REGIONAL ECONOMIC DEVELOPMENT IN THE PARKLAND REGION OF MANITOBA

By

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A Practicum Submitted
In Partial Fulfillment of the
Requirements for the Degree,
Master of Natural Resource Management

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ABSTRACT

The objectives of this practicum are: (1) to synthesize relevant concepts, development theories, and approaches in a context consistent with regional economic development in the Parkland Region; (2) to analyze the organizational structure and approach adopted by the Parkland Regional Development Corporation in its effort to promote effective regional economic development; (3) to provide a natural resource inventory to aid in the analysis and identification of development dynamics in the Parkland Region.

Regional economic development is a continuing process. The major components of this framework that must be considered include: (a) The need for a research phase to identify information needs for plan formulation, monitoring and evaluation; (b) the creation of a formal mechanism for the implementation of development programs; (c) the design of a strategy for coordinating regional development programs.

Regional economic development has many different facets, and to learn from both theory and practice, one must examine the goals to be achieved. Economic development in any region should be considered in terms of the underlying factors that determine the type of development appropriate to the economy and social needs of the people in a particular region. Important to regional development is the conceptual framework for planning and the components in place to conduct regional development.

The Parkland Regional Development Corporation has functioned for over a decade and continues to examine its role as an effective

development body. Changing environmental, economic and political factors are considered as are the changing social needs with the Parkland Region. The Parkland Regional Development Corporation has recently developed a strategy for development in the Parkland Region. This study has been done to assist this development process.

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Sincere appreciation is expressed to Mr. W. P. Barto, Department of Renewable Resources Planning Branch, for providing valuable information and the many maps used to present the inventory data in this study. Many other resource managers, too numerous to mention also provided useful information for this practicum.

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INTRODUCTION

1.1 Preamble

The evolution of regions and approaches attempting to influence regional development in Canada is an important issue and has been extensively treated.[1] Similarly, regional land use and development planning has been the subject of recent overviews.[2]

The various components that may be considered as part of the concept of Regional Development can be outlined as follows:

> Regional development as an economic concept is concered with the problems of disparities in income, employment, welfare and rates of growth among regions. As a concept in geography, it deals with the spatial structure of a country as expressed in the distribution of people, economic activities and communities, and with the flows within and between regions. As an environmental concept regional development is concered with releasing the potentials of the natural and man-made environment for the enhancement of the quality of life. Viewed as a political concept it has two related pre-occupations: (i) the easing of tensions between have and have not regions within a country, and (ii) the fostering of local participation in the process of decision making related to both the development and environmental aspects of each region.[3]

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[1] T. N. Brewis, Regional Economic Policies in Canada (Toronto: MacMillan, 1969); Department of Regional Economic Expansions, Salient Features for Federal Regional Development Policy (Ottawa: DREE, 1969); L. Gertier, Regional Planning in Canada (Montreal): Harvest House, 1972.)

[2] L. Gertler, I. Lord, and A. Stewart, "Canadian Planning: The Regional Perspective", Plan Canada, Vol. 15, (Montreal: Harvest House, 1975), pp. 72-85; D. Webster, "Developmental Planning in Canada: The State of the Art and Emerging Patterns", Emerging Patterns in Canadian Planning, ed. I. M. Robinson and W. T. Perks (Stroudsville, PQ: Dowden, Hutchinson and Ross, 1978).

[3] L. O. Gertler, Regional Development in Canada. (Paper presented at the annual meeting of the Canadian Association of Geographers, St. John's, Newfoundland, August, 1969, p. 45.)

Development planning then is characterized by an integrated approach affecting a variety of interrelated social, economic and natural systems.

The inequality of income and employment opportunity within as well as between provinces has long been one of the important issues in the Canadian scene. There is widespread agreement that this inequality is too great to be acceptable, and federal, provincial, and local governments have in the past devoted a great deal of effort to the development of programs to reduce it.

Regional economic disparity can be considered only within a defined frame of reference. One may define economic disparity as a state of affairs in which the economic conditions of large groups of people or regions differs significantly, over time, from those of other groups or regions.[4] From a federal viewpoint Canada has been divided into the Atlantic Region, Quebec Region, Ontario Region and the Western Region. The provincial viewpoint in Manitoba's case further breaks down the province into seven economic regions.

In its Second Annual Review, the Economic Council of Canada defined an "economic region" as a:

> geographic area that is essentially homogeneous in respect of one or more important attributes.

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[4]M. Menzies, A Canadian Resource Policy Reader: A Collection of Papers, (Winnipeg: Natural Resource Institute, University of Manitoba, 1976), p. 172.

> Among these may be included physical features and resources, structure of economic activity, market size, economic performance, administrative jurisdiction, and social cultural features.[5]

The Manitoba Regional Development Corporations which represent the seven economic regions of Manitoba endorse the definition of "region" established by the Canadian Council on Rural Development. The Council states that:

> a region is determined by reference to a large number of political, social and economic factors ... We regard a region as a territorial unit, which occupies an intermediate position between the local and national levels, comprises a network of socio-economic activities focussed around a centre and which is capable of self-development.[6]

For the purposes of this study the concept of a region as defined by the Canadian Council on Rural Development will be used.

The present Regional Development Corporation boundaries, also to be used in this report, were determined by economic considerations, to a certain extent by existing administrative boundaries and by the wishes of member municipalities, who felt they had a common interest.

In recognition of the fact that the provinces are increasingly assuming the central role in regional planning the following

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[5]Economic Council of Canada, Second Annual Review, "Towards Sustained and Balanced Economic Growth" (Ottawa: The Queen's Printer, 1965), p. 98.

[6]Canadian Council on Rural Development, "Second Report and Review: Some Major Problems in Regional Development" (Ottawa: The Queen's Printer, 1965), p. 36.

study will view in general some aspects of the theory and practice of a Regional Development Corporation in Manitoba.

1.2 Problem and Its Setting

1.2.1 *Statement of the Problem*

Regional Development Corporations in Manitoba are responsible to their regions for planning and development. The Regional Development Corporations are involved in "grass roots" planning by involving local people in discussions of developmental issues and attempting to reach a consensus on issues affecting the regional community.[7]

The Regional Development Corporations are responsible for expediting the total resource development (development of physical economic and human resources) in the region by:

1. Identifying the needs of the region through research, continuing dialogue with individuals, organizations, interest groups, and local governments in the region;
2. Researching these needs and opportunities;
3. Documenting the needs and opportunities in an appropriate form;
4. Mobilizing the resources necessary to ensure that these regional needs are resolved and/or regional oportunities are developed.[8]

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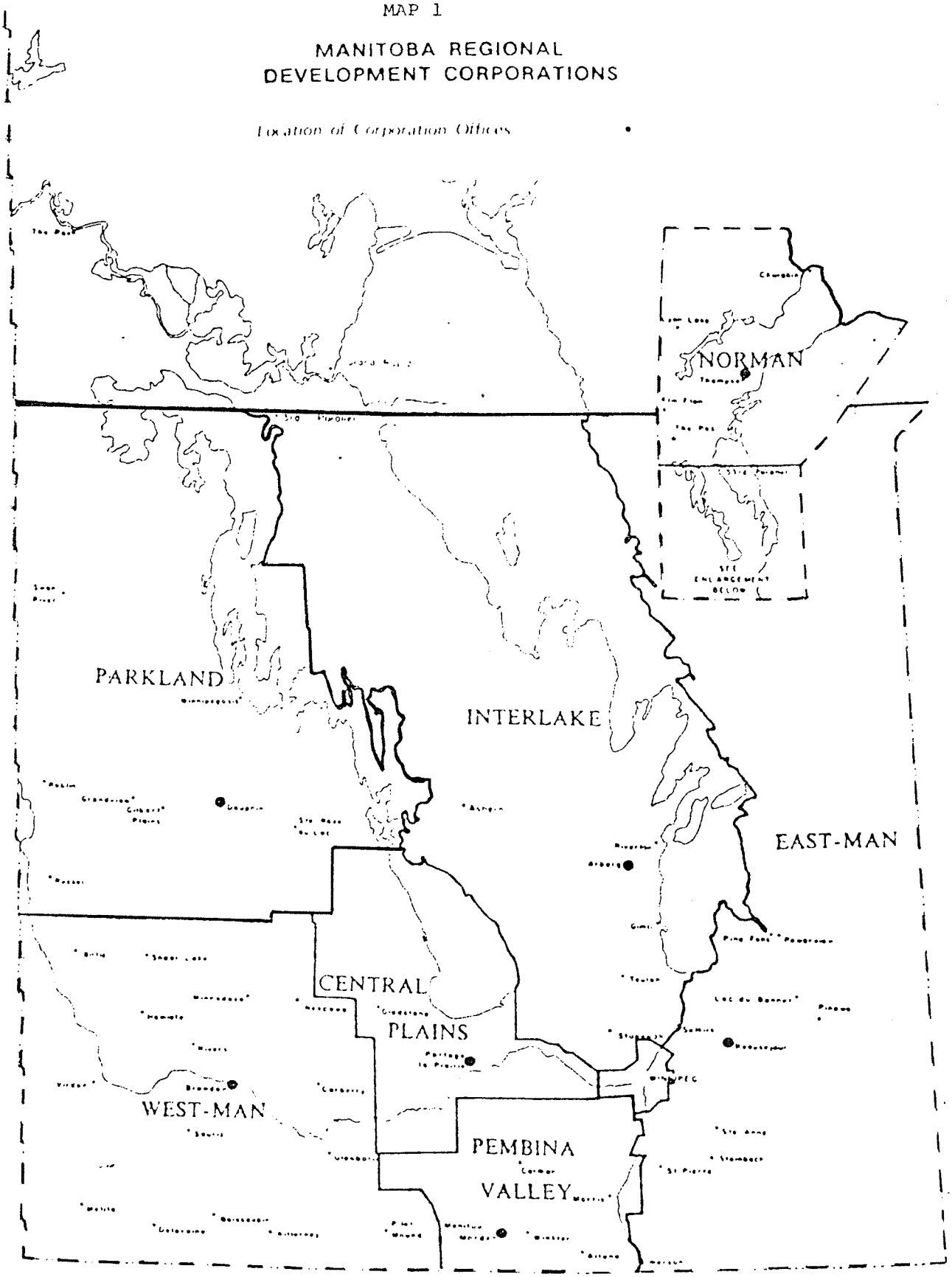
[7]Manitoba Regional Development Corporations, "Submission by the Seven Regional Development Corporations in Manitoba to the Regional Development Committee of the Government of Manitoba" (January 1975), p. 9.

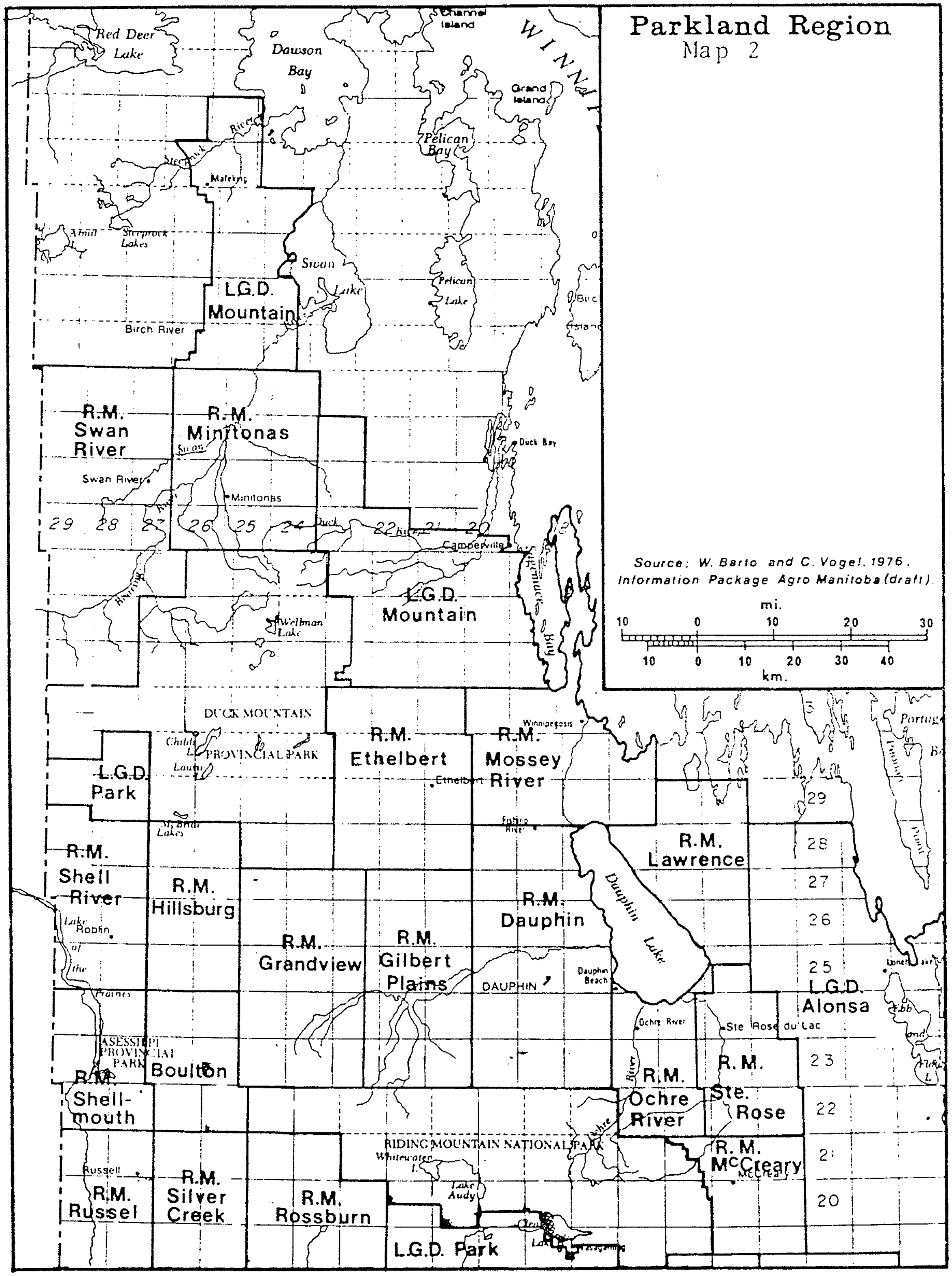
[8]Manitoba Regional Development Corporation, p. 10.

MAP 1

MANITOBA REGIONAL DEVELOPMENT CORPORATIONS



Source: Manitoba Regional Development Corporation 1975, p. 30.


Parkland Region
Map 2
Source: W. Barto and C. Vogel. 1976. Information Package Agro Manitoba (draft).
mi.
km.
Red Deer Lake
Dawson Bay
Channel Island
Grand Island
Pelican Bay
Swan Lake
Pelican Lake
L.G.D. Mountain
Birch River
R.M. Swan River
R.M. Minitonas
Swan River
Minitonas
Duck Bay
Camperville
L.G.D. Mountain
Wellman Lake
DUCK MOUNTAIN PROVINCIAL PARK
Winnipegosis
R.M. Ethelbert
Ethelbert
R.M. Mossey River
L.G.D. Park
R.M. Shell River
R.M. Hillsburg
R.M. Lawrence
Dauphin Lake
R.M. Dauphin
R.M. Grandview
R.M. Gilbert Plains
DAUPHIN
Dauphin Beach
L.G.D. Alonsa
Ochre River
Ste Rose du Lac
R.M. Boulton
R.M. Shellmouth
R.M. Ochre River
R.M. Ste. Rose
RIDING MOUNTAIN NATIONAL PARK
R.M. McCreary
McCreary
Russell
R.M. Russel
R.M. Silver Creek
R.M. Rossburn
L.G.D. Park
Lake Audy

Manitoba Regional Development Corporations represent an important part of the overall development framework. These corporations can provide an avenue for encouraging local participation in planning for opportunities.

The problems that this study will address stem partially from the previously stated responsibilities and partially from the difficulties faced by the Parkland Regional Development Corporations (PRDC) in maintaining a role in the overall regional development process.

1.2.2 *The Study Area*

The Parkland Region boundaries used in this study are the proposed boundaries of the Manitoba Development Corporations (Map 1). Parkland Region includes that portion of the province of Manitoba which borders on Saskatchewan and which is mainly north of Riding Mountain Park, but including the park, south of the 53rd parallel and west of Lake Winnipegosis and Manitoba (Map 2). A more comprehensive physical and economic description of the region will be presented in Chapter 3.

1.2.3 *Study Goals and Objectives*

The objective of this study is to put into perspective the present economic development strategy of the Parkland Regional Development Corporation, identifying problems in the development approach and to provide information which may be used for regional planning and analysis.

The concerns of this study are reflected in the following set of objectives:

1. To synthesize relevant concepts, development theories and approaches in a context consistent

with regional economic development in the Parkland Region;

2. To analyze the organizational structure and approach adopted by the Parkland Regional Development Corporation in its effort to promote effective regional economic development.

3. To provide information through the provision of a natural resource inventory to aid in the analysis and identification of development dynamics.

1.3 Justification for Study

The need for planning and evaluation of regional economic development is well documented.[9] Regional policy questions relating to regional economic growth and income redistribution requires a considerable amount of up-to-date information to permit effective policy formation.[10] However, while regional development corporations are responsible to their regions for regional development planning they lack adequate staff to conduct research. The PRDC has indicated the need at the present time for information on its region's natural resource base. Also, at the time of this practicum's original proposal, the Department of Regional and Economic Expansion was assembling information with the objective of describing the southern rural region of Manitoba, the Parkland part of this.

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[9] L. Gertler, I. Lord, and A. Stewart, "Canadian Planning".

[10] J. A. MacMillan, et. al., Manitoba Interlake Area: A Regional Development Evaluation, (Ames, Iowa: Iowa University Press, 1975), p. 3.

It was indicated at that time that a natural resource inventory of the region would complement the information collected on the people and their communities of that area.

A survey of members of the Parkland Regional Development Corporation, conducted by J. A. MacMillan in 1977, revealed a perceived need for a development planning thrust centering on jobs, resource development and quality of transportation services.

While the concept of Regional Development Corporations has been generally accepted as both useful and important to the process of regional economic development, their credibility has often been questioned by its member municipalities as well by higher levels of government. This credibility question has recently resulted in the demise of the West-Man Regional Development Corporation centred in Brandon. It is for this reason that the organizational and structural approach of the PRDC will be reviewed in a search for methods to provide a broadly acceptable and credible approach to regional economic development.

1.4 Approach to the Study

The importance of both the information needs and the operational approach to regional economic development have been identified by the Parkland Regional Development Corporation. To achieve the objectives of this study a literature review will be conducted to obtain information on the Parkland Region and also the concepts and theories of regional economic development. The study begins with a review of relevant concepts and theories to present a more systematic process of dealing with regional economic development problems. The third chapter presents an

overview of the region and its existing social and economic conditions along with a detailed description of the region's natural resource base.

In the final section the present management approach of PRDC will be reviewed. This review will attempt to identify some of the operational difficulties posed by regional economic development problems in the Parkland Region.

Information sources will include the private sector, government and university. Resource data will be sought mainly from resource managers in various government departments. Individuals representing a cross-section of interests will be interviewed to raise possible concerns about the present development approach and to make suggestions to aid the PRDC in its task of providing an important link in the regional economic development process.

CHAPTER 2

LITERATURE REVIEW

The objective of this chapter is to describe the theory and practice of the regional development process in a manner which will provide useful insight to the PRDC.

2.1 History of Regional Development Approaches in Canada

Government recognition of regional disparity essentially came about during the Great Depression of the 1930's. It was during this time that government agencies proposed a developmental solution to regional problems. Early government responses consisted of programmes aimed at improving rural land use. The Prairie Farm Rehabilitation Agency (PFRA) was created in 1935. PFRA was designed on the assumption that improved resource use practices and physical resource investment would contribute to the depressed rural areas of that time.[1]

By the 1950's, regional disparities still persisted; programs such as PFRA generally did not have great impact on the rural poor. It was during this time, because of the political atmosphere of the day, that important developments at the federal level affecting regional development policy occured. The most significant steps in the formulation of a regional development policy was the establishment in 1957 of the Senate Special Commission on Land Use in Canada. One of the recommendations by the Special Committee of the Senate on Land Use

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[1] Paul Nickel and Ian Gillies, Regional Development in Manitoba Interlake: Two Perspectives (Winnipeg: The Natural Resource Institute, University of Manitoba, 1977), p.5.

was that a joint Federal-Provincial Program be instituted to deal with areas of greatest need, and that appropriate action programs be planned and developed.[2] This investigation led to the Agricultural Rehabilitation and Development Act (ARDA) in 1961, whose objectives were to deal with problems of low income arising out of technological changes in agriculture, and to develop a national strategy of agricultural development.

Separate from the rural development policies, the Department of Industry Act of 1963 set up the Area Development Agency (ADA) with the purpose of providing incentives for industrialization in certain areas.[3] The ADA inducements had two major failings: the rigidity by which incentives were restricted to manufacturing and the tendency of capital-intensive firms to take advantage of the grants.

In 1966, the emphasis of ARDA shifted from strictly agricultural problems to a more comprehensive assessment of rural society, including social as well as economic problems. An act creating the Fund for Rural Economic Development (FRED) was passed to give financial support to this new trend in regional economic development under ARDA. Local rural development committees were constituted to participate with the authorities in devising comprehensive plans for designated areas. FRED

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[2]T. N. Brewis, "Regional Development in Canada in Historical Perspectives", in N. H. Lithwick, Regional Economic Policy: The Canadian Experience (Toronto: McGraw-Hill Ryerson Limited, 1978), p. 218.

[3]D. Todd, "Regional Intervention in Canada and the Evolution of Growth Center Strategies" in Journal of Growth and Change. (January 1977, p. 30).

signaled a change in official attitudes, away from assisting pockets of unemployed labour by conventional subsidy, toward comprehensive functional area planning.[4] In 1965, the Area Development Incentive Act (ADIA) had been introduced to provide financial incentive for industries to locate in depressed regions.[5] In the Atlantic provinces the Atlantic Development Board (ADB) was created to prepare a regional development plan. After a change in government, the Atlantic Development Board was empowered to prepare, in consultation with the Economic Council of Canada, an overall co-ordinated plan for the promotion of the economic growth of the region. Attention was directed to the examination and financing of specific projects, and the advisory and planning function became subsidiary. The ADB became the Atlantic Development Council in 1969 and adopted a spatial planning thrust.

The need for a more comprehensive approach to planning and for greater coordination between rural and industrial development packages was recognized by the federal government.[6] In 1969 the Regional Development Incentives Act was passed and incentives previously controlled by ARDA, FRED, and ADA

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[4] D. Todd, 1977, p. 30.

[5] P. Nickel, and I. Gillies, p. 9.

[6] D. Todd, 1977, p. 31.

were incorporated under one regulating body, the Department of Regional Economic Expansion (DREE).

The Department of Regional Economic Expansion is now the main actor in regional development in Canada. Established in 1969 as a hybrid of various existing federal agencies, DREE had by 1973 moved toward a "growth centre" approach to regional development.[7] This approach de-emphasized an earlier focus on rural poverty and instead placed emphasis on creating employment in designated areas. DREE's main role focussed around employment creation and jobs were regarded as the main measure of economic success. As a result of criticism, DREE was reorganized and decentralized in 1973. Subsequently the Department has entered into General Development Agreements (GDA's) with all provinces. This change reflects "a search for a more comprehensive or multi-dimensional approach to regional development."[8] The focus has now been to decentralize planning, administration, and implementation from Ottawa to the regions and provinces. Provinces are responsible for designing their own regional development structure.

Lack of a comprehensive theory of economic growth and development adds difficulty to formulating development plans.

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[7] W. B. Rees, Development and Planning North of 60 Degrees: Past and Future, Theme Paper: Second National Workshop on People, Resources, and the Environment North of 60° (Edmonton: 1978), p. 12.

[8] Canadian Council on Rural Development, "A Development Strategy for the Mid-North of Canada" (Ottawa: The Queen's Printer, 1976), p. 36.

However, a number of partial theories of economic growth are available which focus on major forces of economic change and growth. Among these relevant theories for regional growth and development are export base or staples theory, location theory, sector theory, cumulative causation theories and several theories of production investment, public finance, and rural interdependence.[9]

2.2 Theories of Regional Development

A brief overview of regional development theory is given by J. R. Barnard et. al. The export base or staples theory of growth emphasizes the growth of regional exports as the main force of economic growth. The staples theory focuses on the growth in demand for the regions exports as the primary basis for long-run regional growth and short-run regional fluctuations. Closely related to the staple theory and the production of goods for which the region has an advantage. Location theory is concerned with the location factors of firms, groups of firms, and the location patterns of production and specialization of sets of activities. The sector theory of economic growth is concerned with advances in technology, increasing per capita incomes, and changing rates of sector expansion arising from the relative income elasticity of the output of various sectors, with emphasis focused on the forces of

[9] J. R. Barnard, J. A. MacMillan, W. R. Maki, Evaluation Models for Regional Development Planning, Dept. of Agricultural Economics University of Manitoba, Papers of the Regional Science Association, Volume XXIII, p. 121.

growth internal to the region. Theories of production and investment are concerned with describing the production and investment process. Formulations of production and investment theory expresses expansion of productive activity as a function of capital accumulation, technical progress and labour productivity. Relevant production costs, accessibility to markets, and attractiveness of a region are not only dependent upon the investment of the private sector but also upon the expenditure of the public sector in social overhead capital. The interdependence of the rural-urban sectors is important where activities are intertwined in the region's production, consumption, investment and trading processes. Finally, cumulative causation theory has also had an influence on subsequent development in regional growth theory. This theory stresses the cumulative and self-reinforcing advantages of the initially established locations in the process of development, with particular stress on the role of agglomeration and other external economies.[10]

The usefulness of regional economic theory depends upon its practical application to specific types of regions. The first problem to be identified in this case is the cause of regional disparities and the region's potential areas of growth.

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[10] H. W. Richardson, Regional Growth Theory, (Toronto: John Wiley and Sons, 1973), p.57.

2.2.1 *Origin of Regional Disparity*

Hoover feels we can build an understanding of spatial and regional economic problems on three facts of life:

1. natural resource advantage
2. economies of spatial concentration
3. costs of transport and communication.[11]

Although these basic facts do not directly express social-cultural aspects, one should keep these aspects in mind.

The various theories of regional growth that might deal with these problems are grouped by Stilwell.

1. those that consider growth to arise as a result of resource reallocation;
2. those relating growth to the expansion of the region's export base;
3. those that concentrate upon investment in its relation with the growth of capacity; and
4. those that consider growth as a cumulative process.[12]

Stilwell identifies two sub-categories in the above; intra-regional reallocation models and inter-regional reallocation models. Both rest upon factor mobility as the mechanism producing differences between regions in the rate of economic growth, usually measured in per capita income. He states that the first suggests the rate of growth will be fastest in those

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[11] E.M. Hoover, An Introduction to Regional Economics (New York: Alfred A. Knopf Inc., 1975), p. 5.

[12] F. J. B. Stilwell, Regional Economic Policy (Toronto: MacMillan, 1972), p.30.

areas where the internal allocation of resources is the greatest. Any misallocation of resources is corrected by resources moving from sectors offering below-average return to those offering above average returns. Inter-regional reallocation directly follows from the assumptions that a set of regional economies will be in equilibrium only when factor price/productivity ratios are identical in all regions.

In direct contrast to this equilibrating situation are the disequilibrating concepts known as cumulative causation theories. Richardson points out that the play of forces in the market normally tends to increase, rather than to decrease, the inequalities between regions. Market forces lead to the clustering of increasing return on activities in certain areas of a nation. Regardless of the initial location advantage, this build-up becomes self-sustaining because of increasing internal and external economies at these centres of agglomeration. The limited advantages of slow growth regions are insufficient to offset those agglomeration advantages. Thus, the free trade of an inter-regional system operates to the disadvantage of poor regions, inhibits industrialization and distorts their pattern of production. Hence, economic growth is a disequilibrating process.[13]

How then do regional development theories aid in the decision making process? It has been noted that the conceptual foundation of current regional development efforts is actually a mixed bag of tools where each one was developed to analyze

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[13]H. W. Richardson, 1973, p. 29.

a particular aspect of the complex structure of the economy or of particular types of economic activity.[14] The most commonly discussed relevant bodies of theory include trade theory, location theory and staple theory.

2.2.2 *Theoretical Solutions*

Of the basic theories Scott notes that trade and location theory are suggestive, but not really helpful, for their conclusions usually depend on the assumption that factor input (the various kinds of labour, capital and enterprise) are not mobile among regions. A version of the staple theory is found to be more useful, and is developed for its implications, especially for declining regions.[15]

Trade theory accounts for the observed trade of goods and money between regions. It produces conclusions in terms of a region's comparative advantage in specializing in certain activities. The theory explains or predicts which goods are traded by observing the endowments of each region, and the productive processes that are available to fully employ each region's endowment.[16]

Location theory was developed out of the need to explain and predict the location of economic activities. The theory

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[14]J. P. Francis and N. G. Pillai, Regional Development and Regional Policy: Some Issues and Recent Canadian Experience (Ottawa: DREE, 1972), p. 14.

[15]A. D. Scott, "Policy for Decline Regions: A Theoretical Approach", in N. H. Lithwick, Regional Economic Policy: The Canadian Experience (Toronto: McGraw-Hill Ryerson, 1978), p.46.

[16]A. D. Scott, in N. H. Lithwick, p. 48.

embraces three levels of observation:

1. location of a firm,

2. the location of groups of firms so they will be in a stable competitive situation in relation to each other, and

3. the location of sets of activities such as different kinds of agricultural land use in relation to each other so that all activities bear a stable competitive relationship[17]

Location theory usually considers transport and labour costs, weight and bulk loss in manufacturing, and size of establishment, to suggest where particular firms can best add to that firm's profits. Theories of firm location can be grouped into four categories according to the motivation attributed to the entrepreneur taking the location decisions. These are:

1. minimizing costs,
2. maximizing revenue,
3. maximizing profit, and
4. satisficing.[18]

Thus, a firm is seen as selecting a location by trading off distance from raw materials and market against advantages in terms of reduced costs of labour, resources and other factor endowments.

In Stilwell's discussion of location theory, the most obvious policy recommendations noted in studying industrial location

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[17]B. Berry, and F. Horton, Geographic Perspective on Urban Systems (New Jersey: Prentice-Hall Inc., 1970), p. 94.

[18]F. J. B. Stilwell, p. 25.

include:

1. to develop a system of taxes and incentive which make the individual firm's profit maximizing location synonymous with the social optimum,

2. to assist location decision-makers to perfect their knowledge of both costs and revenues in alternative sites.[19]

In the Canadian perspective and more specifically the Parkland Region of Manitoba, the staple commodity appears to offer the most helpful approach. The Parkland Region is heavily reliant upon agriculture and trade related activities. The various economic conditions of regions are explained, according to the staple approach, by the varying availability and marketability of natural resources. The staple approach offers an explanation both of regional growth and of decline, in terms of factor migration, export price, resource availability, and technology.[20] Alternatively, the Economic Council of Canada notes that the availability of certain resources, such as good agricultural land and other marketable natural resources may explain part of the regional differences in income, but evidence suggests that resources are of secondary importance in determining factors influencing the productivity of a region compared with the combined effects of factors such as physical and human capital, technology, and scale economies.[21]

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[19]F. J. B. Stilwell, p. 27.

[20]A. D. Scott in N. H. Lithwick, p. 59.

[21]Economic Council of Canada, Living Together: A Study of Regional Disparities (Ottawa: Ministry of Supply and Services, Canada, 1977), p. 23.

The staple theory emphasizes migration of the factors of production, arguing that factor endowment can better be explained by factor migration than by local generation. The staple theory supposes that the declining marketability of a region's staples generates a combination of low income, high unemployment, and high out-migration. On the other side, factors come to a region in response to the high returns offered by a staple export; growth comes when advancing technology reduces unit costs, or when expanding demand increases rates of return.[21]

Leading from the theoretical aspects of regional disparities and growth models, one must next consider how to approach regional development problems in specific regions.

2.3 The Practice of Regional Development

The practice of regional development depends upon a number of interrelated factors. This section will attempt to outline a planning framework that might be used to identify the more general principles to be considered when approaching the working concept of regional development.

2.3.1 *Regional Planning Framework*

Ideally, a logical framework for regional planning would include:

1. A set of objectives
2. Programs for achieving specified objectives
3. Techniques for measuring linkages between programs and objectives
4. Evaluation of program success and failures .[22]

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[21] B. Berry and F. Horton, p. 96.

[22] W. R. Maki and J. A. MacMillan, Regional Systems for Development Planning in Manitoba, Research Bulletin No. 70-1 (Faculty of Agriculture, University of Manitoba, Winnipeg, 1970), p. iii.

Planning and evaluation of regional economic development is important for two main rasons. First, a logical and systematic approach or process of dealing with problems is usually more effective in the long term, than an ad hoc approach. The second reason stems from the fact that regional problems are constantly changing.

An initial consideration that should be addressed prior to setting objectives or planning specific programs is the concept of regionally balanced economic development as opposed to an unbalanced development strategy.

The Economic Council of Canada suggests two main interrelated considerations involved in moving towards more balanced regional development:

1. The importance of reducing the relative disparities in average levels of income as they presently exist among the regions; and

2. The need to assure that each region contributes to total national output, and to the sustained, long-run growth of that output, on the basis of the fullest and most efficient use of human and material resources available to the region.[23]

The above considerations raise fundamental questions of an idealogical nature concerning Canada's social and political objectives as well as the interrelationship of its various levels of government.[24]

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[23] Economic Council of Canada, "Regional Growth and Disparities" in N. H. Lithwick, Regional Economic Policy: The Canadian Experience (Toronto: McGraw-Hill Ryerson Limited, 1978), p. 3.

[24] T. N. Brewis, Regional Economic Policies in Canada (Toronto: MacMillan, 1969), p. 4.

Further to the above considerations, the Economic Council has suggested that the concept of balanced development among separate regions comprising the nations economy implies taking account of such factors as their location, physical area and dimensions of space, and other broad characteristics.

Alternatively, Richardson states that Regional growth is almost inevitably unbalanced: some regions are better endowed with resources than others; investment is lumpy, and many projects have to be undertaken on a large scale at a very limited number of locations (due to demand constraints) to be economically feasible, external economies provide a strong motive for agglomeration of industrial investment at selected locations; markets are not distributed evenly, and this results in inter-regional imbalance in transport development and market oriented industries. Thus, economic forces are likely to lead to growth being concentrated in a limited number of regions.[25] The principle of cumulative causation has been interpreted as being nothing more than the existence of increasing returns to scale (in the widest sense, ie: including external and agglomeration economies) in manufacturing.[26] Expanding this concept to a regional development approach might be reflected in a growth pole strategy.

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[25] H. W. Richardson, Regional Economics, (London: Camelot Press Ltd., 1969), p. 367.

[26] H. W. Richardson, Regional Growth Theory, 1973, p. 30.

2.3.1.1 *Policy Implications*

Given the lack of an exact and comprehensive theory of regional development, planning should be viewed as a circular process of program formulation, implementation and evaluation, and corresponding revision of plans and goals over time. The circular nature of planning is emphasized by viewing the process as having two major parts:

1. policy and program formulation, and
2. research and evaluation.[27]

The following section will view general policy implications.

The policy implications of intra-regional resource reallocation would suggest the emphasis be placed on increasing the mobility of factors between industry and occupations. The inter-regional resource reallocation theory would suggest that emphasis be placed on increasing the mobility of factors geographically.[28]

Stilwell discusses a second main approach to regional growth emphasizing the effect of regional exports on regional income. In the short-run, export expansion leads to increases in regional income both directly and via secondary effects on the demand for locally produced goods and services. In the long run, changes in the structure of the regional economy resulting from capital and labour movements promote regional growth.

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[27] J. R. Bernard, J. A. MacMillan, W. R. Maki, p. 118.

[28] F. J. B. Stilwell, p. 31.

The policy implications suggest measures to stimulate export performance. Export subsidies are most common, but other programs to lower production costs and thus output price, such as capital or labour subsidies have similar effect. Policies of this type appear most useful in regions that have a balanced industrial economy or at least growing industrial activity in primary producing areas.

The growth centre approach has two possible rationales. The first would imply that the peripheral backward areas outside of industrial centres have no prospects of survival except as charity cases, and that they should be vacated. The second argument for a growth centre approach is that some of the effects of economic improvement initiated in growth centers will spread out to their less developed hinterlands or zones of influence.[29] This implies that a more sound approach to development is not to uproot the rural base, but to indirectly promote the progress of accessible growth centers. However, the "trickle down" theory was felt to be inadequate in interlake experience in Manitoba.

Development impacts of a growth center strategy can be grouped into two classes. First, the concentration of public jobs in designated population centers would support a higher quality and wider range of choice in local consumption goals by stimulating sales in the growth center service sector. Secondly, if a designated center is provided with a high quality local

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[29]E. M.Hoover, An Introduction to Regional Economics (New York: Alfred A. Knopf, Inc., 1971), p. 278.

government infrastructure such as schools, roads, sewers, recreation and protective services, the centre's prospects for attracting industry are increased.

Regional economic development programs generally involve four central issues:

1. how wage and employment levels can be measured in the context of area economic activity;

2. how government expenditure promote increases in area wage and employment levels,

3. which combination of government expenditure programs create the largest increase in wage and employment levels.

4. which combination of programs provides the largest economic benefit in the long run.

The most common approach to policy implementation has been in the form of direct government investment or measures to stimulate private investment through incentives of one form or another.

2.3.1.2 *Program Implementation*

There is a wide gap between theoretical solutions to regional problems and practical applications of theory. The most important consideration in regards to defining objectives has been noted by MacMillan. Professionals (government and university

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[30] W. R. Maki and J. A. MacMillan, 1970, p. 50.

[31] J. A.MacMillan, Chang-Mei Lu, C. F. Framingham, Manitoba Interlake Area: A Regional Development Evaluation (Ames, Iowa: Iowa University Press, 1975), p. 4.

based) involved in regional development appear to be designing, delivering and studying regional development in ignorance of regional goals and aspirations.[32] Without a set of commonly agreed-upon goals, regional development actions have a low probability of success.

One attempt at regional economic development which should be referred to is the ten year Canada-Manitoba Agreement of 1966 covering the development of the Interlake Area. Since this time, many books have been written describing and evaluating the approach taken.[33] The success of the Interlake approach

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[32] J. A. MacMillan, The Need for Partnership in Regional Development (Guelph: paper presented to the annual meeting of the Canadian Agricultural Economics Society, 1977), p. 1.

[33] J. MacMillan and S. Lyon, The Interlake Experience: A Description and Evaluation of a Rural Development Program, Dept. of Agricultural Economics and Farm Management (Winnipeg: University of Manitoba, 1977). I. Gillies and P. Nickel, Regional Development in Manitoba's Interlake: "Managing and Evaluating a Regional Plan" "Winnipeg: Natural Resource Institute, University of Manitoba, 1977). Hedlin-Menzies Economic Survey of the Interlake Region of Manitoba, (Winnipeg: 1964). D. Matviw and P. Nickel, A Study Guide to the Interlake Planning Process (Winnipeg, Natural Resource Institute, University of Manitoba, 1975). P. Nickel, Confessions of Planners (Winnipeg: Natural Resource Institute, University of Manitoba, 1974).

is difficult to assess, although the many evaluations of the plan will have an effect on future regional development planning. These evaluations will aid in developing an approach to regional development within the Parkland Region.

With reference to James MacMillan's, "The Interlake Experience: A Description and Evaluation of a Rural Development Program, 1967-1977", MacMillan notes some interrelated factors affecting development goals.

The socio-economic development spiral (Figure 1) is used to illustrate the interrelation among factors affecting rural development. MacMillan states that the degree of social and economic development and change must rest upon, or can be measured on the basis of the following components:

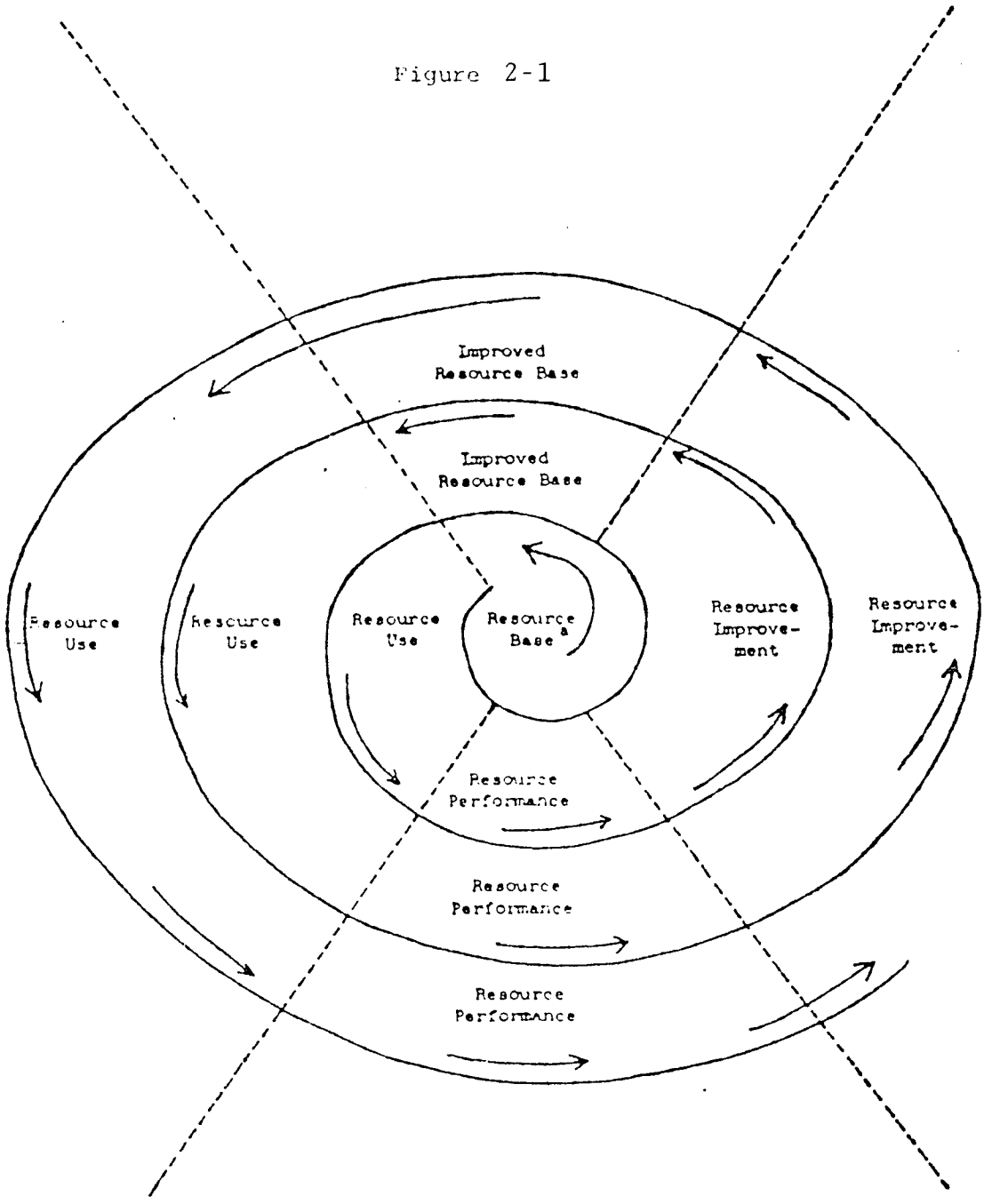
1. *Resource base* consists of people's skills; physical resources of land, minerals, and water; and basic infra-structure including schools, hospitals, roads, energy sources, and drains.

2. *Resource use and urban-rural linkages* denotes how the resource base is used to provide economic and social necessities, i.e. jobs, products grown, raised or manufactured, and amount of basic resource used. For example, acreage in crops and pasture, livestock numbers, traffic counts, and student numbers are measures of resource use. Migration and trading patterns are critical in establishing the roles of communities in the regional system.

3. *Resource information* measures the 'pay-off' to those using the basic resources. This can be measured with statistics on such things as income levels, quality of education, variety and access to medical facilities, and tax revenue.

4. *Resource improvement* measures the upgrading of the human resource or improvement to the physical resources to boost performance. Measures include improvement in training

Figure 2-1



The Socio-Economic Development Spiral

[a]Resource base denotes physical and human resources that are employed (resource use) to produce output (resource performance) that generates additional investment and improvement of the original resources (resource improvement). This improved resource base leads to additional resource performance and so on.

Source: Charles. P. Framingham, James A. MacMillan, and Paul E. Nickel, Guidelines for Community Planning, Extension Bulletin No. 73-1 (Winnipeg: Department of Agricultural Economics, University of Manitoba, 1973), p. 16.

> programs and their availability and use, changes in acres of improved land, additions to street construction, drainage, and road construction .[34]

As indicated in Figure 1, the relationship between resource use, resource performance, and resource improvement is directly correlated. Therefore, a change in one of these means an alteration in the other affecting the development spiral. However, there may be more than one strategy of attack to achieve the desired goals. It has been mentioned that to achieve community objectives of improved economic and social conditions, planners might attempt first to assess the potential of the resource base, or they may focus on resource use or resource improvement of an under-utilized base.[35]

2.3.1.3 *Program Evaluation*

As previously noted plan objectives need to be elaborated upon to give a precise focus to the evaluation of development programs. A great deal of controversy has arisen over past development progarms in regards to the difficulty in evaluating programs due to the lack of clear objectives. Problems of specifying objectives include:

1. Overlapping federal, provincial, and local government jurisdictions.
2. The arbitrary nature of any definition of an "adequate" standard of living.
3. The dependence of economic growth in a region on provincial and national economic growth.
4. The problems of determining the trade-off

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[34] J. MacMillan and S. Lyon, pp. 12-14.

[35] J. MacMillan and S. Lyon, p. 15.

between long-run and short-run benefits [36]

The use of models has been noted as a useful approach to the regional development planning process and in evaluating alternative strategies. Simulation models illustrate quite effectively important relationships between various activities. These relationships can provide clues regarding the effectiveness of different public policies and programs. Specifically, the key relationships for measuring the effectiveness of public policies and programs include the following:

1. Criteria for allocating public service equalization grants.

2. Interdependencies between changes in the level of development program expenditures and tax revenues.

3. Impacts of economic growth on revenues from the tax system and of public service expenditures upon area levels and distribution[37]

It is evident from the evaluation process alone that regional policy questions relating to regional balance of environmental quality, regional economic growth and income redistribution requires considerable information to permit effective policy formation.

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[36] J. A. MacMillan, Chang-Mei Lu, and C. F. Framingham, p. 9.

[37] W. R. Maki and J. A. MacMillan, p. 55.

2.3.1.4 *Information Needs*

Information needs for regional development planning include data for defining regional development objectives and determining the consequences of alternative development strategies.

Three general categories of information are noted below as being important to the process of regional development.

1. A general diagnosis of disparities made on the basis of a few carefully selected indicators of regional development. It appears in the literature that inter-regional comparisons focus mainly upon the aspect of regional income flows and their change over time. Other regional development measures include statistics on job vacancies, earnings, return on investment, population migration, per family consumption expenditure, and percentage of national market accounted for by regional industries.

2. For effective public choice and formulation of development strategies, considerable regional economic analysis is required to quantify and explain the impact of alternative policies on regional development indicators.

3. Qualified regional projections are essential in providing an indication of future job, income, and services disparities.[38]

A number of factors appear to contribute to inter-regional variations in income. Income disparities arise from differences in comparative levels of manpower utilization, the educational attainment of the labour force, the use of physical capital, and also influences such as industrial structure, natural resources, and population concentration.[39]

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[38] W. R. Maki and J. A. MacMillan, p. 51.

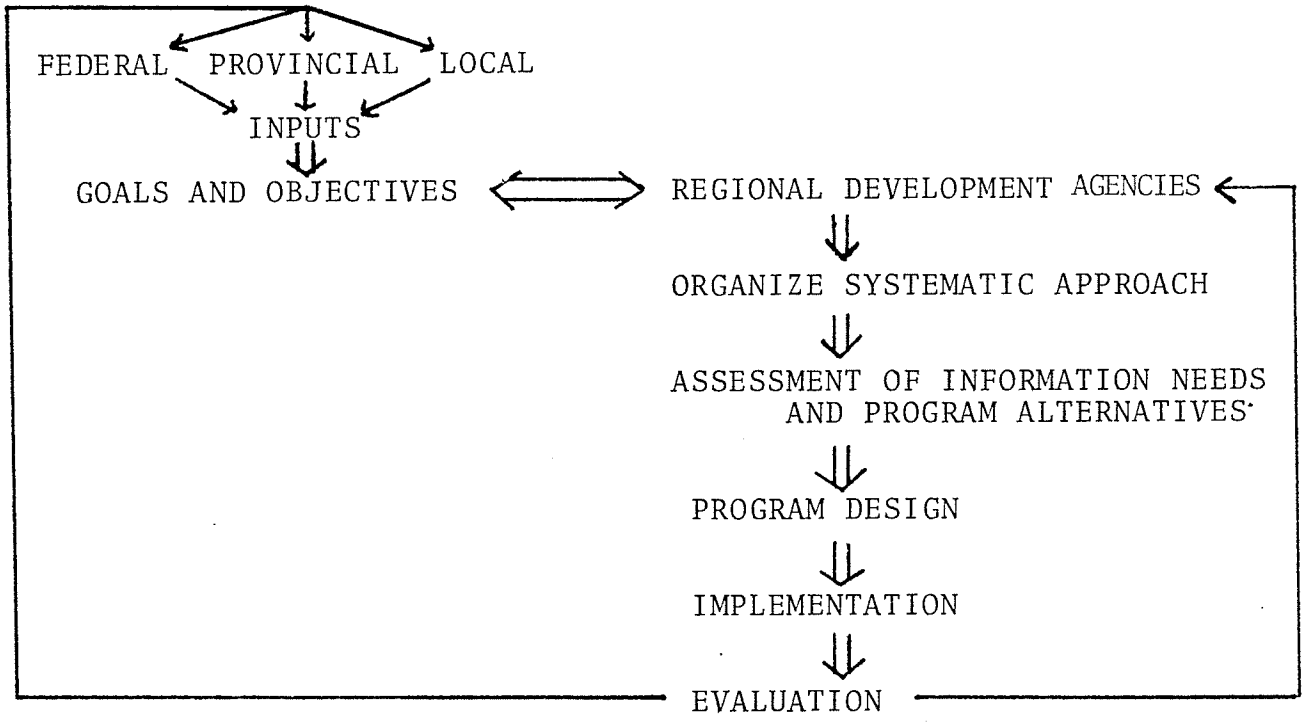
[39] Economic Council of Canada in N. H. Lithwick, p. 3.

A specific objective of this study is to provide a description of the Parkland Region's natural resource base. This information as presented in chapter 3 will add an important component to the overall information necessary in the regional development planning process.

2.4 Summary on Theory and Practice

In summarizing the theoretical and practical aspects of regional development planning one might visualize the overall process as depicted in Figure 2.

FIGURE 2: PLANNING FRAMEWORK



Understanding the conceptual underpinnings of regional development planning is a pre-requisite to the identification of both the causes and effects of potential problems. As a corollary to this it is necessary to examine the application of this theory in practice. Once a theoretical model has been adopted to account for growth, the next stage in the planning framework is to take into consideration the goals and aspirations of the three levels of government. These concerns can then be considered as inputs into the policy making process in the adoption of specific objectives for a management body working in the region. With well defined goals and objectives outlined, a systematic approach to development can then be constructed. The importance of such an approach is to introduce basic considerations into each regional program so that a logical course of action follows. If a systematic approach is adopted the changing needs and conditions affecting a region can be considered and incorporated in the overall regional development process.

The importance of research and a sound information base cannot be overemphasized. Policy formulation and development decisions are only as good as the information upon which they were made. Moreover, program design and implementation is dependent upon a good information base. Program implementation, however, has budgetary constraints imposed upon it making it critical that support from all levels of government be given.

The input from each level of government remains a critical factor in each stage of any regional development approach. In order for a regional development program to be effective its objectives and goals must be well defined and understood by all concerned. An important point that must be recognized is the

fact that regional development problems will always exist. Acknowledging this fact, the starting point is to first construct a framework that introduces each critical input, followed by the development of a systematic approach to deal with specific regional problems.

CHAPTER 3

THE PARKLAND REGION

3.1 General Overview

The seven development regions of Manitoba comprise the province's total land area of slightly greater than 518,000 square kilometers. Of this total area the Parkland Region accounts for approximately 25,000 square kilometers. The Parkland Region as previously noted, lies west of Lake Manitoba and Lake Winnipegosis, north of but including Riding Mountain, south of the 53rd parallel and borders on Saskatchewan.

The total population of the region in 1976 was 54,027 person or about five percent of the population of Manitoba.[1] Approximately sixty percent of the people in the Parkland Region live in rural areas or in settlements of less than 500 persons, the rest of the population is concentrated in and around the towns of Grandview, Roblin, Russell, Ste. Rose du Lac, Swan River and Dauphin.

At the municipal level, there are eighteen rural municipalities as well as four local government districts. In the Parkland Region there are nine villages and six towns. The Parkland Region is not congruent entirely with federal or provincial electoral boundaries nor does it coincide with Statistics Canada Census Division or provincial planning regions.

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[1] Statistics are generally available for 1971, the date of the last major Canada Census. Updated statistics in certain areas have been provided where available.

The natural resource base of the region consists of agriculture, forestry, tourism and recreation, mining and fish and wildlife.

3.2 Economic Indicators

The purpose of this section is to sketch the basic pattern of economic activity within the Parkland Region. General trends are identified and, more specifically, data on population, labour force, employment and occupation are presented to outline the regions economic structure.

The Parkland region lost a relatively high proportion of its population between 1966 and 1976. The distribution of Parkland population over this period is illustrated in Table 3-1.

TABLE 3-1: PARKLAND REGION POPULATION DISTRIBUTION 1966-1976

	1966	1971	1976
Farm Population[2]	28,456	22,816	16,988
Urban	17,043	17,600	18,397
Rural Non-Farm	16,644	15,689	18,642
TOTAL:	62,143	56,105	54,027

SOURCE: DREE unpublished report (Data from 1966, 1971 and 1976 Census figures).

[2]NOTE: For the 1966 and 1971 Census, a census-farm was defined as a farm, ranch or other agricultural holding of one acre or more with sales of agricultural products, during the 12 month period prior to the Census, of $50 or more; the dollar value for 1976 Census was raised to $1,200 or more.

It should be noted, therefore, that this definition change could have an effect of reducing farm population.

As illustrated by the population figures in Table 3-1, in the ten year period between 1966-1976 the total population has declined by 8,116 persons or approximately thirteen percent. While both the Urban and Rural Non-Farm population has increased, farm population has dropped 40 percent. This change is partially due to a change in the definition of Farm Population.[3] Other reasons would include increasing farm sizes with a corresponding decrease in population needed to run these farms. This is a direct result of changing agriculture technology and economic considerations.

While approximately 60 percent of the total population lives in rural areas or settlements of less than 300 persons, the remaining non-farm populations are concentrated in six trading centres with populations of 1,000 or more (Table 3-2).

TABLE 3-2: PARKLAND TRADING CENTRES WITH 1,000 OR MORE PERSONS IN 1976

	1966	1971	1976
Dauphin	8,655	8,891	9,109
Grandview	998	967	1,013
Roblin	1,617	1,753	1,971
Russell	1,511	1,526	1,971
St. Rose du Lac	792	818	1,038
Swan River	3,470	3,645	3,742
TOTAL:	17,043	17,600	18,397

SOURCE: DREE unpublished report (Data from 1966, 1971 and 1976 Census figures).

[3] See footnote 2.

Of the population in the Parkland Region the total labour force in 1971 was 21,130 persons. Employment in the primary sector of the economy (agriculture, forestry, fishing and trapping, and mining) accounted for 40 percent of employment. Approximately 8,000 jobs or 38 percent were in the agriculture sector. Manufacturing industries account for three percent of the experienced labour force and the service industries for a total of 35 percent, with seventeen percent in community services, twelve percent in trade, five percent in public administration, and one percent in finance and insurance.[4]

Gross output at market prices is widely considered to be the best indicator of the overall performance of the economy associated with the existing human and natural resources bases.[5] The Parkland Region, with five percent of Manitoba's total population in 1971 accounted for 4.4 percent of the $4,784 million provincial output (Table 3-3).

TABLE 3-3: TOTAL OUTPUT AND DISTRIBUTION OF THE TOTAL OUTPUT BY MAJOR SECTOR, PARKLANDS REGION AND MANITOBA, 1971.

SECTOR	MANITOBA		PARKLANDS REGION	
	Total Output ($'000)	Percent of Gross Output	Total Output ('000)	Percent of Gross Output
Primary Resources	908,000	18.97	61,124	29.05
Construction	671,000	14.02	19,200	9.12
Manufacturing	1,310,000	27.38	7,961	3.78
Trade	1,318,000	27.55	92,209	43.82
Transportation	270,793	5.66	17,220	8.18
Service	306,221	6.42	12,701	6.04
Gross Output	4,784,014	100.00	210,417	100.00

SOURCE: Parklands Region Manpower Study, Vol. II

[4]Manitoba Department of Industry and Commerce, Regional Analysis Program: Southern Manitoba, Regional Development Branch(Winnipeg: 1975), p. 12.

[5]Parklands Region Manpower Information Study, Volume II Working Papers, J. A. MacMillan (Research Director), University of Manitoba, p. 88.

The trade sector in the Parkland Region has a total output of $92 million or 44 percent of the regional total, followed by primary resources making up 29 percent of the gross regional output. The output of trade and agriculture sectors together accounted for 73 percent of total regional output. The Parkland Manpower Study notes that the economic growth prospects of the regional economy are highly dependent upon agricultural production which, in turn, affects the trade sector.

Dauphin is the largest manufacturing centre in the Parkland Region with approximately seventeen firms providing 218 jobs. Swan River follows Dauphin as the second large manufacturing centre with eleven firms providing 114 jobs. Roblin is the third largest manufacturing centre with eight firms providing 87 jobs. Within the region as a whole there are approximately 65 manufacturing industries which provide a total of 600 jobs.[6] Of these firms 45 percent are involved in the food and beverage industry.

If income can be used as an economic indicator of regional disparities, it should be noted that the average family in the Parkland Region earned less than $5,800 in 1971, $800 below the average for Southern Manitoba.[7] Another breakdown of incomes by

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[6]DREE unpublished report (information collected by the Manitoba Department of Industry and Commerce, 1977.)

[7]Manitoba Department of Industry and Commerce, Regional Analysis Program: Regional Development Branch (Winnipeg:1975), p. 12.

class, as well as by region within Manitoba clearly indicates the Parkland Region as having the lowest average family income (Table 3-4). This table also indicates the Parkland Region as having the highest proportion of families and households in the lowest income bracket.

In reviewing the general trends occuring in the Parkland Region, the most noted change was in population. The Parkland Region lost thirteen percent of its population in the last ten years. Total employment remained static, whereas in all other regions total employment increased. This trend has been attributed to a high rate of job displacement in agriculture and lower than average rates of compensating job creation in manufacturing and tertiary industries. There was also a strong movement of population and tertiary activity towards the regional centres of Dauphin and Swan River, together with market centres such as Roblin. It should also be noted that the population centres in the region are characterized by an interdependence of local services. For example, Swan River and Russel serve as intermediaries between the Yorkton region in Saskatchewan and the Brandon region in Manitoba. Residents may also travel a distance of 350 miles or more to Winnipeg rather than to the local centres for many services. This results in a great deal of money leaking from the local economies within the Parkland Region.

3.3 The Natural Resource Base

The description of the natural resource base in any particular region serves many important functions. An overview of the natural resource base is useful in an historical and

TABLE 3-4

Distribution of Incomes[a] of Manitoba Tax-Filing Families and Households[b] by Region, 1971

Income Class (dollars)	Region Development Corporation Region																	
	Parklands		Pembina Valley		Central Plain		West-Man		East-Man		Interlake		Norman		Winnipeg		Manitoba	
	Number of Households	Percent	Number of Households	Percent	Number of Households	Percent	Number of Households	Percent	Number of Households	Percent	Number of Households	Percent	Number of Households	Percent	Number of Households	Percent	Number of Households	Percent
0-2,999	7,122	45.0	5,052	39.9	3,591	37.6	12,640	36.0	5,040	33.5	4,658	35.4	3,397	18.7	34,739	18.4	76,239	24.7
3,000-3,999	1,924	12.2	1,697	13.4	1,172	12.3	4,267	12.1	1,671	11.1	1,449	11.0	1,154	6.4	15,780	8.4	29,114	9.4
4,000-4,999	1,309	8.3	1,322	10.4	832	8.7	3,109	8.8	1,315	8.7	1,103	8.4	1,157	6.4	14,660	7.8	24,807	8.1
5,000-5,999	1,113	7.0	1,043	8.2	737	7.7	2,631	7.5	1,273	8.5	974	7.4	1,224	6.7	13,406	7.1	22,401	7.3
6,000-6,999	926	5.9	789	6.2	659	6.9	2,421	6.9	1,167	7.7	809	6.2	1,287	7.1	13,859	7.3	21,917	7.1
7,000-7,999	730	4.6	686	5.4	504	5.3	1,977	5.6	1,029	6.8	769	5.9	1,312	7.2	13,955	7.4	20,962	6.8
8,000-8,999	609	3.8	495	3.9	420	4.4	1,723	4.9	860	5.7	729	5.5	1,423	7.8	13,716	7.3	19,975	6.5
9,000-9,999	453	2.9	391	3.1	376	3.9	1,406	4.0	645	4.3	590	4.5	1,481	8.2	12,113	6.4	17,455	5.7
10,000-11,999	667	4.2	495	3.9	539	5.7	2,043	5.8	893	5.9	851	6.5	2,092	11.5	19,607	10.4	27,187	8.8
12,000-14,999	558	3.5	411	3.3	386	4.0	1,638	4.7	652	4.3	665	5.1	1,866	10.3	17,868	9.5	24,044	7.8
15,000+	413	2.6	291	2.3	333	3.5	1,304	3.7	520	3.5	545	4.1	1,764	9.7	18,931	10.0	24,101	7.8
TOTAL	15,824	100.0	12,672	100.0	9,549	100.0	35,159	100.0	15,065	100.0	13,142	100.0	18,157	100.0	188,634	100.0	308,202	100.0
AVERAGE INCOME	4,600		4,740		5,221		5,428		5,550		5,580		8,147		8,225		7,233	

[a] Includes only income for tax purposes. Major excluded components of income are: family allowance payments, guaranteed income supplement, unemployment insurance, social assistance, and capital gains. Income includes that received in 1970 as wages and salaries, net income from business or professional practice and/or net farm income.

[b] Excludes people who do not file tax returns but may have income. Where two or more family members both file, income are combined.

SOURCE: Charles Kang, Economic Analysis Group, Cabinet Planning Secretariat, "Distribution of Incomes of Manitoba Tax-Filing Families and Individuals by Region, 1971", Manitoba, 1973.

Parkland Region Manpower Information Study, Vol. II, p. 136.

educational context as well as providing a framework for resource development planning. This section will identify the existence and capabilities (in a broad sense) of resources in the Parkland Region, as well as documenting the extent to which these resources are being utilized.

The information describing the resource base has been abstracted from various literature sources. General data has been compiled from Census Canada. A portion of data for the agriculture sector was abstracted from unpublished works presently being conducted by the Department of Regional Economic Expansion. The bulk of the information in this section, however, has been provided by the Planning Division of the Department of Renewable Resources and Transportation Services.[8]

The following section proceeds with a description of the Natural Resource Base of the Parkland Region including agriculture, forestry, fish and wildlife, mining and outdoor recreation.

3.3.1 *Agriculture*

3.3.1.1 Resource Base

The agricultural capability of the Parkland Region is presented in Map 3-1. This map is a portion of a modified capability map prepared by Canada Land Inventory (C.L.I.) for Agro-Manitoba.

The CLI classification divides mineral soils into seven classes based on limitations for Agricultural use. Generally, classes 1-3 are capable of sustained production of common field crops, class 4 soils a physically marginal for sustained

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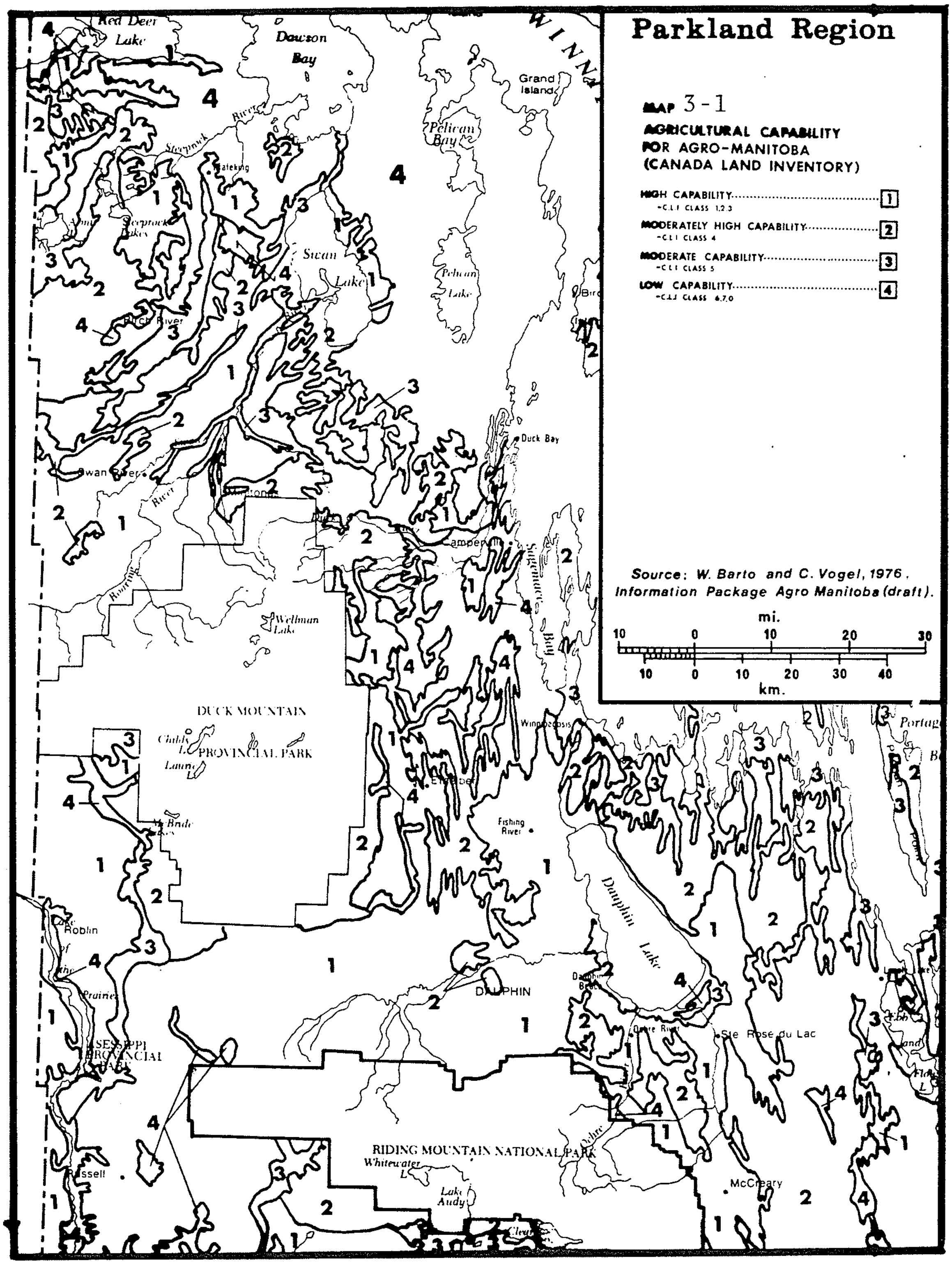
[8] W. P. Barto and C. G. Vogel. Information Package Agro-Manitoba, Planning Division, Manitoba Department of Renewable Resources and Transportation Services (unpublished).

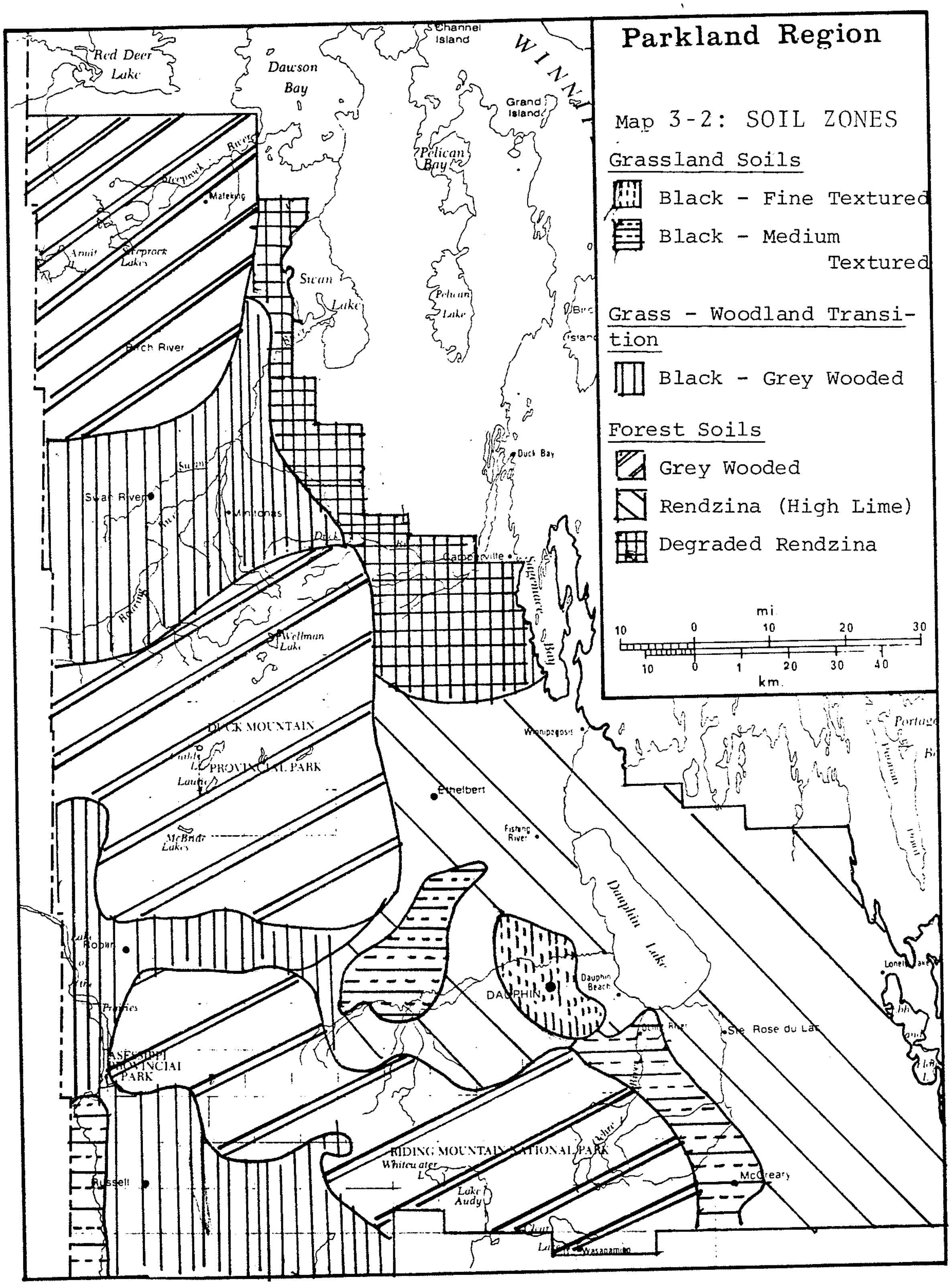

Parkland Region
MAP 3-1
AGRICULTURAL CAPABILITY FOR AGRO-MANITOBA (CANADA LAND INVENTORY)
HIGH CAPABILITY 1
-C.L.I CLASS 1,2,3
MODERATELY HIGH CAPABILITY 2
-C.L.I CLASS 4
MODERATE CAPABILITY 3
-C.L.I CLASS 5
LOW CAPABILITY 4
-C.L.I CLASS 6,7,0
Source: W. Barto and C. Vogel, 1976. Information Package Agro Manitoba (draft).
mi.
km.
Red Deer Lake
Dawson Bay
Grand Island
Pelican Bay
Swan Lake
Pelican Lake
Duck Bay
Swan River
Camperville
Wellman Lake
DUCK MOUNTAIN PROVINCIAL PARK
Roblin
Winnipegosis
Fishing River
Dauphin Lake
DAUPHIN
Ste Rose du Lac
RIDING MOUNTAIN NATIONAL PARK
Lake Audy
McCreary

production, class 5 soils are capable of permanent pasture and hay, class 6 soils are suitable for wild pastures only, class 7 soils are not arable and are unsuitable as permanent pasture land.

For illustration on Map 3-1, lands with high capability generally includes classes 1-3, land with moderately high capability are class 4, lands with moderate capability are class 5 and lands with low capability are classes 6 and 7. These designations are general and no description is made of exact limitations of any specific site. Map 3-2 has been provided to identify generalized soil types in the region.

Two sub-divisions of the Manitoba Lowlands occur with slightly different physical and soil characteristics which over time have resulted in different farming types and land use. They are the Swan River Plain and the Valley River Plain (Dauphin Area). A substantial amount of water-borne parent material was deposited in these two areas with the result that soil profiles are much deeper, and the land is gently sloping and well drained in comparison to the rest of the Manitoba Lowlands Region. These two soil regions compare with the best in Manitoba in terms of crop production and fertility.

The Western Uplands comprised of the Riding, Duck and Porcupine Mountains consist primarily of glacial and moraine shale bedrock which contacts the surface in this area. Hence, there is substantially more shale in the soil parent material than there is limestone. The topography is rolling to hilly and depressions are frequently large enough to form small lakes. Surface drainage is rapid over most of this terrain. Most of


Parkland Region
Map 3-2: SOIL ZONES
Grassland Soils
Black - Fine Textured
Black - Medium Textured
Grass - Woodland Transition
Black - Grey Wooded
Forest Soils
Grey Wooded
Rendzina (High Lime)
Degraded Rendzina
mi
km
Red Deer Lake
Dawson Bay
Channel Island
Grand Island
Pelican Bay
Pelican Lake
Swan Lake
Birch River
Swan River
Minitonas
Duck Bay
Camperville
Wellman Lake
DUCK MOUNTAIN PROVINCIAL PARK
McBride Lakes
Winnipegosis
Ethelbert
Fishing River
Dauphin Lake
DAUPHIN
Dauphin Beach
Ste Rose du Lac
Roblin
RIDING MOUNTAIN NATIONAL PARK
Whitewater L
Lake Audy
Russell
McCreary
Wasagaming

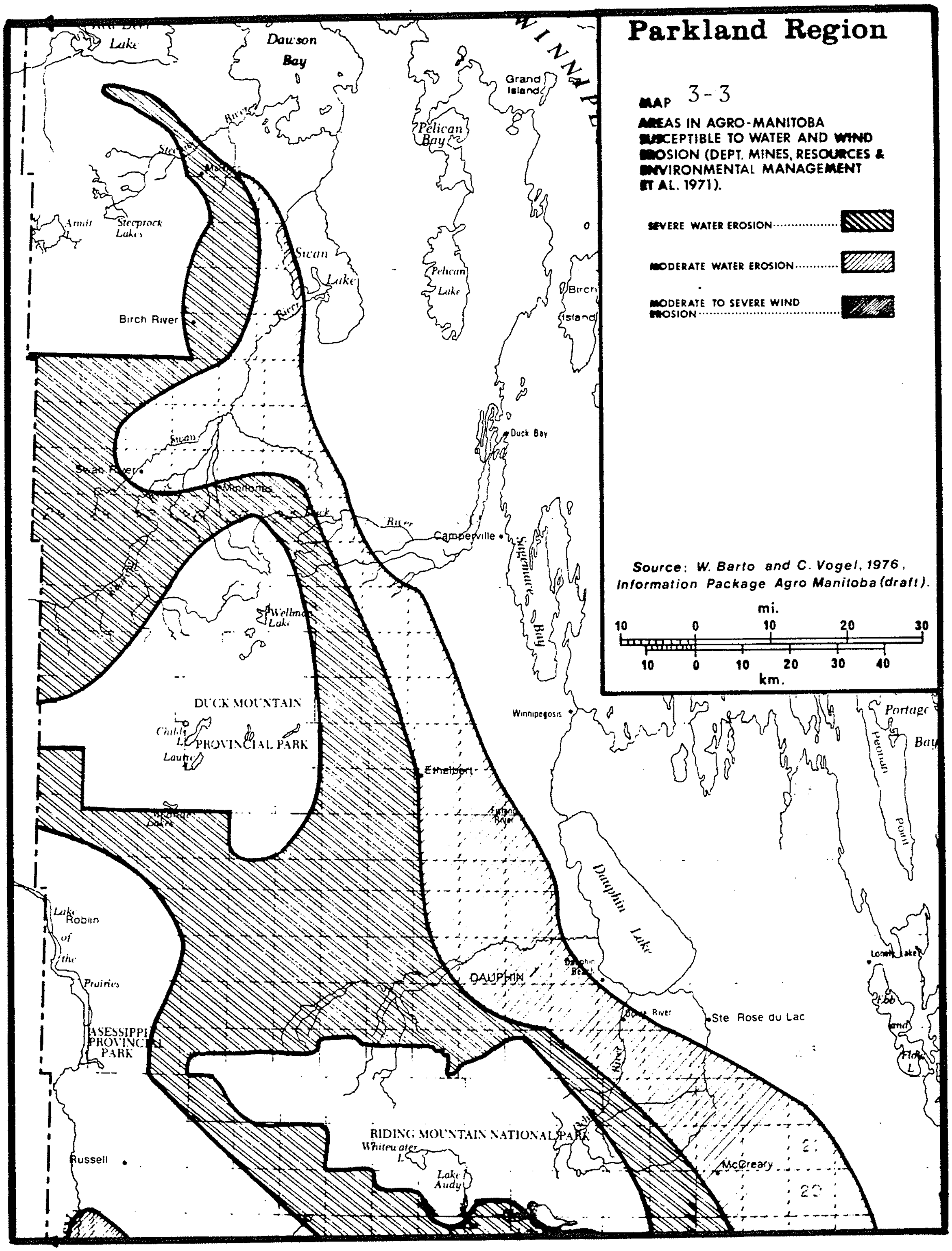
the area is poorly suited to agriculture and has been designated for parks and recreation use or forest reserves.

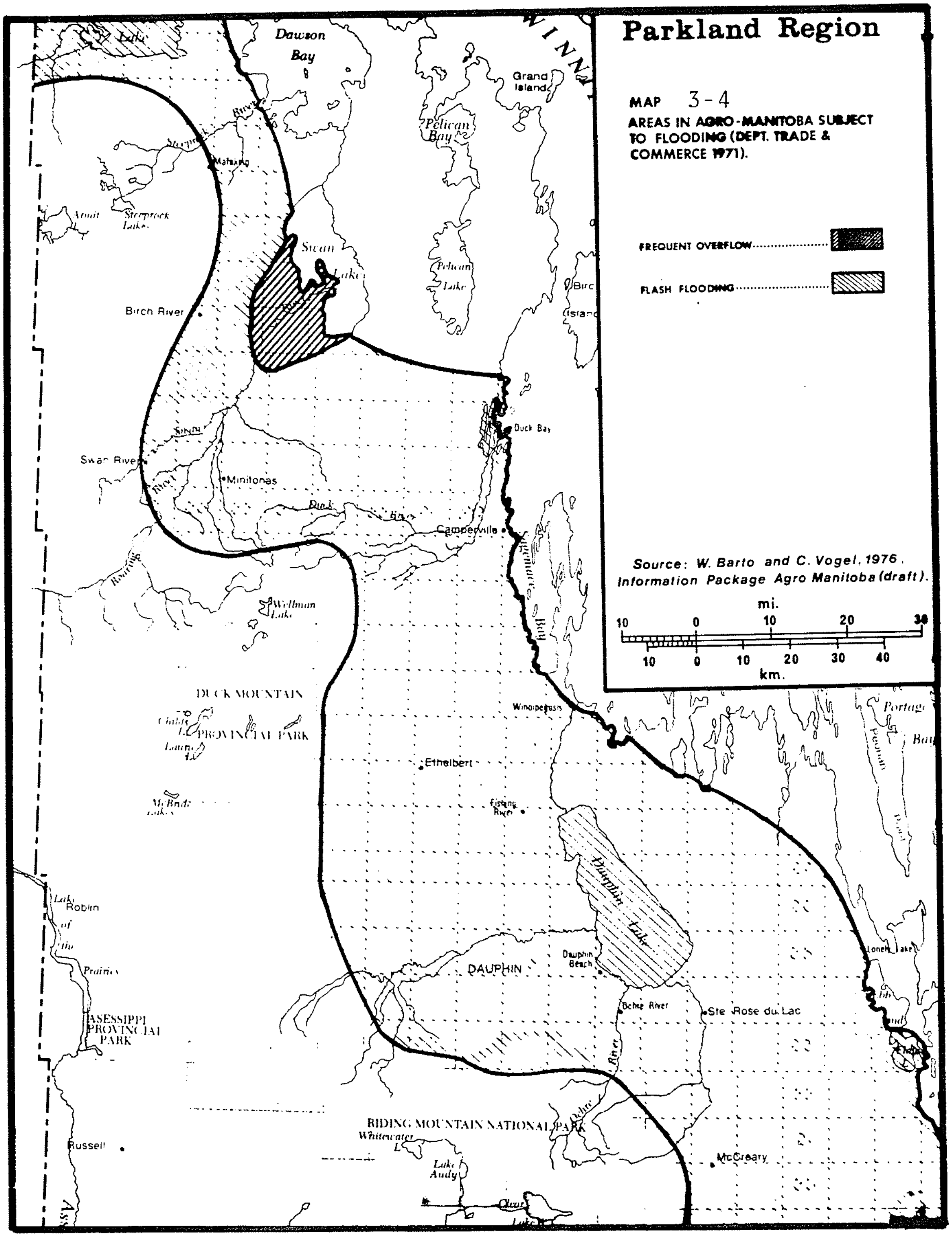
Between these hills, Uplands, and the Saskatchewan border toward the southwest corner of Parkland, lies a further sub-region of gently undulating to rolling terrain. This area is comparatively level and has been developed agriculturally. While somewhat stony, a range of soil characteristics exists and cultivation, while largely dependent on the nature of individual parcels of land, is extensive.

Large areas of land with high capability occur over the full extent of the Parkland Region. The major areas of high and moderately high capability for agriculture include the Dauphin area and Swan River Valley. These areas contain some of the best soils in Manitoba. Areas of high capability also occur where till or other coarser deposits have been overlain by lacustrine deltaic or outwash deposits of clay and silt.

A variety of factors may limit soil capability for agriculture and have resulted in a finer intermixture of the different classes. In the lowland areas, the principal limitations are excessive moisture, impeded drainage, degree of stoniness, proximity of bedrock to the surface, coarse texture, deficient moisture and reduced fertility with high lime content.

On and above the escarpment, topographical limitations such as steepness, adverse pattern of slope are of major importance (refer to Maps 3-3, 3-4). Other limitations include coarse texture, acidity and secondarily excessive moisture due to inadequate drainage.


Parkland Region
MAP 3-3
AREAS IN AGRO-MANITOBA SUSCEPTIBLE TO WATER AND WIND EROSION (DEPT. MINES, RESOURCES & ENVIRONMENTAL MANAGEMENT ET AL. 1971).
SEVERE WATER EROSION
MODERATE WATER EROSION
MODERATE TO SEVERE WIND EROSION
Source: W. Barto and C. Vogel, 1976, Information Package Agro Manitoba (draft).
mi.
10 0 10 20 30
10 0 10 20 30 40
km.
Dawson Bay
Grand Island
Pelican Bay
Swan Lake
Pelican Lake
Birch Island
Birch River
Steeprock Lakes
Duck Bay
Swan River
Minitonas
Camperville
Winnipegosis
DUCK MOUNTAIN PROVINCIAL PARK
Ethelbert
Dauphin Lake
DAUPHIN
Ste Rose du Lac
Lake of the Prairies
Roblin
ASESSIPPI PROVINCIAL PARK
Russell
RIDING MOUNTAIN NATIONAL PARK
Lake Audy
McCreary
Portage Bay


Parkland Region
MAP 3-4
AREAS IN AGRO-MANITOBA SUBJECT TO FLOODING (DEPT. TRADE & COMMERCE 1971).
FREQUENT OVERFLOW
FLASH FLOODING
Source: W. Barto and C. Vogel, 1976, Information Package Agro Manitoba (draft).
mi.
km.
Dawson Bay
Grand Island
Pelican Bay
Pelican Lake
Swan Lake
Birch River
Swan River
Minitonas
Duck Bay
Camperville
Winnipegosis
Ethelbert
Fishing River
DUCK MOUNTAIN PROVINCIAL PARK
Dauphin Lake
Dauphin Beach
DAUPHIN
Ochre River
Ste Rose du Lac
Roblin
ASESSIPPI PROVINCIAL PARK
Russell
RIDING MOUNTAIN NATIONAL PARK
McCreary

Moderate limitations to agriculture due to cool conditions occur on the Riding, Duck and Porcupine Mountains.

3.3.1.2 Resource Utilization

Agriculture is Manitoba's most important primary industry. Similarly, in the Parkland Region agriculture is the major economic activity. In 1976, 18.7 percent of Manitoba's farms and 20.5 percent of total farm acreage were in the Parkland Region (Table 3-5). The number of farms and acres have fluctuated over the period 1966 - 1976. Farm numbers are decreasing, while farm size tends to be increasing.

TABLE 3-5: NUMBER OF FARMS AND ACRES OF FARMLAND IN MANITOBA AND PARKLAND REGION 1966-1976

		1966	1971	1976
FARMS:	Parkland	7,597	6,683	6,012
	Manitoba	39,747	34,981	32,104
ACRES:	Parkland	3,876,265	3,921,048	3,902,961
	Manitoba	19,083,817	19,008,259	19,026,255

SOURCE: Statistics Canada Census Data

All census -farm land was classified according to use as improved or unimproved land. The area of improved land consists of crop land, improved pasture, summer fallow, and other improved land. Areas of native pasture or hay land that has not been cultivated, brush pasture, grazing or waste land sloughs, marsh and rock land are all included in unimproved land (Figure 3-1).

Agricultural activities in the Parkland Region are quite

varied. At the present time, grain farming still predominates with livestock enterprises and some special crops gaining in importance. The climate in the region is favorable for many field crops grown in Manitoba. The more productive soils of the area are generally used for wheat and other feed grain production. Table 3-6 identifies the agricultural land use characteristics of the Parkland Region.

TABLE 3-6: AGRICULTURAL LAND-USE - 1976

IMPROVED LAND	PARKLANDS PARKLANDS	% TOTAL AGRIC. LAND PARKLAND	MANITOBA
Crops	1,500,210	38%	9,507,495
Pasture	195,115	5%	769,191
Summer Fallow	553,477	14%	2,308,205
Other	56,260	2%	305,933
Total Improved	2,305,062	59%	12,890,824
UNIMPROVED LAND			
Wooded	282,139	7%	928,410
Other	1,315,760	34%	5,207,021
Total Unimproved	1,597,899	41%	6,135,431
TOTAL FARM LAND	3,902,961		19,026,255

SOURCE: Census of Agric. Stats. Canada 1976.

PARKLAND REGION

USE OF FARM LAND

(3,903 Thousand Acres)

1976

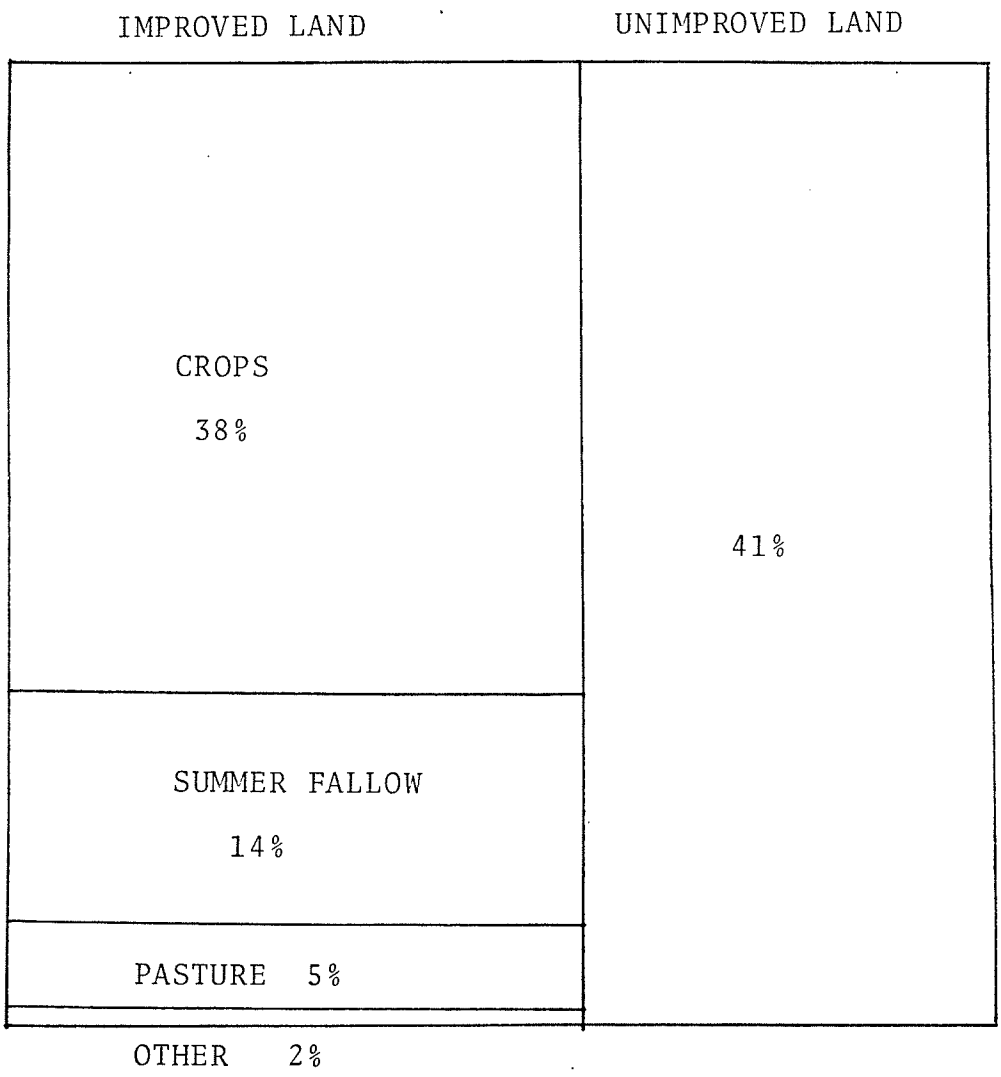


FIG. 3-1

Agricultural productivity is a measure of actual yields obtained from the lands. The information for Map 3-5 was obtained from the Manitoba Crop Insurance Corporation. This map describes 35 year average wheat yields in bushels per acre. Maps of this type may also be prepared for other crops, but are essentially extrapolations of wheat yield data. Actual yields from year to year depend on a variety of factors such as climatic conditions, land capability and management techniques. According to the wheat yield map the most productive land in wheat (25-35 bushels/acre) occurs in the Swan River Valley.

Out of 3,902,961 acres of farm land in the Parkland Region in 1976, 1,499,868 acres or 38% were in crops. Table 3-7 and Figure 3-2 illustrate quite effectively the general breakdown of types of crop production. Acreages in forage and special crops have been on the increase within this area over the past ten years.

The value of crops in the Parkland Region, based on estimates of the proportions of crops, was calculated to be $113.3 million in 1976. This crop value represented 16% of the total $718.4 million of Manitoba's crop production. Crop value represents 64.3% of agriculture production value generated in the region is dependent upon livestock farms including dairy, beef, cattle, hogs, sheep and poultry.

The value of livestock production in the Parkland Region was $60.9 million in 1976 and in Manitoba $332.1 million. This represented 18% of Manitoba's total livestock value. Beef cattle and dairy farms are by far the most significant portion of livestock income. The number of cattle on Parkland's

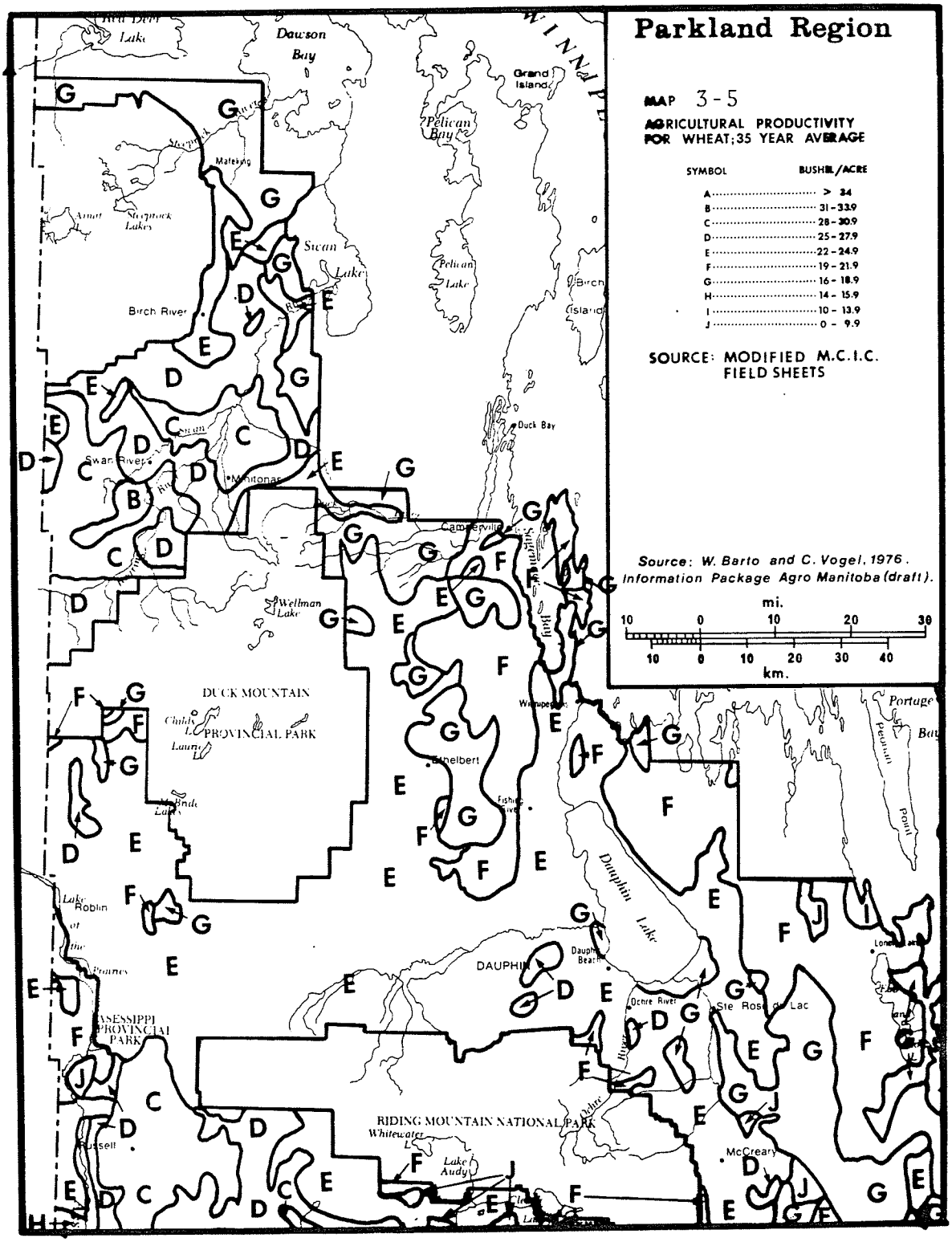

Parkland Region
MAP 3-5
AGRICULTURAL PRODUCTIVITY FOR WHEAT; 35 YEAR AVERAGE
SYMBOL BUSHEL/ACRE
A ..... > 34
B 31-33.9
C 28-30.9
D 25-27.9
E 22-24.9
F 19-21.9
G 16-18.9
H 14-15.9
I 10-13.9
J 0-9.9
SOURCE: MODIFIED M.C.I.C. FIELD SHEETS
Source: W. Barto and C. Vogel, 1976. Information Package Agro Manitoba (draft).
mi.
10 0 10 20 30
10 0 10 20 30 40
km.
Dawson Bay
Grand Island
Pelican Bay
Pelican Lake
Swan Lake
Birch River
Birch Island
Duck Bay
Swan River
Minitonas
Camperville
Wellman Lake
DUCK MOUNTAIN PROVINCIAL PARK
Ethelbert
Dauphin Lake
DAUPHIN
Ste Rose du Lac
Lake Audy
McCreary
Russell
RIDING MOUNTAIN NATIONAL PARK
Portage

TABLE 3-7: PARKLAND REGION*
CROPS ON CENSUS-FARMS BY REGION

	1966	1971	1976			
	Acres	Acres	Acres***		Farms	
Durum Wheat			7,015		94	
Other Wheat			578,230		4,342	
Total Wheat	552,191	354,418		585,245		4,436
Rye	10,919	23,225	23,996		430	
Barley	173,518	345,298	261,593		3,058	
Oats	214,107	205,430	205,477		3,459	
Mixed Grains	28,062	37,008	18,938		347	
Flaxseed	80,781	49,542	31,605		632	
Rapeseed	86,003	211,594	55,462		830	
Corn for Grain			210		3	
Corn for Ensilage	1,126	177	1,010		20	
Tame Hay & Fodder Crops	206,058	217,656	303,339		4,071	
Potatoes	771	118	142		8	
TOTAL	1,353,536	1,444,466	1,487,017		17,294	
Sunflower Seeds			319			
Mustard Seed			5,111			
Sugar Beets			-			
Buckwheat			6,089			
Field Peas			135			
Field Beans			340			
Other Field Crops**			857			
SUB-TOTAL			12,851			
TOTAL			1,499,868			

* 1966 and 1971 data have been adjusted to conform to the revised 1976 Census of Canada, Census Divisions.
** Includes soybeans, tobacco, forage seed.
*** All agricultural holdings.

SOURCE: Statistics Canada Catalogue No. 96-608, Table 29, 1966.
Statistics Canada Catalogue No. 96-708, Table 51, 1971.
Statistics Canada Catalogue No. 96-851, SA1, Table 16, 1976.
Data compiled by the Department of Regional Economic Expansion.

census farms increased from 229,000 in 1966 to 283,000 in 1976 (Table 3-8). Hog production dropped from 12.4% in 1966 to 7.4% in 1976. The actual numbers of hogs over this ten year period fluctuated from 62,000 (1966), up to 134,000 (1971), down to 46,000 (1976). The numbers of sheep within the region has been steadily declining from 15,000 (1966), to 11,000 (1971), down to 5,000 (1976), which presently accounts for 24.8% of Manitoba's production. The production of hens and chickens has also dropped from 8.1% of Manitoba's production in 1966 to 4.4% in 1976.

TABLE 3-8: NUMBER OF LIVESTOCK IN THE PARKLAND REGION

	1966	1971	1976
	(Number of Livestock)		
Cattle			
Milk Cows	25,555	14,890	9,767
Other	202,910	219,833	273,593
TOTAL	228,465	234,723	283,360
Pigs	61,801	134,181	46,141
Sheep	14,775	11,126	5,216
Hens and Chickens			
Hens & Pullets	138,213	116,526	121,445
Other	337,961	230,853	134,164
TOTAL	476,174	347,379	255,609
TOTAL LIVESTOCK	781,215	725,409	590,326

SOURCE: Census of Agriculture, Statistics Canada,1976.

Farm type is directly related to various factors such as suitability of soil, climate, transportation costs, markets and ethnic origin. As far as farm size, past trends indicate an increase in both the average size of farms and in total farming area, while the actual number of farms has decreased. It is also important to note that farm size expressed in acres may be very misleading, figures such as cost of land, land use and many other variables should be considered in discussing the specifics for any district.

Capital investment was documented to have increased over ten times during the past 20 years. In 1971, the average farm in Manitoba had a capital investment of $58,775, of which $39,278 was in land and building, $11,778 in machinery and equipment, and $7,718 in livestock. Investment in land and building has risen steadily and constitutes about two-thirds of all farm investment. Machinery and equipment, the second largest capital expenditure has undergone the highest rate of growth. Livestock investment has been increasing in amount and proportion, however, its rate of growth has been the lowest of the three investment categories considered. (Refer to Figure 3-3 and Table 3-9).

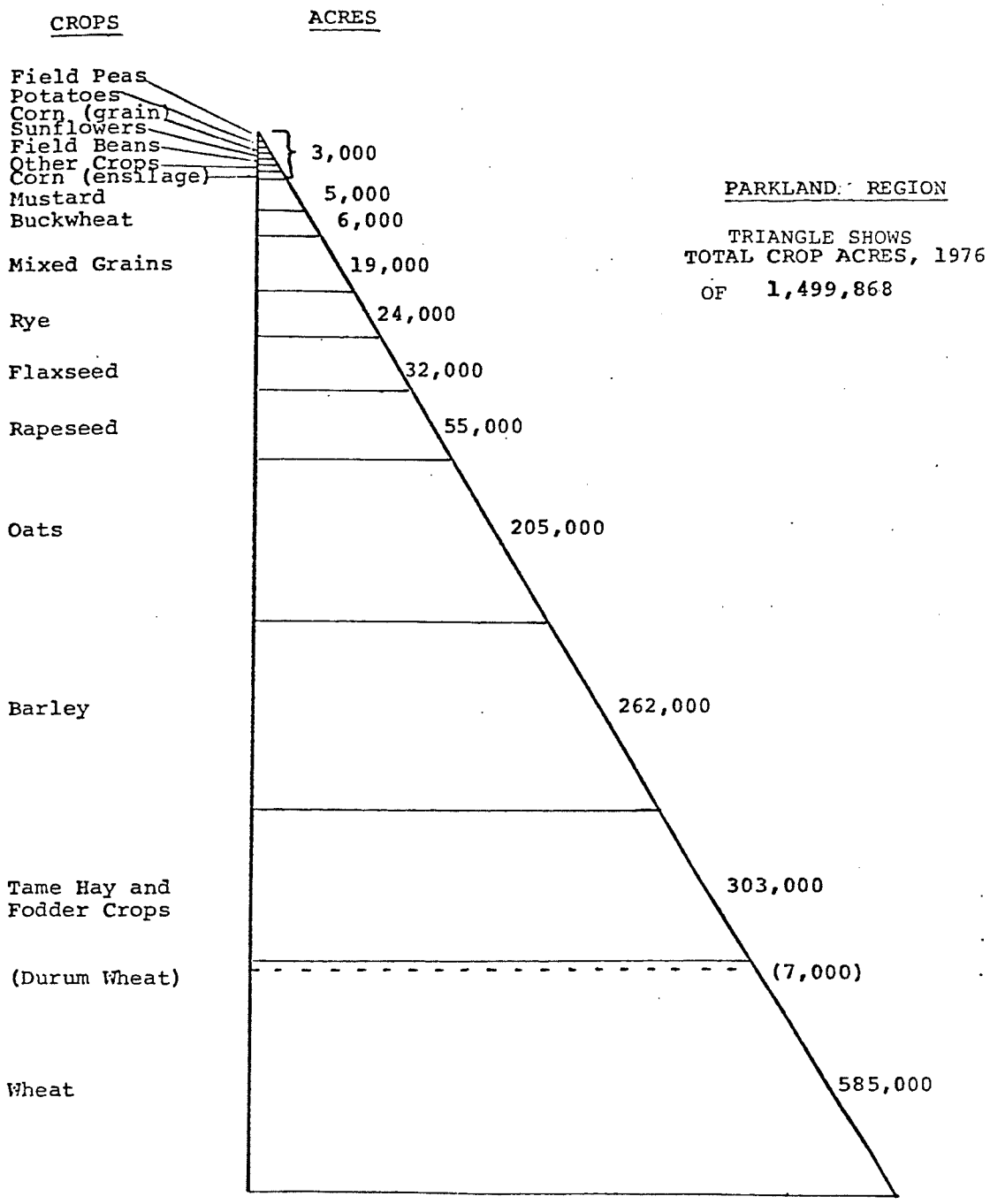

CROPS
ACRES
Field Peas
Potatoes
Corn (grain)
Sunflowers
Field Beans
Other Crops
Corn (ensilage)
3,000
Mustard
5,000
Buckwheat
6,000
Mixed Grains
19,000
Rye
24,000
Flaxseed
32,000
Rapeseed
55,000
Oats
205,000
Barley
262,000
Tame Hay and Fodder Crops
303,000
(Durum Wheat)
(7,000)
Wheat
585,000
PARKLAND REGION
TRIANGLE SHOWS TOTAL CROP ACRES, 1976
OF 1,499,868

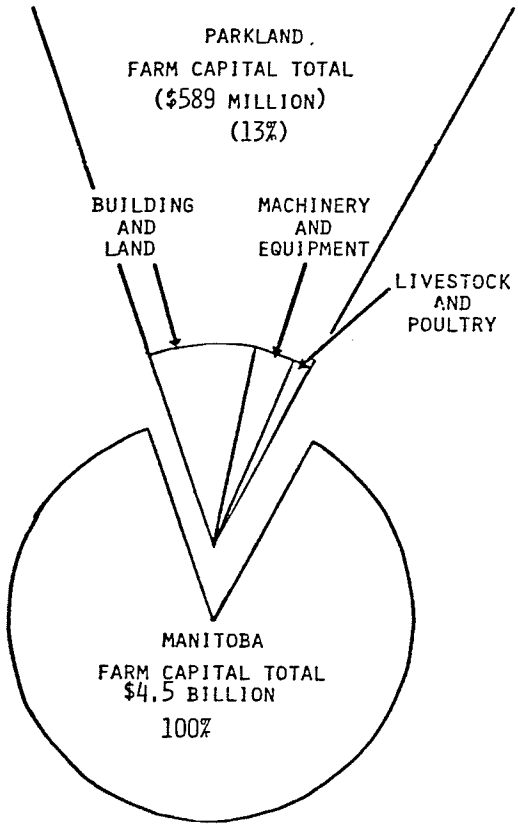
FIG. 3-2

TABLE 3-9: FARM CAPITAL VAUES ($) FOR THE PERIOD 1971 AND 1976

	Land & Buildings	Machinery & Equipment	Livestock & Poultry	Total Value
1971	$	$	$	$
Parklands	200,367,000	70,200,100	48,233,000	318,800,400
Manitoba	1,374,238,600	411,471,300	269,910,000	2,055,618,800
1976				
% Growth	53	47	79	
Parklands	378,185,430	149,429,653	61,020,065	588,635,148
Manitoba	3,208,063,649	959,736,081	366,986,480	4,534,786,210

SOURCE; Census of Agriculture, Statistics Canada.

FIGURE 3-3 Parkland Region Farm Capital as a Percent of Manitoba's Total 1976



3.3.2 *Forestry*

Information in the following section has been obtained from the Department of Renewable Resources and Transportation Services. As previously noted the bulk of the data has been abstracted from resource information compiled by the planning branch. This sector is designed to describe the forestry resource base and illustrate how it is presently being utilized. The information on Manitoba's forest resource was initially collected by the Planning Branch for the purpose of:

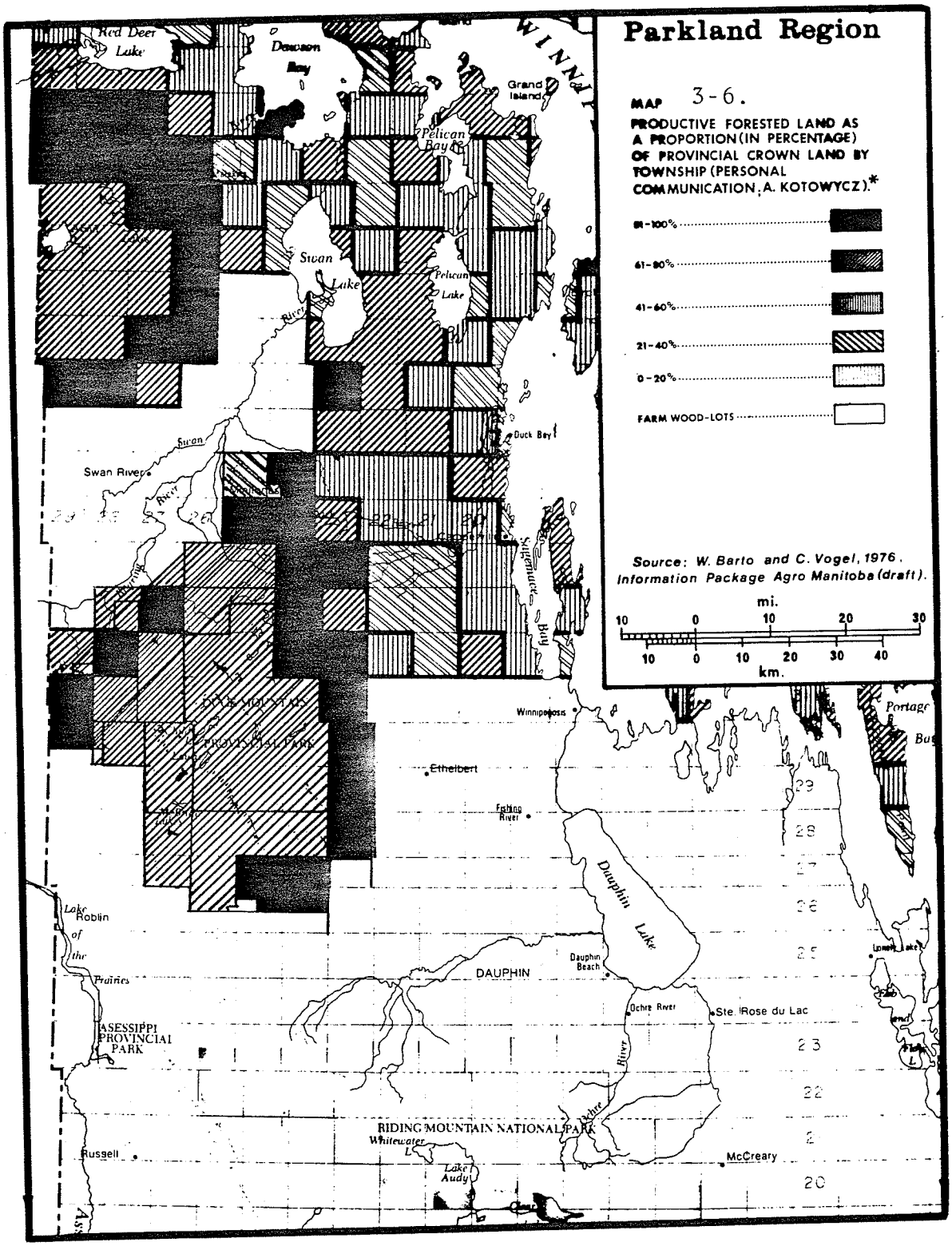
1. providing the basic information required to delineate possible trends in the forestry industry;
2. presenting the relative importance of the forest resource to the region;
3. noting the present wood production;
4. documenting possible development potentials.

3.3.2.1 Resource Base

Forest area classification in Manitoba is sub-divided and summarized as productive forest land, non-productive forest land and non-forested land. The total area of Manitoba comprising 160,640,000 acres of which 84.1 percent is land and 15.9 percent is water. On the basis of land productivity for forestry, 29.4 percent of the total land area is classified as productive forest land, 33.9 percent as non-productive forest land and 36.7 percent as non-forested land.

There are two measures of productivity. They are:

1. the proportion of land within the forested areas which is productive forest land (Map 3-6); and


Parkland Region
MAP 3-6.
PRODUCTIVE FORESTED LAND AS A PROPORTION (IN PERCENTAGE) OF PROVINCIAL CROWN LAND BY TOWNSHIP (PERSONAL COMMUNICATION; A. KOTOWYCZ).*
81-100%
61-80%
41-60%
21-40%
0-20%
FARM WOOD-LOTS
Source: W. Barto and C. Vogel, 1976. Information Package Agro Manitoba (draft).
mi.
10 0 10 20 30
10 0 10 20 30 40
km.
Red Deer Lake
Dawson Bay
Grand Island
Pelican Bay
Swan Lake
Pelican Lake
Swan River
Duck Bay
Swan River
Winnipegosis
Ethelbert
Fishing River
DUCK MOUNTAIN PROVINCIAL PARK
Dauphin Lake
Lake Roblin of the Prairies
DAUPHIN
Dauphin Beach
Ochre River
Ste. Rose du Lac
ASESSIPPI PROVINCIAL PARK
RIDING MOUNTAIN NATIONAL PARK
Whitewater L.
Lake Audy
Russell
McCreary
Portage
29
28
27
26
25
24
23
22
21
20

2. the mean annual increment (yearly growth) of trees growing on the land (Map 3-7).

Productive forested land is all land capable of producing merchantable wood within rotation age regardless of its existing state. Mean annual increment is the average annual volume increase, computed to rotation age.

The CLI Map 3-8 is a modified compilation of forestry capability prepared for the Land Use Planning Branch, Department of Renewable Resources and Transportation Services. Capabilities are classified along similar lines to agriculture. Mineral and organic soil have been divided into seven classes although Class 1 does not occur in Manitoba. Class descriptions for forestry are:

Class 2 - lands with slight limitations for commercial forest growth, mean annual increment (MAI) is 90 to 110 cu. ft./acre/year.

Class 3 - lands with moderate limitations for commercial forest growth, MAI is 71 to 90 cu. ft./acre/year.

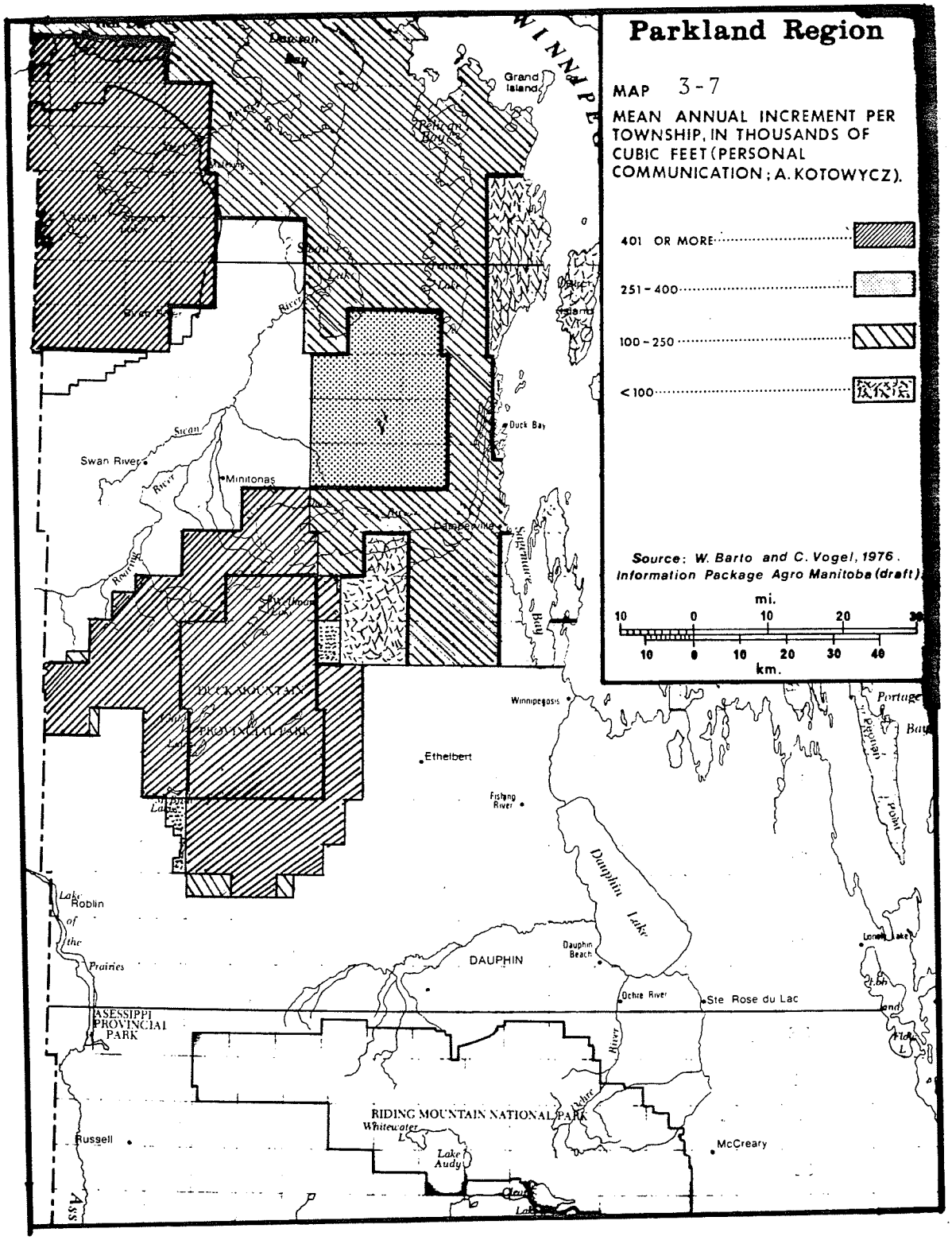
Class 4 - lands with moderately severe limitations for commercial forest growth, MAI is 51 to 71 cu. ft./acre/year.

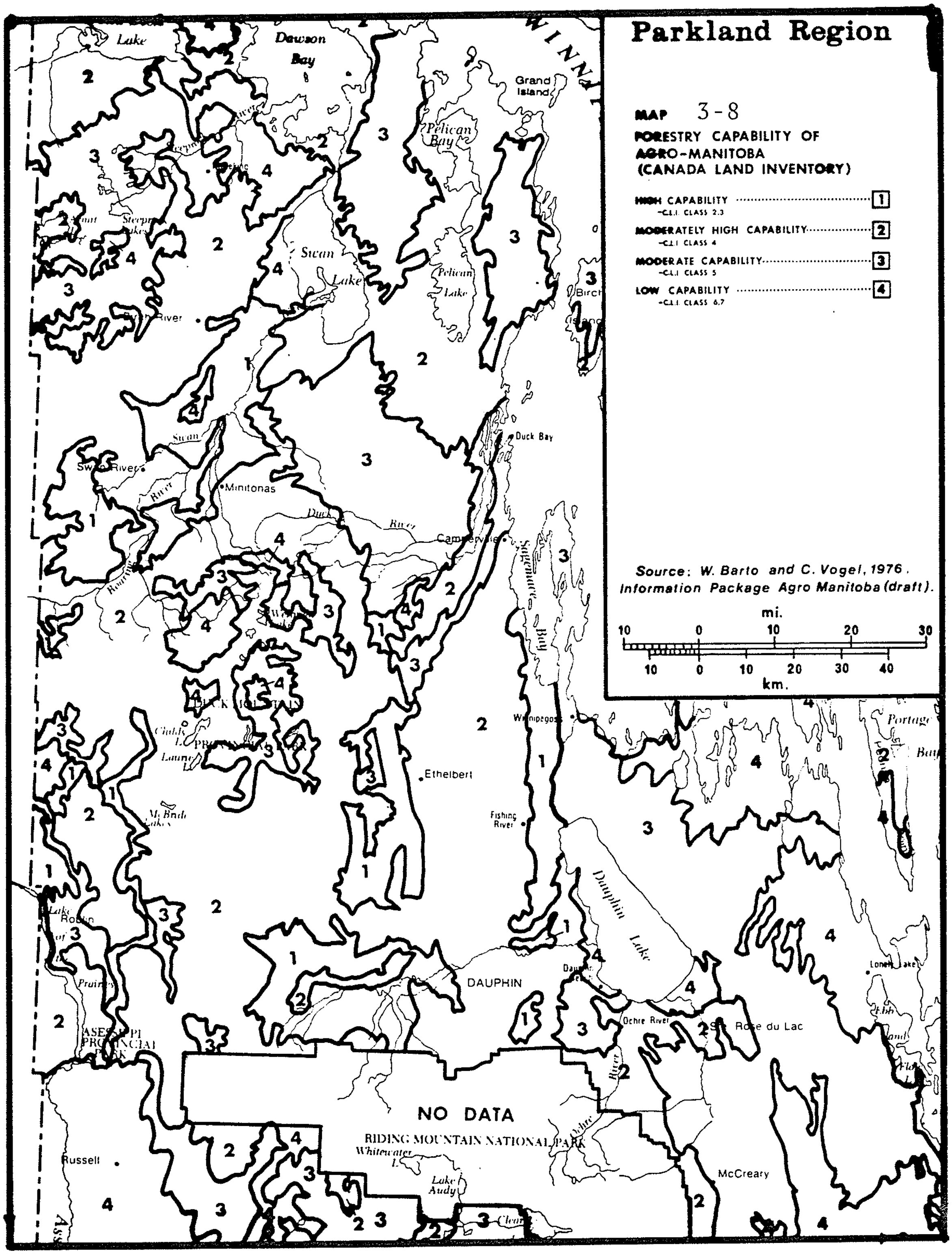
Class 5 - lands with severe limitations for commercial forest growth, MAI is 31 to 50 cu.ft./acre/year.

Class 6 - lands with severe limitations for commercial forest growth, MAI is 11 to 30 cu. ft./acre/year.

Class 7 - land with severe limitations which preclude commercial forest growth, MAI is less than 10 cu. ft./acre/year.

The forest capability map designates the CLI Classes on a broad basis for the Parkland Region, that is, lands with high capability includes Class 2 and 3 lands with moderately high Capability Class 4 lands with moderate capability Class 5 and


Parkland Region
MAP 3-7
MEAN ANNUAL INCREMENT PER TOWNSHIP, IN THOUSANDS OF CUBIC FEET (PERSONAL COMMUNICATION; A. KOTOWYCZ).
401 OR MORE
251 - 400
100 - 250
< 100
Source: W. Barto and C. Vogel, 1976. Information Package Agro Manitoba (draft).
mi.
10 0 10 20 30
km.
10 0 10 20 30 40
WINNIPEGOSIS
Duncan Bay
Grand Island
Pelican Bay
Duck Bay
Swan River
Minitonas
Winnipegosis
Ethelbert
Fishing River
DUCK MOUNTAIN PROVINCIAL PARK
Lake Dauphin
Dauphin Beach
DAUPHIN
Ochre River
Ste Rose du Lac
Lake Roblin of the Prairies
ASSESSIPPI PROVINCIAL PARK
RIDING MOUNTAIN NATIONAL PARK
Whitewater L.
Lake Audy
Russell
McCreary


Parkland Region
MAP 3-8
FORESTRY CAPABILITY OF AGRO-MANITOBA (CANADA LAND INVENTORY)
HIGH CAPABILITY — C.L.I. CLASS 2,3 — 1
MODERATELY HIGH CAPABILITY — C.L.I. CLASS 4 — 2
MODERATE CAPABILITY — C.L.I. CLASS 5 — 3
LOW CAPABILITY — C.L.I. CLASS 6,7 — 4
Source: W. Barto and C. Vogel, 1976. Information Package Agro Manitoba (draft).
mi.
km.
Dawson Bay
Grand Island
Pelican Bay
Swan Lake
Pelican Lake
Duck Bay
Swan River
Minitonas
Ethelbert
Fishing River
Dauphin Lake
DAUPHIN
Ochre River
Rose du Lac
NO DATA
RIDING MOUNTAIN NATIONAL PARK
Lake Audy
McCreary
Russell

lands with low capability include Classes 6 and 7.

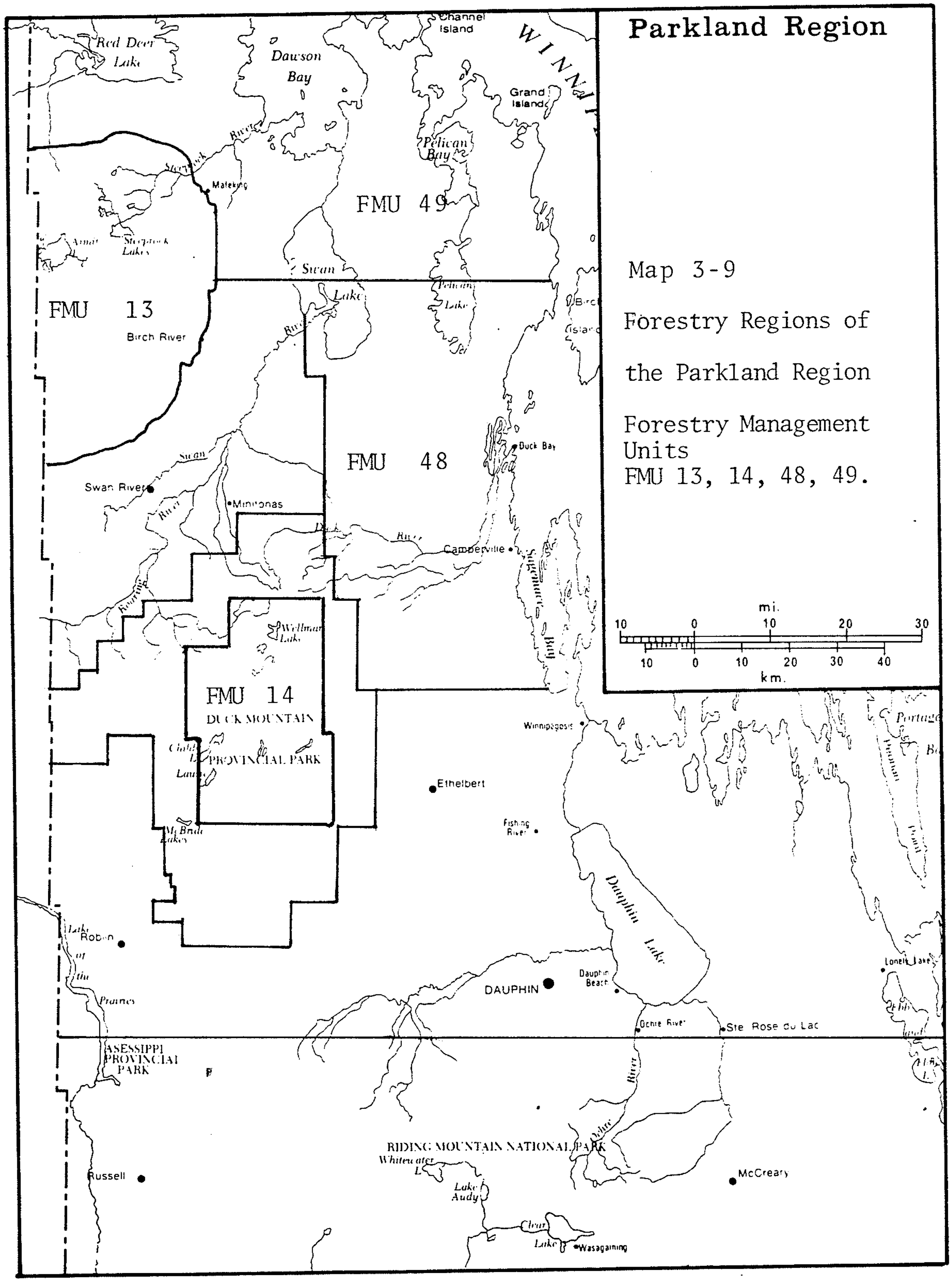
The Parkland Region contains one of the major forestry resource areas in the southern half of the province. This area includes Forest Management Units (FMU's) 13 (Duck Mountain Provincial Forest), FMU 14 (Porcupine Provincial Forest, FMU 48 and 49 (Lake Winnipegosis Management Units). (Map 3-9). Sixty-three percent of the land in this area is Provincial Crown productive forest land. The two Provincial Forests occupy 37 percent of the region, in addition to a further 28 percent included in the proposed Permanent Forest Zone. The remaining area is considered as an agricultural development zone.

Lands with the highest and moderate to high capability for forestry occur on the Duck and Porcupine Mountains as well as the northern Westlake area. In these areas, productive forested land occupies 61 percent or more of provincial crown land, and the mean annual increment per township is usually above 200,000 cubic feet.

The Duck and Porcupine Provincial Forests are in the mixed wood section of the Boreal Forest Region. The predominant species are trembling aspen, balsam poplar, white birch, white spruce, balsam fir, jack pine and black spruce. The Lake Winnipegosis Unit (FMU's 48 and 49) is contained within the Manitoba Lowlands section of the Boreal Forest Region. Forest patches of black spruce and tamarack is the prevailing forest vegetation.

3.3.2.2. Resource Utilization

The areas of major forestry importance were determined by considering productivity and location of merchantable stands



Parkland Region

Map 3-9

Forestry Regions of the Parkland Region

Forestry Management Units FMU 13, 14, 48, 49.

over the next 50 to 60 years, ownership and existing commitments to other resource users. This was determined by a forestry team in 1975.

More than half of the total annual allowable cut for Agro-Manitoba is located in the Parkland Region. Fifty-five percent of the net merchantable volume of the area is in softwoods. Eight-two percent of the softwood volume occurs in the Duck and Porcupine Provincial Forests. These two units also include 86 percent of the hardwood net merchantable volume of the area. Of the allowable cut in these areas, virtually all of the softwood cut is pine and spruce while poplar forms about 90 percent of the hardwood cut. Black Spruce is prominent through most of the Lake Winnipegosis unit. These stands are largely in the regeneration phase, following fires in 1961. Since this is also the case with other softwood species, there are few major concentrations of mature and intermediate softwood stands in this unit. The northern part of the Lake Winnipegosis unit (FMU 49) does not have a relatively high degree of productivity for forestry.

The total area of Forest Management Unit 13 or Duck Mountain, is 928,506 acres or 1,450 square miles. This is all within the Duck Mountain Provincial Forest or the Duck Mountain Provincial Park. The productivity of FMU 13 is illustrated in table 3-10.

TABLE 3-10: DUCK MOUNTAIN AREA BY PRODUCTIVITY (ACRES)

Type	Duck Mountain Prov. Forest	Duck Mountain Prov. Park	Total Area	% Productivity [1]	% Total Area
Softwoods	97,096	98,316	195,412	26%	-
Hardwood	392,400	86,292	478,692	64%	-
Total Forest Productive	489,496	184,608	674,104	90%	70%
Total Potential Productive	24,205	45,465	69,670	10%	-
Total Productive	513,701	49,793	734,774	100%	80%

The total area of FMU 14 or Porcupine Mountain is 513,860 acres or 803 square miles. This area is all within the Porcupine Provincial Forest. The productivity is illustrated in Table 3-11.

TABLE 3-11: PORCUPINE PROVINCIAL FOREST BY PRODUCTIVITY (AREA)

TYPE	PROVINCIAL FOREST	% PRODUCTIVITY	% TOTAL
Total Softwood	218,345	55	-
Total Hardwood	164,774	42	-
Total Forest Productive	383,119	97	75
Total Potential Productive	11,079	3	2
Total Productive	394,198	100	77

[1] Productivity - the proportion of land within the forest area which is productive forest land.

Under the Forest Act, timber cutting rights may be granted under authority of a forest management license, timber sale or timber permit. Timber sales and time permits may be awarded by public competition or by agreement between the Ministry and persons established or intending to become established in timber operations. Special additional allocation of timber may be granted to a company wishing to expand its existing operations.

To stabilize the forest industry and provide longer term tenure, operators holding timber cutting rights during the immediate three years prior to 1965, were granted an allocation of timber quota effective until 1980. The volume and species allocated under the quota system is based on the actual average productions during the preceeding years 1962-1965.

Approximately 60 percent of the wood allocation in the Parkland Region is principally by timber sale quotas, the balance is in special allocation grants. Pulpwood permits cover less than one percent of the committed volume. Of the 144 thousand cunits committed annually, spruce and poplar each form about two-fifths and pine about one-fifth with minor quantities of balsam, fir, tamarack and birch.

The largest total and proportional commitment is in the Duck Mountain Provincial Forest. It supplies 57% of all committed wood in the region. In the region as a whole, 42% of the annual available volume is committed (56% of the softwood, 31% of hardwood).

Quota commitments, which are 65% spruce, are predominantly found in the Duck Mountain Provincial Forest. Special allocations are granted to industries wishing to initiate new or

expand existing operations on surplus volumes. These allocations are restricted to poplar, small diameter jack pine and minor quantities of birch and small diameter spruce.

The actual cut, as reported for 1969-74, averaged 101 thousand cunits per year. This was 70% of committed volume (85% of softwood, 48% of hardwoods), and 30% of the annual allowable cut for the region (48% of softwood, 15% of hardwood).

Of the non-committed volume which forms 58% of the regional annual allowable cut, the major part is poplar, mostly mature and over-mature aspen. This volume is principally located in the Provincial Forests. Smaller amounts of small diameter jack pine, and still smaller quantities of spruce, white birch and balsam firm make up the remaining uncommitted volume. (Table 3-12).

TABLE 3-12: AVAILABLE COMMITTED AND NON-COMMITTED CUT IN MILLION CUBIC FEET

AREA	ANNUAL CUT		COMMITTED		NON-COMMITTED	
(Management Units)	Coniferous	Deciduous	Coniferous	Deciduous	Coniferous	Deciduous
PARKLAND REGION FMU - 13, 14, 48, 49	15.7	17.3	9.2	5.8	6.5	11.5

In regard to protection, utilization and management of forests, four major working groups were established. They are

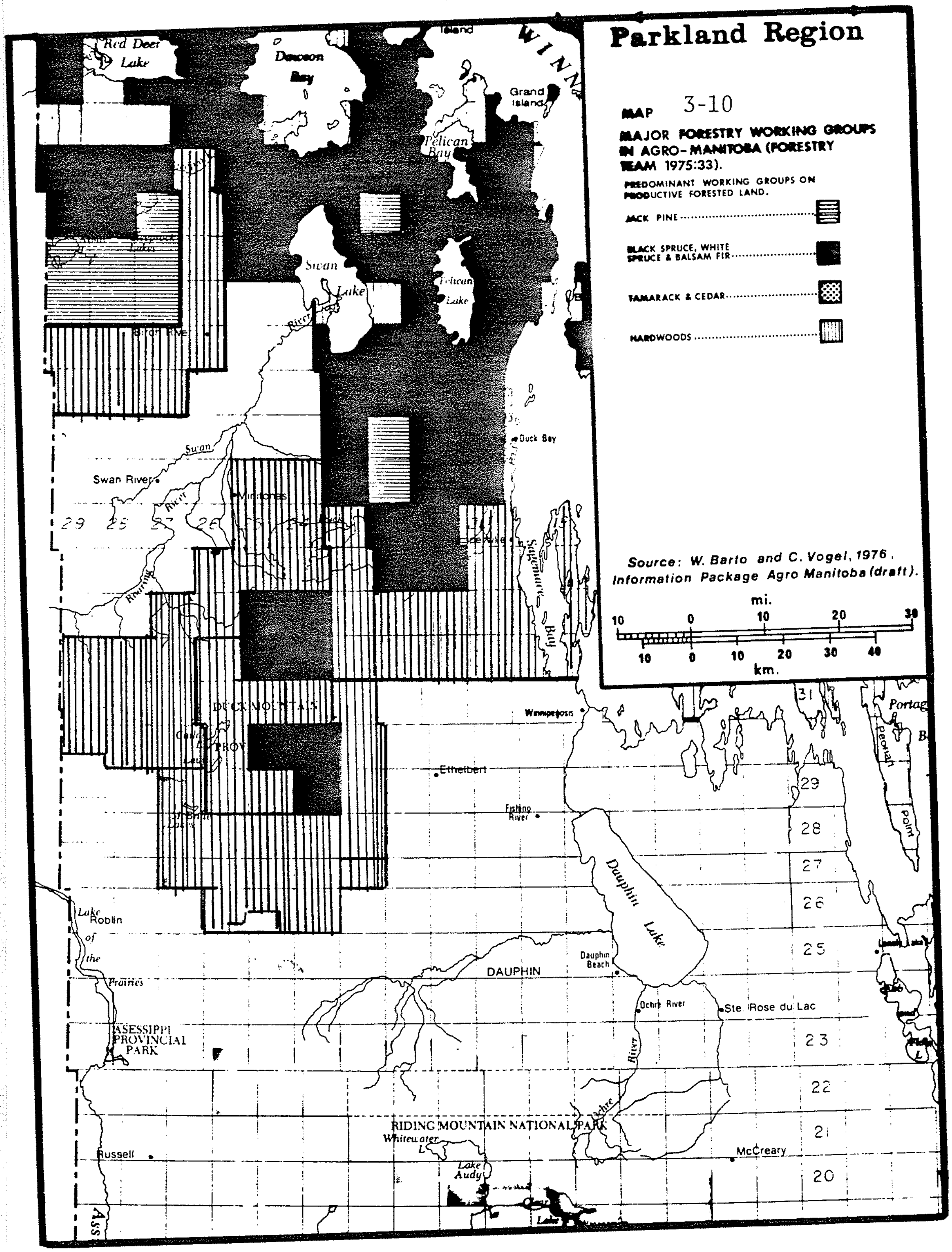
a) Jack Pine, b) Black and White Spruce, and Balsam Fir, c) Tamarack and Cedar, d) Hardwoods (Map 3-10).

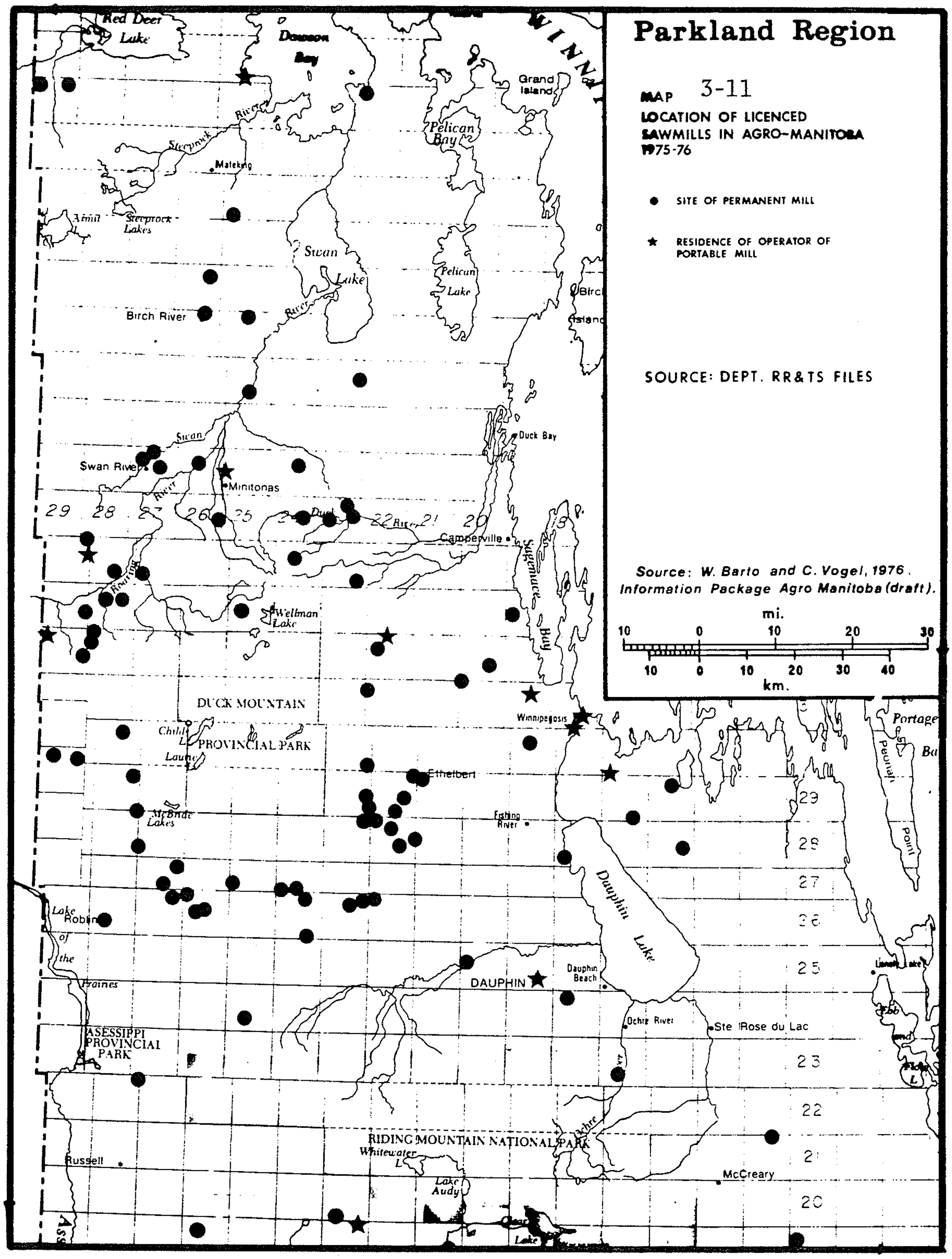
Because of the irregular age distribution within age classes for some working groups, noticeable fluctuations in the allowable cut of individual species available over a period of 20 to 30 years will occur. In the Porcupine Provincial Forest, a large number of mature and over-mature stands exist. It is anticipated that in the next 20 to 30 years, decreases in allowable cuts in three major species will occur. This decline could be 70 percent for pine, 40 percent for spruce and 50 percent for poplar.

Primary forest industries include logging and industries which use wood from forests as their primary raw material. Examples of such industries include: pulp and paper, sawmills, chemical treatment and particle board plants.

The most important primary industry in the Parkland Region is sawmilling. The total number of small portable and stationary sawmills has declined over the past ten to fifteen years. Most of the sawmills are concentrated around the Duck Mountain area (Map 3-11). Recently, several large modern sawmills have been established in centres such as Swan River. As a result of these new facilities, lumber production has increased markedly. A chemical treatment plant is also located at Roblin, another important service centre of the region. The main products treated are posts and poles as well as small quantities of lumber.

Forest production in the Parkland Region consisted of fence posts (two percent) round timber (three percent), firewood (one percent), and other piece products together. (1.5 percent).


Parkland Region
MAP 3-10
MAJOR FORESTRY WORKING GROUPS IN AGRO-MANITOBA (FORESTRY TEAM 1975:33).
PREDOMINANT WORKING GROUPS ON PRODUCTIVE FORESTED LAND.
JACK PINE
BLACK SPRUCE, WHITE SPRUCE & BALSAM FIR
TAMARACK & CEDAR
HARDWOODS
Source: W. Barto and C. Vogel, 1976. Information Package Agro Manitoba (draft).
mi.
10 0 10 20 30
10 0 10 20 30 40
km.
Red Deer Lake
Dawson Bay
Grand Island
Pelican Bay
Swan Lake
Pelican Lake
Duck Bay
Swan River
Winnipegosis
Ethelbert
Fishing River
Dauphin Lake
DAUPHIN
Dauphin Beach
Ochre River
Ste Rose du Lac
Lake of the Prairies
Roblin
ASESSIPPI PROVINCIAL PARK
RIDING MOUNTAIN NATIONAL PARK
Whitewater L.
Lake Audy
Russell
McCreary
Peonan Point
29
28
27
26
25
23
22
21
20


Parkland Region
MAP 3-11
LOCATION OF LICENCED SAWMILLS IN AGRO-MANITOBA 1975-76
SITE OF PERMANENT MILL
RESIDENCE OF OPERATOR OF PORTABLE MILL
SOURCE: DEPT. RR&TS FILES
Source: W. Barto and C. Vogel, 1976. Information Package Agro Manitoba (draft).
mi.
km.
Red Deer Lake
Dawson Bay
Grand Island
Pelican Bay
Swan Lake
Pelican Lake
Birch River
Swan River
Minitonas
Duck Bay
Camperville
Wellman Lake
DUCK MOUNTAIN PROVINCIAL PARK
Winnipegosis
Ethelbert
Fishing River
Dauphin Lake
DAUPHIN
Dauphin Beach
Ochre River
Ste Rose du Lac
ASESSIPPI PROVINCIAL PARK
RIDING MOUNTAIN NATIONAL PARK
Russell
McCreary
Lake Audy

Harvest has consisted primarily of lumber (51 percent) and pulpwood (41 percent). (Refer to Table 3-13).

Increased or sustained production must take into account the potential markets available for exploitation. These considerations might include the expansion of the industry as a result of expanding outside demand, and also the possibilities of capturing a greater share of the market within the province. With the forestry potential in the Parkland Region, market potentials utilizing the following wood products might be explored.

1. Fence posts,pickets, and framing (poplar, pine, spruce.)
2. Wooden boxes, crates, pallets (poplar, pine, spruce).
3. Bed frames (pine, spruce).
4. Furniture and furniture components (pine, poplar).
5. Doors and panel products.
6. Window frames, ladders.
7. Caskets
8. Precut or pre-fabricated components for housing.
9. Spruce mobile home framing.
10. Corrugated containers, modular containers.

In considering possible development potential for the Parklands forestry resource, information on the current utilization, commitments and basic supply of wood is most important. However, questions that must also be considered in the best interests of the region include:

1. What level of forestry activity can the Parkland Region best support?
2. How can this activity be met; and

TABLE 3-13 Forestry Production in the Parkland Region

	YEAR					
	1969-70	1971-71	1971-72	1972-73	1973-74	5 year Average
Lumber (MFBM)						
spruce	12,685	10,362	10,682	12,111	10,717	11,311
balsam	7	77	133	1,163	327	341
jack pine	1,779	2,641	2,526	4,104	2,991	2,808
other softwood	3	3	14	15	7	8
poplar	9,518	11,647	7,603	13,373	13,570	11,142
other hardwood	55	204	170	313	242	196
Fence Posts	265,306	248,517	53,338	293,961	242,208	220,666
Pulpwood (cords)						
spruce	53,509	51,698	36,221	34,503	29,832	41,153
balsam fir	4	55	-	300	100	92
jack pine	916	3,109	3,328	5,498	4,813	3,533
poplar	2,186	10,342	2,284	2,057	5,423	4,458
Railway Ties (M.)	36	41	10	15	18	24
Round Timber (M.Lin.ft.)	985	635	446	1,497	1,152	943
Mine Timber ($M.ft^3$)	139	-	-	-	1	28
Line Poles	8,879	144	58	418	1,394	2,179
Fuelwood (Cords)	1,253	1,131	1,211	2,090	692	1,257
Christmas Trees	470	869	355	611	1,367	734

Source: Department of Renewable Resources and Transportation Services files.

3. What potential impacts will arise?

3.3.3. *Minerals*

This section will attempt to provide information on the Parkland Regional mineral resource base. General information on the capability and productivity of geological formation will be identified. Information in this section was abstracted from general data compiled by the Planning Branch, Department of Renewable Resources as well as from personal communication with, and reports done by B. Bannatyne, Mines Branch.

3.3.3.1. Resource Base

The geology of the Parkland Region can be divided into two distinct age units; a sedimentary zone of post-Precambrian age, and a Precambrian zone which underlies the sedimentary rocks. The major geologic environments for the evaluation of mineral potential include the two sedimentary and the Precambrian rock group.

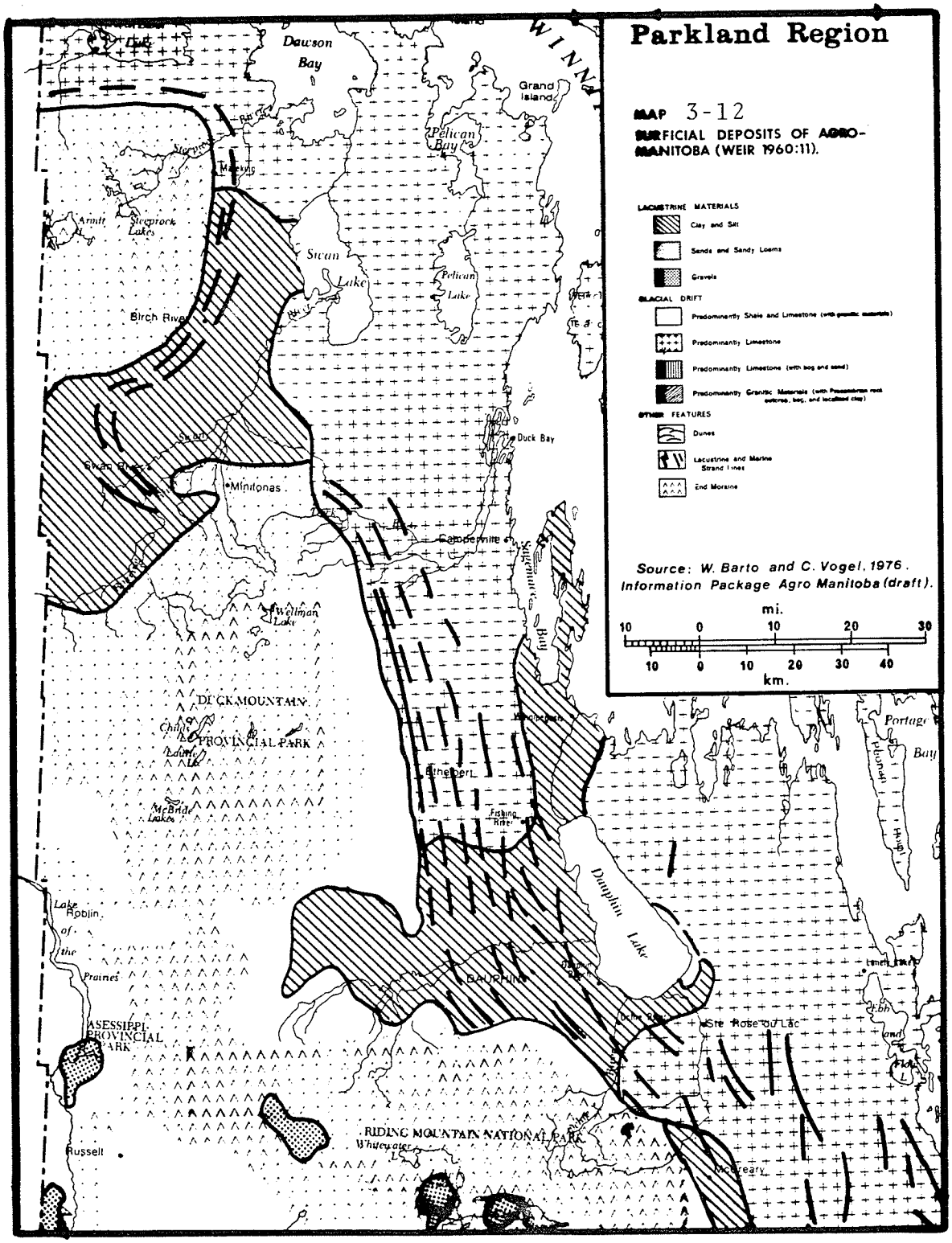
Various geological environments have a particular relationship to certain types of mineral deposits. Specific areas within these environments have been termed potential mineral areas, and refer to those presently known areas which have the highest potential for the mining industry. Since the delineation of the potential mineral areas is subjective, the terms of reference for evaluation vary with the geologic environment.

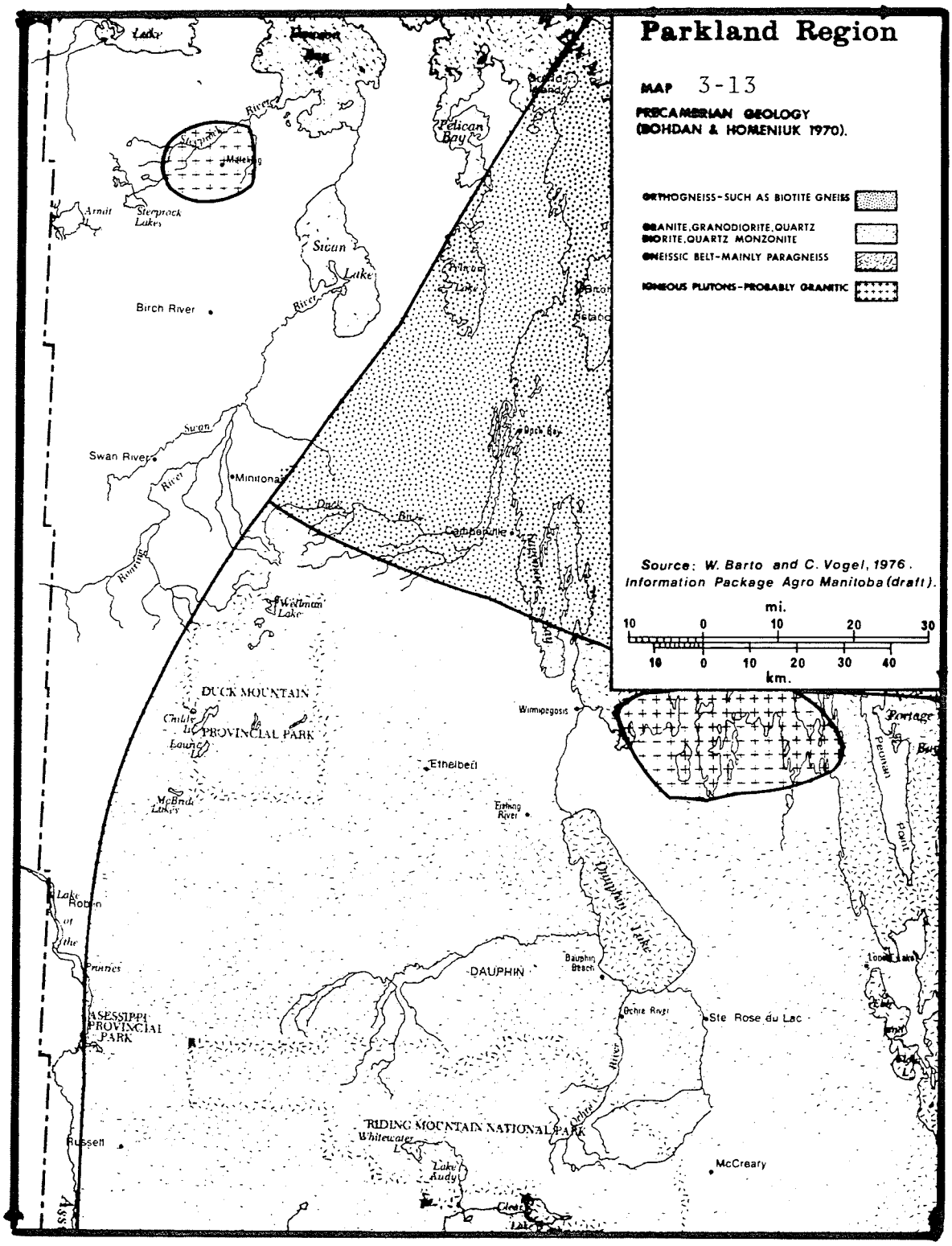
Present topography and surface deposits in the Parkland Region are the result of pre-glacial and glacial erosion occuring in the Pleistocene Period. Major features, including highlands lowlands, hills, valleys and the Manitoba escarpment were formed

prior to this period. Pleistocene glaciation brought large volumes of debris and cover, stripped from the Precambrian shield. As the ice sheets retreated, present day features of glaciation disappeared. These features are directly related to formation of the many glacial lakes, particularly, Glacial Lake Agassiz. Subsequent sedimentation processes associated with these lakes and water courses deposited much of the present day surficial material. These deposits are divided bascially into two divisions, lacustrine and glacial drift (Map 3-12). Lacustrine material deposited characteristically in shallow water with little wave action and weak current, includes deposits of clay, silt, and sandy loams. Glacial drift is loosely consolidated mainly of worked bedrock. These deposits include shales, limestones, and granitic material, most associated with secondary features. Other surface deposits occur in end and ground moraines, dunes and lacustrine strand lines. These features have varying compositions, textual structures and topographic characteristics.

Because sedimentary formations extend over large areas in this region, evaluation of this zone is difficult. The most significant areas for this group reflect facts of accessibility, nearness to surface and quality of the deposit.

Precambrian rocks have been divided into seven classes: greenstones, quartzites, iron formations, orthogneiss, granites and related rock types, paragneiss and igneous plutons (Map 3-13). Evaluation of the Precambrian zone in this area is even more difficult as a result of the large amounts of surficial cover and sedimentary rock. Less is known of this zone in the Parkland area.


Parkland Region
MAP 3-12
SURFICIAL DEPOSITS OF AGRO-MANITOBA (WEIR 1960:11).
LACUSTRINE MATERIALS
Clay and Silt
Sands and Sandy Loams
Gravels
GLACIAL DRIFT
Predominantly Shale and Limestone (with granitic materials)
Predominantly Limestone
Predominantly Limestone (with bog and sand)
Predominantly Granitic Materials (with Precambrian rock outcrops, bog, and localized clay)
OTHER FEATURES
Dunes
Lacustrine and Marine Strand Lines
End Moraine
Source: W. Barto and C. Vogel, 1976. Information Package Agro Manitoba (draft).
mi.
10 0 10 20 30
10 0 10 20 30 40
km.
Dawson Bay
Grand Island
Pelican Bay
Swan Lake
Pelican Lake
Birch River
Duck Bay
Minitonas
Swan River
Wellman Lake
DUCK MOUNTAIN PROVINCIAL PARK
McBride Lakes
Fishing River
Dauphin Lake
Lake Audy
Lake Robin
of the Prairies
ASESSIPPI PROVINCIAL PARK
Russell
RIDING MOUNTAIN NATIONAL PARK
Whirlpool L.
Ste Rose du Lac
Portage Bay


Parkland Region
MAP 3-13
PRECAMBRIAN GEOLOGY
(BOHDAN & HOMENIUK 1970).
ORTHOGNEISS-SUCH AS BIOTITE GNEISS
GRANITE, GRANODIORITE, QUARTZ
DIORITE, QUARTZ MONZONITE
GNEISSIC BELT-MAINLY PARAGNEISS
IGNEOUS PLUTONS-PROBABLY GRANITIC
Source: W. Barto and C. Vogel, 1976.
Information Package Agro Manitoba (draft).
mi.
10 0 10 20 30
10 0 10 20 30 40
km.
Birch River
Swan River
Minitonas
Pelican Bay
Swan Lake
Duck Bay
Camperville
Waterhen Lake
DUCK MOUNTAIN
PROVINCIAL PARK
Ethelbert
Wimpegosis
Dauphin Lake
DAUPHIN
Ste Rose du Lac
RIDING MOUNTAIN NATIONAL PARK
Whitewater Lake
Lake Audy
McCreary
Russell
ASSESSIPPI
PROVINCIAL
PARK
Portage Bay

3.3.3.2. Resource Utilization

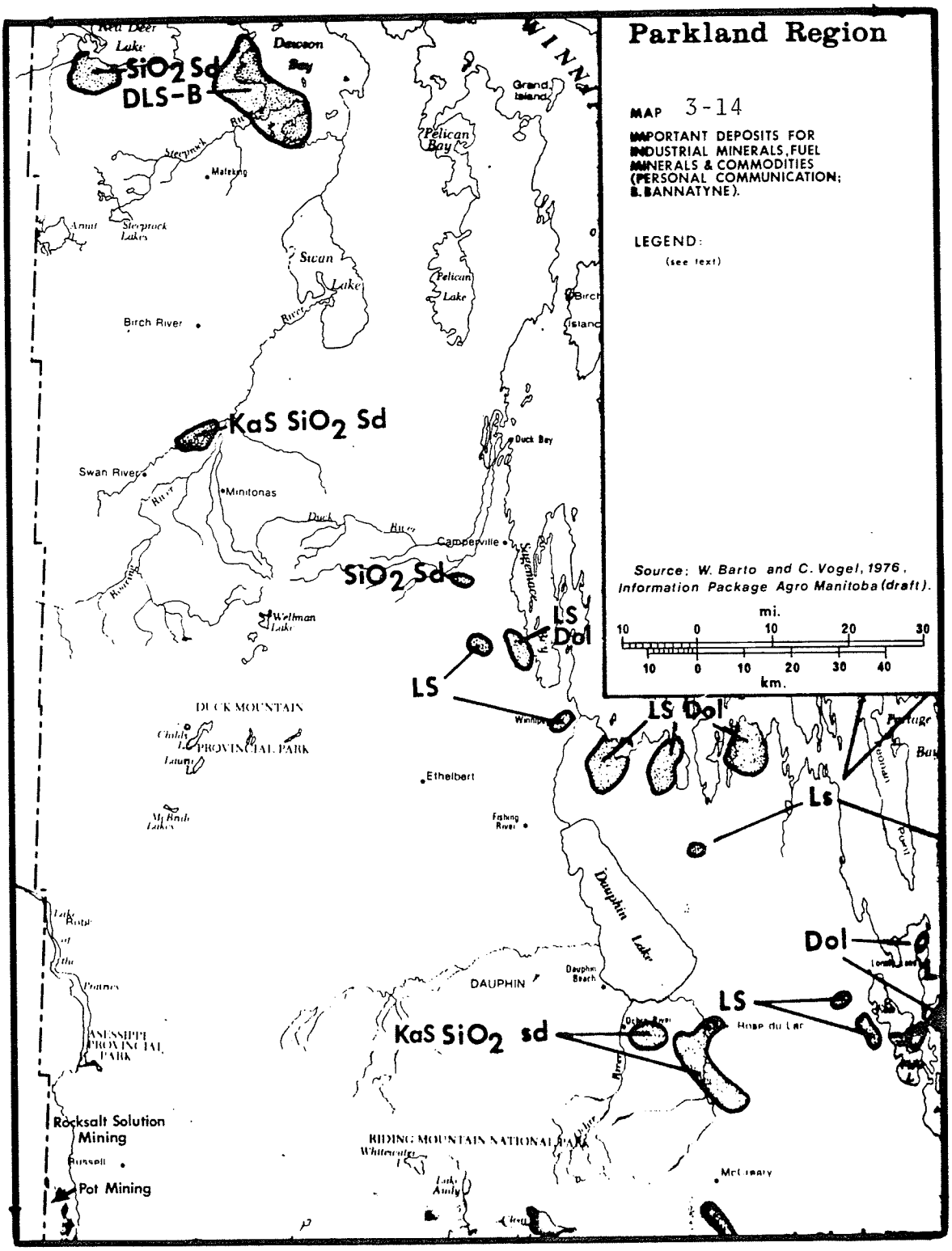
The ability to provide minerals and mineral commodities is dependent on the following important factors:

1. the location of the mineral deposit;
2. the size, depth and grade of the deposit;
3. the economics of mine exploration, mine development and cost of mineral extraction; and
4. the price and markets available for any specific mineral commodity.

However, such information is generally scant for the Parklands Region and any quantification of the value of various areas with regard to mineral extraction can only be subjectively delineated.

Mining in the Parkland Region has been limited, in general, to the extraction of industrial minerals. Total value of mineral production in this area has been increasing, as a result of both increased production and price. Although this value does not contribute a large amount to the Gross Provincial Product, the significance of the industrial minerals in the construction and secondary industries cannot be overlooked.

The sedimentary zone is the major source of economic industrial - commodity minerals. Major industrial mineral deposits mined in the Parkland Region are: shales, limestone, dolomite, gypsum, and sand-gravel (Map 3-14). Potential deposits of potash, oil shale, rock salt, brick shale, and silica sand have been indicated (Table 3-14).


Parkland Region
MAP 3-14
IMPORTANT DEPOSITS FOR INDUSTRIAL MINERALS, FUEL MINERALS & COMMODITIES (PERSONAL COMMUNICATION; S. BANNATYNE).
LEGEND:
(see text)
Source: W. Barto and C. Vogel, 1976, Information Package Agro Manitoba (draft).
mi.
10 0 10 20 30
10 0 10 20 30 40
km.
SiO2 Sd
DLS-B
KaS SiO2 Sd
SiO2 Sd
LS
Dol
LS
LS Dol
Ls
Dol
LS
KaS SiO2 sd
Rocksalt Solution Mining
Pot Mining
Red Deer Lake
Deacon Bay
Grand Island
Pelican Bay
Steeprock
Manitou Steeprock Lakes
Swan Lake
Pelican Lake
Birch River
Birch Island
Swan River
Minitonas
Duck Bay
Duck River
Camperville
Waterhen Lake
DUCK MOUNTAIN PROVINCIAL PARK
Ethelbert
Fishing River
Dauphin Lake
DAUPHIN
Dauphin Beach
Rose du Lac
ASSESSIPPI PROVINCIAL PARK
RIDING MOUNTAIN NATIONAL PARK
Lake Audy
McCreary

EXTENDED LEGEND FOR MAP 3-14

SYMBOL	MINERAL/ COMMODITY	USE
DOL	Dolomite	Crushed Stone
LS	Limestone	a) Cement b) Forest Industry
DLS-A DLS-B	Dolomitic- Limestone	a) Building Stone b) Crushed Stone
KaS	Kaolinitic Shale	Ceramics
Pot	Potash	Varied
SiO_2Sd	Silica Sand	Varied

TABLE 3-14 INDUSTRIAL MINERALS, Parkland Region

(Source: B.B. Bannatyne. Mines Branch. Personal Communication).

CURRENT PRODUCERS:

PRODUCT	LOCATION	COMPANY
Limestone Portland Cement	Mafeking Winnipegosis	Inland Cement Industries Ltd., (intermittent)
Clay Brick Shale	Ste. Rose (Swan River Formation) Jurassic	(2 quarries 6 & 7 miles S. of town). Red River Brick and Tile
Gypsum Gypsum Mine	Harcus (10 miles N. of Amaranth)	Westroc Industries Ltd.
Crushed Stone Dolomite	The Narrow (Winnipegosis Fomration)	

POTENTIAL

Silica Sand (glass sand & foundry sand)	Pine River (Swan River Formation)
Brick Clay	Swan River Formation N.E. of Swan River (Production 1953-55, 1959)
Potash	St. Lazare Area - may extent from Saskatchewan border.
Rock Salt	S.E. of Roblin - one oil well intersected 210 ft of rock salt.
Oil Shale	Favel Formation - investigated in 1966 resulting in 5-13 gals. /ton over short intervals

The following discussion identifies in greater detail a number of industrial mineral deposits in the Parkland Region including: gypsum, limestone and clay and shales.

Gypsum - Anhydrite Deposits

The Amaranth formation is sub-divided into two formations; the Upper Amaranth formation or Amaranth evaporite containing Anhydrite gypsum and some shale and the Lower Amaranth formation or Amaranth red beds containing red silty shales, some gypsum and anhydrite.

The Amaranth evaporite underlies the drift in a belt extending from Dauphin southeast to Dominion City. The limit of economically recoverable deposits is probably in the range of 300 to 500 feet. Thus the favourable area for gypsum deposits within the Amaranth evaporite is limited to its outcrop belt and to a narrow belt to the southeast. This Amaranth evaporite is composed predominantly of gypsum with one thin bed of the original anhydrite remaining.

The chief commercial value of gypsum depends upon its ability to set into a hard permanent cement or plaster after calcination. Run-of-the-mine gypsum, when calcined,is used as a base coat in construction and in the manufacturing of lath, wallboard, sheathing, and tile. Laminated board consisting of plaster between sheets of heavy paper has a wide use. Pure white gypsum is used in special industrial plasters such as terra-cotta plaster, molding plaster, and dental plaster, with hydrated lime it is used as a finishing coat for the walls of houses.

Gypsum is also used in Portland Cement as a retarder to prolong the setting time of the cement. Some alabaster has been used as an interior decorating stone and also in small ornamental pieces such as lamp stands, book ends, bowls and other objects. This phase of the industry thought to be under developed in Manitoba.

High Calcium Limestone Deposits

The Winnipegosis formation consists primarily of dolomite although occurence of magnesium and high-calcium limestone within this formation have been noted.

A sisgnificant area of outcrop of the Souris River Formation is present to the north and northeast of Mafeking. An area of 20 square miles contains large reserves of high-calcium limestone of good quality. Outcrop of the Souris River Formation occur in Swan Lake area, 30 to 40 miles northeast of the town of Swan River.

Numerous outcrops of the Dawson Bay Formation also occur in the area extending from Spence Lake southwest to Dauphin Lake and north to Lake Winnipegosis.

High-calcium limestone is defined as a carbonate rock with a minimum of 95% combined $CaCO_3$ and $MgCO_3$. The limestone used in various processes generally are required to meet certain minimum specifications in the amount of impurities they contain. However, for certain uses the limits are somewhat flexible, or the process can be adjusted to tolerate the specific compositions of locally available stone. The various uses are noted in Table 3-15.

Table 3-15 Uses of Lime

Use	Remarks	Specifications
Fluxstone for pig iron	In blast furnaces, removes mainly Al and Si, also Mn and S	Less than 3% non-carbonate impurities, maximum of 0.1% S, 0.02% P, lump size, 8 inch to 1 inch range; fines not usable
Flux for iron sinters	Pulverized limestone mixed with iron fines, powdered coke, to form agglomerates	Both high-calcium and dolomitic limestones can be used
Open hearth furnace and foundry use	Limestone, being replaced in part by quicklime	As for pig iron, except maximum of 1.5 to 2% SiO_2
Nonferrous metals refining processes	Flux in refining Cu, Pb, Zn, and Sb, also low grade bauxite for alumina	Usually high-calcium limestone used; specifications as for pig iron
Glass; fluxing and conditioning of melt	Used either in limestone or lime form, dependent on quality of glass	Both high-calcium and dolomitic types are used; uniformity in composition important; generally less than 0.06% FeO; SiO_2 plus Al_2O_3 less than 3%
Pulp and paper	Limestone used in sulphite process, reacted with SO_2 to form calcium bisulphite	Minimum 95 to 97% $CaCO_3$; must be in large fragment size
Portland cement	Limestone main ingredient, mixed with clay, silica, and iron to comply with specific limits of composition	Must be low in magnesia; maximum of 5% $MgCO_3$, preferred 3% $MgCO_3$; SiO_2 less than 1.3%; Al_2O_3 less than 3.7%
Filter beds	To aid in purification of sewage plant and other effluents; also used in acid neutralization	Sound, fine-grained stone preferred
Agricultural limestone	Used principally in eastern United States and Canada	Crushed to -0.1 inch; chert undesirable
Mineral feed	High-calcium limestone	98 to 98.5% $CaCO_3$; finely pulverized
Poultry grit	Either limestone or dolomite can be used	Purity unimportant; uniform size, ¼-inch ± ⅛-inch
Building stone	Soundness, bedding, colour, fracture, and appearance are important	No pyrite; any composition from limestone to dolomite
Aggregate, coarse and fine	Angular form in concrete considered to give better set than sand and gravel	Any sound carbonate; chert or clay undesirable
Other construction uses	Road stone, railroad ballast, rip rap, roofing granules	Various specifications

Source: B.B. Bannatyne, Limestone Deposits of Manitoba. Mineral Resources Division, 1975.

Table 3-15 (continued)

Use	Remarks	Specifications
Steel manufacture	As a flux; promotes removal of P, Si, and S	Generally high-calcium lime, low in MgO, SiO_2 and S
Nonferrous processes	In magnesia-from-seawater processes; in neutralization of acid leaching solutions from uranium mills; in flotation of some Zn, Ni, and Pb ores; in cyanidation process of gold milling; in Bayer process for Al_2O_3	Various specifications
Pulp and paper	Lime used in sulphate process in Kraft paper plants, to regenerate caustic soda; calcium carbonate recovered, calcined in plant kilns; also used in soda process. Used in some sulphite processes for pulp and paper	High-calcium lime, 92.5% CaO, less than 2.5% MgO, less than 3% combined SiO_2, Fe_2O_3 and Al_2O_3; dolomitic lime used in some sulphite process plants
Chemicals	Soda ash, bicarbonate of soda, and caustic soda by the Solvay process; calcium carbide for acetylene process; calcium chloride	High-calcium lime; for calcium carbide, less than 0.02% P
Sugar refining	Sucrose extracted from sugar beets is treated with lime to remove phosphatic materials and organic acids	Pulverized quicklime from on-site kilns; CO_2 required in processing; less than 1.5% SiO_2 + insolubles, and less than 1% $MgCO_3$ in the limestone
Water treatment	Combined with soda ash in the lime-soda softening process; also used in purification processes	Mainly high-calcium lime
Sewage and waste	Added to neutralize acidity, and thus to promote biological oxidation processes; also used in chemical treatment of sewage and wastes from a variety of industrial plants	Mainly high-calcium lime; dolomitic lime may be used in acid neutralization
Sand-lime brick and cellular blocks	Formed in autoclaves from a mixture of sand and lime, lightweight cellular concrete blocks are produced from special mixtures	High-calcium lime; either hydrated lime or pulverized quicklime
Soil stabilization	Lime reacts with clay minerals to reduce plasticity, and acts as a cementing agent; used extensively in road construction	Laboratory testing of specific soil required to determine whether high-calcium or dolomitic lime is more effective (see Wicks and Whitehead (1965) for application to Manitoba soils)
Miscellaneous uses	Soil liming; bituminous paving; plaster and stucco; insecticides; bleaches; paints; tanning	Variable with use

Clays and Shales

Outcrops of the Swan River Formation are known only from the northern part of the area along the Pine, Swan and Roaring rivers, and south of Mafeking. There the formation is composed of fine to coarse grained quartzose sandstone, unconsolidated, numerous interbeds of shale and silty shale are present.

The shale beds exposed along the Swan River to the north - east of the town of Swan River, were once used for face brick. Two types of shale are predominant, dark grey kaolinitic shale and a light grey kaolinitic shale. Exploration in the Kerwenan area by St. Rose du Lac has indicated the occurence of light grey and dark grey kaolinitic shales, associated with silica sand and lignite. The firm Red River Brick and Tile plan to use these shales in their brick plant in the Lockport Area.

A small deposit containing white Kaolinitic clay mixed with fine grain silica and occurs 14 miles east of the town of Pine River. Tests on selected samples of the clay indicate it is of stoneware quality. They clay is a high quality clay, but is similar to other kaolinitic material in Manitoba in having a high content of clastic quartz. Unless additional tonnage can be outlined more detailed testing is not warranted. The deposit could be suitable for ceramic are ware uses.

The Favel Formation was investigated by three oil companies in 1965 and 1966, as a possible source of oil. An earlier report had indicated oil contents of up to 7.5 imperial gallons per ton in the Favel shale in the Riding Mountain and Porcupine Mountain areas. Recent work reported a maximum of 12 imperial

gallons per ton however, reservations were dropped due to consistently low values encountered.

Summary

In summary, mining in the Parkland Region is an important resource use activity. It serves to provide the basic mineral resources necessary in the construction and transportation sector and also support a number of industries. However, mining in the Parkland Region accounts for only one percent of total available jobs. The analysis conducted by the Planning Branch for southern Manitoba indicated that increased production, either from existing deposits or from new deposits, will be required in the future for: sand-gravel and quartz, cement, stone, peat, gypsum and salt. Increases in the value of production for lime and clay products has also been noted.

Increased demand for a number of mineral commodities has been projected by the Mines Branch. In meeting any of these future demands the following planning considerations should be referred to:

1. What level of demand can be met and how?
2. What is the relative priority of mining to other land uses? and,
3. What particular safeguards are required to maintain the integrity of the land base when mining?

3.3.4. *Outdoor Recreation*

The concern over recreation and particularly outdoor recreation has grown a great deal over the past twenty years. The structure of society as well as the present work ethic allows an increasingly greater proportion of the average individuals time to be spent on recreational activities. With the increasing demand for outdoor recreation facilities as well as the close relationship of outdoor recreation to other resource use activities, it is most important that regional developmental planning include outdoor recreation. This section will attempt to present general information on the present state of outdoor recreation in the Parkland Region. General outdoor recreation capabilities will be identified as well as the present utilization of the regions outdoor recreation resource base. Information in this section was abstracted from data compiled by the Department of Renewable Resources Planning Branch. Other information sources include Manitoba Parks Statistics compiled by the Department of Tourism Recreation and Cultural Affairs of Manitoba.

3.3.4.1 Resource Base

The outdoor recreation capability of the Parkland Region is identified in very general terms from Canada Land Inventory Maps. Capability classes designated by Canada Land Inventory are based on intensity of recreation use and/or quantity of recreation as generated and sustained per unit area of land per year, under perfect market conditions. It is further noted that quantity in this sense means a measure of use either in

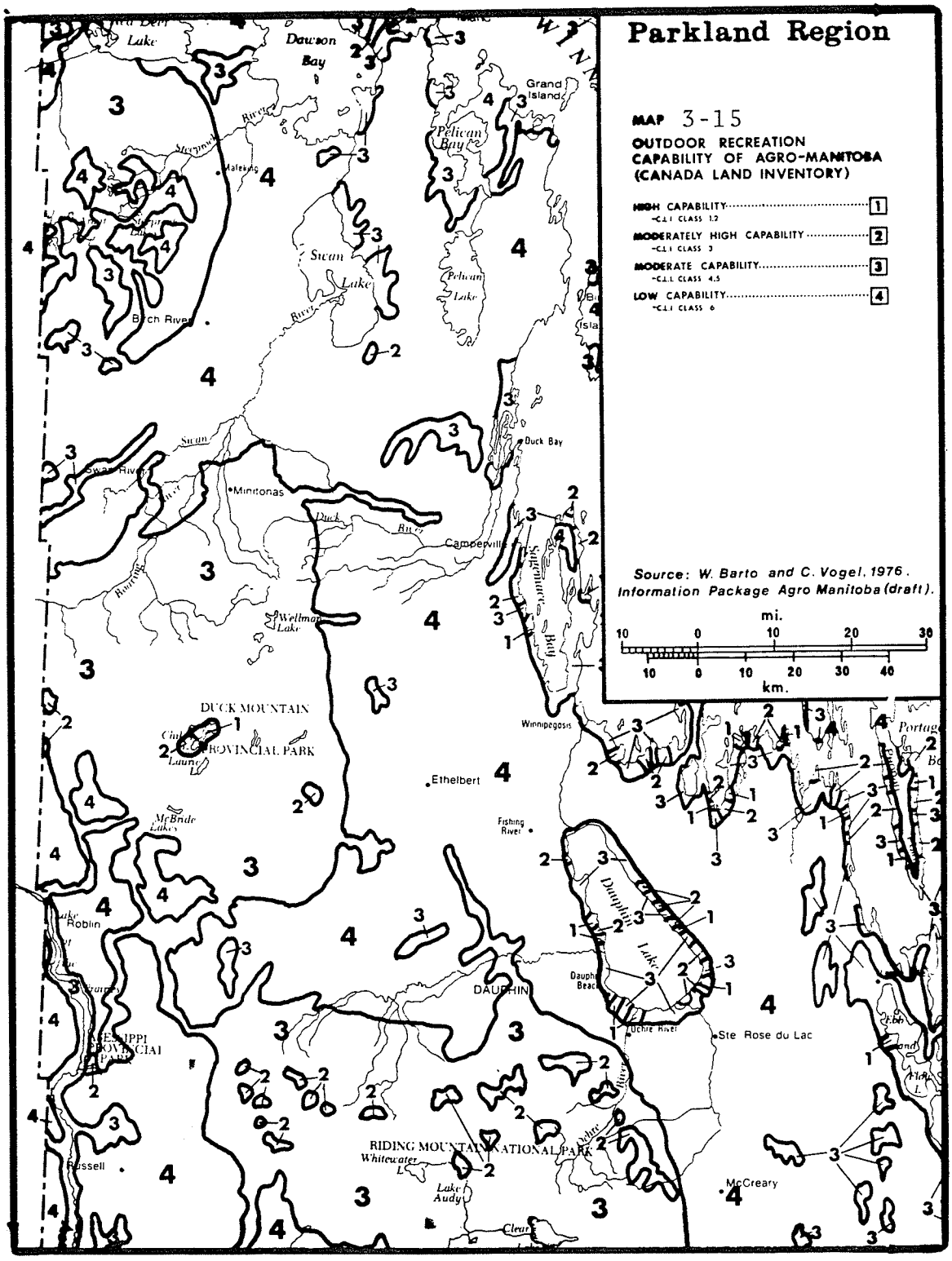
the form of visitor days or some other appropriate measure. Perfect market conditions suggests uniform demand and accessibility for all areas.

Canada Land Inventory designates four major divisions of outdoor recreation capability; lands with high capability, representing classes 1 and 2; lands with moderately high capability including classes 4 and 5, lands with low capability representing mainly class 6. Class 7 lands with very low capability are noted to be low in southern Manitoba, and therefore not significant in the modified map presented (Map 3-15).

High capability lands are suitable and capable of maintaining high to very high total annual use based on one or more recreational activities of nature such that relatively large numbers of people may be accomodated per unit area. Virtually all of those lands occur on lakeshore and imply water-related recreation. Some lands of high capability occur along river, and a much smaller quantity occurs on sites of unusual landforms, historic sites, scenic views and collecting opportunities. In general, lands of high capability are located on the periphery of the more densely settled parts of the zone.

Lands having a moderately high capability for recreation are also located principally on lakeshores, but substantial tracts also occur in marshes or on rough uplands where opportunities for angling, canoeing, and viewing of land formations, vegetation and wildlife are of a moderately intensive level.

Land with moderate capability for recreation can maintain only moderate and moderately low total annual use based on


Parkland Region
MAP 3-15
OUTDOOR RECREATION CAPABILITY OF AGRO-MANITOBA (CANADA LAND INVENTORY)
HIGH CAPABILITY 1
-C.L.I. CLASS 1,2
MODERATELY HIGH CAPABILITY 2
-C.L.I. CLASS 3
MODERATE CAPABILITY 3
-C.L.I. CLASS 4,5
LOW CAPABILITY 4
-C.L.I. CLASS 6
Source: W. Barto and C. Vogel, 1976. Information Package Agro Manitoba (draft).
mi.
km.
Dawson Bay
Grand Island
Pelican Bay
Swan Lake
Pelican Lake
Birch River
Minitonas
Duck Bay
Swan River
Duck River
Camperville
Waterhen River
Waterhen Lake
Swan River Bay
DUCK MOUNTAIN PROVINCIAL PARK
Winnipegosis
Ethelbert
McBride Lakes
Fishing River
Lake Dauphin
Dauphin Beach
DAUPHIN
Duchie River
Ste Rose du Lac
Lake Robin
RIDING MOUNTAIN NATIONAL PARK
Whitewater Lake
Lake Audy
Russell
McCreary

'dispersed' or extensive forms of recreation. These lands are usually located on lakeshores, in river valleys, on escarpments and duned areas, or on hilly uplands.

Lands with a low capability for recreation have a natural capacity for low total annual use in extensive activities, and cover the rest of the planning zone.

In summary the major areas of outdoor recreation potential in the Parkland Region exist in and around the Duck Mountain Provincial Forest, Porcupine Provincial Forest, Riding Mountain and along the shores of Lake Dauphin and Lake Winnipegosis.

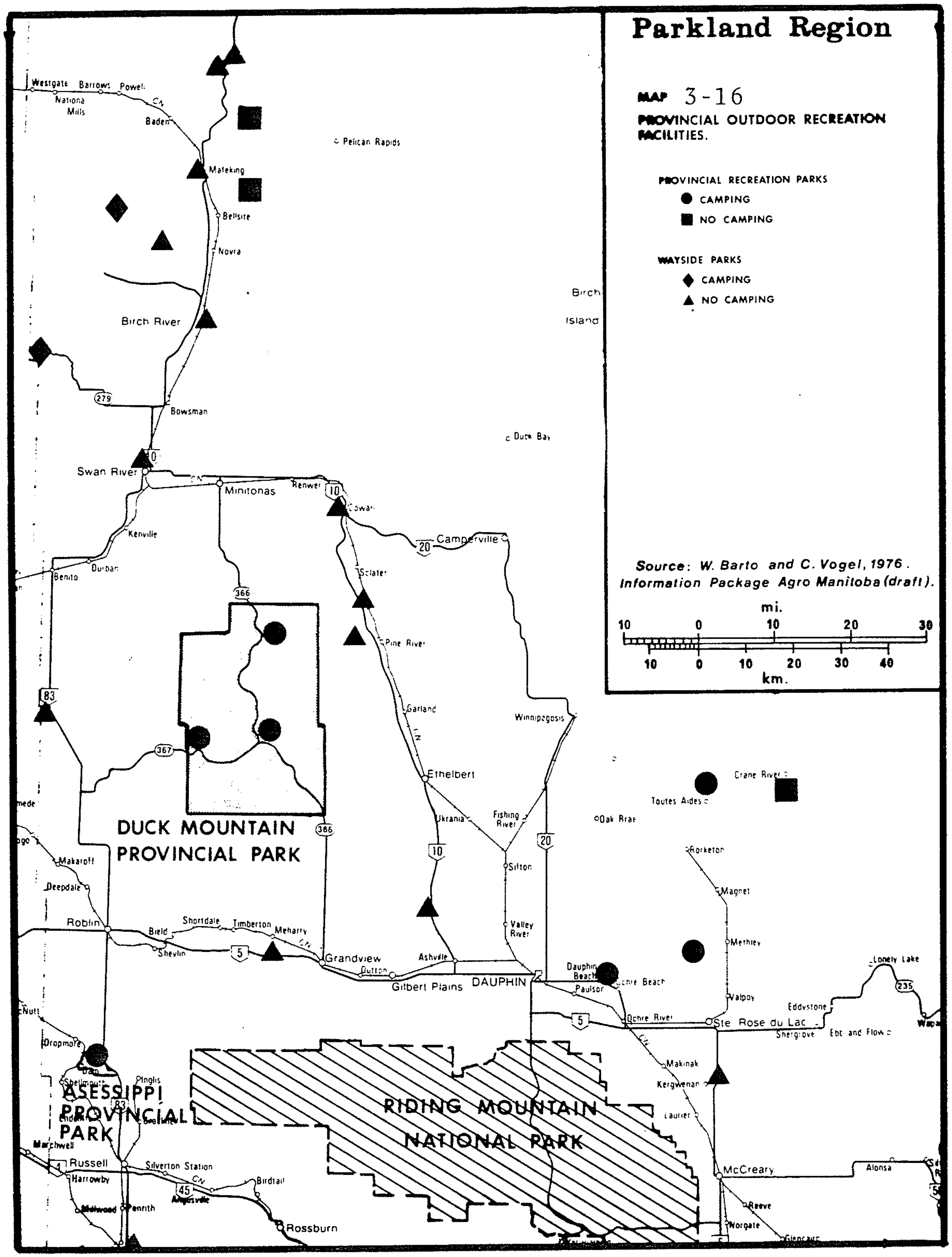
3.3.4.2 Resource Utilization

The Parkland Region contains two of Manitoba's ten Provincial Parks, numerous provincial recreation areas and wayside parks, as well as Manitoba's single National Park (Map 3-16). Other major areas of outdoor recreation utilization occur in the Porcupine Provincial Forest and around parts of Lake Einnipegosis and Lake Dauphin. Statistics are generally only available for Park and camping activities.

Some general points have been identified for purposes of development planning:

1. The possible trends in visitor numbers;
2. The important groups;
3. The types of recreational pursuits demanded;
4. The type of accomodation required; and,
5. Some of the economic benefits.

This section will attempt to provide information, where possible, on the above points to aid planning consideration. Statistics


Parkland Region
MAP 3-16
PROVINCIAL OUTDOOR RECREATION FACILITIES.
PROVINCIAL RECREATION PARKS
CAMPING
NO CAMPING
WAYSIDE PARKS
CAMPING
NO CAMPING
Source: W. Barto and C. Vogel, 1976. Information Package Agro Manitoba (draft).
mi.
10 0 10 20 30
10 0 10 20 30 40
km.
DUCK MOUNTAIN PROVINCIAL PARK
RIDING MOUNTAIN NATIONAL PARK
ASESSIPPI PROVINCIAL PARK
Birch River
Swan River
Minitonas
Ethelbert
Grandview
Gilbert Plains
DAUPHIN
Ste Rose du Lac
McCreary
Russell
Rossburn
Robin
Bowsman
Mafeking
Pelican Rapids
Winnipegosis
Crane River
Camperville
Birch Island

are generally only provided for summer recreation activities, a four month period from May to September, which draws the bulk of out of province recreationists. Winter activities are increasing in importance in Manitoba and while information on winter recreation is not provided, consideration should be given when planning decisions are made.

In 1976, an estimated three million or more non-residents visited Manitoba. Of this total: 61 percent were Canadians, 38 percent were Americans and the remainder were from other nations.

Total visitors increased steadily from 1955 to 1974, and declined from 1974 to 1976. The number of American visitors has declined by an average of four percent per year from 1972 to 1976, while the number of other Canadian visitors declined from 1974 to 1976, at seven percent per year. Visitors from other nations has been steadily increasing. Overall, the total number of visitors has declined by about five percent since 1974.

Travel expenditures in Manitoba were estimated at $331,406,000 for 1976. Of this expenditure, resident Manitobans accounted for 66 percent, other Canadians 15 percent and United States and Foreign visitors 19 percent. The overall total expenditure on travel in Manitoba has increased by about 5.5 percent per year since 1971.

The Renewable Resource Planning Branch notes from Statistics Canada 1974 data that:

1. Over 50 percent of the expenditures by Manitobans occur during trips less than 100 miles from home,

2. That Manitoba has a net income from travel in and out of the province, and,

3. That the per capita income from travel for Manitoba is higher than most provinces (approximately $300 per capita in 1973).

The information on purposes of trips from the Canadian Travel Survey and Travel Data Surveys note the following points:

1. Visiting friends and relatives is the most important trip purpose for Manitobans and other Canadians. In most instances, this limits the use of outdoor recreational facilities to in-transit and day-use modes. However, the importance of this purpose has decined from 1969.

2. The outdoor rural recreational purposes were together as popular as visiting friends and relatives. The importance of this group has increased since 1969, especially for Manitobans.

The Reception Centre Surveys furnish information on visitor interests, activities for which visitors indicated an intention to undertake while travelling in Manitoba.

1. Historical sites, museums, shopping and swimming are the outstanding activity preferences for summer visitors to the province.

2. The rank order of interests for both groups is about the same. However, American visitors had a much higher proportionate interest in hunting and fishing and a moderately higher interest in canoeing and boating. The other Canadian visitors expressed a stronger interest in swimming and in night clubs.

3. Over the period 1970-72, both American and other Canadian visitors expressed increased interest in shopping,swimming, night clubs, sporting events and canoeing. Other Canadian visitors expressed increasing interest in outdoor lakeshore activities; fishing, boating, and water skiing. American visitors in contrast, expressed increasing interest in some indoor urban activities such as memorial events and plays. American visitors also show a greater interest in hunting.

In general, based on regional preferences the visitors destined to the Parkland Region have a high interest in outdoor

water related activities, a moderate high interest in hunting and sporting events and a generally low interest in indoor urban activities. Park statistics indicate that in 1977, a total of 1,132,000 cars entered provincial outdoor recreation areas in Manitoba. Of this total approximately 20 percent utilized outdoor recreation areas in the Western Region, which includes all of the Parkland Region as well as a number of recreation areas to the south. More specifically information on provincial recreation camping sites located in the Parkland Region is presented in Table 3-16.

Reviewing the origin of permit holders in provincial campgrounds for the Parkland Area noted that: (Table 3-17).

TABLE 3-17 : ORIGIN OF PERMIT HOLDERS IN PROVINCIAL CAMPGROUNDS WITHIN PARKLAND REGION

PARKLAND AREA	MANITOBA %	OTHER CANADIAN %	AMERICAN %
1971	47	30	23
1972	53	27	20
1973	56	28	16
1974	59	27	14
1975	62	26	12

1. Most campers are Manitobans. In the Parkland Area, the proportion of Manitoban campers has been growing, while the percentage of American campers in the region has declined. Overall, the proportion of Manitoban campers throughout the province was 64% for the period 1971-74 and in 1974 rose to 67%.

TABLE 3-16

GENERAL INFORMATION ON PROVINCIAL RECREATION CAMP SITES IN THE PARKLAND REGION 1977

1977 Camping Season (May-Sept.)	Asessippi Park	Blue Lake (Duck Mountains)	Childs Lake (Duck Mountains)	Manipogo (Lake Manitoba)	Rainbow Beach (Dauphin Lake)	Singush Lake (Duck Mountains)	Wellman Lake (Duck Mountain)	Whitefish Lake (Porcupine Mountains)
No. of sites								
(Total)	94	115	60	109	35	15	50	50
Unserviced	94	115	60	85	10	15	29	50
Electrical	0	0	0	24	25	0	21	0
Revenue $	5,886	14,616	9,300	11,035	3,460	843	6,288	3,631
Unit Days Sold[1]								
Non-Seasonal[2]	1,962	4,397	2,150	3,570	1,653	281	1,295	577
Seasonal[3]	0	2,055	4,110	0	0	0	2,291	2,702
Origin of Permit Holders								
Manitoba	63%	78%	79%	95%	80%	75%	82%	79%
Other Can.	34%	17%	19%	4%	13%	14%	12%	19%
U.S.A.	3%	5%	2%	1%	6%	10%	5%	2%
Other	0	0	0	0	1%	1%	1%	1%
Equipment Used by Campers %								
Tent	23	30	16	15	24	42	20	26
Tent Trailer	31	26	22	24	23	20	28	22
House Trailer	22	17	20	34	30	15	28	20
Camper Truck	14	15	24	16	12	10	18	21
Motor Home	6	6	9	9	5	5	3	5
Other	4	6	9	2	6	8	3	6

[1]Unit Day is defined as being one campsite sold for one mile.

[2]Non-Seasonal is defined as being the total number of daily permits sold.

[3]Seasonal is defined as being one campsite from date of sale to closing date of camp ground.

NOTE: Campgrounds in the southern part of the province including the Parkland Region have an average occupancy rate of about 50 percent over the camping season.

2. American campers are the least numerous of the three groups. Until 1974, American campers were proportionately more important in the Parkland Area, but the decline in their numbers is most evident here, so that Americans now form about 13% of all campers.

The following trends which are associated with camping in Manitoba have been identified by the Planning Branch:

1. In the period 1967 to 1972, the rates of participation of Manitobans 18 or more years old increased by a total of 75% for tent camping and 83% for trailer camping, equivalent to a rate of 12 and 13 percent per year, respectively. Frequency of participation data indicate that the most tent campers camped on a relatively few (one to five) occasions during the year, while most trailer campers camped more frequently (six or more times). Truck campers occupy an intermediate position. Because the proportionate use of tents by campers is increasing, while the proportion of trailer campers decreases, it is possible that camping is becoming a more widespread activity, but that its average practitioners indulge relatively fewer times each season.

2. The population of Manitoba has increased at about 0.7 percent per year since 1969. The frequency with which Manitobans take vacation trips has increased from 1.24 trips per person per year in 1970 to 1.53 trips per person per year in 1973.

3. The percentages of other Canadians who indicated that a purpose of their trip to Manitoba was camping, rural sightseeing, or other outdoor activity have declined since 1969. However, the Manitobans have indicated these purposes for their trips at steadily and markedly higher degrees for each successive survey year since 1969.

In summary, outdoor recreation areas in the Parkland Region are numerous. Many types of outdoor recreation however are difficult to measure. This section has attempted to provide general information on outdoor recreation capabilities and utilization of recreation sites in the Parkland Region. Other general information on recreation trends within Manitoba have

been noted also to add perspective to outdoor recreation planning considerations.

People of the Parkland Region should be concerned about the type and extent to which outdoor recreation areas are developed. Three questions have been noted by the Renewable Resources Planning Branch that should arise for future recreation planning considerations:

1. What kinds of recreational opportunity can best be provided in the Parkland Region?
2. At what levels of participation can the Parkland Region realistically handle; and,
3. What are the priorities for activity allocation, that is consumption versus non-consumptive, outdoor versus urban, etc?

3.3.5. *Fish and Wildlife*

The importance of fish and wildlife as a resource is dependent upon the specific benefits they supply to people. The value of fish and wildlife as a natural resource used to meet the economic and social needs of people is often difficult to determine. This section will attempt to identify in very general terms an overview of the capabilities and utilization of fish and wildlife in the Parkland Region. Information in this section was abstracted from data compiled by the Department of Renewable Resources Planning Branch. Also, information was obtained from Fishery and Wildlife Departments within the Parkland Region.

Fish Capability

Fish capability is the most difficult to measure. Ideally fish capability should be distinguished on the basis of either sport or commercial uses. Generally, the species of value found in the Parkland area include: trout, walleye, norhern pike, perch, carp, and mullet. Areas with a variety of fish species suitable for recreation purpose are found within the designated park areas as well as in tributaries of Lake Winnipegosis and Lake Dauphin. More specifically, areas having numerous lakes and rivers with good sport fishing potential occur in the Duck Mountain, Porcupine Mountain and Riding Mountain.

With regard to commercial fishing, the only significant lake is Lake Winnipegosis, although Dauphin Lake in the past has supported a small commercial fishery. Due to extensive erosion of the surrounding farmlands siltation in Lake Dauphin is becoming a formidable problem. Increased nutrient loads from agriculture run-off has increased the rate of entrophication in the lake. Oxygen depletion occuring both in summer and winter, has killed great number of fish. The capability for commercial fishing potential in Lake Winnipegosis is difficult to determine. One measure of capability might include sustained levels of productivity. However, during the past ten years, commercial fish harvests have varied greatly and have been dependent to a large degree on management practices as well as possible natural fluctuations which have not yet clearly been defined.

Wildlife Capability

Canada Land Inventory (CLI) divides ungulate wildlife capability into five general categories corresponding to the CLI classes which indicate the ability to sustain certain wild ungulate species. These divisions apply to the following big game animals; whitetailed deer, moose, elk, and woodland caribou and represent estimated potential (not present ability) of the land to support wild ungulates.

A modified ungulate wildlife capability map identifies the following capabilities (Map 3-17).

High Winter Capability - land with high capability for winter support: Classes 1, 2 and 3.

High Capability - Classes 1 and 2; none or very slight limitations to the production of wild ungulates.

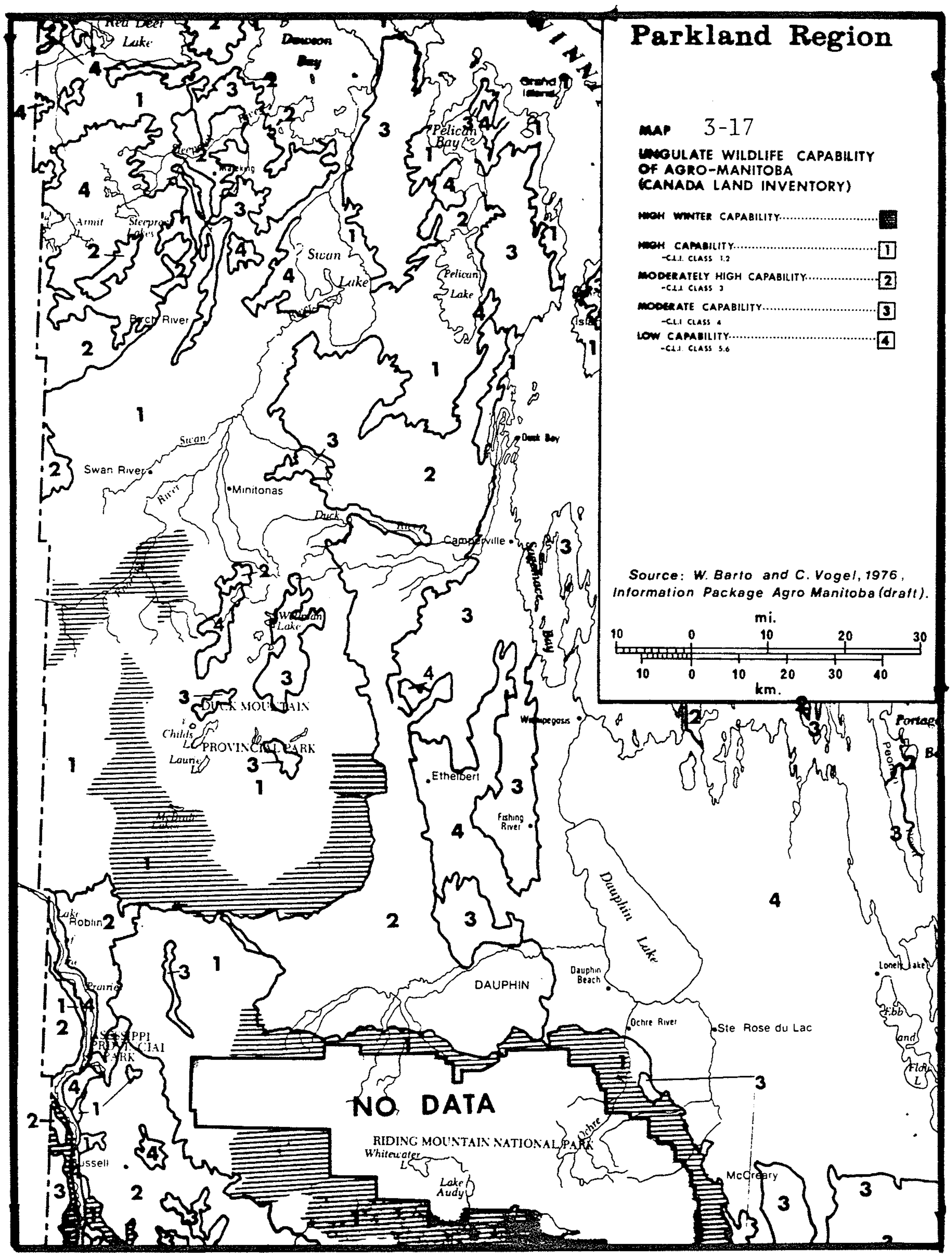
Moderately High Capability - Class 3; slight limitations.

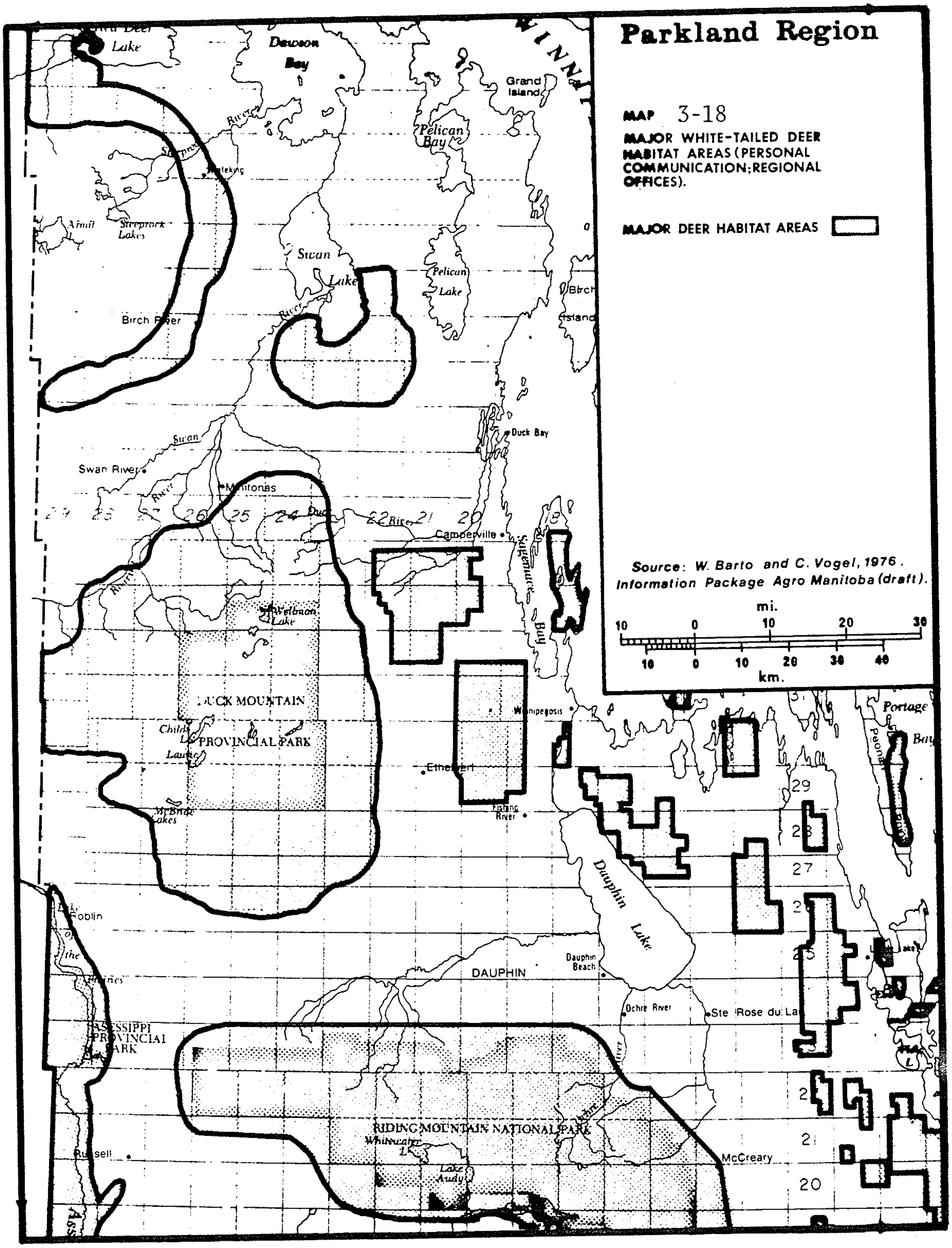
Moderate Capability - Class 4; moderate limitations

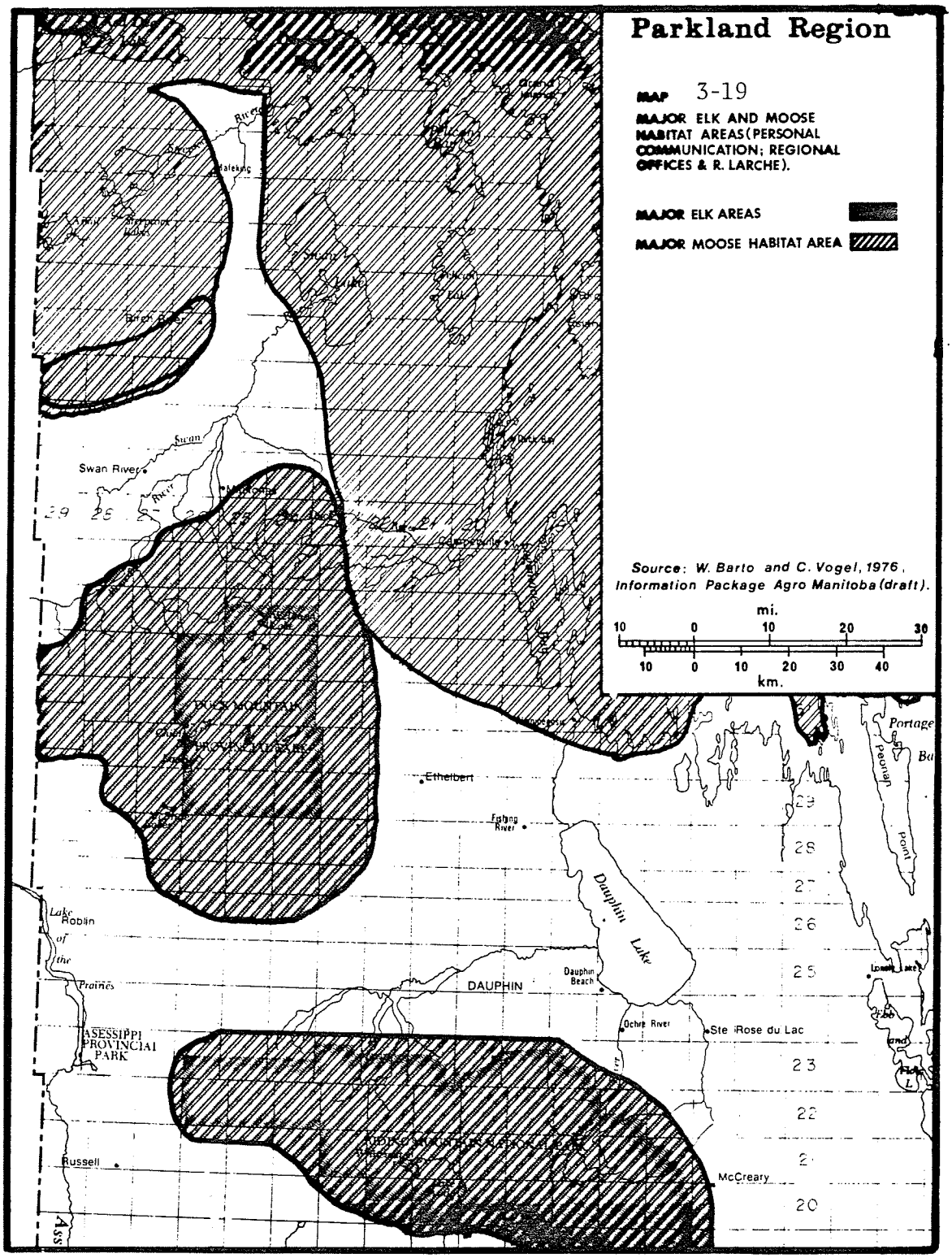
Low Capability - Class 5 and 6; moderately severe to severe limitations.

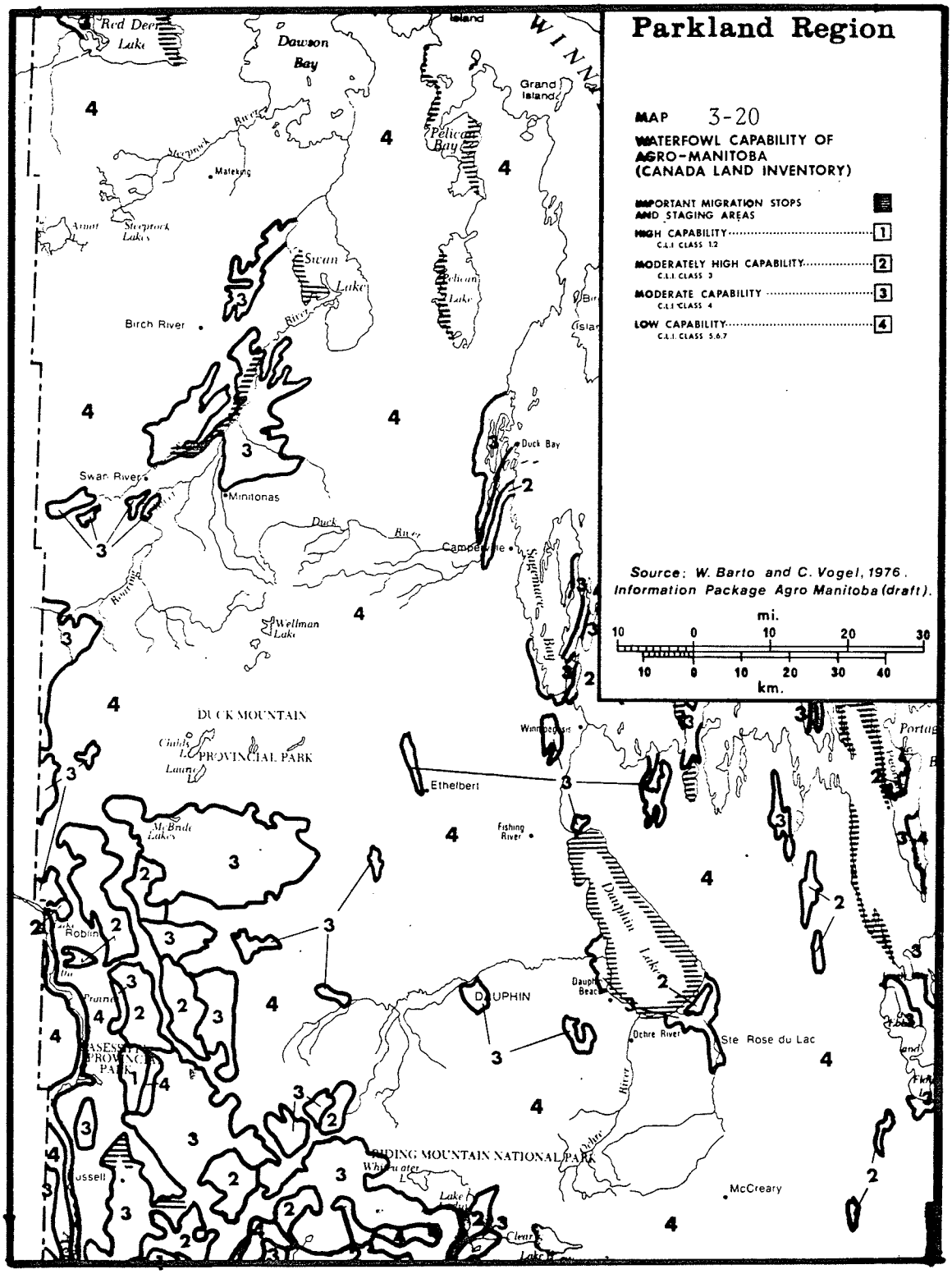
The highest quality deer habitat occurs on lands in and around agricultural areas, especially on river valley sides, escarpment faces and certain hilly areas where optimum conditions of land form, soil type and vegetation coincide (Map 3-18).

Moose habitat occurs around Riding Mountain and northward. Combinations of riparian willow growth adjacent to dense upland forests forming optimum moose habitat occur on the Duck and Porcupine Mountains, and around Red Deer, Swan, and Pelican Lakes (Map 3-19).


Parkland Region
MAP 3-17
UNGULATE WILDLIFE CAPABILITY OF AGRO-MANITOBA (CANADA LAND INVENTORY)
HIGH WINTER CAPABILITY
HIGH CAPABILITY -C.L.I. CLASS 1,2
MODERATELY HIGH CAPABILITY -C.L.I. CLASS 3
MODERATE CAPABILITY -C.L.I. CLASS 4
LOW CAPABILITY -C.L.I. CLASS 5,6
Source: W. Barto and C. Vogel, 1976, Information Package Agro Manitoba (draft).
mi.
km.
NO DATA
RIDING MOUNTAIN NATIONAL PARK
DUCK MOUNTAIN PROVINCIAL PARK
DAUPHIN
Swan River
Minitonas
Swan Lake
Pelican Lake
Birch River
Ethelbert
Dauphin Lake
Ste Rose du Lac
Ochre River
Dauphin Beach
Roblin
McCreary
Winnipegosis
Campbellville
Dawson Bay
Red Deer Lake
Pelican Bay


Parkland Region
MAP 3-18
MAJOR WHITE-TAILED DEER HABITAT AREAS (PERSONAL COMMUNICATION; REGIONAL OFFICES).
MAJOR DEER HABITAT AREAS
Source: W. Barto and C. Vogel, 1976. Information Package Agro Manitoba (draft).
mi.
10
0
10
20
30
10
0
10
20
30
40
km.
Dawson Bay
Grand Island
Pelican Bay
Swan Lake
Pelican Lake
Birch River
Birch Island
Duck Bay
Swan River
Minitonas
Camperville
Winnipegosis
Ethelbert
Fishing River
DUCK MOUNTAIN PROVINCIAL PARK
Childs Lake
Dauphin Lake
DAUPHIN
Dauphin Beach
Ochre River
Ste Rose du Lac
Roblin
RIDING MOUNTAIN NATIONAL PARK
Whitewater L.
Lake Audy
McCreary
Russell
Portage Bay
29
28
27
20


Parkland Region
MAP 3-19
MAJOR ELK AND MOOSE HABITAT AREAS (PERSONAL COMMUNICATION; REGIONAL OFFICES & R. LARCHE).
MAJOR ELK AREAS
MAJOR MOOSE HABITAT AREA
Source: W. Barto and C. Vogel, 1976, Information Package Agro Manitoba (draft).
mi.
10 0 10 20 30
10 0 10 20 30 40
km.
Swan River
Ethelbert
Fishing River
Dauphin Lake
Lake Robin of the Prairies
DAUPHIN
Dauphin Beach
Ochre River
Ste Rose du Lac
Portage
Peonan Point
Russell
McCreary
29
28
27
26
25
23
22
21
20


Parkland Region
MAP 3-20
WATERFOWL CAPABILITY OF AGRO-MANITOBA (CANADA LAND INVENTORY)
IMPORTANT MIGRATION STOPS AND STAGING AREAS
HIGH CAPABILITY C.L.I. CLASS 1,2 1
MODERATELY HIGH CAPABILITY C.L.I. CLASS 3 2
MODERATE CAPABILITY C.L.I. CLASS 4 3
LOW CAPABILITY C.L.I. CLASS 5,6,7 4
Source: W. Barto and C. Vogel, 1976. Information Package Agro Manitoba (draft).
mi.
10 0 10 20 30
10 0 10 20 30 40
km.
Red Deer Lake
Dawson Bay
Grand Island
Pelican Bay
Swan Lake
Birch River
Swan River
Minitonas
Duck Bay
Duck River
Wellman Lake
DUCK MOUNTAIN PROVINCIAL PARK
Ethelbert
Fishing River
Dauphin Lake
DAUPHIN
Ochre River
Ste Rose du Lac
RIDING MOUNTAIN NATIONAL PARK
McCreary
Russell

Lands capable of supporting elk populations occur in the Riding Mountain, Duck Mountain and Porcupine Mountains.

Habitat suitable for Woodland Caribou occurs in the northwest area of the Parkland Region. The highest capability lands occur where an intermixture of ridges, eskers,rock outcrops, lakes, fens, bogs and deciduous and mature coniferous forest occur.

The greatest land capabilities for supporting fur bearing animals occurs in and around the densely covered areas of Duck Mountain, Porcupine Mountain, Riding Mountain and in the more northern areas of the region around Red Deer Lake, Swan Lake, Pelican Lake and Lake Winnipegosis.

Waterfowl

The waterfowl capability overview has the following land categories derived from generalized CLI classes (Map 3-20).

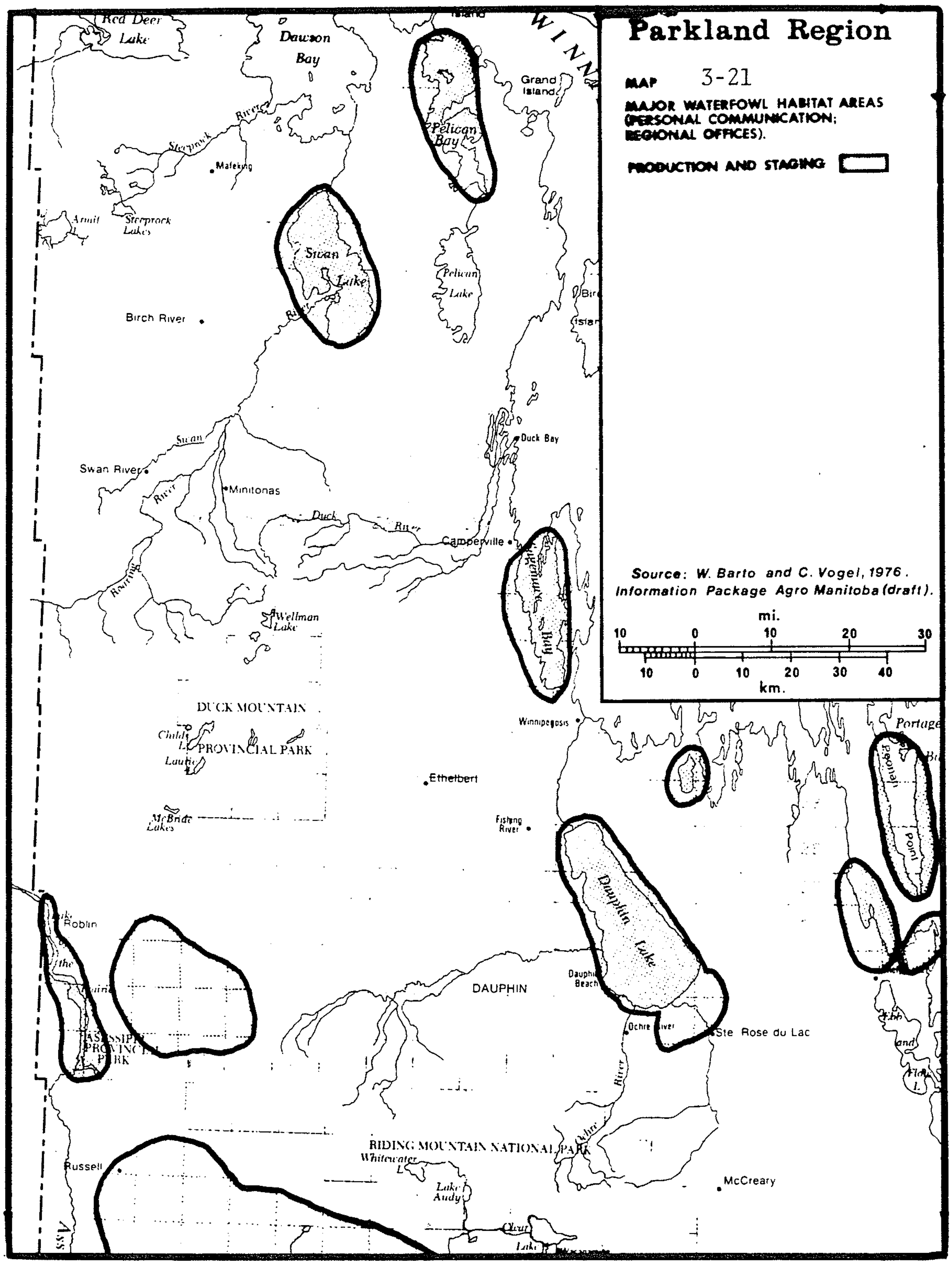
Migration and Staging - lands important for migration steps and staging.

High Capability - lands with high capability for production: Classes 1 and 2.

Moderately High Capability - lands with moderately high capability for production: Class 4.

Low Capability - lands with low capability for production : Classes 5, 6 and 7.

High capability ratings do not mean, in all cases, that lands can support large numbers of waterfowl in the present condition. Important staging areas in the zones are the marshy margins of Lake Winnipegosis and shallow lakes such as Dauphin Lake, Swan Lake and Pelican Lake (Map 3-21).


Parkland Region
MAP 3-21
MAJOR WATERFOWL HABITAT AREAS (PERSONAL COMMUNICATION; REGIONAL OFFICES).
PRODUCTION AND STAGING
Source: W. Barto and C. Vogel, 1976. Information Package Agro Manitoba (draft).
mi.
10 0 10 20 30
10 0 10 20 30 40
km.
Red Deer Lake
Dawson Bay
Grand Island
Pelican Bay
Steeprock River
Mafeking
Armit
Steeprock Lakes
Swan Lake
Pelican Lake
Birch River
Duck Bay
Swan River
Minitonas
Duck River
Camperville
Wellman Lake
DUCK MOUNTAIN PROVINCIAL PARK
Childs L.
Laurie
McBride Lakes
Winnipegosis
Ethelbert
Fishing River
Dauphin Lake
Dauphin Beach
DAUPHIN
Ochre River
Ste Rose du Lac
Portage
Roblin
Russell
RIDING MOUNTAIN NATIONAL PARK
Whitewater L.
Lake Audy
McCreary

3.3.5.2. Resource Utilization

The utilization of fish and wildlife have been grouped into five major categories as follows:

1. Consumptive uses:

   a) recreational and domestic hunting,
   b) commercial trapping, reptile and amphibian collecting;
   c) scientific and education collection.

2. Non-consumptive uses: viewing, nature education, artistic, photography.

3. Indicator role: as symptoms of environmental quality and change.

4. Biological control: suppressing or preventing costly outbreaks of species destructive to development and resource utilization.

5. Genetic reserves for breeders of domesticated species.

The various uses that have been outlined above may provide one or more of the following benefits to the people in the Parkland Region: income, jobs, and economic stimulation; wild food, maintenance of lifestyle for native people, recreation, quality environment and balanced ecosystems; and hardy breeding stocks, scientific, education and artistic resources.

Fish

Little information exists on the extent to which sport fishermen utilize the various potential of lakes and rivers within the Parkland Region. Resource Managers in the region however, have noted that there is an increasing demand for good sport fishing areas. As a result of this demand, an active stocking program was started to introduce greater numbers as well as different types of game species to certain lakes and rivers.

The importance of commercial fishing in the Parkland

Region is dependent almost entirely on Lake Winnipegosis. Decreased production of valuable fish species in Lake Dauphin over the past years is illustrated in table 3-18.

TABLE 3-18: TRENDS IN LAKE DAUPHIN FISH PRODUCTION

	PRODUCTION				
PERIOD	Pickerel	Pike	Perch	Tubilee	All Species
1930-35	826	179	40	1,773	3,222
1936-40	2,266	414	81	253	2,734
1941-45	1,541	319	53	283	2,637
1946-50	2,148	478	10	978	3,733
1951-55	1,345	307	13	523	2,490
1956-60	916	1,335	53	903	3,872
1961-65	163	1,097	37	571	2,352
1966-70	49	594	2	143	1,397
1971-75	60	269	--	15	552
1975-77	47	244	0.2	1	638

SOURCE: Department of Renewable Resources, Fisheries Division Files.

The fishery of Lake Winnipegosis has also had greatly fluctuating production levels. As recently as 1956, more than two million pounds of fish were taken from Lake Winnipegosis. Catches reached an all time low in 1973 when the catch of walleye, which is presently the most valuable fish species, was only 63,700 pounds. With 299 men employed in the fishery the average income for each man was $213.00 for the 1972-73 season. In the past few years there has been an increase in the walleye catch on Lake Winnipegosis. The pickerel production was up by about 150,000 pounds in the 1974-75 season compared to

the previous year. Another upsurge in production occured in the fall of 1976 when a total of 361,000 pounds were taken. Walleye production increased to 412,800 pounds in the 1976-77 season. The price paid to the fishermen for walleye in 1976 reached 71 cents per pound. Marketing of freshwater fish is conducted by the Freshwater Fish Marketing Corporation. A pilot project is presently being carried on in the Parkland Region testing the marketability of less valuable fish species such as carp and mullet.

Wildlife

Little information exists on the non-consumptive uses of wildlife. These benefits are usually obtained as a by-product of the management of the wildlife resources for consumptive use. The increasing demands on a limited wildlife resource base however has raised concern for environmental quality and is encouraging more research and management in this area.

Wildlife is produced in varying degrees of intensity, as a by-product of all land uses. The manner in which land is employed and the limitations to its use substantially determine the nature and accessibility of its wildlife resource potential. Provincial Crown lands specifically allocated to the conservation, management and use of wildlife include, wildlife management areas, public shooting grounds and wildlife refuges. In addition, substantial acreages of Crown Land are allocated to land uses which affect wildlife management and use. These areas include Provincial Parks, Provincial Recreation Areas, Provincial Forests, Community Pastures, and National Parks. Private land is also a very important component influencing

wildlife production and use.

The benefits obtained from recreational consumptive use of wildlife have not been measured in any comprehensive manner. However, some attempts have been made to calculate the dollar values of the meat harvest, the total expenditures by hunters and weaponry, travel, accomodation, transportation, and the monetary value which the hunters themselves attribute to their hunting experience. A summary of available studies on hunter expenditure suggests that big game hunters spend an average of $160 (1975 dollars) each per season on permit fees, arms and ammunition, accomodation, travel, food, etc. The additional fees or willingness to pay by hunters has been estimated at $18.40 (1975) per hunter-day for whitetailed deer sport hunters.

The Parkland Region has been divided into three main game management areas. These hunting units include the Duck Mountain area, the Porcupine Mountains east to Lake Winnipegosis and the West Lake area east and south of the Duck Mountain planning area. The Renewable Resources Planning Branch has collected general information on patterns in wildlife use and regional distribution for some important species from hunting data.

Estimated deer populations in the Parkland Region are noted in the following Table 3-19:

TABLE 3-19: ESTIMATED DEER POPULATION IN THE PARKLAND REGION 1955 AND 1970

AREA	DEER POPULATION 1955	DEER POPULATION 1970	SIZE OF AREA (Mi.^{2})	AUG. #DEER/ Mi.^{2}	PROPORTION OF DEER IN AGRO-MANITOBA 1955	PROPORTION OF DEER IN AGRO-MANITOBA 1970
Westlake	7,214	7,201	4,816	1.5	8	9
Duck Mountains	2,114	3,285	2,642	1.2	4	5
Porcupine	2,853	4,076	4,381	0.9	5	8

The major factor affecting the long term variation in deer populations has been noted to be the reduction in suitable habitat by intensification of agricultural use. In contrast, employment in deer habitat occurs with forestry harvest, forest fires and reforestation.

In 1973, the Manitoba moose population was estimated to be 45,000. Elk were estimated to number 7,500, 91 percent of which were in the Riding Mountain and Duck Mountain. Hunting is not allowed within the Riding Mountain National Park boundaries. Elk and moose habitat occur in areas of low agriculture development, principally in and around Riding Mountain, Duck Mountain and Porcupine Mountain. In general, moose hunters each spend on the average, four to five days hunting. Other big game harvested in the region includes black bear. Migratory and upland game birds are also important consumptive uses of wildlife in the Parkland Region for hunting recreation.

Trapping in the Parkland Region has been an important source of income for many individuals. The location of registered traplines have been grouped into four main areas. These areas

include the Duck Mountains, Porcupine Mountains and the northern part of the region including the Red Deer - Shoal River unit and the Camper Duck unit. Trapping in open or agricultural areas is also permitted. The number of registered traplines are noted in Table 3-20 :

TABLE 3-20: REGISTERED TRAPLINES IN THE PARKLAND REGION

AREA	TOTAL LICENSES 71 - 72	72 - 73
Camperduck	100	122
Duck Mountain	44	46
Porcupine Mountain	26	30
Red Deer-Shoal River	123	124
TOTAL	293	322

Commercial use of wildlife in Manitoba is an important industry. The exact trend in relation to species utilized, is however, not easy to predict or even discuss considering the many constraints placed upon data availability. Commercial use of wildlife in the Parkland Region is also an important development consideration. The region has a wide diversity of wildlife species and provides some of the best hunting and fishing areas in Manitoba as well as scientific and educational potential.

The only aspects of wildlife demand which can be documented are related to sport hunting, fishing and trapping. Here data is available in respect of licenses issued to project the number of users of wildlife. General categories of economic importance include:

a) Resident and non-resident angling license;
b) Big game licenses (deer, moose, elk, bear)

c) Game bird licenses (ducks, geese, upland game)
d) Trapping permits.

Summary

In general, the demand for consumptive use of managed wildlife species in the Parkland Region already exceeds supply and restriction of harvest by the imposition of seasons and license requirements has already been introduced. For species of birds and mammals that are commonly hunted, the key to sustained and increased populations lies in good management and maintenance of suitable habitat. The importance of the increasing demand for wildlife for educational purposes is also an important consideration.

While the overall importance of commercial fishing and trapping on a regional basis is minimal. The reliance on this sector for jobs and income in specific areas within the region is most important.

The Renewable Resource Planning Branch notes the following questions for consideration:

1. For Recreation, what level of user demand can be realistically met and what role does Crown Land have in achieving this demand?

2. What is the relative priority of domestic hunting to consumptive recreation wildlife use?

3. What level of demand can be met and sustained in respect to commercial fishing and trapping.

4. What are the inter-relationships of fish and wildlife with other development consideration?

CHAPTER 4

THE PARKLAND REGIONAL DEVELOPMENT CORPORATION

4.1 General Overview

In viewing the objectives, role, and organizational structure of the Parkland Regional Development Corporation (PRDC) a number of questions are raised.

1. Why was the regional development corporation concept introduced?
2. What do its goals and objectives imply?

It is the intent of this section to deal with the above issues, hopefully to give perspective to the organizational approach adopted by the PRDC and the present state of the corporation evolution.

4.1.1 History

The first Regional Development Corporation was formed voluntarily by the municipalities in the Pembina Valley Region of Manitoba with the assistance of the Provincial Government in 1964. Subsequently, corporations were formed in the West-Man region in 1966, the Central-Plains, East-Man and Parkland regions in 1968 and the Interlake and Nor-Man regions in 1970.[1]

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[1]MRDC 1975, p. 5, Manitoba Regional Development Corporations 1975. Submission by the seven Regional Development Corporations in Manitoba to the Regional Development Committee of the Government of Manitoba, January, 1975.

The regional development concept was a recommendation of the Committee on Manitoba's Economic Future (COMEF) released in 1963. The report recommended the formation of Regional Development Corporations (RDCs) as a means to further economic and social development in rural Manitoba. The recommendation was based on the need for a local involvement in government economic development programs. It was realized that other government programs were achieving limited success in building economic stability within Manitoba's rural area.

4.1.2 Rationale

The concept of regional development corporations was recommended by COMEF report as a means of improving development in Manitoba. It was recognized that this regional development approach would be more effective if coordinated on a regional level. The type of coordination required was to be dependant on a number of factors that would probably vary between the different regions. The rationale for the regional development concept was based on the need to improve methods of provincial-local coordination in approaching regional development problems by providing a mechanism to introduce local involvement. The TED report which was published in 1969 emphasized that these corporations must assume the major responsibility for co-ordinating the people of the region into an effective planning unit. The need for regional planning involving local participation was stated.

> The regional development process demands that the people of the region must participate in planning, effecting, adjusting and controlling community change--the best possible results can be expected when the region's people participate in the planning process. [2]

Similarly, the TED report identified the function of the Regional Development Corporations as well as its position in the development process:

> Regional development strategy must be able to deal with the particular coordination problems which appear at distinct stages of the regional development process. Most Manitoba regions are in a preliminary stage of regional development planning. This stage requires a strategy of research, of informing the people of a region about their development opportunities, and of developing necessary links between the people of a region and the senior levels of government. During this preliminary stage, hasty policy conclusions made without research and consultation must be avoided. [3]

The rationale for the introduction of the Regional Development Corporation concept then appears to be based on three points:

1. the need for local involvement in the planning process.
2. the need for coordination of development strategies at a regional level.
3. the need to improve federal-provincial-local coordination in approaching regional development problems.

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[2] Commission on Target for Economic Development to 1980, Winnipeg, Manitoba, 1969, p. 411 (TED Report).

[3] TED Report, Page 454.

Upon the Regional Development Corporations falls the critical role of dealing with the problems of uncertainty, planning and effective participation in the rural areas. It also appears that the RDC concept was established to provide a regional body to act as an interface between the region, and provincial and federal governments.

Since the formation of Regional Development Corporations in Manitoba, many issues and questions have arisen as to just what the RDCs represent and the intent of the objectives they were meant to fulfill. There also seems to be confusion concerning where the development corporations fit into the rural economic development process. The following sections will discuss in more detail some of the above issues.

4.2 Objectives

The objectives of the Parkland Regional Development Corporation (PRDC) as noted in the Letter Patent of Incorporation dated April 19, 1968, state the following:

1. To promote, encourage, assist and foster the economic development of the area comprising the region and to institute programs which will assist the economic development of the region;

2. To assess the economic potential of the region;

3. To investigate circumstances and situations which may inhibit or retard economic development in the region and to make recommendations for the improvement or removal of such circumstances and situations;

4. To cooperate with other persons in achieving the objects set out in clauses a), b), c);

5. To assist and cooperate with the officials of the municipalities located in the region, and with the Province of Manitoba and the Government of Canada and with officials of any other governmental agency, Chamber of Commerce or other community group in creating and planning for the economic development of the region.

6. To carry on the above objects without pecuniary gain to its members."[4]

An important issue presently exists which confronts the intended function of the PRDC. Shortly after the PRDC received its Letter of Patent which outlined the above objectives, a change in government prompted a meeting with the new Premier to align the direction of the RDCs with new government policy. At a meeting with the RDCs in 1969, Premier Schreyer expressed the provincial government's intention to plan and implement government development programs in conjunction with the RDCs.[5] The Premier, at this meeting, defined the regional development objectives of the Provincial Government. It was noted that the RDCs were to compile comprehensive regional development plans that would guide the province as to the priorities for development policy. The emphasis of the development plans were to focus on job creation, the protection and improvement of a good quality environment, and

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[4]Letter Patent of Incorporation of Parkland Regional Development Inc. by Honourable Stewart E. McLean, Provincial Secretary. 1968.

[5]Parkland Regional Development Incorporated, "Manager's Report" Annual Meeting, April 3, 1978.

the attainment of better social conditions. The framework outlined by the Premier for developing these comprehensive regional plans was to be based on the following principles:

> The plans prepared for each region must be of high quality in their analysis and conception.
>
> The regional plans will be prepared within the framework of a provincial plan or terms of reference; and become components of the provincial plan.
>
> The concept of delegation of responsibility to those affected will be followed in allocating authority for plan preparation. This would mean that each region would play a key role.
>
> Effective means of achieving plan implementation will be considered in establishing the framework for plan preparation.
>
> The planning framework will be sufficiently flexible to take into account the extent to which people in different regions are prepared to commit themselves to a regional plan.
>
> Regional planning will be considered a continuing process.
>
> The Government of Manitoba, with the Department of Industry and Commerce playing a key role, is now proceeding with designing the format and determining the proper federal, provincial, regional and local responsibilities in preparing these plans.[6]

The RDC's were told by the Premier at this meeting that the government would consult with them to determine just how and where the corporation would fit into the formulation and implementation of the established economic development plans.

The basic goals of the development plans were summarized by the Premier as follows:

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[6]In a joint meeting with RDC Presidents and Managers in September 1969, Premier Schreyer defined regional development objectives of the Provincial Government.

1. Full employment
2. Average income as close as possible to the provincial level and a reasonably balanced distribution of incomes within each region.
3. The full and best use of the region's resources.
4. Where economically feasible, population stability and growth.
5. Good commercial services.
6. An attractive environment.
7. A high standard of cultural and recreational amenities.

The role of the RDCs as defined in 1969 was that of long-term planning for economic development. Although emphasis was placed on balanced growth, development was to be based on the potential of various sectors such as natural resources The importance of constructive participation of the people of each region in planning through the RDC was also noted by the Premier.

To date, except for the broad regional development objectives outlined by the Premier in 1969, there has been no development of provincial policy or programs which would serve as a framework for the RDCs to work within.[7] It appears that from this lack of directional policy has grown one of the biggest problems confronting not only the PRDC but all of the RDCs in Manitoba. While there is an awareness at the provincial and federal levels that a local thrust should be incorporated into government economic development programs, the RDCs feel that support has been sporadic. The PRDC

[7] "PRDC, "Manager's Report, Annual Meeting, April 3, 1978

notes that it has received only token support from government on an issue by issue basis. As a result the PRDC and other regional corporations have been forced to deal with economic development concerns in an ad hoc fashion.

Further to the legislated objectives, representatives from each of the RDCs of Manitoba at a meeting in 1975 agreed that emphasis should be placed on strengthening inter-regional, intra-regional, provincial and federal communication on regional matters. As well, there was agreement that the RDCs should foster a spirit of cooperation at all levels of government. The final principle noted that the major role of the RDC was to provide an objective and consistent approach to development within the region over the long-term. As a working body, the RDCs have had difficulties in achieving these general goals. These difficulties will be discussed in the following sections:

4.3 Approach

The Parkland Regional Development Corporation (PRDC) was incorporated in 1968 as a non-profit organization under Section 123 of the Companies Act. The following section will present the basic details on the PRDC's structure, funding and strategy to lay the basis for a better understanding of the RDC as a concept and its working function.

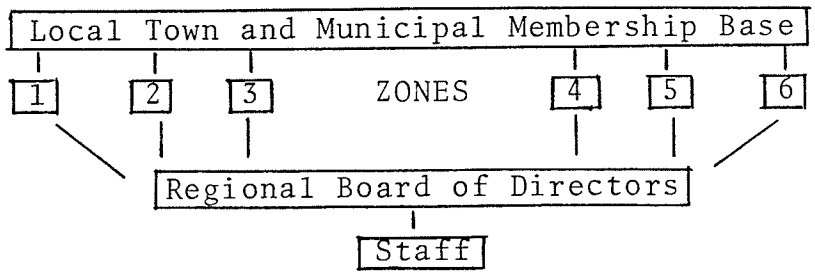
4.3.1 Structure

Membership in a Regional Development Corporation is voluntary and is open to all incorporated cities, towns, villages, and rural municipalities. Municipalities join the Corporation on the basis of a membership contract. The

structure of the RDC provides for a Board of Directors who are either appointed directly to the Board by the member towns, villages and municipalities, or elected by none appointees at the annual meeting. Policies and programs of the RDC are determined by the Board of Directors.

In the Parkland Region, certain towns, villages and municipalities have been grouped together to form six zones. There are generally six directors in each zone, one of which is elected to be a representative on the regional board or management committee. Of the six official directors elected to its board of directors, presently, three of the members are reeves. two members are municipal councillors, and one member is a non-municipal representative. In addition to municipal representatives, provision was made for ex-officio directors on the board, representing the provincial government and certain regional interests. This was done to provide a mechanism for liason and technical support. The PRDC employs a small staff comprised of a general manager and a secretary to carry out the programs of the Board. The manager at the present time notes that the PRDC benefits from the support of forty-six volunteer directors and non-directors. The following diagram represents a structural conceptualization of the PRDC.

Figure 4-1. The Structure of the Parkland Regional Development Corporation



4.3.2 Funding

Membership in the PRDC is voluntary. In the Parkland Region there are thirty-six municipalities, towns and local government districts of which twenty-three are members of the corporation as of May, 1979. These municipalities join the corporation on the basis of a three year membership contract and pay a per-capita fee. The operational budget for the corporation is largely provided for by the provincial government and is administered through the Department of Economic Development. The following is a summary of the Regional Development Corporations funding policy:

1. Annual operating grant to each Corporation, on approved application, based on the following formula:

   a. Basic grants of $30,000 provided that minimum municipal participation requirements are met. (see point 2, below)

   b. Matching 50/50 grant for additional municipal per capita or equivalent cash contributions, up to a maximum of $6,000 for any one Corporation.

c. Special travel/cost grants for Parkland Region of $2500. and Norman Region $5000.

d. Associate and initial membership fees ineligible for additional provincial matched funding purposes.

2. Municipal minimum annual participation requirements:

a. Minimum per capita contribution of 20¢ for each rural municipality, 30¢ for each village, and 40¢ for each town or city that belongs to the Corporation.

b. At least 60% of the municipalities and 60% of the population in a region must belong. Exceptions to the 60% policy will only be considered where unusual circumstances exist (such as adjacency to a major urban centre) and will be subject to Provincial approval in each individual case.

c. Submission of annual budget three months in advance for review of Corporation program and financial compatibility with the intent of Regional Development Corporation program.

The application for the provincial operating grant submitted by an RDC to the Department of Economic Development is processed on the basis of:

1. A review of previous year's activities.

2. The proposed programs and projects, in priorized order for the coming year.

3. Anticipated sources of revenue, listing each confirmed member municipality along with its population and per capita levy.

4. The proposed budget for the coming year.

5. An audited financial statement for the previous year.

The budgeting policy has remained unchanged since 1972 except that the RDCs now have control over the amount of per capita fee charged to municipalities, towns and L.G.D.s. An example of the PRDC's working budget is shown below as taken from the PRDC's 1977 Annual Report.

Parkland Regional Development Inc.
Statement of Operating Fund Revenue
1977

INCOME	
Municipal Financing	
- Membership per Capita Assessment	$ 12,168.00
- Special Levy	3,000.00
Associate Membership Fees	500.00
Provincial Funding	
- Administration Grant	30,000.00
- Special Travel Grant	2,500.00
- Matching Grants	3,500.00
*Federal Funding	
1978 estimated $83,000.00	
Miscellaneous Receipts	
- Printing	500.00
- Interest	400.00
Average total without Canada Works Funding.	$ 52,568.00

It is expected that the PRDC's 1979 budget would differ only slightly to the above illustration. Canada Works Grants have added a considerable amount of money to a number of

*Federal funding dependant on Canada Works Program.

research projects conducted by the Corporation. However, these grants remain uncertain from year to year.

One final point that might be noted is that the annual operating grants to regional development corporations are included in the Canada/Manitoba Industrial Development Sub-Agreement. However, the grant to the RDC's is funded fully by choice of the Provincial Department of Economic Development.

4.3.3 Strategy

The original objectives of the PRDC as a working organization focussed primarily on industrial development to establish industry in the region and to provide jobs to maintain population. The Parkland Corporation has gradually changed this role from a basically industrial development organization to broader concerns of regional development. The development of the total potential of the region is now the objective.[8] The RDCs note that each Corporation has adapted its approach to development in accordance with the particular characteristics of the region; however, there are certain basic principles which have been common to all. Major principles include the following:

1. Collectivity

   The Corporations have operated on the basis that more could be accomplished by municipalities and communities working together than could be accomplished by working separately.

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[8]MRDC 1975, p. 11

2. Cooperation

> The Corperations foster a spirit of cooperation at all levels: between urban and rural; between communities within the region; between the region and senior Governments. At the regional level, this has often meant that community priorities have had to take second place to regional priorities.

3. Objectivity and Continuity

> The Boards of Directors attempt to make their decisions in the long-term best interests of the people of the region. It was recognized that because of the normal democratic process both local governments and senior governments would make subjective demands for short-term results in development. It was felt that a major role of the RDCs was to provide an objective and consistent approach to development within the region over the long-term. [9]

The role of the RDCs has been interpreted as that of a comprehensive developer concerned with not only the economic aspects of development, but with the cultural, social and political aspects as well. The RDCs feel they can fill a role which neither the federal or provincial governments can fill, while providing strength and unity at the local or grass roots level.

Original expectation for the emergence of a dynamic industrial development program did not materialize for the PRDC.[10] The manager of the PRDC noted that this has resulted in disappointment at the local level which led to a period of confusion of purposes, with the corporation practising ad hoc opportunism in order to retain support of municipal councils. Along

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[9] MRDC, 1975, p. 6.

[10] PRDC, "Managers Report", Annual Meeting, 1977.

with the adopted broader role of the PRDC in dealing with the economy of the region as a whole, various communities have had difficulty in identifying the new function with the Corporation.

Over the past three years, the PRDC has initiated a regional planning program of its own. With representatives of the various municipalities, communities and local advisors a procedural policy has been formulated and service priorities identified. The policies for the PRDC adopted by resolution at their Annual Meeting, April 26, 1976, are listed as follows:

I. Because of Limitations of resources (money, staff and time), first priority will be given to work at the regional level, second priority to work at the zonal level, third to community and fourth priority to vested interest groups (individuals, etc.). The relative importance of the specific individual project will always be considered in making such decisions.

II. Parkland should act as a resource in all matters in which members can be assisted; e.g. help in securing grant support or in approaches to senior governments or other appropriate agencies.

III. To organize and assist communities, regardless of size, interested in regional, zonal and community concerns; e.g. rail line abandonment, land and water management, housing, libraries, etc.

IV. To have the people who are directly involved and affected, make as many of the decisions as possible, feasible and effective (decision making at the "grass-roots" level where possible.

V. To maximize the gain to the region from any activities in the region; e.g. housing programs: where possible houses should be built in the region using local resources and labour.

VI. These devices of Parkland should not duplicate or overlap services already in existence or otherwise available to the region.

VII. In some cases a fee for service may be charged for services rendered.[11]

At the Annual Meeting of the Parklands Regional Development Corporation in 1977 at Dauphin, J.A. MacMillan from the Department of Agricultural Economics, University of Manitoba questioned the members of the Development Corporation on eight regional development issues. The issue dealt with included: 1) jobs, 2) housing, 3) education, 4) health, 5) transportation, 6) land use, 7) environment and 8) resources development. The purpose was to identify a consensus on common development goals.

The results as summarized by MacMillan note the following:

> More jobs for people wanting to work and 'resource development by sector (economic growth)' were both ranked first. 'Changes in land-use allocation' was next. 'Improved quality of transportation services education, housing and environment' were third. 'Quality of health services' was ranked last. The preferences expressed in the group discussions have been summarized into the following broad statement of goals for regional development in the Parklands Region - Improvement in Jobs, Resource Development and Quality of Public Services.

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[11] Policies for Parkland Regional Development Inc. Adopted by Resolution at the Annual Meeting of the Membership on April 26, 1976.

Further to the above general goals, with respect to jobs, the following target groups were identified in decreasing order of importance: 1) heads of households now employed, 2) school graduates, 3) welfare recipients, 4) housewives and the handicapped. With respect to subcategories under resource development (economic growth) the rank in decreasing order of importance is: 1) livestock, 2) crops, 3) recreation, 4) manufacturing and 5) forestry.

Changes in land use allocation came out as a clear second to jobs and resource development. With respect to the subcategory "use of crown land" the rank order is: 1) pasture, 2) forestry, 3) parks and 4) subdivision control 5) zoning by-laws, 6) rural and urban land banking, and 7) control of farm land by farmers.

Transportation, housing, education and environment were ranked third. With respect to transportation issues, rankings were very inconsistent. Roads, rail and air were each ranked first by different groups. It appears that considerable confusion exists with respect to the role of alternative modes and efficiency of transportation in regional development. The housing subcategory rank is: 1) farmers, 2) trade centres, and 3) Indian reserves. The ranks for the subcategories under education were inconsistent.

Environmental issues were ranked second last: 1) improved town water and sewer, 2) pollution control, and 3) wildlife protection. Health services were ranked last and stated as not an issue by one group.

Important resources were placed in the following order: 1) human resources, 2) natural resources, and 3) infrastructure. Within the natural resource category, the order is: 1) agricultural land, 2) water, 3) park land, 4) wildlife, and 5) fishery.

The following actions to promote employment were listed: 1) general lowering of taxes, 2) encourage employers to hire younger people, 3) promote local shopping, 4) survey needs and encourage development, 5) form local development financing pools, 6) decentralization of federal-provincial economic development agencies,

7) decentralization of national corporations, 8) promote secondary school agricultural institutes, 9) develop resources through agricultural incentives, transportation services, tourist development, and industrial activities. [12]

In the Objects of Charter of the PRDC and in statements issued by government in the past, it appears that one of the primary roles of the RDC was to set up comprehensive development plans for the region. The PRDC has recently directed more effort towards the establishment of development plans. However, a sense of confusion seems to exist as to the form these development plans should take and where they should fit into the development process.

Some examples of PRDC's present involvement include various areas such as promotion of information programs, government advisory agencies, and grass roots involvement with farmers, fishermen and other interest groups. More specifically, some actual programs being carried on by the PRDC include:

a) Financing of Education
This was a 10 year analysis of municipal and education levies and the annual budgets of five Parkland school divisions.

b) Building Inspector Program
Several municipalities are experiencing difficulty in satisfying the building code requirements in that, a small municipality does not have the work load to support a full-time building inspector.

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[12] J.A. MacMillan, The Need for Partnership in Regional Development, p. 5. J.A. MacMillan, Is Regional Development Possible. Department of Agricultural Economics, University of Manitoba (paper presented to the Annual Meeting of the Parklands Regional Development Corporation, Dauphin, April 18, 1977).

c) Cable T.V Services to seven Parkland Communities.

d) Parkland Farm Study
An examination of agriculture from the regional point of view and analysis of its strengths and weaknesses.

e) The Carp and Mullet Domestic Fish Marketing Project

f) Transportation Study
A study to look at transportation costs, standards of services in local communities and regulations affecting transportation in the Parkland Region.

It is also noted that the PRDC recognizes the value of industrial development in the region. However, the PRDC manager points out that industrial development, in the strict sense, has recently been relegated to the Department of Economic Development.

The PRDC operates within a policy of providing support to regional and local organizations.[13] It has been noted that local Chambers of Commerce and individual municipalities often request support in dealing with local issues. The regional organizations which have received establishment assistance in the past include the Parkland Regional Library, the Parkland Tourist and Convention Association. Similarly, support is provided to provincial and federal government programs.

The PRDC and its Board of Directors have set a deliberate course of action in committing the resources and efforts of the organization toward dealing with:

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[13] PRDC, Report to Swan River Council, March 20, 1979

1. critical problems which are undermining the region's economy as expressed by the member municipalities and their directors, and

2. the development of the region's natural resources and potentials.[14]

In summary, the PRDC notes that the effectiveness of the RDC in meeting the needs and serving the interests of its communities and its municipalities depends on the continuing support and involvement of its municipal members and their directors. The PRDC is based on municipal membership and control, and feels it can deal more effectively and objectively with issues that affect its communities than can government agencies and personnel.

A number of important issues and concerns have arisen in regard to the present role and approach the PRDC is now taking. The following section will attempt to address these questions.

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[14]PRDC, Annual Report, 1978.

4.4 Issues and Concerns

The experience of RDCs in Manitoba has been primarily the involvement of local people in the rural development process. While the need for a grass-roots approach to rural development has been widely accepted, issues and concerns regarding the RDCs effectiveness and direction have, at times arisen. This section will attempt to identify a number of these issues.

In 1975, a submission prepared by the RDCs of Manitoba was presented to the government identifying the following concerns:

1. The need for government recognition of the RDC role.
2. Concern over the local government-RDC relationship.
3. The need for technical support and advice from the Provincial Government on programs and projects undertaken by the Corporations.
4. To broaden the base of involvement of the RDCs.
5. Concern over the financial resources to meet the increased operating costs of the RDCs.
6. The need for and importance of having a vehicle for liaison between the RDCs and the Provincial Government.[15]

It has been noted that,at times, various towns and municipalities have re-evaluated their membership in the RDC. The West-Man Development Corporation centered in

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[15]MRDC, 1975, p. 17.

Brandon faced this situation. As member municipalities decided to discontinue membership in the West-Man RDC, the corporation ceased to operate. While some corporations such as the Nor Man RDC centered in Thompson maintains the membership of all the towns and municipalities in its region, other corporations like Parkland, Interlake, East-Man and Pembina Valley for a variety of reasons have fluctuation membership.

Twenty-three of the total thirty-six towns, municipalities and local government districts of the Parkland region are presently members of the PRDC. Possibly because of the changing role and involvement of the PRDC or possibly, the lack of consistent support from government, the PRDC has been continually forced to justify its existence. The present manager of the PRDC feels that lack of clear government policy has added to the problem of identifying development goals and working effectively to achieve them. One government development representative noted that one dimension of the problem results from the various interpretations of the legislated objectives of regional development corporations in general. This variation in views is determined by three bodies; government, local municipalities and the administration of the RDCs.

A number of managers and directors of other regions were questioned to determine why certain towns and municipalities were not members of the RDC. Towns deciding to revoke their membership seldom gave specific reasons, however, a few possible reasons were identified.

1. Certain towns noted that they had similar programs that would overlap with RDC programs.

2. Councils find it difficult to justify the RDC programs which often have intangible results.

3. Some councillors do not understand the function of the RDC.

4. There is possibly an information flow problem in terms of directors not reporting back to councils.

It would appear that membership should be the major concern of an RDC designed to incorporate local concerns. The RDCs have a basic responsibility to involve local people in discussion of developmental issues and to work towards a consensus of views on larger issues affecting the regional community. Therefore, the strength of an RDC lies in its membership as well as its effectiveness in communication.

If one is to address the above concerns, the following questions might be raised:

1. Is the structure adequate to permit local participation?

2. Why do communication flow problems exist and how might communication be improved?

3. What type of local participation most benefits the regional development process.

4. What is the role of the RDC as taken from the perspective of government, local members and RDC administrators.

The opinions of RDC managers and directors were sought in an attempt to answer the above questions.[16] It appeared that all approached were in general agreement with the RDC

[16]Those interviewed included representatives of all but one of Manitoba's Regional Development Corporations.

structure at the regional level. However concerns were expressed in regard to the input at the municipal level. It was pointed out that the effectiveness of the RDC was dependent upon the dedication of the volunteer members. It has been noted that at present, the daily operations of a regional development corporation relies seventy-five percent on the competence of the manager.

While the directors are usually informed, unless each town or municipal director reports back to councils on a regular basis, the mayors, reeves, councillors, and secretary-treasurer tend to be uninformed regarding RDC matters. It has been noted that the procedures of councils often defeat effective communication between members and the RDC. This refers to other council priorities as well as an apparent lack of council support at times for the regional development corporations. A number of interviewees felt that better participation might be achieved if directors were comprised of businessmen, farmers and others in the area who have a vested interest in the region's economy. One manager felt that with the broad goals of the RDC, it was also important to have directors from a wide range of backgrounds.

Some RDCs have recently started to alternate the location of the corporation's meetings on a regular basis. Reports indicate that directors thus achieve a better perspective of other communities in the region. Also a few RDC's have opened all meetings by inviting the local Chamber of Commerce, Town Council and other interest groups. This has led to greater interest in the RDC and improved communication and participation as well.

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[17] PRDC, "Managers' Report", Annual Report, 1978

Another concern expressed by RDC managers is the need for government recognition of the RDC role. Most RDCs note that while government cooperation is good, there are areas where improvements could be made. The RDC/government cooperation concern is expressed on both sides. This concern reflects upon the differing expectations of each body. The question of what is and what should be the specific function of the RDC is often raised. The key point noted in regard to the RDC's role is that they are autonomous bodies. This is reflected by the differing priorities of each RDC. One suggestion has been made to elect a common spokesman for the RDCs to voice the joint concerns of the RDCs as well as to clearly identify the role of RDCs to government and other interest groups. However, it is also feared that if the RDCs become too structured, they might lose their autonomy. Based on the above noted concerns it is understandable that the role of the RDC remains to be an issue.

Concern has been expressed that there is a need for a mechanism at the senior government level to allow the priorities expressed by the RDC to be incorporated into the policy and priorities of the province. Effort in this direction has recently been taken by the managers representing the RDCs.

The RDCs feel strongly that the priorities of the local people should enter into the planning process. The PRDC manager for example, notes that the RDCs are opposed to bureaucracy dictating regional development policies and priorities.

It is further noted that the PRDCs municipal membership, Board of Directors, policies, priorities and programs are all formulated from within the region. The PRDC states that the RDC is not an arm of senior government or a delivery mechanism for government programs (any such function in this regard is at the discretion of the RDC in supporting its regional goals). While the RDC shares many goals and involvements with federal and provincial government agencies, it does not operate according to their priorities and direction. The PRDC however, seeks policy direction from government. This apparent contradiction seems to revolve around the specific planning function of the RDC. Is the function of the RDC to act as a facilitator in the rural development process with the main role to improve local input and identify development potentials? Or, alternatively, is the function of the RDC to develop comprehensive development plans for the region and to provide a mechanism to carry out programs that do not necessarily fall under provincial government priority. The questions raised by what the specific planning function should be and how local development plans should fit into the regional development process are not easily answered and will require further research. The present planning role, however, appears fairly unstructured and informal. Some feel that the funding of the RDCs does not permit an active planning program.

The financial concern expressed by the RDCs has legitimacy for a number of reasons, the first reason being that funds have remained relatively static since 1972. The main reason, however, is dependent upon which specific planning functions the RDCs adopt. Planning, research and program implementation requires considerable amounts of money. If budgetary expansion is deemed necessary, a number of alternatives might be considered. The following possibilities represent only a few:

1. Federal cost sharing in addition to municipal and provincial shares.
2. Increasing local funding levies which are matched by provincial grants.
3. Providing a mechanism for RDCs to negotiate with other departments of government for specific programs.

Of the many options that might be considered, it should also be remembered that the strength of the RDC should not be dependent on financial resources. The RDC concept is based on the support of local bodies. It is important that financial strings do not fundamentally alter the RDCs autonomy and innovativeness.

Frustration and lack of response to some of the above noted issues prompted the PRDC to present a submission to the Provincial Government in 1978. In this submission, the Board of Directors of PRDC sought support for the establishment of a more effective liaison with government. The PRDC asked the Government of Manitoba to define its commitment to rural development through issuing:

1. A new set of objectives--since the ones laid down by Premier Schreyer may not necessarily be the objectives of the present government;

2. A clear statement of provincial policy outlining the RDC role and the manner in which the provincial government will incorporate regional development corporations into its development plans for the Province; (Statement by Fred McGuinness, Editor of the Brandon Sun, CBC Radio--December 22, 1977).

3. The creation of development programs which will take into account provincial priorities and regional priorities of the RDC's.

4. Consideration toward a new administrative and funding structure at the provincial level whereby RDC's no longer be a single department, giving consideration to the possibility of direct funding from Cabinet since RDC's serve the interests of many departments. The possibility of revamping the Economic Advisory Development Board or establishing a similar provincial board having its directors appointed by the government and RDC's might be one approach.

5. The establishment of a commission for the purpose of reviewing and restructuring the RDC's if necessary in order to make them more effective in serving the development interests of their regions and the priorities of the government.[18]

Issues and concerns were identified in this chapter, not to resolve them but to draw attention to them in an objective manner. Following sections will review a number of other regional development approaches.

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[18]"Submission to the Task Force on Government Organization and Economy" (Parkland Regional Development Corporation) on behalf of Manitoba's Regional Development Corporation, January 16, 1978.

CHAPTER 5

REGIONAL DEVELOPMENT EXPERIENCES IN OTHER JURISDICTIONS

The PRDC and other RDC's in Manitoba may benefit from a review of approaches taken in other jurisdictions to deal with regional disparities and economic development problems. It is the intent of the following section to present alternative regional development approaches as well as an array of views on regional economic development that could be considered.

5.1 National

The federal government introducted Bill c-77, the Agriculture REhabilitation and Development Act (ARDA) in 1960 which became law in 1961. The purpose of the ARDA legislation was stated in very general terms -- "to facilitate the income and employment opportunities and improve the standard of living in rural areas".[1] More specifically, the Bill contained four provisions:

1. The Minister of Agriculture was authorized to enter into agreements with provincial governments or agencies.

2. The federal government was authorized to make payments to the provinces for projects arising out of the agreements and undertaken by a Province or agency on its behalf.

3. The Bill authorized the Minister of Agriculture to undertake research programs in connection with "alternative land use, soil and water conservation, and the development and employment opportunities in rural agricultural areas.

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[1]Canada, "Agricultural and Rural Rehabilitation Act". (1966) Amended by 14-15 Elizabeth II, Ch. 11, Ottawa: Queen's Printer, 1961; 1966.

4. The Bill authorized the establishment of advisory committees and the appointment of members with respect to the other provisions of the Bill.[2]

The responsibility to initiate and implement ARDA programs lay with the provinces. The federal government provided funds, technical and administrative services as well as policy co-ordination.[3] In 1965, new policy directions were taken towards rural development and in 1966 the Fund for Rural Economic Development (FRED) was passed amending ARDA legislation. The Bill included four amendments, the most important one extending the Act to include all rural areas in Canada as opposed only to agricultural areas.

The Interlake Development Plan in Manitoba was one of the first large scale, comprehensive regional development plans implemented in Canada. This ten year Federal-Provincial Development Agreement was signed in 1967. Any program fitting ARDA guidelines was cost shared 50-50 between the provincial and the federal government. Research was funded entirely by the federal government. The Interlake program ended in March, 1977 after the expenditure of 85 million dollars.

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[2]D. Matviw and P. Nickel. A Study Guide to the Interlake Planning Process, edited by J. Peterson (Winnipeg: Natural Resource Institute, University of Manitoba, 1975), p. 7.

[3]Ian Gillies and Paul Nickel, Regional Development in Manitoba's Interlake: Designing, Managing and Evaluating a Regional Plan. (Winnipeg: The Natural Resource Institute, University of Manitoba, 1977), p. 15.

The Interlake Agreement specified both a rationale and procedure for development. The general guidelines noted that a plan would involve the following:

1. physical, economic and social studies necessary to the determination of the development problems and potential of the area;

2. the involvement of local people through the establishment of rural development committees or similar bodies;

3. the preparation of comprehensive rural development plans; and

4. the undertaking of a broad range of projects for the development of the rural development area in conformity with the development plans to increase income and employment opportunities and raise standards of living.[4]

As the administrative structure is most important in the implementation of any program, the important points in the framework for management of the plan are noted as follows from Part V of the agreement.

a. The Province has responsibility for implementing, operating, and maintaining the Plan except for specific parts assigned to the Government of Canada or those to be undertaken jointly. A Provincial Program Administrator reporting to the Minister of Agriculture coordinates the activities of the various provincial departments and agencies involved. He also maintains central financial control over the provincial aspects of the Plan, working directly with federal agencies involved in this Agreement.

b. A Joint Federal-Provincial Advisory Board composed of an equal number of senior public servants from both levels of government but no fewer than six must meet at least bi-annually to evaluate the management of the Plan in terms of

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[4]Federal-Provincial Rural Development Agreement, 1965-70, Part VI, Section 33, p. 19.

objectives, performance, and priorities. This Board reports to the Ministry of Forestry (now to DREE) for Canada and to the Minister of Agriculture for Manitoba.

c. A Federal Program Coordinator, appointed by Canada, works directly with the Provincial Program Administrator to review and make recommendations for all joint programs and projects. It is his responsibility to coordinate the programs of the federal agencies.

d. Canada and the Province must approve, by the first of September each year, estimates of the costs of programs for the next fiscal year which commences on April first of the following year. In addition, an estimate of expenditures for the next five years must be approved by the first of May of each year. These estimates are recommended to the federal government by the Joint Federal-Provincial Advisory Board.

The objective of the management framework was the settlement of conflicts at the Ministerial and Advisory Board Level.[6]

Three basic concepts underlay ARDA-FRED policies. The first of these was self-help; the development process could be dynamic and sustaining only if local people were actively involved. The formal importance of local participation in the FRED legislation embodies this concern. The second concept was that the regional context was an appropriate one for self-help initiatives. Regional planning was responsive to local needs and aspirations and could be conducted on a personal, as opposed to an anonymous, basis. The final concept was that government planning with regions could be more flexible, better reflect Canadian regional diversity, and flow more naturally from a plurality of interests.[7]

[6] D. Matviw and P. Nickel, p. 36.

[7] I. Gillies and P. Nickel, p. 21.

The comprehensive area development plans undertaken through ARDA-FRED, were to include the participation of local people in the planning process. Three main phases have been noted in the effort to involve the people of the Interlake. The first phase provided information to local community leaders, promoted the formation of local community groups and developed program priorities for action based on the particular situation of the community. The second phase involved communities in regional research and inventory projects dealing with community and natural resources which could be used in developing community programs and in analyzing proposed regional programs. The third phase undertook preliminary action programs to develop known resources of the area more fully.[8]

The first phase was carried out in three separate parts; informal discussion, special conferences and the formation of regional development committees.[9] It has been noted that the conceptual basis for community involvement was laid down through discussion and information provided to local leaders. Also in the early stages the position of rural development co-ordinator was created. The objective of the initial community involvement phase was to develop a familiarity with the concepts, objectives and strategies of rural area development.

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[8] I. Gillies and P. Nickel, p. 49.

[9] I. Gillies and P. Nickel, p. 49.

Two Interlake Resources Conferences were held as a formal step to involve local people. The resource conferences were specifically designed to establish local development committees. The guidance of the resident extension agent, the rural development co-ordinator and other resource persons was offered to allow local committees to carry out studies and develop priorities for action. The Area Development Boards, as they came to be called, had five main functions:

1. to study and analyze information and local communities;

2. to plan for the development of resources by setting goals and priorities;

3. to take action on priority projects;

4. to establish co-ordination of the development effort and communication flow:

   a. between communities and organizations within the area,

   b. with agencies outside the area; and

5. to evaluate programs for economic growth and development.[10]

An Area Development Board's membership was usually composed of a cross-section of established interests within the local communities. The boards received support from provincial planners and from visits of senior government officials. It was later noted that the local involvement process was successful to the extent that it familiarized people with opportunities for

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[10] I. Gillies and P. Nickel, p. 50.

regional development, created new communications channels and a regional identity. The formation of a regional identity is best symbolized by the creation of the Interlake Development Corporation in 1969.[11]

A great deal of emphasis was placed on research during the initial stages of the Interlake planning process. Research focused on human resource problems and the natural resource base. The research results were used in building the comprehensive development plan both by their contribution of substantive information and by their role in raising local awareness to development possibilities.[12]

The co-ordination of the multi-objective Interlake Program was a most important consideration. It has been noted that inter-departmental co-ordination was achieved in three main ways.

"1. Through the co-ordination efforts of the Provincial Administrator and the Federal Co-ordinator who had to rely upon their own ability to persuade and the expressed committment of the various departments to the objectives of the Plan.

2. By the appointment of senior public servants from each level of government to the Joint Advisory Board. Through their involvement in evaluating objectives, priorities, and performance, these public servants gain an understanding of, as well as a commitment to, the broader objectives of the FRED program, enabling them to integrate their department's efforts in line with stated objectives. In their role as Board members they therefore mediate between the Plan and their respective departments.

3. Through Cabinet committees at both levels of government. Recourse was made either to the

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[11] I. Gillies and P. Nickel, p. 53.

[12] I. Gillies and P. Nickel, p. 53.

> Planning and Priorities Committee or Management Committee at the provincial level or to the Privy Council or the Treasury Board at the federal. This top-level structure can be used by the Provincial Administrator and Federal Coordinator if they are unsuccessful in gaining commitments from the departments in any of the less formal manners.[13]

The Plan relied to a great deal upon a commitment to objectives and the abilities of the federal and provincial managers for co-ordination. The flexibility of this type of arrangement was thought to outweigh its disadvantages.

In summary, local involvement was seen as an essential part of the Interlake program. Opportunities for development were investigated, and priorities developed, based on the needs and potential of each community.Rural area development committees made up of local representatives were organized to review information gathered by resource specialists and to develop priorities for community action. Research focused on human resource problems and the natural resource base. Area development committees set up under ARDA became area development boards under FRED. The regional meetings and local discussion were important factors in the formation of the Interlake Development Corporation. Some of the problems facing the Parkland region are similar to those resulting in the Interlake plan. It has been noted that the evolution and final form of the Interlake plan cannot be understood without reference to the objectives held by the three levels involved- federal, provincial and community. Each level had differing views on the types of programs it would find acceptable. One analysis suggests that the federal level attached priority to the

[13] D. Matviw and P. Nickel, p. 38.

economic efficiency of the area; the provincial level thought income distribution was of primary importance and the community level determined that standard of living was most important.[14]

5.2 Provincial

A brief overview of regional economic planning at the Provincial level was prepared by Brewis.[15] The following section will summarize some of the policies, programs, institutions and administrative arrangements which have been introduced by a number of other provinces in Canada to encourage economic development. Although one cannot arrive at a full understanding of the array of operational problems, an examination of other approaches to regional development and planning will possibly identify some useful variations.

5.2.1 *Western Provinces*

British Columbia and Alberta

Brewis states that a characteristic objective of most regional development plans is the attraction of new industry and, whether conceived as part of a plan or not, all provincial governments are attempting to attract industry. In Alberta as in British Columbia, there is a basic "free enterprise" approach to industrial development. In the main, the government of British Columbia seems to feel that it should play a minimal role in influencing the location of economic activity and it is perhaps

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[14] Department of Regional Economic Expansion, FRED: 1967-1977 A Decade of Development in the Interlake (A Summary). 1979.

[15] T. N. Brewis, Regional Economic Planning at the Provincial Level in N. H. Lithwick, Regional Economic Policy: The Canadian Experiences (McGraw-Hill Ryerson Ltd., 1978) pp. 303-332.

the farthest from the concept of planning the development of its regions. Compared to British Columbia, the government of Alberta has been more active in introducing regional development programs. Brewis notes, however, that individual departments go their own way and it is difficult to obtain a coherent picture of their goals, policies and influence.

The province of Alberta has recently been divided into five major regions each serviced by a provincial industrial development officer who lives and works in the region. The development officer's responsibility is to work with communities and entrepreneurs, and recommend the types of industrial development which appears to be most suited for the area.

Saskatchewan

In Saskatchewan, Brewis specificly notes that industrial development is not seen as the solution to economic problems. Saskatchewan differs from Alberta and Saskatchewan as it is predominantly rural with urban centres heavily dependent on the agriculture sector. Given the wide scattering of population, Saskatchewan is unlikely to be able to attract industry other than that related to agriculture or primary resources.

A joint planning committee has been established within the province to try and tie together the objectives and functions of different departments and agencies covering such fields as social development, housing transport, manpower, and federal and provincial officials participate on it under the chairmanship of a DREE official. However, Brewis feels that regional economic planning of a formal nature is not in place.

Saskatchewan is also a member of the Prairie Provinces Economic Council which meets periodically to discuss matters of common interest but there is considerable competition between the provinces for new industrial activity thus limiting cooperation.

5.2.2 *Central Province*

Ontario

In 1965, the Department of Industry in the federal government and the Department of Economics and Development of the Province of Ontario contributed to a conference at Queen's University of "Areas of Economic Stress in Canada", and that same year the provincial government sponsored an "International Conference on Regional Development and Economic Change". Brewis notes that these conferences were followed in April, 1966 by a statement of the Premier of the Province on Regional Development Policy entitled, "Design for Development". This program will be discussed in greater detail in section 5.3 Basically, the intention of the government was to strive for regional economic specialization. Brewis points out that the province decided that responsibility for the control and administration of any regional undertaking by the government should be in the hands of a central authority. However, it was the function of government to achieve its various objectives by encouraging local initiative and responsibility in the provinces planning for economic development.

5.2.3 *Atlantic Provinces*

New Brunswick

Economic planning of a more formal and comprehensive nature is carried on in New Brunswick. From early in 1968 a Cabinet Committee of the government of New Brunswick has been involved in the formulation of a comprehensive development policy for the province. The Cabinet Committee under the chairmanship of the Minister of Economic Growth includes ministers from a number of other departments including Natural Resources, Fisheries and Agriculture, Municipal Affairs, Labour, Highways and the Hectric Power Commission. The Premier serves as an ex-officio member. The prime responsibility of the committee is to advise the Cabinet on the formulation of development policy for the province with a view to accelerating development and providing a guide to expenditure priorities. It provides a forum for frequent discussion of problems and opportunities, the resolution of conflicts of opinion as well as for securing government approval of recommendations. The Cabinet Committee established within the office of the Premier has its own Secretariat and an Official's Committee provides the necessary technical support. The secretariat maintains close liaison with the Minister of Finance and the Chairman of the Treasury Board. The planning process itself involves the review of government priorities, the potentials of the major industrial sectors, the identification of key development objectives, the formulation of strategy to accomplish them and the phasing of various programs and policies.

New Brunswick, like other provinces, hopes to increase employment opportunities and to reduce out-migration. In the case of extractive industries there is also concern to increase output per worker. Though it is realized that the province suffers from severe locational disadvantages, the attraction of secondary manufacturing industry on a large scale is regarded as a main priority of development policy, with both federal and provincial resources directed to this end.

One of the crucial questions confronting the New Brunswick process, and indeed all development processes, concerns the decision structure on specific action to achieve general goals. In New Brunswick the specific actions are defined by individual departments which are encouraged to suggest objectives, priorities and potential policies in a form which will permit adequate appraisal in terms of the overall goal of provincial economic growth. The choice of various long term programs are then integrated into the process of drawing up the annual budget.

Considerable doubt exists as to the forms and magnitudes of infrastructure and other expenditure likely to hasten development most effectively and much analytical work needs to be done before conclusions are reached. Brewis also notes that New Brunswick like other provinces is paying considerable attention to the co-ordination of mobility and social development programs with those for economic development and specifically the education, motivation, relocation, and rehabilitation of those persons outside the main economic stream.

Newfoundland

In Newfoundland, the general strategies of development including sectoral and area development possibilities have been outlined in a preliminary paper prepared by the Minister of Community and Social Development of the Province.

An Advisory Committee on regional development has been set up in the Province consisting of all Deputy Ministers having a major role in development to ensure a high degree of co-ordination. Priorities and strategic planning have been outlined under various headings in descending order of priority. Thus Strategy A is related to the direct creation and expansion of production in the various commodity sectors; Strategy B is designed to increase industrial and individual productivity; Strategy C is designed to increase the rate of structural change especially in primary resource activities; Strategy D includes maintenance programs to keep a viable activity in operation and Strategy E involves alleviation programs to facilitate adjustment of declining sectors. Basic to the whole program is strategy 0 involving a systematic overview of all programs, in light of the ultimate goal of the creation of job opportunities through industrial development and expansion thereby reducing unemployment and underemployment. Three five year programs are envisaged and at the outset the bulk of DREE assistance will support road construction and municipal and industrial infrastructure. The geographic distribution of expenditures has been considered and a hierarchy of areas has been conceived consisting of four main regions, fourteen sub-regions, thirty-seven development areas and seventy-nine zones.

5.2.4 *Summary*

In summary, Brewis notes that few of the arrangements that have been introduced by the various provinces to encourage economic development fall within the conceptual framework of planning. While Brewis did not analyze Manitoba's provincial structure for regional development in any detail he refers to the planning process and machinery that has been introduced as somewhat informal in nature. He also feels that public participation in the formulation of plans and programs for individual regions is essential to their success. Thus, Brewis notes that the recommended strategy for the development of rural regions in Manitoba requires maximum participation and control over the development process by the people living in the rural regions.

It is interesting to note Brewis' thoughts on public attitude towards change. He states that unless people understand and are consulted in the planning of changes which affect their future, there is likely to be serious hesitance from many areas. Error and failure can result from lack of appreciation of local attitudes and pressures.

Brewis further notes that there is a great need for a vastly enriched conceptual framework with which to approach regional economic issues. Such a framework must capture both the intra-regional diversity and the inter-regional complexities of the Canadian economy. Brewis concludes that there are no national guidelines which suggest the direction which regional plans might take, a deficiency which he feels contributes to the difficulties of effective planning at the regional level.

5.3 Sub-Provincial Level

The Province of Ontario recognized that the relative lack of success of specific programs to reduce regional disparities warranted examination. It was also recognized that committments to expanding social and economic opportunities and development of the natural environment were commendable as ideals but failed to highlight the real impact or the real intent of public policy.

This section looks specifically at the regional approach to development adopted by Northern Ontario. As in the Parkland Region, the regional economy is also dependent to a great extent on primary resource activity. It is the intent of this section to identify some of the regional issues as discussed by the Ontario Economic Council on their analysis of this regions development approach.

The regional planning program adopted for northern development in Ontario is called "Design for Development". The development strategy of this program first selects growth points or growth centres as a prerequisite for the orderly spatial and structural development of a region.

The characteristics of each centre are determined on the basis of:

1. population base;
2. degree of diversification of industrial activity and employment opportunities;
3. degree of provision of urban amenities;
4. degree of accessibility to various transport modes;
5. potential for growth and development.

These centres are then priorized according to the primary focus for new industry. The recommendations for economic development fall into three broad categories:

1. urging that government provide various sorts of financial incentive for private enterprise;

2. preparation of detailed feasibility studies in various sectors;

3. advocating various types of infrastructure development, including the establishment of industrial parks.

Further to the above, recommendations with respect to such other areas of concern as transportation and communication, health and education, may be characterized as basically concerned with providing a climate and framework, through public responsibility for infrastructure that would tend to induce expansion of the private sector in the designated centres.

An evaluation of the Design for Development strategy by the Ontario Economic Council makes some of the following comments.[1] The intended objective of planning regional development in a manner complementary to the private sector in attempting to create an atmosphere for growth and development has remained. But this objective is founded more in faith than program experience. Local government reorganization, the creation of regional governments, the promise of a single comprehensive provincial plan have all served at various times as the focus point of the program. The changing objectives of the program are, in part, a reflection of the inevitable political process of compromise and revaluation and the absence

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[1]Ontario Economic Council, 1976, p.

of a comprehensive set of regional development strategies.

A number of other general observations on regional development have been made by the Ontario Economic Council. The Ontario Economic Council quotes Richardson to characterize the attitude of many observers of regional development:[2]

> Regional growth is almost inevitably unbalanced: some regions are better endowed with resources than others; investment is lumpy, and many projects have to be undertaken on a large scale at a very limited number of locations (due to demand constraints) to be economic;external economies provide a strong motive for agglomeration of industrial investment at selected locations; markets are not distributed evenly, and this results in inter-regional imbalance in transport development and market oriented industries. Thus, economic forces are likely to lead to growth being concentrated in a limited number of leading regions.

The above observations support the cumulative causation theory of regional growth.

The Ontario Economic Council notes that if one accepts this argument, the rationale for a regional development strategy is limited. It has been pointed out that even in areas that have adopted comprehensive regional strategies there is little evidence that intervention has made a significant contribution to either reducing regional disparities or promoting economic growth. The major determinants of economic development have been the decisions of private enterprise and national policy formulation.

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[2]Richardson, H. H. Regional Economics, 1969, p. 367 in Q.E.C. p. 3.

The Ontario Economic Council makes an important point, namely that purely regional influences are only one part of complex inter-actions which affect regional development. Thus, a strategy for a region should be designed to influence the development of a region within a national or provincial setting.

The Council points out that there is a tendency to measure regional economic disparity in terms of per capita income. It has been noted that such measures only indicate the symptoms of the problem, not the causes. The causes stem from differing resource endowments, distance from markets, low productivity, low investment, and structural difficulties including market imperfections.

In response to questions raised on how regional goals and objectives should be set the Council believes that consideration should be given to relying to a greater extent on market forces to determine the distribution of economic enterprise.

The Council states that if the objective is defined as the reduction of regional economic disparities in terms of per capita income, several options follow including: greater mobility out of the slow growth regions, higher welfare assistance, or by providing incentives to encourage regional expansion. Other possible specific goals include the adjustment of unemployment, under-employment, low productivity, and low participation rates as the major problems to be dealt with in the region.

5.4 Conclusions

The assessment of regional development experiences in other jurisdictions is difficult. The federal example used in the Interlake seems complete. The purpose of ARDA-FRED legislation was to enhance income and employment opportunities and to improve the standard of living in rural areas. Three basic policies underlaying ARDA-FRED policies are noted: the development of a process for self-help; that the concept for self-help in the regional context was appropriate; that government planning with regions would better reflect regional diversity and interests. The approach adopted began with research to determine problems and potentials for development. A major attempt to involve local people was initiated. Comprehensive rural development plans were developed followed by the implementation of a broad range of projects for rural development. The co-ordination of the Interlake plan was achieved by: the co-ordination efforts of a Provincial Administrator and a Federal Co-ordinator: a joint-advisory board; and Cabinet committees at both levels of government. It has been noted that problems with the Interlake plan may be attributed to the differing views on the types of programs each level of government gave priority.

The general overview of regional economic planning at the provincial level presented by Brewis gives one an idea of the various approaches attempted in Canada. However, further study would be required to assess the effectiveness of the varying approaches. Brewis concludes in the review presented that few of the structures adopted to encourage economic development fall within the conceptual framework of planning.

The Ontario Economic Council in a review of the planning program adopted by northern Ontario, note similar problems to those occuring in the Parkland Region of Manitoba. The Ontario Economic Council notes that even in areas that have adopted comprehensive regional strategies, there is little evidence that intervention made a significant contribution to either reducing regional disparities or promoting economic growth. The council notes the importance of the decisions of private enterpise and national policy. These statements lead to arguments that are constantly raised against certain regional development policies. However, lack of information and evaluation techniques make such arguments difficult to resolve.

CHAPTER 6

SUMMARY AND CONCLUSIONS

The purpose of this practicum is to aid the Parkland Regional Development Corporation in the regional economic development process. With this basic goal in mind, the following study objectives were defined:

1. To synthesize relevant concepts, development theories, and approaches in a context consistent with regional economic development in the Parkland Region;
2. To analyze the organizational structure and approach adopted by the Parkland Regional Development Corporation in its effort to promote effective regional economic development.
3. To provide a natural resource inventory to aid in the analysis and identification of development dynamics in the Parkland Region.

6.1 Regional Development: Theory and Practice

Many definitions of regional economic development have been formulated in the past. There have been as many approaches to regional development as there have been definitions. The conclusions that can be drawn from both the theoretical concepts and the practical experiences seem to be in general agreement. Authors dealing with the many issues of regional economic development concede that no one simple theory or definition adequately describes the regional economic development concept. Similarly, those working in the field of economic development agree that while certain concepts outline basic goals, the implementation of these concepts is difficult.

Regional economic development has many different facets,

and to learn from both theory and practice, one must examine the goals to be achieved. Economic development in any region must incorporate the fundamental underlying factors that determine the type of development appropriate to the area's economy. It is also important to realize that political boundaries are not contiguous with economic regions. Regional planning, therefore, must include inputs from the federal, provincial and local levels of government. Until regional economic problems are defined clearly within the context of how a particular area's economy functions and interacts with the economies of other jurisdictions, regional economic policy will tend to be ad hoc in nature.

Plan formulation involves several processes. A logical framework for planning should include: objectives, programs to achieve these objectives; techniques to measure linkages between programs and objectives and evaluation of program successes and failures. This circular process should involve each level of government, politicians, civil servants, businesses, community, and local people must be involved. No single entity can expect to develop and conduct regional economic development plans. It is therefore important that each actor in the development process understand the economic development process and work together towards the same end.

6.2 Regional Development Corporations in Manitoba

In the development of policies governments ostensibly hold the view that public participation in the formulation of plans and programs for individual regions is essential. The

Parkland Regional Development Corporation as well as other Regional Development Corporations in Manitoba, can play a very important role in stimulating and encouraging public participation in the regional development process. The recommendation for the formation of the Regional Development Corporation concept was based on this need for a local involvement in economic development programs.

The objectives under the Municipal Act indicate that the role of the Regional Development Corporation is to be a part of the regional economic development process. These objectives state that the Regional Development Corporations are to assist and foster the economic development of the area; to assess the economic potential of the area; to make recommendations for improvement; and to assist and co-operate with municipalities, the Provincial and Federal govenments, and other community groups in planning for economic development. The rationale for the formation of regional development corporations was to provide a mechanism to allow local interests a chance to work together towards regional economic development goals as well as to form the critical link between the local municipalities and other levels of government.

When the Regional Development Corporations were originally conceived, the objectives presented in the "Letter of Patent" were left to the autonomy of the corporation. The main focus at that time was on industrial development. The Regional Development Corporations are presently funded largely under the Department of Economic Development, whose main concern is also industrial development.

As the objectives of the Regional Development Corporations changed from interpreting economic development as industrial economic development to broader goals of socio-economic development, the interaction between the Regional Development Corporations and the Department of Economic Development has also changed. Similarly, the changing focus of the Regional Development Corporations in a number of regions has at times been met with differing expectations at the municipal level.

The legislative objectives have suggested that Regional Development Corporations assist and cooperate in creating and planning for the economic development of the region. Late in 1970, then Premier Ed Schreyer informed the Regional Development Corporations that they were to be involved in the formation of comprehensive regional development plans for the respective regions. However, the specific planning functions in terms of the identification of a particular planning group, the endorsement of plans and involvement of local people in regional development in Manitoba remained unclear. Overall, the regional economic development process in Manitoba tends to be quite unstructured. The lack of clarity and consistency of regional objectives and also the lack of well defined regional development processes has resulted in a lack of co-ordination and communication between various government departments, the regional development corporations, and towns and municipalities within a number of regions.

6.3 The Parkland Regional Development Corporation

The Parkland Regional Development Corporation was established in 1968. Over the past decade, the Parkland Development Corporation has addressed many problems and has continued to build upon this experience in an attempt to establish sound regional development goals and strategies to approach these goals. Regional development has multiple goals involving a number of disciplines. Balance is required between regional plan formulation and plan implementation. In addition, there is a need for the effective coordination of regional programs. Changing economic and political climates must be considered in addition to the changing social needs of people within the Parkland Region. The Parkland Regional Development Corporation for these reasons identified the need to gather information on the region's natural resources to assist in future development planning. It is apparent that the approach to development, clarifying both the purpose and function of the corporation to member municipalities, as well as the provincial and federal governments, is most important to the corporations effectiveness. Challenges for regional economic development in the Parkland Region of Manitoba that must be addressed by all of the actors in the regional development process may be summarized as follows:

1. Clarification and coordination of regional economic policy objectives at the federal, provincial and local levels;

2. To strengthen the identity of regional planning areas;

3. The broadening of the PRDC's membership base and examination of ways to increase interaction between communities and municipalities in the region;

4. The development and implementation of a well defined development strategy, both at the provincial and local level;

5. The development and refinement of a mechanism to allow local input into provincial regional planning;

6. The provision of adequate financial resources to development agencies to provide the necessary research and development activities.

The basic objective of this practicum was to deal with some of the theoretical aspects of regional economic development and to provide a perspective on the development approach of the Parkland Regional Development Corporation. The final objective outlined in this study was to develop a nutual resource inventory for the Parklands region.

6.4 Natural Resource Inventory

Regional economic development requires information to ensure effective policy formulation. The Parkland Regional Development Corporation has recently initiated a regional planning program. One of the main strategies concerned the development of the region's natural resources potential.

The importance of the natural resource base to the region's economy, life style, and quality of life is a major consideration in any regional development strategy. Employment in the primary sector of the economy (agriculture, forestry, fishing, trapping, and mining) accounts for 40 percent of the regions total employment. The output in dollar terms of agriculture and related trade sector together accounts for over 70 percent of the regional total. The economic growth prospects of the

regional economy are highly dependent upon agricultural production which, in turn, affects the trade sector. Population trends and migration patterns also reflect the changes occuring. Technological advances in agriculture and the increased mobility of people have concentrated the population in a few larger trade and service centres in the region.

Other natural resource sectors, while less important, add economic stability to a number of towns and municipalities in the region. Outdoor recreation holds considerable potential both in economic terms and to enhance the quality of life. Fish and wildlife resources are abundant in the region and deserve careful considerations in the development of other resource activities such as agriculture and forestry. The performance of mining in the Parkland Region is tied to the performance of the construction industry.

The natural resource inventory provided in this practicum is important to the formation of a regional development strategy for the Parkland Region. Questions raised in relation to each resource activity note planning considerations that should be referred to.

6.5 Further Study

This study has identified a number of areas that deserve further study. Generally, regional economic development in Manitoba would benefit from:

1. The adoption of a more explicit framework for regional economic development and planning. The major components of this framework that must be considered include:

(a) The preparation of a research plan to identify information needs for plan formulation, monitoring and evaluation,

(b) The creation of a formal mechanism for the implementation of development programs,

(c) The design of a strategy for coordinating regional development programs.

6.6 Concluding Comment

Regional economic development is a continuing process. This practicum has made suggestions that will further this process. It must be recognized however, that this practicum is only the first step in the analysis and formulation of a regional development strategy for the Parkland Region of Manitoba.

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