made in the Mines Branch. Mr. Gobert was appointed Senior Petroleum Engineer and Ronald J. Kinsley was appointed Reserve Engineer. Early in 1955, James T.J. Raleigh assumed the duties of Petroleum Engineer.

### Recording Office

Numerous changes to the regulations under "*The Mines Act*" governing the disposal of mineral locations were made in 1948. Four new means of reserving Crown Land for investigation by a



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holder were introduced: "Prospector's Reservation"; "Geophysical Reservations"; "Airborne Geophysical License"; and "Reservation of Mineral Rights".

- (1) The Prospector's Reservation permitted a holder of a miner's licence to explore a four-square mile area centered on a mineral discovery for 6 months before staking claims within the reservation.
- (2) Geophysical Reservations permitted ground geophysical evaluation of a large block of ground before staking.
- (3) An Airborne Geophysical Reservation allowed the flying of large tracts of land to identify anomalies for ground follow-up by ground geophysics, drilling and geological mapping.
- (4) Reservation of Mineral Rights secured those rights under water where the totally submerged area extends beyond that which can be legally staked out.

### **Mineral and Royalty Tax Division**

Beginning with the 1949-50 fiscal year, the Mineral and Royalty Tax Division was added to the Mines Branch to do assessments under *The Mineral Taxation Act* and *The Mining Royalty and Tax Act*. Thos Ewens was appointed Provincial Mines Assessor and remained in that position until the end of the 1962 fiscal year. The average annual number of assessments under The Mineral Taxation Act dropped from 1400 to 850 for the 1965 tax year due to the elimination of any tax under one dollar. The average number of assessments to the end of the 1967-68 fiscal year was 63 and average revenue collected was about \$2 million.

### **Chemical Laboratory**

The reduction in interest in gold was shown in the Chemical Laboratory supervised by I.H. Spector, Chief Chemist, where there was a sharp

decrease in gold assays. Increasing interest towards base metals and industrial minerals was demonstrated by 50% more chemical analyses being performed.

### **Analytical Laboratory**

Two new services were inaugurated in the Analytical Laboratory during 1965: the determination of fuel oil content and the screen analysis of "Anfo" (ammonium nitrate-fuel oil explosive), and the quantitative chemical determination of the free quartz content of airborne dusts in mines. Also, a new atomic absorption spectrophotometer was purchased and installed. This instrument was obtained primarily to facilitate the analysis of the large number of rock samples taken by the field geological staff in connection with Project Pioneer.

### **Public Information**

The publication "*Geology and Mineral Resources of Manitoba*" was completed and published early in 1963. The book, authored by J.F. Davies, B.B. Bannatyne, G.S. Barry and H.R. McCabe, was well received by mineral exploration companies, prospectors, and the public. A preliminary geological map of Manitoba was compiled at a scale of one inch to 12 miles.

At the end of 1966, a metallogenic map of Manitoba was compiled, printed and released. All major metallic mineral deposits and prospects in the Precambrian were shown. The deposits were classified according to relative size and type and shown on a lithologic-tectonic base. Occurrences of oil and industrial minerals were also included.

The first set of index maps, showing geophysical reservations, airborne permits (radiation, aeromagnetic, electromagnetic surveys), mining claims maps, geological maps issued by the Manitoba Mines Branch, and geological maps issued by the Geological Survey of Canada, were published in 1967.

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## End of an Era

After 20 years of service, the longest of any Director of Mines, J.S. Richards was promoted to the position of Policy Advisor to the Assistant Deputy Minister, Mr. Gobert. Under his guidance, the Precambrian geological mapping of the province was transformed from the production of 15-minute sheets to the concept of district geological compilations which was done in the Lynn Lake area and in the Rice Lake-Beresford Lake area for "Project Pioneer". A similar concept was used to produce *"Geology and Mineral Resources of Manitoba"* for the province. During his tenure, Manitoba became an oil-producing Province and new regulations under *The Mines Act* were generated and enforced. The Oil and Natural Gas Conservation Board was set up and held public hearings beginning in 1953. Innovative means of assisting mineral exploration and in granting exploration rights in Precambrian areas were devised to take into account the development of geophysical techniques which allowed aerial reconnaissance of large tracts of land.

K.A. Phillips, Chief Geologist, acquired the title Assistant Director of Mines upon Richards' promotion.

## *The Roper Years* (1968-1974)

### Director of Mines

J.S. Roper was appointed to the position of Director of Mines in 1968.

### Mining Engineering Division

Engineering and inspection services continued in 1972 to meet the many demands with respect to the administration of *The Mines Act* and *Regulations* pursuant thereto, including those concerning the safety and health of persons employed in the mining industry. To increase inspection services, additional personnel were employed and offices set up at Lynn Lake and Snow Lake, in addition to those previously established at Flin Flon, Thompson and Winnipeg.

### Mineral Tax Division

Personnel of the mineral Taxation Division, including John M. Stokes, Chief Mines Assessor,



*Spruce Point Mine — Head Frame*

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were transferred to the Department of Finance in 1969.

## **Geology Division**

The Mines Branch produced the first *"Summary of Geological Fieldwork"* in 1968 which gave a detailed account of field orientated investigations. In the summary, Project Pioneer was described as being practically completed. The northern Precambrian geological-mapping program was the largest since 1965 with three five-man parties mapping at one half mile to the inch.

The 1974 field program of the Geological Survey gave emphasis to the investigation of belts judged to be economically favourable for mineralization; to the geological setting and mode of origin of known ore deposits; and to updating and expanding the geological mapping of the province.

## ***The Haugh Years (1974-1979)***

The Mines Branch underwent a metamorphosis in August, 1974 and became the Mineral Resources Division. The division structure was the framework under which a new mineral policy, announced by the Hon. Sidney Green on March 21, 1974, could be implemented and administered. The policy was to ensure for the province, a fair share of the returns from exploitation of its mineral resources and greater involvement in exploration, development and management of these resources.

The Mineral Resources Division was one of three divisions reporting to T.E. Weber, Senior Assistant Deputy Minister responsible for resource management and James T. Cawley, P. Eng., Deputy Minister. The former role of Director of Mines under *The Mines Act* was incorporated into the position of Assistant Deputy Minister heading the Mineral Resources Division.

## **Assistant Deputy Minister**

Dr. Ian Haugh was appointed Assistant Deputy Minister to head the Mineral Resources Division. He had joined the department in 1965 as Geologist and had become Chief Geologist in 1971.

On April 11, 1975 a new divisional structure and staffing pattern was announced. A five-branch structure was presented consisting of: Mineral Evaluation and Administration Branch; Engineering and Inspection Branch; Petroleum Branch; Geological Services Branch; and Exploration Operations Branch. The first four branches had much in common with the "divisions" under the former Mines Branch, but Exploration Operations Branch was a completely new entity.

### **Mineral Evaluation and Administration Branch**


F.J. Elbers became the Director of this Branch in August, 1974. The branch had two sections, the Mineral Evaluation and Economics Section headed by Dr. Elbers; and the Mineral Administration Section later headed by Thomas G. Frohlinger.

The Mineral Evaluation and Economics Section was concerned with the geological evaluation of mineralized area of the province, and the economics of mineral development in Manitoba.

### **Mining Engineering and Inspection Branch**

Director of this Branch was J.D. Russell. The responsibilities and duties of this branch were described in the Department's Annual Report for the fiscal year ended March 31, 1976:

*"The Mining Engineering and Inspection Branch is responsible for administering regulations governing the operation of mines in Manitoba. Specific responsibilities relate to employee safety and health and to the mining methods and equipment used. In addition to ongoing inspections and engineering duties related to mine safety,*



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*the branch investigates serious mine accidents, prepares reports on these investigations, and makes recommendations for improved safety methods."*

### **Petroleum Branch**

The branch, with H.C. Moster as Director, was responsible for all matters relating to exploration, development, and production of oil and natural gas under *The Mines Act*. In addition, it was responsible for administration of *The Pipe Line Act*, and from June, 1975 portions of *The Gas Storage and Allocation Act*.

### **Geological Services Branch**

In early 1975, the Geological Survey within the former Mines Branch was regrouped as an integral unit of the newly established Geological Services Branch with W.D. McRitchie as Director. The new branch comprised the previous Geological Survey Section and the consolidated Laboratory Services Section.

### **Exploration Operations Branch**

This Branch was established to develop departmental capability in the planning, co-ordination and implementation of mineral exploration programs. The branch was structured, with F.J. Stephenson as Director, to provide professional expertise and field operational capability in the exploration for base metal (primarily copper, nickel and zinc), uranium and precious metal deposits.

Of the five branches of the Mineral Resources Division, Exploration Operations was the shortest-lived. Following the change in government in October, 1977, all site specific exploration activities were terminated. At the end of the fiscal year ending March 31, 1978, the branch itself was discontinued.

In November 1979, the Mineral Resources Division became part of the new Department of Energy and Mines with the Hon. Donald W. Craik as the first Minister.

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***Environmental Management***

***ADM:***

☐ W. George Bowen

***DIRECTORS:***

<input type="checkbox"/> Bill Ward	<input type="checkbox"/> Grant McLeod
<input type="checkbox"/> Larry Kay	<input type="checkbox"/> Ken Doan
<input type="checkbox"/> Mike Kaye	<input type="checkbox"/> Carl Orcutt
<input type="checkbox"/> Norm Brandson	

***CLEAN ENVIRONMENT COMMISSION:***

<input type="checkbox"/> Guy Moore	<input type="checkbox"/> Stan Eagleton
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# *Environmental Management*

On April 1st, 1971, the department was renamed the Department of Mines, Resources and Environmental Management and on that date the Environmental Sanitation Section was transferred from the Department of Health and Social Development to this newly renamed department to form the nucleus of a new Environmental Management Division. It was renamed the Environmental Protection Branch. The other major component of the Environmental Management Division was the Research Branch with responsibility for investigating a wide range of resource based, environmental and operational matters related directly to the work of many of the branches of the department.

The division, headed after 1972 by Assistant Deputy Minister Dr. W. George Bowen, was to evolve and undergo a number of changes as time went by, but it remained part of the department until the end of 1979, a period of eight years, nine months in all.

Major responsibilities of the division included ensuring pure food, milk and water supplies, enforcing safe waste disposal practices and preserving the quality of the natural environment. The role also included providing technical consultation and advice to the Clean Environment Commission and support services to the Manitoba Environment Council.

## ***Research Branch***

The Research Branch was formed in 1971 from components transferred from the department together with an environmental research component. The branch was organized to carry out applied research in the areas of environment,

economics, forestry, fisheries and wildlife and to fund basic research in the universities by means of grants.

## **Economics Research Section**

During its first year with the division, in addition to being associated with work of The Pas Working Group, the Canada Land Inventory, and the Northern Working Group, the Economics Research Section carried out a dozen projects in forestry, mining, fishing, trapping, fish farming, future water demand and other matters. Prior to the end of the 1971-72 fiscal year the Economics Research Section and some resource components were transferred and were no longer part of the division.

## **Environmental Research Section**

Environmental Research embraced such things as water quality, fisheries and wildlife, the effects of noise, contamination by chemicals, odour, water control, soils, energy production, waste transportation and aesthetics. Most of the research was directed toward the results of things that people do as they went about their everyday activities.

## **Forestry Research Section**

Research continued in support of the work of the resource divisions of the department. The Forestry Research Section made studies that included monitoring test plantings of hybrid poplars, investigating the future of cut-over areas, experimental land scarification to increase germination and tree seed production methods and reforestation.



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## Fisheries Research Section

Research by this section dealt with a review of several years' whitefish data for Lake Winnipeg that confirmed there had been over-fishing in previous years, a review of the catch quota system including development of a dynamic population model for whitefish and the study of other populations. Work was begun on the effects on fish of hydro power development in the lower Nelson River and on the possible effects of the Garrison Diversion project on the Manitoba fishery.

## Wildlife Research Section

During the five years the Wildlife Research Section was in the division, research dealt with enumerating rare and endangered species and the population dynamics of furbearers, big game, predators and prey species. Interface problems between man and coyote in agricultural Manitoba were investigated. Woodland caribou winter ecology in southern Manitoba was examined as was the deer population in Winnipeg. It was in the wildlife study area that a majority of the branch's research grants were concentrated.

## Reorganization

Early in 1976, the Fisheries, Forestry and Wildlife Sections of the Research Branch, together with other resource-oriented elements of the department, were transferred, in a government reorganization, to the department of Renewable Resources and Transportation.

With the withdrawal of the resource-centred research components in 1976, the division retained only a limited research capability for dealing with environmental matters. This environmental component was augmented in ensuing years with the addition of expertise for the exploration and review of a range of resource and environmental impact related problems.

## Environmental Protection and Control

The principal operational component of the division was the Environmental Protection Branch, renamed "Environmental Control Services" in 1974.

The main responsibilities of the Environmental Control Services branch included response to public complaints and enquiries, environmental assessment reporting on existing and planned emission sources, environmental monitoring, inspections and investigations, input to and enforcement of orders and regulations issued under *The Clean Environment Act* and of specified regulations issued under *The Public Health Act*.



## Water Pollution Control

From the date of their transfer to the department, the engineers and technicians of what was initially termed Engineering Operations played a key role in the development and delivery of programs central to the mission of the branch. The responsibility of the section was to protect and enhance Manitoba's water resources. Programs were undertaken to identify, monitor and control pollutants and pollution sources. The design and construction of municipal water and wastewater treatment facilities were reviewed and certificates of operation prepared. The operation and effluent quality of wastewater treatment installations were monitored and accidents and malfunctions investigated.

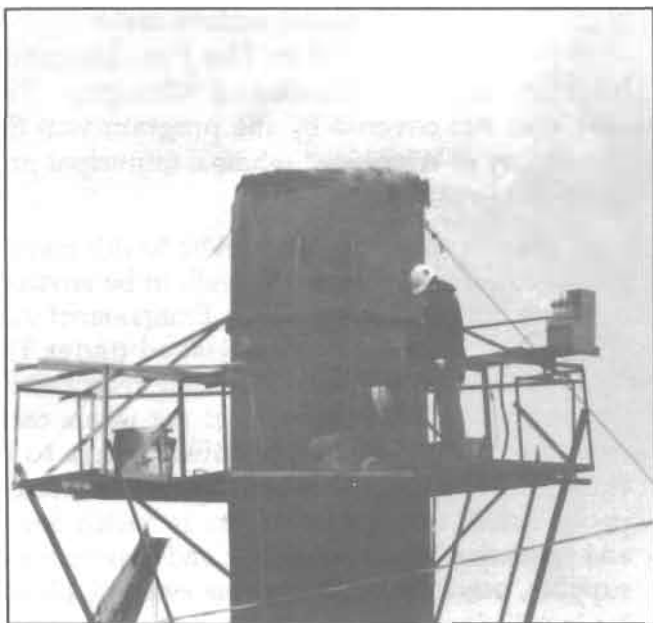
ed. Industrial wastewater and pollution abatement were also responsibilities of the section.

Throughout the 1970s, several site-specific investigations of major industrial and municipal emission sources were undertaken to develop, negotiate and obtain implementation of abatement and control measures. This required an extensive commitment of resources, not only from the Water Pollution Control Section, but from several other sections of the division, as well.

### **Air Pollution Control**

Air pollution was a concern of the division from the time it joined the department in 1971. Originally set up as the Air Sanitation Program under the aegis of the branch laboratory, the section grew as new programs were addressed and additional resources added. At the time of the 1974 branch reorganization, it emerged as the Air Pollution Control Section with responsibility for six programs.

The assessment program developed recommended emission control limits for implementation in environmental control orders for point sources of air pollution. The inspections program



*Sampling smokestack emissions*

collected data, observed processes and equipment and used a variety of field testing apparatus. Staff carried out liaison with emission source operators to develop compliance plans and schedules.

The ambient air monitoring program, was the provincial component of the joint federal-provincial National Air Pollution Surveillance (N.A.P.S.) system whereby four federal government installed ambient air monitoring stations in Winnipeg and one in Brandon were operated by staff of the section.

### **Soil Pollution Control Section**

The section first appeared on the organization charts under this designation in 1974. Programs that fell within its responsibility included the environmental land use advisory which coordinated environmental screening of development plans. Under this program, in 1976-77, for example, 322 subdivision applications or planning schemes were reviewed on the availability of sewer and water services and other aspects of site suitability. Recommendations were forwarded to the approving authority.

In the same year the environmental accident program operated by the section dealt with 82 incidents involving leaks and spills of petroleum products and the handling and disposal of radioactive materials. Incident reports were dealt with throughout the years on a 24-hour-a-day basis. Officers responded to ensure spill sites were secured and that the areas were cleaned and restored to a satisfactory condition.

Following their 1975-76 inventory of all petroleum storage facilities the section took over the administration of the new regulation on the storage and handling of gasoline and associated products when it was adopted in 1976. This required operators to maintain a strict system of inventory control and to report leaks and spills on the 11,000 storage tanks registered by the end of 1977.

In 1979, the division's last year in the department, the Soil Pollution Control Section's responsibilities were extended to the management of

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hazardous wastes in consonance with the adoption of the federal *Transportation of Dangerous Goods Act*. The division actively participated with other western provincial governments in a consultant's study of hazardous waste in the region. The first phase of the study, entitled "*Assessment and Need*", estimated that 42,000 tonnes of such wastes were being generated in Manitoba annually.

### **Noise Pollution Control Section**

The Noise Pollution Control Section's work originated under the industrial hygiene component and grew, in the late seventies to embrace two programs. The first program, noise pollution control, encompassed sound level and seismic vibration monitoring to evaluate complaints and prepare assessment reports and recommendations for control orders.

The Section's second program was community environmental monitoring for hazardous physical or chemical agents in indoor, non-occupational environments such as ice arenas, parking garages and private homes. On request of provincial or municipal government departments or residents support services were provided to measure indoor levels of contaminants and noise.

### **Food Protection Section**

The Food Protection Section's role was to provide the highest possible level of protection from unwholesome or unsafe food and to limit adverse affects on the environment from food industry operations. The section conducted inspections, usually at the manufacturing or wholesale processing level and collected or received food samples for analysis. Samples were analyzed for bacterial and physical contamination in the section's own laboratory facility and were forwarded to other facilities, when appropriate, to test for chemical contaminants.

Facilities and products of particular concern to the section were ready-to-eat meat, salad, poultry and frozen dairy products. Also inspected, pursuant to an agreement between federal and provincial governments, were some thirty abattoirs throughout agricultural Manitoba.

### **Occupational Health Section**

From its earliest days in the department, industrial hygiene was an important concern for the Environmental Management Division. Originally it was a program of the Environmental Protection Laboratory and, in 1974, a separate section was established to carry out this function. Responsibilities were, initially, following up on referrals by interested groups such as the Workers' Compensation Board to detect, measure and evaluate occupational health hazards and recommend control of exposure.

The Occupational Health Section was transferred to the department of Labour in 1977.

### **Inspection Services**

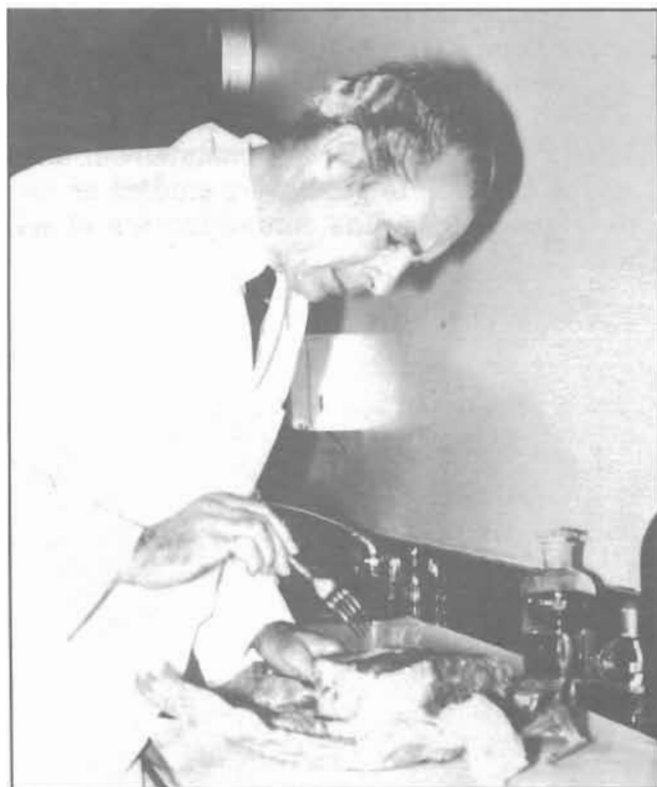
In October, 1972, the Public Health Inspection program was transferred from the department of Health and Social Development to the Environmental Protection Branch and designated Regional Services, a title later changed to Inspection Services. This program had 49 public health inspectors stationed in thirty locations throughout Manitoba. They worked under a Chief of Inspection Services, located in Winnipeg, in five (later to become six) regions under regional supervisors located in The Pas, Dauphin, Brandon, Morden, Selkirk and Winnipeg. The only area not covered by the program was the "Inner City of Winnipeg" where a municipal program was in place.

Under the program, the public health inspectors, who were appointed, as well, to be environment officers under *The Clean Environment Act*, administered 29 regulations issued under *The Public Health Act* and had expanding responsibilities under *The Clean Environment Act* where there were also regulations and control orders to be enforced. Continued responsibilities under the public health inspector program included health and sanitation aspects of public and private water supplies, private sewage disposal systems, plumbing installations, food service operations, insanitary conditions, housing and bathing premises, camps, resorts, non-institutional care facilities and correc-

tional institutions. The added responsibilities under *The Clean Environment Act* included livestock waste management, pollution surveys in provincial parks and recreational areas, a census of food handling premises, environmental assessments of proposed subdivisions, industries or other developments and environmental monitoring.

By 1979, Inspection Services was responsible for carrying out 23 specific programs. The major thrusts were improvement of the province's 408 waste disposal grounds, surveillance of public water supplies, inspection of food service operations, taking action on citizen complaints and response to environmental concerns relating to proposed subdivision developments.

As their time within the department drew to a close, the public health inspectors were embarking on a system of "ticketing" offenders for environmental and public health offenses, much in the way tickets are issued for traffic offenses. This added further to their flexibility and effectiveness in the compliance process and was an innovative step in the environmental and public health field.



*Jim Sisler testing food sample*

## ***Technical Services Laboratory***

In 1971, the environmental health laboratory of the Department of Health and Social Development was transferred to the department and renamed the "Environmental Protection laboratory". Seven chemists and 14 technicians subjected samples of water, wastewater, industrial waste, food and wildlife tissue to chemical analysis for heavy metals, pesticides and other contaminants.

### **Inorganic Analysis Section**

This section concentrated on conventional chemical analyses to determine such content and characteristics as residues, fluorides, metals and the strength of organic oxygen-depleting contaminants. The section also made quantitative determinations based on atomic absorption spectrophotometry.

### **Organic Analysis Section**

The analyses completed by this section involved the use of auto-analysis, gas chromatography and infra-red spectroscopy. The major analyses involved nitrogen cycle; the phosphorus cycle; pesticides and organic compounds, including PCBs and hydrocarbons and included tests for flammability and the use of dye tracers. Included in this work were forensic determinations in support of investigations by the Provincial Fire Commissioner and evidence for Finance department gasoline tax prosecutions and environmental enforcement actions.

### **Methods and Standards Section**

The results of analyses and tests conducted by the technical services laboratory staff were subjected to challenge when presented as evidence at legal and quasi-legal proceedings or were for use in scientific publications and in support of regulatory findings requiring reliability of analysis results. It was therefore of critical impor-

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tance that the results be accurate and reliable and that the exactness of laboratory procedures be faithfully adhered to.

In 1973-74 the laboratory formalized its quality control activities by forming the Methods and Standards Section. The section created and maintained a methods manual of approved laboratory procedures and participated in inter-laboratory quality control studies leading to AIHA accreditation in 1981.

## ***Waste Management Branch***

In fiscal year 1972-73, the Environmental Management Division formed the nucleus of a waste recycling service unit.

The first challenge facing the unit was the unsightly accumulations of derelict automobiles found in almost every rural centre in the Province. In Winnipeg, market forces encouraged automobile recycling. Outside Winnipeg, however, added costs made this option less attractive.

The success of the derelict automobile recovery program depended on two main lines of action. The first was to increase local awareness and encourage the active participation of local governments and the public. The second was to encourage private sector involvement in the recovery process by negotiation and by subsidizing transportation costs.

In 1975-76, when the unit was designated the Waste Management Branch, its programs continued to expand. In that year a study was made concerning waste lubricating oil. This study continued with a pilot project in 1976-77 to establish collection networks for used oil, development of criteria for the safe use of lubricating oil to oil roads, development of contacts concerning re-refining the oil and study of the possibility of establishing depots for do-it-yourself oil changing. As a record dry year with a consequent heavy demand for road oiling, 1976 proved to be a poor year to develop alternative uses.

## ***Program Development and Review***

The designation Program Development and Review Branch came into use in 1975-76. The objectives of the branch were the evaluation of the division's environmental programs, the development of objectives and standards for soil, air and water quality and the development of environmental legislation.

A salient role of branch members having widely acknowledged professional qualifications was to represent their department and the province on 14 key interdepartmental, inter-provincial and international boards and committees. These included, for example, the Garrison Diversion Study Board and the Red River Pollution Board of the International Joint Commission, the Liaison Committee of the Canada-Manitoba Accord for Protection and Enhancement of Environmental Quality and the Committee on Guidelines for Canadian Drinking Water, to name only a few.

Participation in a federal-provincial program on the Souris-Assiniboine system began in 1973. U.S.- Canada sampling stations on the Red River ensured the water quality objectives of the Red River Pollution Board were maintained. Point source emission impacts were studied as were problems of gasoline contamination of well water.



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## ***Environmental Assessment and Review Agency***

In 1978-79 the Manitoba government established the environmental assessment and review program. Its stated objective was to review the environmental impact of all projects funded, designed or constructed by government departments or crown corporations. These projects were put through a screening process, prior to construction, by the Manitoba Environmental Assessment and Review Agency, a body of government specialists and senior officials. The function of this process was to identify any potentially adverse environmental effects and to balance these against the benefits of the proposed project.

## ***Reorganization***

As part of a government reorganization, the Environmental Management Division was transferred to the Department of Consumer and Corporate Affairs and Environment at the end of 1979.



***Official Opening of the Ward Lab***

**Left to right: Hon. W. Jorgenson, Maxine Ward, Bill Ward, Hon. D. Craik, Hon G. Filmon**



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***Directors of Administrative Services***

- ☐ J. L. R. Sutcliffe
  - ☐ J. A. Russell
  - ☐ A. G. Wirdnam
  - ☐ F. W. Stewart
  - ☐ L. R. Pout
  - ☐ W. J. Podolsky
-

# *Administrative Services*

One thing is constant in virtually every organization: bills must be paid, payrolls met, equipment purchased and so forth. When *The Natural Resources Transfer Act* was passed in 1930 the new provincial department established an Accounts and Revenue Branch.

The first accountant was J.L.R. Sutcliffe. He carried the title of Accountant and Chief Clerk. His responsibilities were accounts payable, receivables and payrolls. His staff consisted of 9 persons and the departmental budget was about \$ 552,000. The total departmental staff at that time was 154 people.

In today's department the administrative staff complement, permanent and seasonal, is 83 and the departmental budget is over \$ 99,000,000. The total departmental staff today is 1,467 people.

In the early days of the department, branch managers looked after personnel matters. Systems analysts, internal auditors, counselors and so forth were unheard of, but the Chief Accountant was always a person to respect, if not fear.

Following Mr. Sutcliffe in 1939-40, came J.A. Russell as Accountant and Chief Clerk. He held the position until 1953-54 when A.G. (Bert) Wirdnam took over the office. The staff had grown from eight in 1930 to 16 in 1954, with eight of the 16 being temporary help.

Temporary in those days meant that if the form of payroll was "time certificate" and it was not processed you were out of a job. Some staff worked in the department for 25 years and were always on "time certificate."

In 1968-69, a major change took place when the old Accounts Branch was renamed Management Services under the direction of L.R. Pout. This new branch took on responsibility for personnel matters and staff training.

Another name change took place in 1971-72 when the branch became Administrative Services Section. It remained this way until 1974-75 when the department was split in two;

- (1) Mines, Resources, and Environmental Management,
- (2) Renewable Resources and Transportation Services.

One administrative unit under the direction of F.W. Stewart, who was made an Assistant Deputy Minister, was responsible for Renewable Resources and Transportation Services. Another Assistant Deputy Minister, W.J. Podolsky, was in charge of administration for Mines, Resources and Environmental Management.

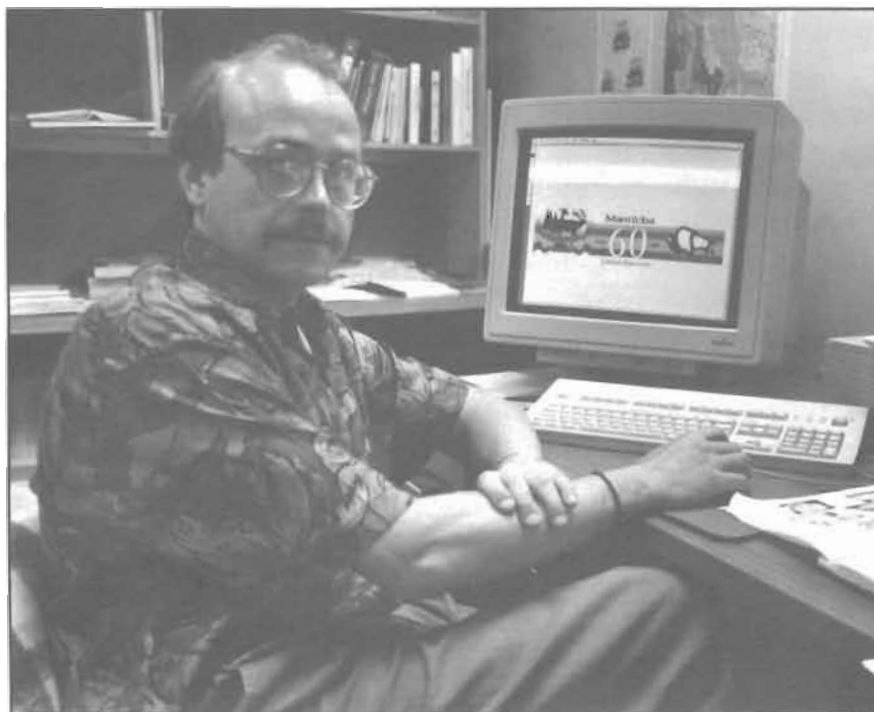
This organizational configuration remained until 1979-80 when the two departments were reunited with Mr. Podolsky being the ADM in charge.

In today's organization Mr. Podolsky is an Executive Director with the following sections reporting to him:

Finance Director - P. Lockett,  
Operational Support Chief - G.Cielen,  
Human Resources Director - Ken Reimer,  
Internal Audit - S. Cohen, and  
Systems Chief - R. Thomas



*Bob Gould*



*Andy Maslowski*

# Acknowledgements

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*The Department of Natural Resources serves a diversity of clientele in most geographic areas of the province. Drawing together an historical background of this group of disciplines has been a challenge met by a host of writers. The task of editing the variety of presentations and styles was undertaken by a previous Deputy Minister, Allan Murray. Al lead our Department in the 70's and enthusiastically undertook this historical review. He brought to this task special writing skills and the familiarity of our province and its people. Al Murray made this historical presentation possible.*

*As the Department began to plan a celebration the need for a logo was identified and a contest held for those employees interested. First prize was a weekend at Gull Harbour Lodge on Hecla Island. The winner was Andy Maslowski who produced the logo shown on the front of this book and used on a variety of publications, letterheads and shirts and hats during 1990. Andy then proceeded during the preparation of the book to assist with the layout and design. His skills were appreciated.*

*The early idea of considering a celebration of the Department's first sixty years came from discussions with Sandy Maltman who had a long history in the Department both in the ranks and in Ministers offices. His ideas and encouragement in producing the celebration were important in getting the event started.*

*To all who used their skills, their energy and their imagination to making 1990 a year to remember — a very warm and sincere **THANK YOU.***

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Deputy Minister of Natural resources

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