

A PLANNING ANALYSIS OF OUTDOOR RECREATION
IN THE WINNIPEG REGION

A Thesis

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STATEMENT OF THE PROBLEM

According to a number of writers, the case for the psychological and emotional need for outdoor recreation has been overstated. Nonetheless, the demand for all types of recreation has been expressed in economic terms, therefore, a range of activities must be made available in quantity and location to serve the public.

It is an acknowledged fact that the provision of social and group recreation is made available at an acceptable level in Winnipeg. It is also apparent that there is opportunity for wilderness recreation activities in the vast reaches of Manitoba's wilderness reserves. Since there is a noticeable deficiency of open space in Winnipeg, it can be stated with some certainty that there is a need for individual and family type outdoor recreation activities.¹ Urbanization has not only given rise to increased appreciation of the outdoors but has also limited the opportunities for the fulfillment of this need. The onus of this need falls upon those rural areas within an accepted travel range. Consequently, there is a spatial imbalance, compensated by the movement of people from where they live to the available recreation facilities.

¹Metropolitan Winnipeg Parks Systems and Standards Study.

According to the locational pattern of existing recreation areas, day use recreation facilities are located within a 75 mile travel range from Winnipeg, while weekend users from Winnipeg are apt to travel no more than three hours travel time. It is the intention of this paper to discuss the provision of individual and family type recreation activities within the 75 mile travel range, to assess their adequacy and project requirements to 1976. The area circumscribed by the 75 mile delineation is referred to as the Planning Area.

METHODOLOGY

The computation of future requirements for outdoor recreation facilities in the Planning Area involves an evaluation of the existing supply of recreation facilities and the projected need for these facilities.

The existing supply of outdoor recreation facilities in the Planning Area was catalogued by extracting data from the Manitoba Outdoor Recreation Facilities Inventory. This survey is deficient in a number of respects. First, the survey has limited coverage, particularly in the Interlake and along the west shoreline of Lake Winnipeg. Second, there were very few instances where the day use participation by Winnipeg residents could be related to the supply of existing recreation sites within the Planning Area.

Two concepts of demand were used in the projections. (Refer to Chapter 4 B). The actual participation by Winnipeggers in outdoor recreation was derived from the Canadian Outdoor Recreation Demand Study, (CORDS). A random sample was used in this instance. Straight line projections were drawn to 1986. The need, unexpressed demand or latent desire was estimated by applying participation rates for specific age groups to comple-

mentary components of the Winnipeg population in 1966. Projected figures for latent desire were tabulated by using a Cohort Survival population analysis method to estimate the size of age groups in 1976. These figures were applied to the CORDS participation rates to derive the expected numbers of people who desire to participate in 1976.

In order to determine the future requirements for outdoor recreation, in terms of land and facilities, projected demand was compared to existing supply. Prior to this, demand was converted to a more manageable form. First, the projected numbers of participants were multiplied by the estimated frequency of participation by groups that participate to determine the total number of visitations by participants. Figures for total participation per activity were divided by the number of seasonal days to arrive at average seasonal day use figures. The summer season was calculated to be 119 days and the winter season 108 days. Since the heaviest demand usually falls on weekend days and particularly Sundays, the average weekday figures were converted to average weekend day figures. This was accomplished by calculating the ratio of average weekend day participation and average

week day participation for all public recreation sites within the Planning Area. With this ratio and the figures for average seasonal day use, a conversion factor was devised to obtain average summer or winter seasonal weekend day participation rates for all activities. These participation rates were then applied to use standards to derive land and facility requirements. Projected requirements were then compared to the existing supply of facilities to determine future requirements and existing backlogue of demand.

CHAPTER I

THE MEANING OF LEISURE AND RECREATION

A Definitions

While there is no uniform agreement as to the exact meaning of the terms 'leisure' and 'recreation', most writers have thought of leisure as a temporal concept, denoting the time not given to work, maintenance and sleep, and recreation as the behavior patterns which fill this time. The definitions presented in the Dictionary of Sociology seem to include the essential elements of this concept. Leisure is the

"...free time after the practical necessities of life have been attended to...conceptions of leisure may vary from the arithmetical one of time devoted to work, sleep and other necessities, subtracted by (from 24) hours - which gives the surplus time - to the general notion of leisure as the time which one uses as he pleases."¹

Recreation is

"...any activity pursued during leisure, either individual or collective, that is free and pleasurable, having its own immediate appeal, not impelled by a delayed reward beyond itself or by any immediate necessity. Recreation includes play, games, sports, athletics, relaxation, pastimes, certain amusements, art forms, hobbies and avocations. A recreational activity may be engaged in during any age period of the individual, the particular action being determined by the time element, the condition and attitude of the person and the environmental situation."²

¹Neumeyer, M. H. and Neumeyer, E. S.. Leisure and Recreation, p. 14. Quoted from Dictionary of Sociology, p. 175, (1944, Philosophical Library, New York).

²Ibid., p. 17. Quoted from Dictionary of Sociology, pp. 251-52.

The meaning of leisure changes with the times. However, in any age, leisure is largely discretionary time; to be used as one chooses. There is a large degree of purposefulness or choice. Hence, recreation can be an activity or planned inactivity. Its distinguishing characteristic is that it is undertaken voluntarily. In a psychological sense, it is a human, emotional and inspirational experience undertaken solely because one wants to do it. The following definitions recognize that the arrangement of stimuli in the environment precondition states of leisure, relaxation and recreation.

"Leisure - A state in which the stimuli in the environment do not demand a conscious mental or physical response.

Relaxation - A state in which there are relatively few stimuli in the environment, none of which demand a conscious mental or physical response.

Recreation - A state in which there are stimuli in the environment which invite but do not demand a response, and to which there is no response."¹

Hence, these differentiated states of leisure contrast with work and the mechanics of life although there is no sharp dividing line between the two. De Grazia² has spoken of the freedom from the necessity of being occupied as being the key to the meaning of leisure. This corresponds to the Greeks'

¹B. W. Crow and Associates, Limited, Leisure Time, Parks and Tourism in Canada, p. 8.

²De Grazia, S., Of Time, Work and Leisure.

conception of leisure but does not include the notion of leisure as being 'free time'. The potential semantic confusion is avoided only if each writer defines his terms.

Gans has added a dimension to the temporal-behavioral concept of leisure and recreation, which is useful in a planning sense. Gans views leisure or leisure behavior as activity or inactivity which people pursue during their free time. He defines recreation as being the artifacts, facilities and institutions which people employ during their leisure activity. This distinction is important for it stresses the need for planned recreation, while at the same time, recognizing the subjective, spontaneous nature of leisure behavior. Understandably, there are borderline activities between what is to be counted as leisure activity and what is primarily the use of recreation facilities, institutions and artifacts.¹

The following section is intended to conceptualize the essential aspects of leisure and work activity. Some of these aspects may be conceptualized with little difficulty while others are definitely more complex.

B The Essential Elements of Leisure

Industrial technology has expanded the productive

¹Gans, H., "Outdoor Recreation and Mental Health", O.R.R.C. Study Report #22.

capacity of society and permitted more people to engage in more free time activity. Time budget studies¹ have revealed the growing amount of discretionary or free time. Not only has the daily block of leisure time increased but so has the total periods of leisure during each lifetime.

TABLE 1: Changing Patterns of Life.

	Inclusive Years of:		
	Youth	Work	Retirement
1900	13	32	3
1950	18	42	6
2000	20	45	9

Source: M.A. Holman, "A National Time-Budget for the year 2000", Sociology and Social Research, Vol. 46, No. 1, October, 1961.

The increased longevity of the population has extended the retirement phase, while at the same time, improved industrial technology has not only enabled young people to prolong their years of education, but also has required that they do so. With the growing periods of leisure during youth, after work in the retirement phase and during the working years because of the shorter working hours, the relationship between work and leisure has become increasingly complex.

In our society, our attitudes to work are influenced by social forces. In order to accommodate machine technology

¹Reference is made to the time budget study by M.A. Holman. Refer to Appendix I.

a culture, based on the 'Protestant Work Ethic', developed. The purpose of this culture was to make the most productive use of human and natural resources in the name of both material and spiritual progress. Progress in both these areas was thought to be harmonious.¹ As time went on, some men realized that there was often conflict between the world of work and material progress, and the world of the human spirit where other values held sway. Whereas society, as we know it, has lost the vital connection between the values of work and values of leisure, our social system has engendered a situation where the value system is incapable of conferring honour on either the typical work or the typical leisure situations. Cox² has noted that urbanization and the secularization of religion have made the religious commitment to work an outmoded social ethic. Consequently, the worker who does not find fulfillment or satisfaction in what he does, is alienated by his job.

Most writers in the past have conceded that work alienation and leisure are two distinct problems. This misconception has occurred because, traditionally, work has been

¹Weber has examined the connection between the spirit of modern economic life and the rational ethics of ascetic Protestantism in The Protestant Ethic and the Spirit of Capitalism. Leisure and enjoyment violated both codes of conduct, while at the same time, the unwillingness to work was symptomatic of a lack of grace.

²Cox, H., The Secular City.

regarded as activity, leisure as a kind of time. From this simple characterization, a distinction has been drawn between the compulsion of work and the freedom of leisure, which disregards the fact that the problem of mass leisure cannot be considered apart from the problem of work alienation. Many authors have addressed themselves to this 'problem' of mass leisure confronting society. Two traditions have evolved. Intellectuals and elites have expressed concern over popular tastes and mass culture. Mannheim¹ has stated that the average citizen is unable to invent new uses of his leisure time and that 'creative elites' must discover criteria for ways of employing leisure time. The second tradition, professionals and voluntary associations, have taken upon themselves the responsibility of providing meaningful, wholesome, productive opportunities for the otherwise deprived public. Both these approaches have failed to account for the fact that work and leisure are tightly related to each other and to the cultural norms which define their moral place in the social order. Leisure may be work and vice versa, given a particular situation. If the culture norms, which govern leisure activity and work, form a constraint, both activities are regarded by the individual as being compulsive.

¹Sutherland, W. C. "A Philosophy of Leisure", Recreation in the Age of Automation, pp. 1-3.

Berger¹ has stated that no time is free of normative constraints. He recognized the fact that we participate in recreation because the normative content is more important to us than is the normative content of work. If this is the case, can the so-called problem of leisure be deemed more than sociological myth? Many differing opinions have been voiced.

Reisman² has called for the deliberate infusion of challenge and meaning into work, for he feels that leisure has become as mechanized and as compulsive as work, hence offering little hope for man's development and growth.

Greenberg³ has speculated that the problem of work alienation may be permanently insoluble in the present industrial system. Galbraith⁴, on the other hand, describes the emergence of a "New Class" with new attitudes to work. Having the security of basic material comfort, they are more concerned with social contribution and personal development

¹Berger, B. M., "The Sociology of Leisure: Some Suggestions", Work and Leisure, pp. 21-37.

²Reisman, D., "Work and Leisure in Post Industrial Society", Mass Leisure, pp. 363-385.

³Greenberg, C., "Work and Leisure Under Industrialism", Mass Leisure, pp. 38-43.

⁴Galbraith, J. K., The Affluent Society.

than with the material rewards of frenzied production. In any case, the normative concept of leisure and work is useful because it invites questions about the conditions under which this comprehensive ideal - leisure - is attained.

If a 'philosophy of leisure' is required today, what are the higher pursuits to which we must aspire? Aristotle said that his goals in life were leisure, happiness and theoretical wisdom.

"Leisure was more than the condition for the attainment of the other two; it represented the satisfaction of the truly disinterested interest, the achievement of understanding, which is Man's highest goal."¹

In this manner, an appreciation of life might be gained, based on a critical attitude and taste for excellence. Bell has stated that:

"This deliberate and self-conscious training is a peculiarity of civilization, the good states of mind that come of (from) it is the end to which civilization is a means."²

This 'civilization' is a vehicle for the transmission of values which determine the quality of its leisure. Without this dimension of quality, leisure time becomes only time for

¹"The Encyclopedia of Social Sciences", Mass Leisure, p.5.

²Bell, C., "How to Make a Civilization", Mass Leisure, p. 32.

recreation that enables man to return to his toil.

Therefore, it has been shown that the problem of leisure is inextricably connected to the problem of work alienation. Perhaps no worthwhile concept of leisure can be developed without a consideration of man's work and his attitude to it, and this would lead to a thorough going examination of society's values and basic structure. This comprehensive view of the subject is beyond the scope of this study, but it did seem important to draw attention to the inter-relatedness of the concepts.

C The Recreation Movement

Prior to the 19th century the term 'recreation' was not used to refer to recuperative, relaxing or self-expressive activity. Since that time, the many scientific, economic and social changes have created a complex world in which people find a steadily growing need for recreation. The most notable of these changes have been urbanization, automation, job specialization, and altering social attitudes.

The transformation of Canada from a rural, agrarian society to an urban, industrialized society has created a range of environmental stresses and constraints from which the urbanite seeks temporary refuge in the now tamed outdoors.

The anthropologist, E. T. Hall,¹ has formulated theories on space and territory, one of which states that sheer overcrowding and pollution are converting New York into a 'behavioral sink'. The agitated state of mind which results, aggravates all forms of group pathology.

Population is not only growing, but changing in ways that will affect recreation patterns. Most notable of these changes have been the rise in income, increased mobility and suburbanization.

The changes in working conditions, owing to technological innovations, the development of highly automatic machinery, and the specialization of work have freed workers from physical labour, but have increased nervous tension and denied the worker personal satisfaction from his job. The rule of efficiency which must be internalized by the industrial worker produces anxiety which is carried over into leisure time.

Greenberg has stated that:

"Leisure, in compensation, has become much more emphatically the occasion for flight from all purposefulness, for rest, respite, and recuperation. It is certainly no longer the sphere 'par excellence' of realization, but a passive state, primarily in which one's least passive need is for distraction and vicarious experience that will give those immediate satisfactions denied one during working hours by the constraint of efficiency."²

¹Hall, E. T., The Silent Language and The Hidden Dimension.

²Greenberg, op.cit., 39...

Recreation becomes entertainment and diversion. When this behavior is internalized into roles, a consumer culture forms in which the enrichment of life is seen only in materialistic terms. Status and prestige are not derived so implicitly as before from social origin, and are conferred more predominantly on achievement. Upward social mobility has meant that leisure is counted as play but becomes work. Weblen¹ notes that social constraint can reduce recreation activity to a form of work. Leisure has developed a whole ladder of status symbols. We not only have to do certain things but we must do them at certain times. Fun not only becomes clock timed but also a duty and obligation.

The social constraint exercised by the 'Protestant work ethic' still persists to the extent that the job is our 'cultus'. We have a need to include everyone in it and to punish those outside. The fact that this belief is starting to dissolve has caused a number of writers to speculate on its replacement. Huxley has traced the gradual acceptance of 'accidie' -

"...the sense of universal futility, the feelings of boredom and despair, with the complementary desire to be anywhere, anywhere out of the world. It is very curious, this progress of accidie from the position of being a deadly sin,

¹Sutherland, op.cit., 1.

deserving of damnation, to the position first of a disease and finally of an essentially lyrical emotion, fruitful in the inspiration of much of the most characteristic modern literature."¹

Manifestation of this form of estrangement in contemporary society has created a social climate where commercialism, escapism and hedonism prevail in recreation pursuits. The formation of a hedonistic ethic is comparable to what occurred in the advanced Roman civilization where an old set of moral values died and was replaced by nothing.

The emergence of recreational activity has been accompanied by a corresponding development in the philosophy of play and recreation. These philosophical theories do not include the opinions and attitudes of writers concerned with the development of leisure and culture but are systematic attempts to find the biological and psychological factors in recreation and the sociological implications. The earliest theories were those of biologists and physiologists. The 'surplus energy theory' by Schiller and Spencer maintained that energy not expended in work is used for play. Spencer thought that dominant animals had more energy in reserve. Groos outlined the 'inheritance and preparation for

¹Huxley, A. "Accidie", Mass Leisure, p. 17.

life' theories. These theories maintained that play was rooted in instinct, a preparation for life and pleasurable. Hall was the chief exponent of the 'inheritance and recapitulation' theory. The psychological theories were like the biological theories in many ways. James was the first psychologist to believe that the impulse to play is instinctive. Two variations of this theory developed: the 'hormic or drive' theory which stressed instincts as related to fundamental appetities, and the 'reflex or mechanistic' theory. According to Patrick, play is a free, spontaneous, relaxing and self-developing activity which is pursued for its own sake and is not continued under any internal or external compulsion.¹ Piaget has emphasized that play is not a form of behavior or activity but an attitude, an 'orientation'. He discusses six criteria for play: autotelic or a disinterested state, spontaneity, pleasure, lack of organization, freedom from conflicts and over motivation. He points out that all these criteria provide the means for distinguishing play or 'ludic' activity from work, which is the accommodation of activity to reality.

"Play is assimilation of reality to the ego, as distinct from 'serious' thought, in which the assimilating process is in equilibrium with accommodation to other persons and things."²

¹Neumeyer and Neumeyer, op.cit., 229-251.

²Piaget, J. "Criteria of Play", Mass Leisure, p.70.

The point to note is that play begins as soon as there is a predominance of assimilation over accommodation.

The study of recreation from the sociologist's point of view stresses the fact that recreation is a phase of culture and group life: it is a process and is greatly influenced by the social processes. Huizinga has stated that:

"Real civilization cannot exist in the absence of a certain play element, for civilization presupposes limitation and mastery of the self, the ability not to confuse its own tendencies with the ultimate and highest goal, but to understand that it is enclosed within certain bounds freely accepted."¹

As a response to environmental pressures and the pleas of academics, reformers began deliberate planning and development of outdoor recreation in American cities. Olmsted and the advocates of outdoor recreation felt that the provision of outdoor recreation would offset the evils of urban living and lead directly to mental health. They proposed that:

"Leisure and the improvement of leisure behavior are one of the central issues of society; that the improvement of leisure through outdoor recreation and other forms of public recreation can be used to solve deprivations in the nature of work, family life and other basic institutions; and that leisure behavior can be used as a form of societal therapy."²

¹Huizinga, J., "The Play Element in Contemporary Civilization," Mass Leisure, p. 84.

²Gans, op.cit., p. 236.

Stoddard,¹ in a more perceptive outlook of the therapeutic value of outdoor recreation, noted that the outdoors contributes markedly to three human needs. First, it lends a sense of reality that serves to integrate the planes of the physical and the abstract. The outdoor experience is an ingredient in the intellectual process. Second, it creates a sense of oneness with nature that leads to a reverence for life. Third, it is a preventive of maladjustment, in that, participation in outdoor recreation creates a sense of belonging.

According to Gans,² leisure and recreation are, comparatively speaking, relatively unimportant causal factors in achieving either mental health or the 'good life'. They are essential and desirable but they are not as important as economic opportunity and security, positive family life, education and the availability of a variety of primary and secondary group supports. Any problems arising from these facets of life cannot be solved by leisure since it is non-utilitarian in nature. Clawson³ has stated that although

¹Stoddard, G. D., "The Merging Pattern of Outdoor Recreation and Education - Problems, Trends and Implications," O.R.R.R.C. Study Report #22.

²Gans, op.cit., 236.

³Clawson, M., The Economics of Outdoor Recreation.

the case for the psychological and emotional need for outdoor recreation has been overstated, demand has been expressed in economic terms. Therefore, recreation facilities must be made available in quantity and location to serve those who desire it. Gans feels that a market oriented approach should be used to make available those recreation facilities which will appeal to people's leisure preferences: anticipated and unanticipated, present and future.

CHAPTER II

PLANNING FOR OUTDOOR RECREATION

A Objective

The primary objective which recreation planners must keep in mind is the provision of effective recreation facilities, concomitant with consumer needs. Handler¹ has stated that planning must have comprehensiveness, organizing principles and a common focus in order to meet its objectives. In any area of planning - be it physical design, human needs or legal controls - general or specific reference is made to physical improvement. This is the common focus that Handler refers to. Although the recreation planner is not responsible for decisions concerning the allocation of land resources, capital and manpower, he must disseminate information so that administrators can select and develop the best possible combination of areas and facilities with the limited budgets available to them.

B Issues

The dominant issues in the process of planning for outdoor recreation are: the nature and the needs of public programs, conceptual problems associated with measuring the

¹Handler, A. B., "The Fundamental Aims of Planning", Planning the Canadian Environment.

demand for outdoor recreation and the preservation and protection of the environment.

Perloff and Wingo¹ have noted that the public provision of outdoor recreation depends on the same sort of decision processes that establish needs for education, transportation, public housing, wealth and welfare and public safety. The planning process involves the preparation of budgets for presentation to political bodies in charge of allocating community resources. There are two main phases in planning: a long term capital program which outlines types of physical improvement, timing, location, costs of facilities and means of financing; then the long range comprehensive plan which considers human requirements, physical configuration, management and ecological factors. Seen in this light, the public recreation program becomes a child of the planning process and the political system, and is conditioned by jurisdictional disputes and voting preferences.

In order to optimize the recreation opportunities which result from the organization and planned use of community recreation resources, a number of conditions and needs must be met. First, public policies and programs must recognize the need for a clear definition of goals. Recreation

¹Perloff, H. S. and Wingo, L., "Urban Growth and the Planning of Outdoor Recreation", Trends in American Living and Outdoor Recreation, O.R.R.R.C., Study Report #22.

should be regarded as a basic source of cultural stimulation and development, hence, programs should include a broad range of cultural recreation activities. Second, there is a need to understand implied as well as expressed interest in recreation as a basis for policy and programming. Third, there is a need for a coordinated approach. Traditionally, recreation services in Canada have developed on an 'ad hoc' basis. Areas of responsibility must be determined and understood by all levels of government. Fourth, there is a need for the clarification of the role of public and voluntary agencies.

Since recreation resources are allocated by public bodies, there is a lack of clear, direct expressions of the values which are attached to outdoor recreation, as is the case for market goods. A number of conceptual problems have beset planners' attempts to measure recreation demand. First, recreation seems to be a whole host of unrelated activities. Clawson¹ was responsible for identifying the major phases of the recreation experience: anticipation, travel-to-site, on-site experience, travel-to-home and recollection. The whole experience is a unit of study but different parts respond to different causal factors. Hence, assigning dollar value to the benefits derived from a recrea-

¹Clawson, op.cit.

tion experience is almost impossible since the values under consideration are largely intangible.

Second, the degree of substitutability between recreation activities is unknown. A basic premise is that recreation activity is decided, to a large but unknown extent, on what is available in the way of opportunities. For instance, Calgary skiers represent 7% of that city's total population, whereas Winnipeg skiers represent only 2% of that city's population. This disparity is an indication of opportunity rather than preference. The problem is to rationalize recreation behavior within the framework of recognizable groupings and to develop methods of measuring these groups. It is noteworthy that techniques of measurement and information systems are deficient in this respect. A third conceptual difficulty has arisen concerning the 'quality' of parks. Considerations of this sort involve physical characteristics, accessibility and proximity to alternative recreation areas.¹

¹Taylor, G. O., "Elements of Outdoor Recreation Demand", A paper presented to Canadian Association of Geographers 1968 Annual Meeting. Taylor has outlined the brief history of research techniques for outdoor recreation demand. Recently, theorists have concluded that park visitation is not demand but consumption, basically, a function of supply and demand. Initially, demand was predicted by projecting the total number of visitor-days that an area would accommodate in a year. Later, demand was predicted for each activity. The problem became one of allocating land to accommodate projected demand for each activity. Recently, interest is being focussed on the mix of activities that constitute a given recreation experience. Detailed analysis of activity combinations, as part of the Canadian Outdoor Recreation Demand Study, should indicate related significant variables.

The problem of measuring 'quality' has wider planning implications. Clawson¹ recognized in 1959 that the public demand for outdoor recreation would outstrip the ability of urban areas to supply space and facilities. There is a real danger that existing areas will become overcrowded. Preservation of the ecological balance should be implicit in the public provision of recreation facilities. However, many planners are not prepared in this field and must be satisfied with tapping sources of information, which in instances such as sport fishing, are still not definitive.

C Approaches

A number of approaches have evolved in the field of recreation planning: notably, the goal oriented approach and the systems approach.

Gans² has analyzed recreation in terms of the goals of three interest groups: the suppliers of its facilities and programs, their users, and the community and its decision makers who determine allocations. Institutional analysis shows that the stated goals of the suppliers reflect

¹Clawson, M., Held, R. B., Stoddard, C. H., Land for the Future, p. 124.

²Gans, H., Recreation Planning for Leisure Behavior: A Goal Oriented Approach, Ph.D. Thesis, University of Pennsylvania, 1957.

the recreation movements' desire for user self-improvement through constructive use of leisure. There is no evidence that maximum use of these facilities achieves the stated goals. Characteristics of users and patterns of use show that these facilities appeal to only a small proportion of the population and a few specific age groups. The community usually allocates resources closer to user preferences, than do the suppliers with their emphasis on middle class productivity. Gans has suggested that the use of standards (e.g. quantified statements of supplier goals) has neglected user and community goals, and excluded too many forms of leisure. He concluded that goal determination should be substituted for planning standards.

In 1967, the National Parks Service of the Department of Indian Affairs and Northern Development commissioned the Canadian Outdoor Recreation Demand Study. A basic premise to the study strategy was the acceptance of the systems approach in recreation planning. Hart¹ has stated that all parks and recreation areas within a subsystem are related to each other and all the subsystems within the larger system are related. Hart has outlined five stages in the multi-stage operation of park systems planning, which include: physical reconnaissance on a national scale, technical assis-

¹Hart, W. J.. A Systems Approach to Park Planning.

tance to areas with deficient recreation resources, cost benefit analysis on a regional basis, development schemes for major parks and maintenance of high professional standards.¹ No country, to this present time, has adopted this multi-discipline approach to resource planning. Nevertheless, public agencies have embarked on more ambitious planning studies and research programs.²

This strategy has been made possible by a number of theorists, who have pioneered development of conceptual systems of recreation usage in urban regions. Clawson has identified a conceptual system in which there are resource based, intermediate and user oriented parks.³ Once the

¹Ibid., p. 170.

²In 1967 the National Parks Branch undertook the Canadian Outdoor Recreation Demand Study. Initial studies attempted to identify factors that motivate outdoor recreation. A house-holder survey examined the recreational habits of Canadians and the relationship of these habits to measurable human traits and to the supply situation. Secondly, the Canada Land Inventory program of the Department of Forest and Rural Development was set up for purposes of identifying and mapping land capability for recreation. Thirdly, park visitor surveys have been conducted to ascertain data on origin of visitors, type of trip, length of stay, participation in selected activities and socio-economic characteristics of the visitor. The fourth step of this research program is comprised of related analysis procedures - primarily, the relationship between supply and participation.

³Clawson, Held, Stoddard., op.cit., 153-182. These terms are almost self explanatory. Criteria used to differentiate regions are: quality of resource base, accessibility, intensity of development, activities. The United States Outdoor Recreation Resources Review Commission has classified six areal categories, ranging from Class 1, high density recreation areas to Class 6, historical and cultural sites.

terms of reference had been specified the problem became one of allocating land to accommodate projected demand for each type of park. Perloff and Wingo have argued that a system's approach is necessary to bring -

"...into perspective the recreation behavior of populations, the evolving needs and demands, and the requirements and potentialities on the supply side. Hopefully, such a systematic analysis and resynthesis will define some of the indispensable specifications for the planning of outdoor recreation."¹

Once the key elements, i.e. recreation markets, activities and facilities, and their interaction have been specified, causal relationships can be identified. In this way interventions might be carried out to achieve the kinds and levels of desired performance.

According to Ellis and Van Doren:

"The recreation system for a given activity presents a spatial pattern resulting from a complex interaction among people, facilities, resources and space. A change in any one of these, such as the conversion of resources to facilities by planning action, will distort this pattern. It is very important that the planners and others in the recreational field be able to determine in advance what shape such distortions are likely to have, what magnitudes they might be and to evaluate whether the distortions are beneficial or not."²

¹Perloff and Wingo, op.cit., p. 87.

²Ellis, J. B. and Van Doren, C. S., "A Comparative Evaluation of Gravity and System Theory Models for State-wide Recreational Traffic Flow," Journal of Regional Science, Vol. 6, No. 2, 1966.

CHAPTER III

SUPPLY ASPECTS

Recreational resources must be examined for existing lands and waters, the programs of land management, and the facilities which make the resources available for recreational use. This chapter presents a tabulation of the quantity of recreation elements and the nature of the public recreation programs now in operation. It also contains an appraisal of existing facilities for various land and water-based activities.

A Inventory of Recreation Elements

1. Physical Elements

With minor exceptions, the surface features of Manitoba may be classified as a series of plains of varying origin and relief. While the south central portion of Manitoba is a large flat plain, significant topographical variations occur in the west, at the Manitoba escarpment and in the east through the Precambrian Shield. (Refer to Plate 1).

The Manitoba Lowland is comprised of a number of plains, two of which are the Interlake - Westlake Plain and the Red River Plain. Relief is flat to slightly undulating. Surface deposits on the Interlake - Westlake Plain are com-

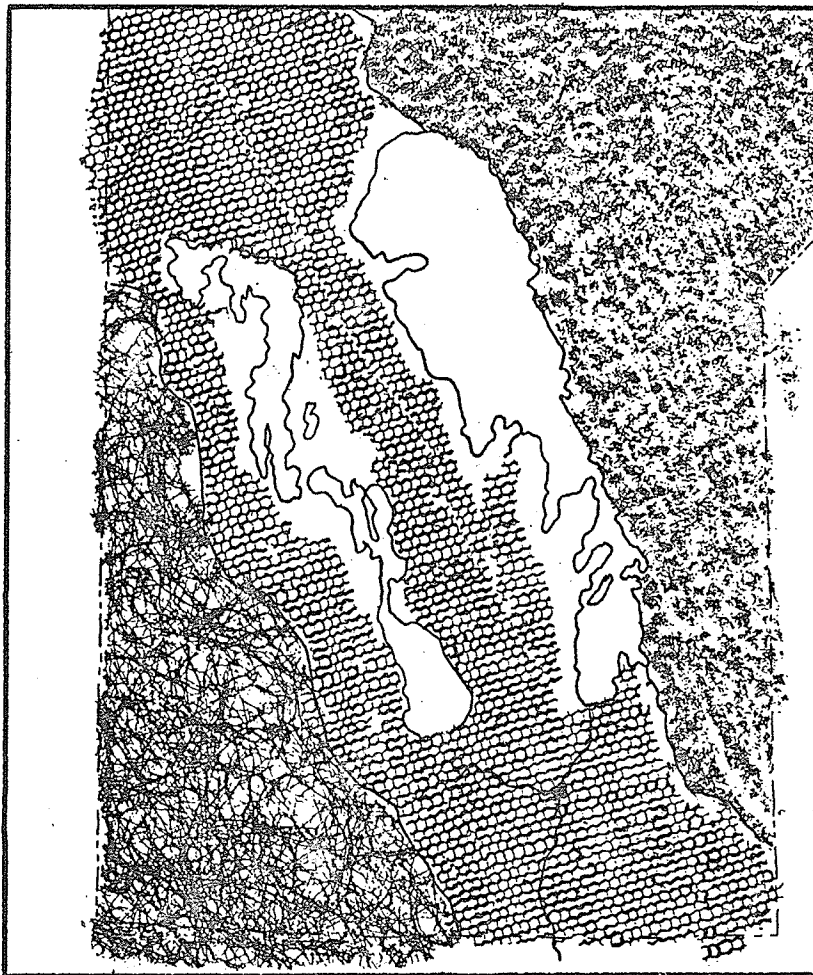





Plate 1

PHYSIOGRAPHIC DIVISIONS

Legend:

-  Precambrian Shield
-  Manitoba Lowland
-  Western Upland

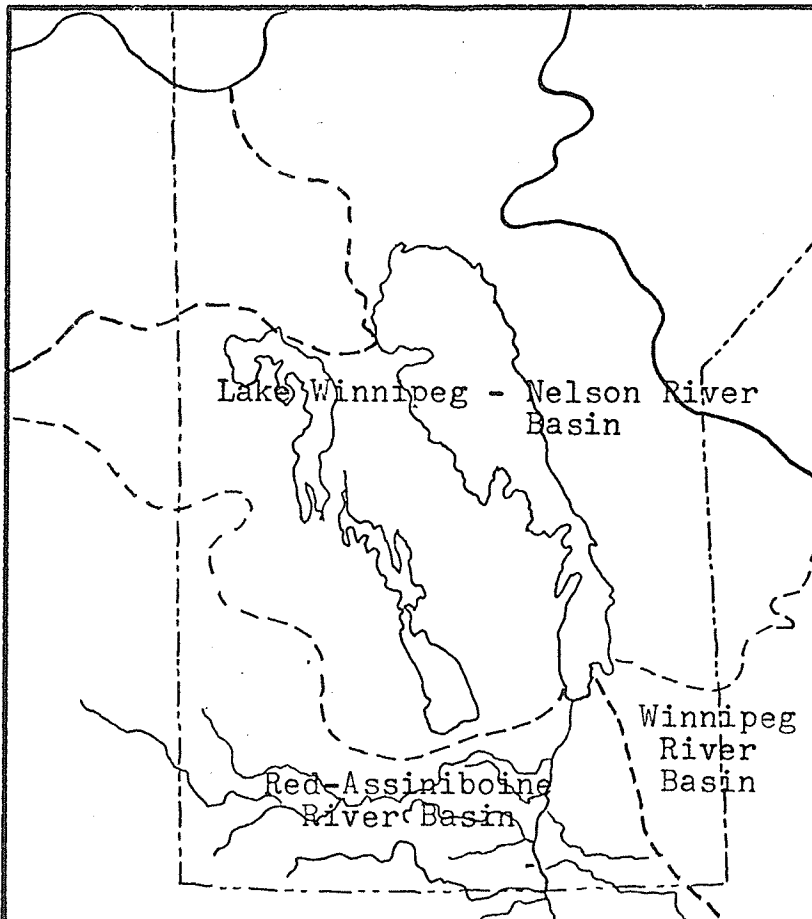


Plate 2

DRAINAGE BASINS

Legend:

- Primary Drainage Basin Boundary ———
- Secondary Drainage Basin Boundary - - - - -

posed of glacial till, modified by wave action. Lacustrine clay and alluvial deposits make up surface deposits on the Red River Plain. These two plains were formed primarily from sediments laid down by ancient Lake Agassiz and its feeder rivers. The lower Assiniboine Delta, of flat to undulating relief, is overlain by lacustrine sandy deposits and clay superimposed on glacial till. In the Southeast Section of the Manitoba Lowland are areas of variable relief composed of wave modified till, end moraine, lake beaches and extensive areas of muck and peat.

The Western Upland is separated from the Manitoba Lowland by an escarpment which has been sheered by successive glacial scouring. Relief is generally variable with rolling to hilly terrain in Tiger Hills and Pembina Mountain. Surface deposits are composed of glacial till.

The Precambrian Shield extends along the Winnipeg River to the Lake of the Woods. The relief is rolling to hilly, with rock outcrop, eskers and drift ridges rising a few hundred feet above valley levels. Bogs and lakes cover from 40 to 60 percent of the surface.¹

¹Economic Atlas of Manitoba. Much of the descriptive material in this section is extracted from this text. If the above mentioned plains are classified according to gradational forces responsible for their origin, we may identify ice scoured, drift or till, lacustrine and sand plains. If they are classified according to relief differences we may identify them as being flat (-10 feet), undulating (10-25 feet), undulating to rolling (25-50 feet) and rolling to hilly (50-300 feet).

Manitoba's 39,225 square miles of surface water are its foremost recreation attraction. The growing popularity of water oriented recreation, particularly boating, attests to the importance of this resource. Manitoba's three largest lakes: Lakes Manitoba, Winnipeg and Winnipegosis offer the closest water access to Winnipeg residents. Unfortunately, since they are quite large they are not conducive to family boating. Seasonal flooding and shoreline erosion often destroy the quality of beaches.

Manitoba has an abundance of inland lakes, however, the majority of these lakes are dispersed throughout the northern and eastern parts of the province - relatively distant from population concentrations. Some controlled water supplies are used for recreation purposes at Morden, Portage la Prairie, Rock Lake, Roblin, Beausejour, Carmen and Stephenfield.

The province is part of the Lake Winnipeg - Nelson River Drainage Basin. (Refer to Plate 2).

Vegetation reflects soil capability as well as the available water resources, topography and regional climatic conditions. These natural factors are complicated, however, by settlement, as in southern Manitoba where most natural vegetation has been displaced by man's land usage.

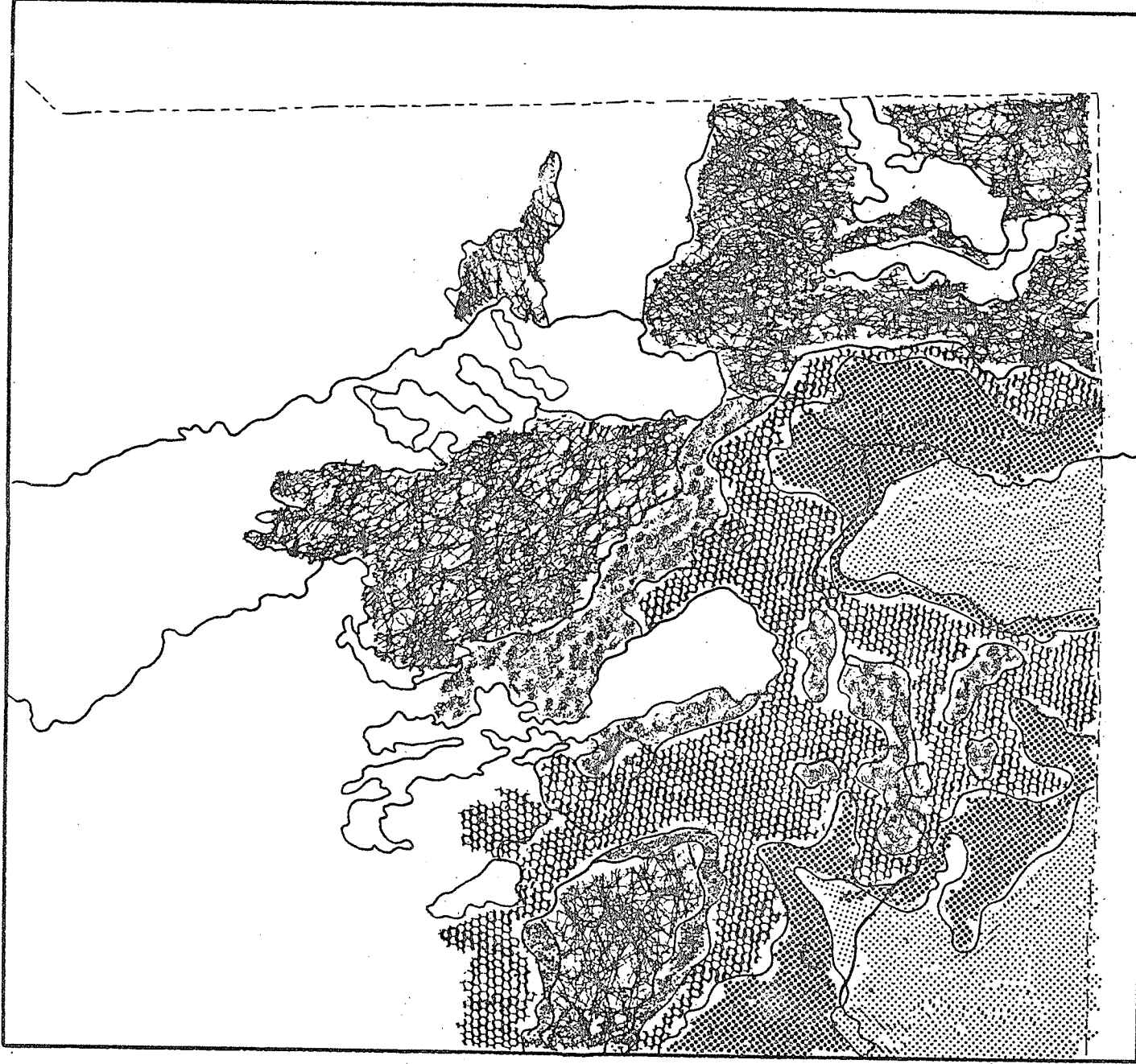


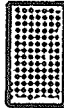





Plate 3

NATURAL VEGETATION

Legend:

	Open Grassland		Broad Leaf Forest
	Sparcely Wooded Grassland		Mixed Woods
	Wooded Grassland		Northern Coniferous Forest

The vegetation in the south, ranges from open to wooded grassland where trees are confined to water courses and scattered groves of willow and aspen in the wooded grassland regions. (Refer to Plate 3). The more intensive forested areas of the central regions include the broadleaf forest, that is, aspen and willow, intermixed with elm, ash, burr oak and maple as well as the northern coniferous forest, that is, black and white spruce and balsam fir. The southeastern portion of the province is endowed with the heaviest forest growth in Manitoba. Black spruce is the most plentiful species, followed by aspen and jack pine. The Whiteshell Provincial Park (2) has excellent stands of jack pine, black spruce, aspen and white poplar. The Lowlands South District (3) is composed of low sand plains covered with jack pine and swamps covered with black spruce.

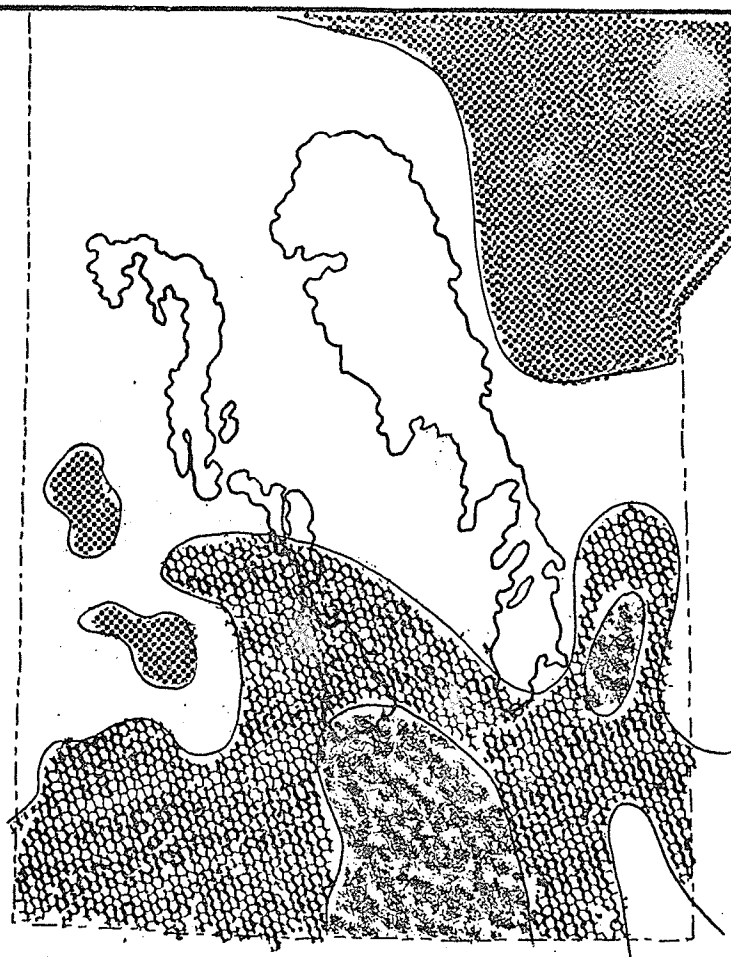
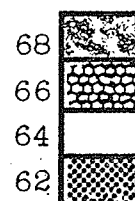
The Manitoba climate is typically continental and characterized by marked weather changes. July temperatures average from 64 to 68 degrees in the southern areas - relatively warm for the latitude. There is an average of 20 tropical days during which the mean temperature exceeds 86 degrees. January temperatures range from -5 to 2 degrees in southern areas which is abnormally cold for the latitude.

Plate 4

AVERAGE TEMPERATURE

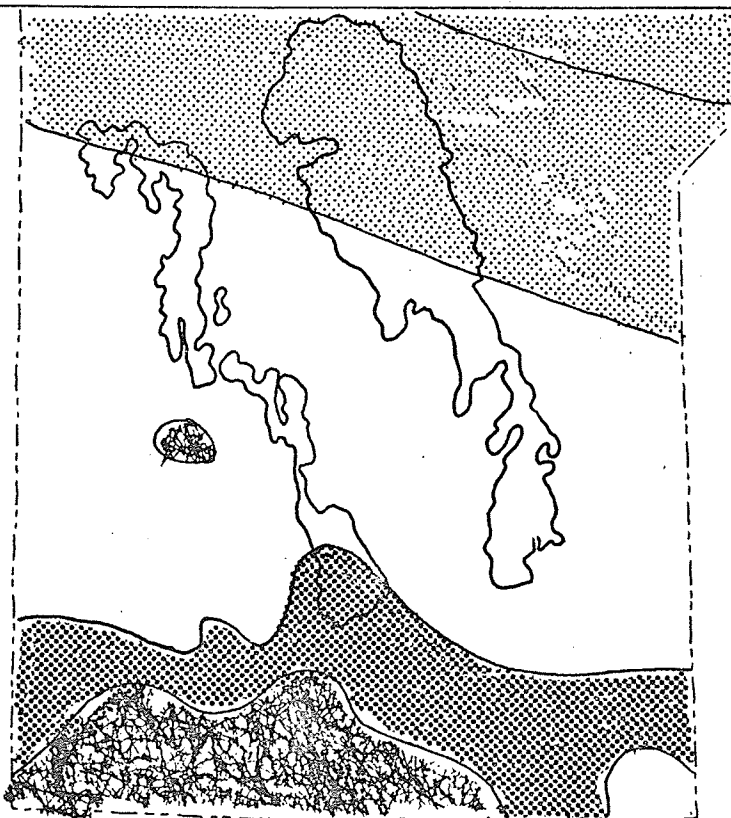
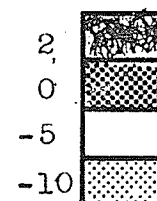
July

degrees Fahrenheit

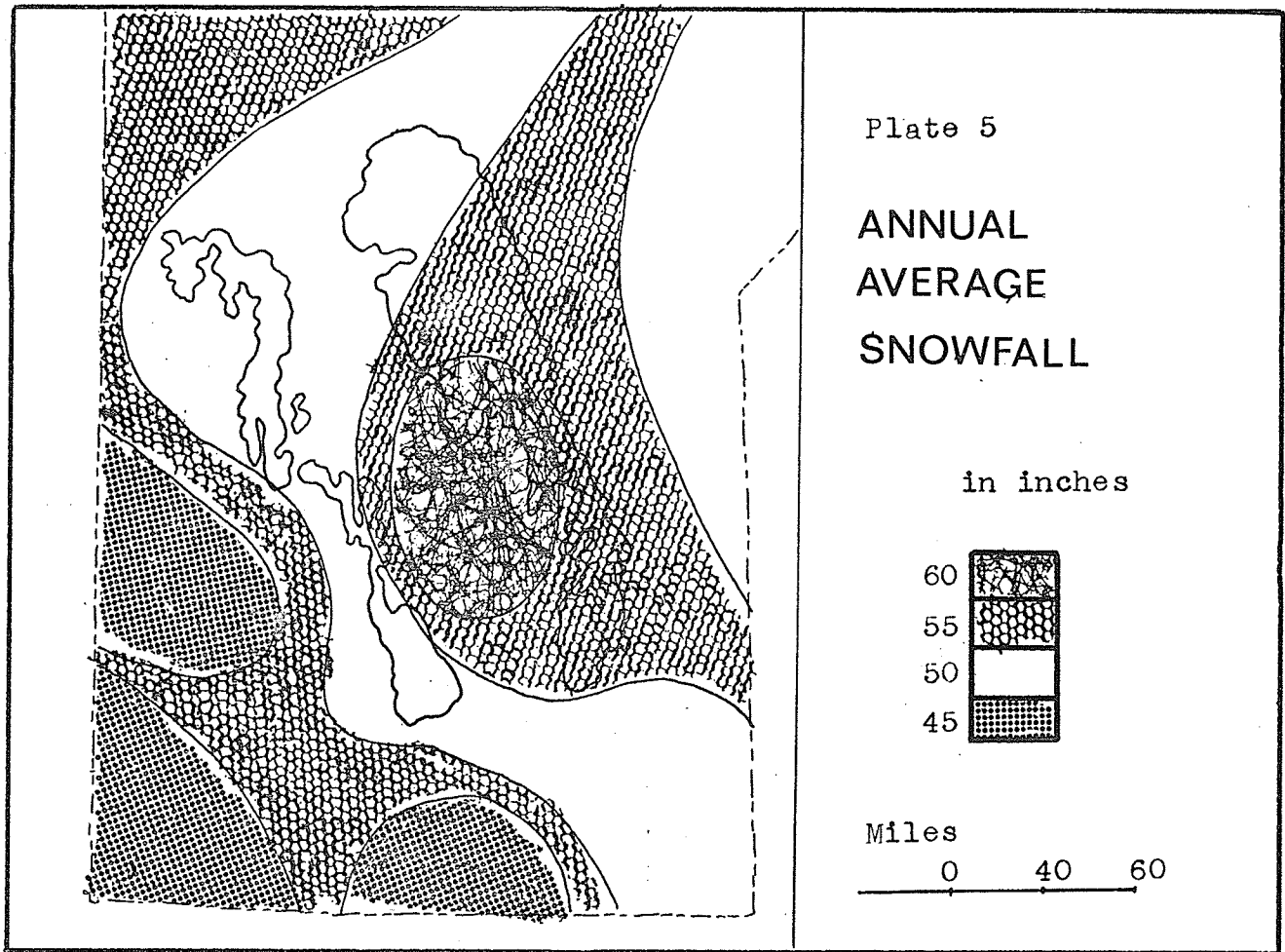


January

degrees Fahrenheit



Miles
0 41 61



(Refer to Plate 4). Manitoba winters provide the opportunity for a variety of winter sports such as skiing, tobogganing, ski-dooing, skating and ice fishing. The winter season extends from November through March. The average annual snowfall varies from over 60 inches in the Interlake region, 55 inches in the Winnipeg River region, 50 inches in the Winnipeg region, to less than 45 inches in the Pembina Valley. (Refer to Plate 5). Monthly totals are fairly uniform throughout the south. Although Manitoba has a long winter season, it has one of the sunniest climates on the continent with an average of 45% sunshine of the maximum days possible.

2. Land Capability for Recreation Use

There is no single set of criteria that can be used for classifying all types of recreation resources. Unlike agriculture and forestry resources, recreation land requirements are as diverse as the number of different recreation activities. In addition to this, the potential of land for recreation use depends, in the final analysis, on the proximity of people.

The scope of an inventory and classification system is limited only by its practicality in terms of cost, time and effectiveness. It can include the evaluation of re-

sources solely on their natural capability or may include feasibility for improvement. The capability classification is of most value when related to those uses in which the quality of the resource is of prime significance. However, the system might also consider population and demand analysis, location factors, transportation studies or economic and management factors. Clawson has stated that:

"...research to be really meaningful or accurate must consider both resources and users."¹

Accessibility and distribution of recreation areas, relative to large centres of population, should be considered in an evaluation of their use.²

The Canada Land Inventory Recreation Capability Classification was conceived through the auspices of the Agricultural Rehabilitation and Development Act of 1961. This classification was designed for planning on a national scale. Its intended purpose is to allocate land suitable

¹Clawson, Ketch, op.cit., 252.

²This approach was followed by the United States Outdoor Recreation Resources Review Commission in 1962. Its classification scheme dealt primarily with physical features but recognized that economic and social factors also play an important role in class designation. The State of Michigan Lake-Shore Inventory and Classification included: a detailed physical description of distinct physical types and the division of the shoreline in terms of intensity of use. The value of this study came from the understanding gained of varied physical characteristics and their possible use for recreation activities.

for recreation but it should not be mistaken as a tool through which management and utilization of land can be specified. The objectives of the program are:

- "1. To provide a reliable and authentic overview of the quality, quantity and distribution of natural recreation resources within the settled parts of Canada.
2. To indicate comparative levels of recreation capability for non-urban lands, based on present popular preferences.
3. To indicate the type of recreation to which land is best suited.
4. To identify where possible lands or features possessing outstanding or unique recreational values.
5. To provide basic information to aid governments in the formulation of policies and programs related to their functions of promotion, development and regulation of lands for recreation.
6. To provide a mapping framework within which provinces may, within reasonable limits, gather and record (for management purposes) data on the physical characteristics of significant recreational resources."¹

Land is classified according to its existing natural capability to provide opportunity for recreation.

"The opportunities for recreation provided by a feature or combination of features, and assessed on terms of quantity of use,² will determine the class of the land unit."²

¹Appendix I, Outline of the more important Guidelines for the Interpretation of the Canada Land Inventory Recreation Capability Classification, p. 49.

²Ibid., p. 54. The 25 features included are: A-Angling, B-Beach, C-Canoe tripping, D-Deep Inshore Water, E-Vegetation, F-Waterfall and Rapids, G-Glacier, H-Historic Site, J-Gathering and Collection, K-Organized Camping, L-Landforms, M-Small surface waters, N-Lodging, O-Upland wildlife, P-Cultural Landscape Pattern, Q-Topographic patterns, R-Rock formations, S-Skiing area, T-Thermal springs, U-Deep water boat tripping, V-Viewing, W-Wetland wildlife, X-Miscellaneous, Y-Family Boating, Z-Man made Features.

The basis of classification is the quantity of recreation that may be generated and sustained per unit area of land per year under perfect market conditions.

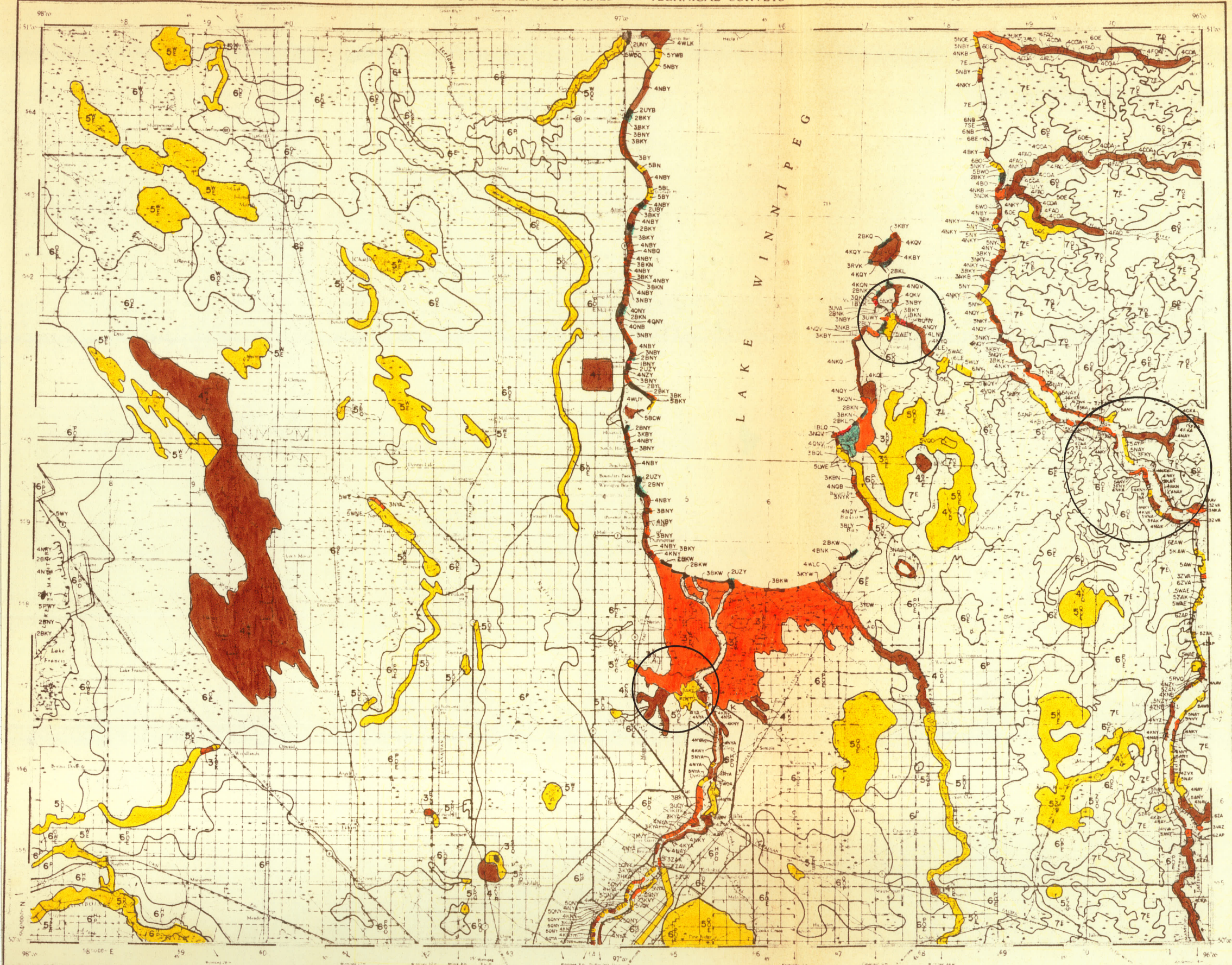
The maps on the following pages indicate the capability of land for recreational use in southern Manitoba.

Seven capability classes are recognized ranging from land with very high capability to land of very low capability. The following color code is used:

- Class 1 (very high capability)
- Class 2 (high capability)
- Class 3 (moderately high capability)
- Class 4 (moderate capability)
- Class 5 (moderately low capability)
- Class 6 (low capability)
- Class 7 (very low capability)
- Class 8 (land committed to intensive urban use is not normally classified)



In the Selkirk District, (Plate 6a) there are three sites with very high recreation capability and numerous sites with high to moderately high recreation capability located along the western and lower eastern shoreline of Lake Winnipeg. The capability of land for recreation use along the Winnipeg River and Red River is generally moderate to moderately low. Upland areas have predominantly low



REFERENCE

Symbol	Description
[Symbol]	Boundary of Municipality
[Symbol]	Boundary of Township
[Symbol]	Boundary of Range
[Symbol]	Boundary of Section
[Symbol]	Boundary of Quarter Section
[Symbol]	Boundary of Half Section
[Symbol]	Boundary of Quarter Quarter Section
[Symbol]	Boundary of Acreage
[Symbol]	Boundary of Township
[Symbol]	Boundary of Range
[Symbol]	Boundary of Section
[Symbol]	Boundary of Quarter Section
[Symbol]	Boundary of Half Section
[Symbol]	Boundary of Quarter Quarter Section
[Symbol]	Boundary of Acreage



REFERENCE

Symbol	Description
[Symbol]	Boundary of Municipality
[Symbol]	Boundary of Township
[Symbol]	Boundary of Range
[Symbol]	Boundary of Section
[Symbol]	Boundary of Quarter Section
[Symbol]	Boundary of Half Section
[Symbol]	Boundary of Quarter Quarter Section
[Symbol]	Boundary of Acreage
[Symbol]	Boundary of Township
[Symbol]	Boundary of Range
[Symbol]	Boundary of Section
[Symbol]	Boundary of Quarter Section
[Symbol]	Boundary of Half Section
[Symbol]	Boundary of Quarter Quarter Section
[Symbol]	Boundary of Acreage

RECREATIONAL CAPABILITY CANADA

EDITION 5

MANITOBA DEPT. OF MINES & NATURAL RESOURCES
CANADA LAND INVENTORY PROJECT
WINNIPEG, MAN.

52 E



Plate 6b
KENORA
CANADA-UNITED STATES

Scale 1:250,000 Échelle

Produit par le SERVICE TOPOGRAPHIQUE DE L'ARMÉE
Produced by the ARMY MAP SERVICE, CORPS OF ENGINEERS, ARMY
Produit par le SERVICE TOPOGRAPHIQUE DE L'ARMÉE
Produced by the ARMY MAP SERVICE, CORPS OF ENGINEERS, ARMY

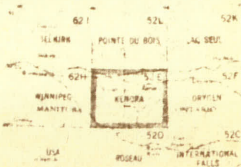




Plate 6c
NEEPAWA
MANITOBA 39

Revised in 1963 by the DIRECTION DES CAVES ET DE LA
GÉOLOGIE APPLIÉE, MINISTÈRE DES MINES ET DES RESSOURCES
TECHNIQUES, 85, à partir des cartes à grande échelle
imprimées en 1964.

La déclinaison magnétique pour 1965 varie de 12° 25'. Est au
centre de la carte à 10° 25' Est au centre de la limite
Est. Variation moyenne annuelle 1.1 Ouest.

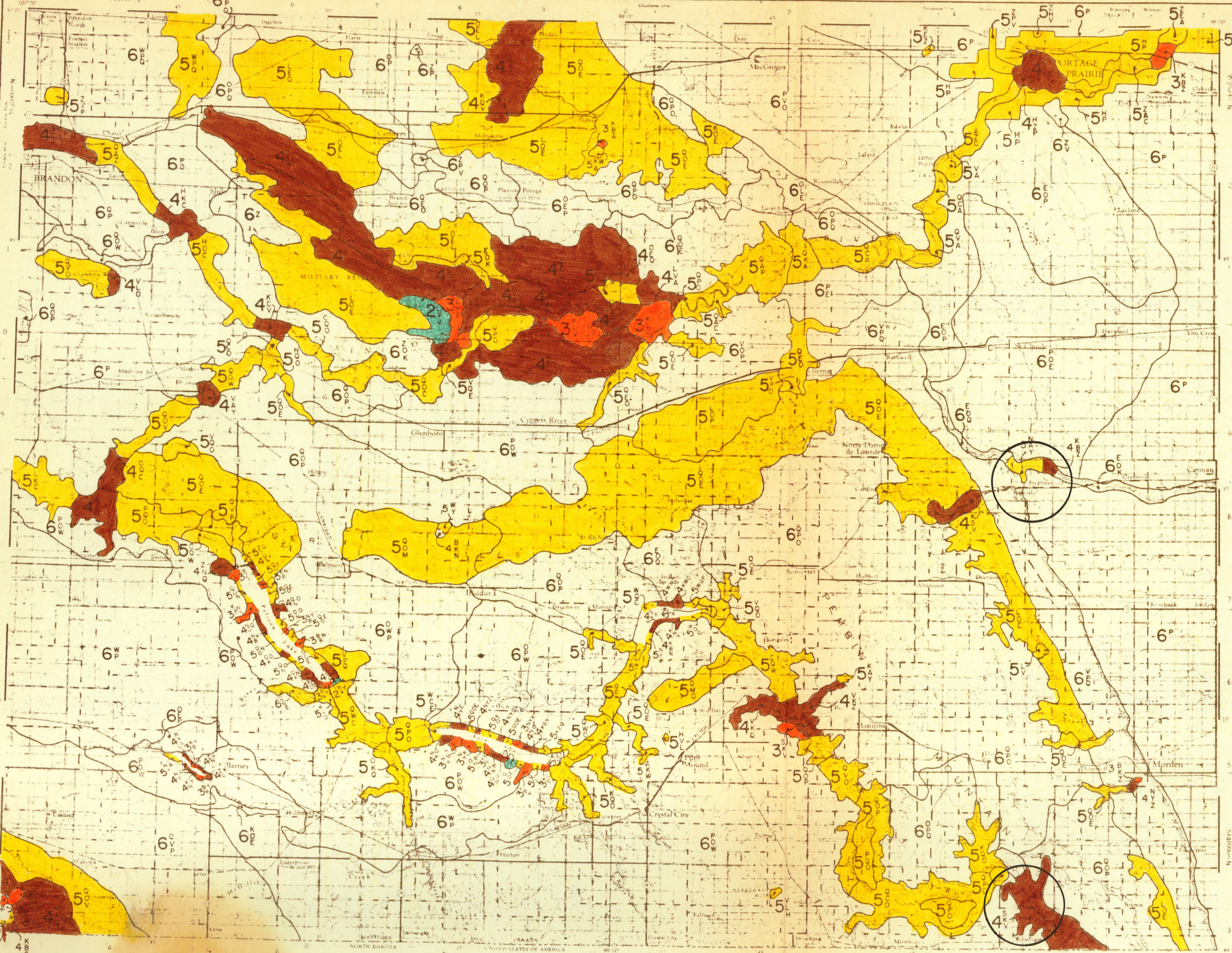


PLATE 6d
BRANDON
MANITOBA
WEST OF PRINCIPAL MERIDIAN 100° WEST
OUEST DU MERIDIEN PRINCIPAL 100° OUEST

Some names on this map are not yet official. Les noms sur cette carte ne sont pas encore officiels. La Direction des cartes de la Gendarmerie royale du Canada est chargée de leur vérification.

Map of the Province of Manitoba, Canada, showing the location of Brandon, Manitoba, Canada. The map is titled "Plate 6d BRANDON MANITOBA" and shows the location of Brandon, Manitoba, Canada. The map is a topographic map with a grid system. The map is titled "Plate 6d BRANDON MANITOBA" and shows the location of Brandon, Manitoba, Canada. The map is a topographic map with a grid system.

capability for recreational use.

In the Kenora District, (Plate 6b) land in the White-shell Provincial Park is endowed with moderately high to moderately low recreation capability. Land in the southern part of this district, generally swamp and peat, is endowed with low to very low recreation capability.

In the Neepawa District, (Plate 6c) sites along the southern shoreline of Lake Manitoba are generally capable of sustaining high to moderate use. The uplands are generally Class 6 - low capability.

In the Brandon District, (Plate 6d) the Assiniboine River valley is endowed with land of moderate to moderately low capability. Use is usually based on dispersed activities. The Pembina Valley, although generally moderately low in potential, is endowed with Rock Lake and Pelican Lake which can support moderately high to moderately low use. Upland areas in the western Upland possess low to moderately low potential whereas upland areas in the Manitoba Lowland are usually of low capability. With the few exceptions of river valleys of moderately low capability, e.g. Pembina, Sale, Morris, Rat, and Roseau, the region surrounding Winnipeg is largely of low recreation capability. (Plate 6e).

The recreation features, noted on a previous page,

represent the major uses of land for recreation as indicated by present popular preferences. Specific reference will be made to those features characterized by moderate to high recreation capability in Chapter VI, Recommendations.

3. Population and its Related Socio-Economic Characteristics.

An analysis of population and related socio-economic factors, as they apply to demand for recreational facilities is an important aspect of recreation planning. Examples of the general relationship between population characteristics and participation rates for various recreation activities are:

1. Age. The older the participant becomes, the fewer and less active are his pursuits. Physical activity declines past 50.
2. Sex. Women have distinctly lower participation rates than men for certain activities such as boating, fishing, hunting, canoeing and skiing.
3. Socio-Economic level. The higher one's income, occupational and educational attainment, the more varied and active are ones pursuits.
4. Residence. Suburbanites are more active and pursue a greater variety of recreation pursuits than do urban dwellers, who in turn have a more active participation rate than do those who live in rural areas. The size of a community has no effect on participation rates.
5. Mobility. Motoring and scenic driving has become a popular form of outdoor recreation as reflected by the increase in car ownership. This situation is contingent upon the rise of discretionary income.
6. Opportunities for activity. Increasing the number

of recreational facilities within a given area results in a geometric increase in recreation participation. British Columbia has a higher participation rate per capita than does any other region in Canada because of its strong recreation resource base.¹

According to the Dominion Bureau of Statistics the population of metropolitan Winnipeg in 1966 was 506,759 and an estimated 529,000 in 1969. The following table presents estimates of the future population of Metropolitan Winnipeg.

TABLE 2: METROPOLITAN WINNIPEG POPULATION PROJECTIONS:
1971 - 1986.

Projections	1971	1976	1981	1986
High	551,378	603,001	659,455	721,198
Medium	549,206	598,256	651,687	709,889
Low	547,034	593,539	644,000	698,746
Adjusted	547,900	590,400	636,000	685,000

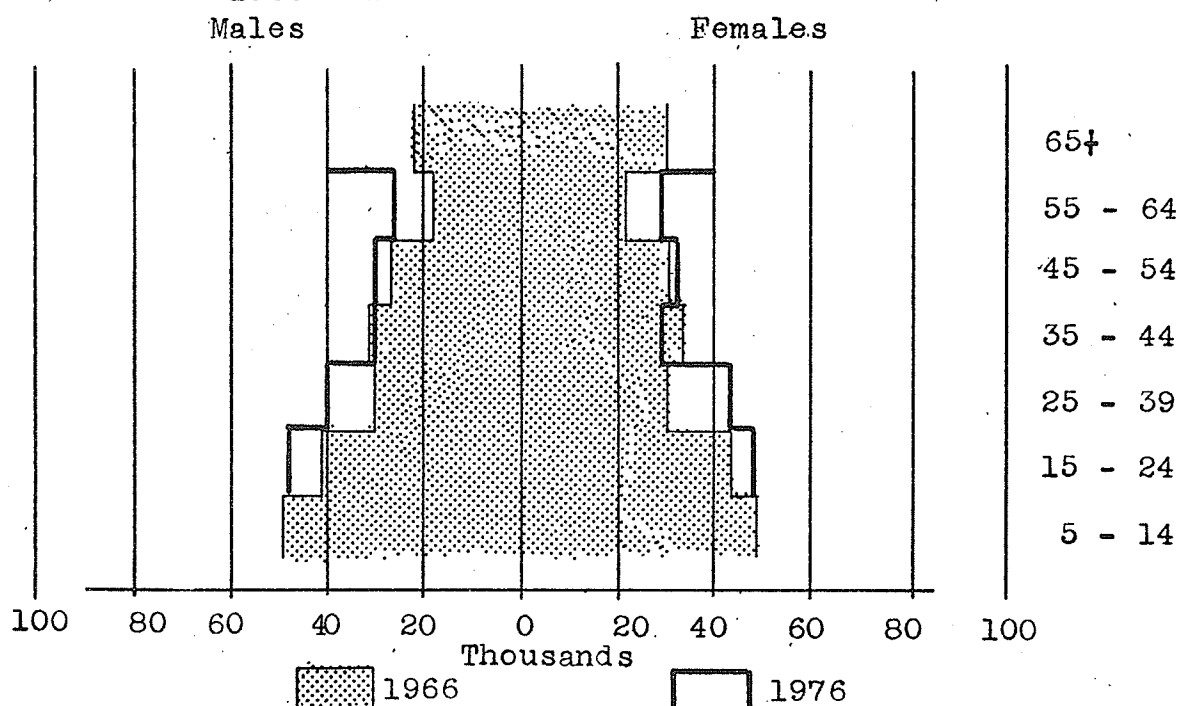
The projected high, medium and low figures were derived from the Metropolitan Winnipeg Population Report. To arrive at these estimates net migration was assumed constant (25% of the total increase) and the natural increase assumed rates from 13.47 to 12.27 people per thousand. However, if the growth rate follows the past trend of 1.5% per year future population will, more than likely, be more in line with the estimated figures of the adjusted projection. These estimates are considerably lower than the lowest 'Metro'

¹The general relationships noted above were derived largely from data collected by the 1967 8M Survey for the National Parks Branch as part of the Canadian Outdoor Recreation Demand Study.

estimate and are more consistent with present trends.

The most significant change in the age structure of the population of Metropolitan Winnipeg between 1944 and 1966 has occurred in the size of the age groups under 15 and over 64 years. A rising dependency ratio means that the non-economically active group is becoming larger.

FIGURE 1. COMPARISON OF NUMBER OF MALES AND FEMALES BY 10 YEAR AGE GROUPS - METROPOLITAN WINNIPEG 1966 - 1976.



Source - Dominion Bureau of Statistics 1966 Census. Refer to Appendix A.

It is evident that the growth experienced by the under 15 age group prior to 1966 will be experienced by the 15 - 24 age group for the period 1966 - 1976. Since

this age group has the greatest physical vigor, this growth has implications for recreation facility requirements. A major proportion of Metropolitan Winnipeg's 20 - 24 age group resides in the City of Winnipeg. It has been acknowledged by the Metropolitan Winnipeg Parks Systems and Standards Study that there is an insufficient amount of open space in this area. Therefore, this young, active and mobile segment of the population force must travel to outside areas in order to participate in outdoor recreation.

The average per capita income for Winnipeg males in 1961 was \$3,907 as compared to \$1,961 for females. At that time, roughly 87% of males wage earners were in the \$6000 and under income bracket. 13% received over \$6000 and 2% received incomes of over \$10,000.

Of the total number of people over 18 in 1961, roughly 17% had no education, 26% had elementary training, 20% had one or two years of high school, 28% had graduated from high school and 7% had one or more years of university education. Discretionary income, education, family size, purchasing habits and price levels are some of the variables which determine the recreation expenditure pattern of Canadian families. Appendix A presents factual evidence to support this

assertion. It appears that the recreation expenditure of Winnipeg residents is generally lower than other major Canadian cities.

The direction of growth in Metropolitan Winnipeg during the last decade has been primarily to the northwest and the east. The municipalities of Assiniboia, St. Boniface and Transcona have experienced the most growth for the period 1961 to 1966 - followed by Fort Garry and North Kildonan. Charleswood, Tuxedo and Old Kildonan experienced the least growth while the City of Winnipeg suffered a net loss.

4. Traffic and Travel Patterns

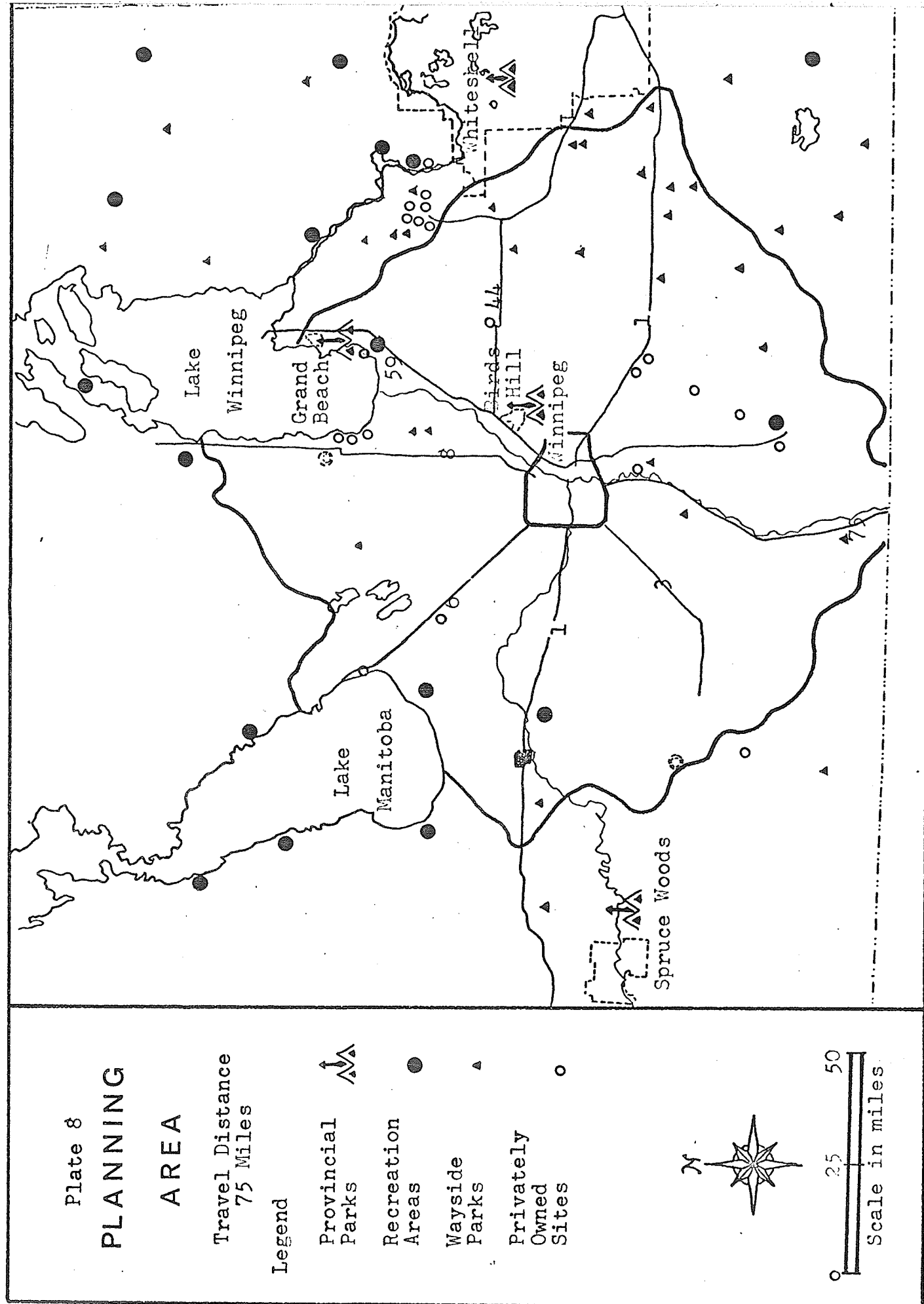
Recreation travel in Manitoba is predominantly by private car and accounts for a significant part of total traffic flow. According to Highways Branch engineers, recreational traffic originating from Winnipeg is channelled, to a large extent, along three major arteries: Provincial Trunk Highway #8, Provincial Trunk Highway #59 and the Trans Canada Highway. Plate 7 indicates that average daily traffic in 1969 on the two Provincial Trunk Highways ranged from 2000 to 5000 vehicles and that average daily traffic on the Trans Canada Highway was 5000 vehicles. An engineering study conducted by the Highways Branch in 1960 fore-

casts the need for 260 miles of multi-lane roadway by 1980.¹ Multi-lane improvements to the Trans Canada Highway and Provincial Trunk Highways 59 and 44 will facilitate the anticipated increase in recreation traffic.

This data does not show the extreme variations in traffic flow caused by peak summertime patterns of recreation activity. Clawson has estimated that 50% of recreational traffic flow, in 'intermediate' recreation areas, occurs on less than 20% of the days of the year.² Recreation travel to these areas consists largely of day and weekend trips which are generally considered to expend one or two hours travel time. Plate 8 indicates that three provincial parks, four recreation areas and numerous private sites fall within a 75 mile travel range from Winnipeg. Demand for regional facilities within a 50-75 mile travel range of Winnipeg is and will continue to be intensive.

¹Manitoba Highways, Planning for Tomorrow, An Engineering Study.

²Clawson, op.cit., 103.



B. Public Recreation Programs

1. Evolution of the Provincial Parks Branch

The public provision of outdoor recreation in Manitoba dates back to the 1920's, when the Provincial Forest Service of the Department of Mines and Natural Resources provided primitive camping facilities in Provincial Forest Reserves. This program was continued during the Depression years, as exemplified by the construction of recreation facilities in the Whiteshell Provincial Forest in 1933 by Single Mens Relief Work Camps. Recreation services on Crown land outside of Provincial Forest Reserves were administered by various government departments through the authority of the Crown Lands Act. Consequently, the public outdoor recreation program lacked coordination and direction. To rectify this situation, the Provincial Parks Act was passed in 1960. This legislation granted the Parks Division of the Department of Mines and Natural Resources the authority to administer recreation facilities on all Crown owned land that was designated for recreational use. (Refer to Plate 9). A few years later the Parks Division became a Branch within the Department of Mines and Natural Resources and in 1966 it was incorporated with the newly created Department of Tourism and Recrea-

Plate 9

PLANNING

AREA

Land Map

Legend

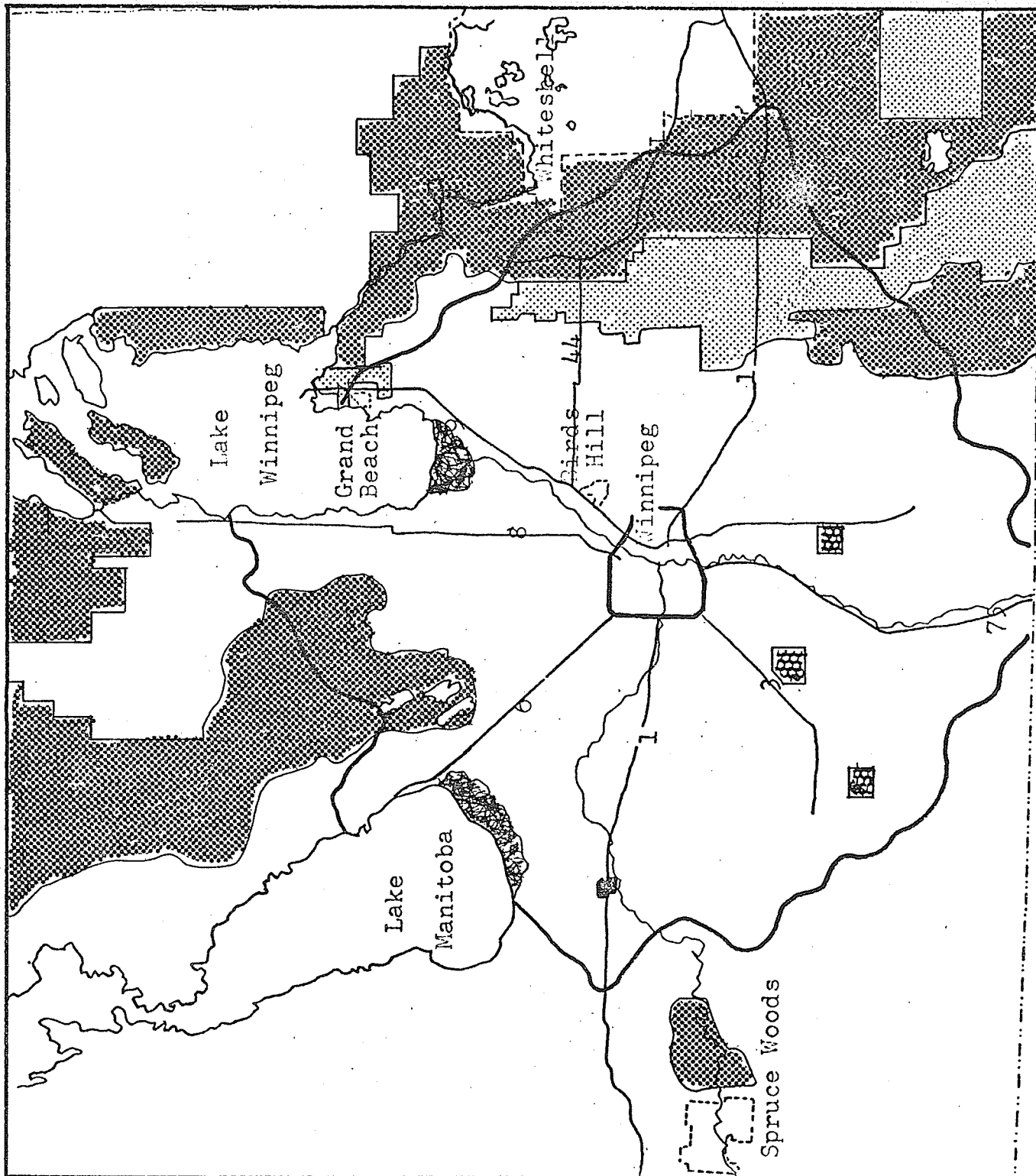
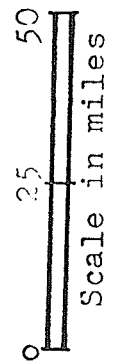
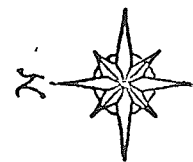
Surveyed Crown Lands

Public Shooting Grounds

Wildlife Management Areas

Provincial Parks

Provincial Forests



tion.¹

The Provincial Parks Act of 1960 is presently under review. According to W. Danyluk, the Director of the Parks Branch, the agency lacks authority in a number of areas. First, the Parks Branch presently administers only those areas designated as Provincial Parks, Recreation Areas and Wayside Parks. This limited scope will be broadened in the near future as the Parks Branch extends its authority over lands classified as historical sites, wild river basins and animal sanctuaries. Second, there is ineffective management of people in designated recreation areas. More regulations are required, for purposes of preserving and protecting the natural habitat. There is also insufficient control of private park land. Third, there is a need to set a precedent for the multiple-use concept of resource management. Under the provisions of the Provincial Parks Act of 1960, recreation lands were to be managed under a multiple-use concept which would supposedly provide a coordinated management of all renewable resources on the land. The conditions under which resource-use could occur were prescribed by the Minister of Mines and Natural Resources under the provisions

¹Manitoba Statutes Bill #124, An Act Respecting the Department of Tourism and Recreation, Chapter 68, 1966.

of the Mines Act, the Forest Act, the Crown Lands Act, the Game and Fisheries Act and any other act of the legislature respecting mining, logging and building construction. In 1966 this authority was transferred to the Minister of Tourism and Recreation, however, there was no precedent within the Parks Act which established recreation as a priority use on land suited for that purpose. The proposed Park Lands Act would give highest priority to the recreational use of designated areas through the inclusion of a clause which would dedicate park lands for public use.

2. The Nature of Public Programs

Under the Parks Act of 1960, the Parks Branch was delegated the responsibility to:

"constitute, establish and maintain parks and recreation areas for the use, benefit, health and enjoyment, recreation and education of the citizens of Manitoba..."¹

Within this statement of purpose the Branch recognizes and endeavours to meet primary objectives that are considered basic to meeting future recreational demands. They are:

¹Manitoba Statutes, An Act Respecting Provincial Parks and Provincial Recreation Areas. Chapter 53, p.425.

- The development of a master provincial recreation plan that will accommodate and make provision for the variety of outdoor recreational demands. The long range Planning Section of the Parks Branch is coordinating this task.
- The development of zoning regulations for all provincial parklands to assure the protection of recreational values. The Parks Branch has commissioned a consultant to prepare a master plan for the White-shell Provincial Park.
- The development of policy guidelines leading to the effective management of a comprehensive and well integrated park system. According to W. Danyluk there is an outstanding need for outdoor recreation facilities in the immediate vicinity of urban centres. In order to offset the spatial imbalance that exists between urban centres and recreation opportunities, a number of intensively developed, regional Recreation Areas have been provided by the Parks Branch. In recent years a number of communities whose requirements have not been met by the Parks Branch program, have applied for planning assistance from the Department of Municipal Affairs. Areas such as Stephenfield, Rock Lake and Pelican Lake will quite likely

serve a regional population once they are developed.

Contingent with the provision of facilities, the Parks Branch endeavours

"To provide the park user the means to develop an active and conscious appreciation for a quality environment and the many hidden values of our resource heritage."¹

In addition to providing the usual popular facilities the Parks Branch is starting to establish public information centres for nature interpretation and natural areas suitable for hiking, bird watching and 'orienteering', which is a pedestrian version of car rallying. A recently completed activity centre in the Spruce Woods Provincial Park has been designed in this manner. (Refer to Chapter 3 c).

The Parks Branch is currently involved in the development of Hecla Island, in the Interlake region. Development schemes are still in the preliminary stages.

C. Existing Outdoor Recreation Facilities

1. Lands for Recreational Use

The following tables tabulate the acreage and the annual use of public and private recreational land within the Planning Area. Plate 10 locates public recreation sites within the Planning Area.

¹Annual Report. Department of Tourism and Recreation Province of Manitoba, p. 17.

Plate 10

PLANNING AREA

Public Recreation
Areas

Legend

Provincial
Parks



Recreation
Areas



Wayside
Parks

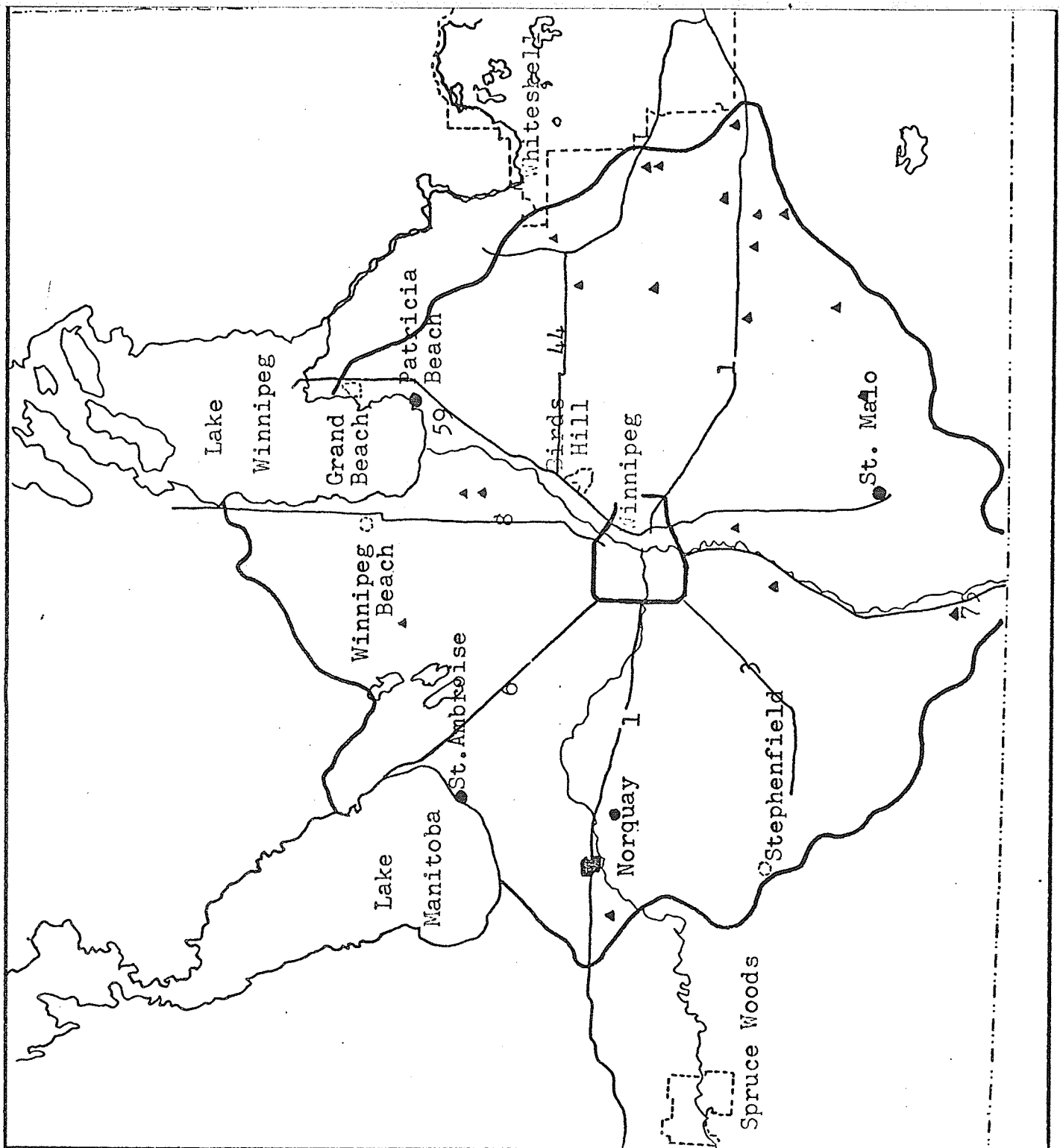
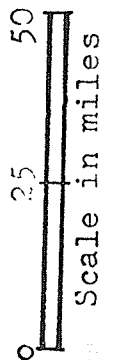
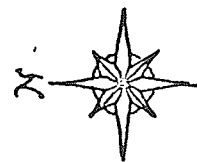


TABLE 3. PUBLIC AND PRIVATE RECREATION SITES, ACREAGE.

Site	Acreage			Total
	Land	Water	Wetland	
<u>Public:</u>				
Provincial Parks	531,440	65,700	93,040	690,220
Recreation Areas	561	40	-	601
Wayside Parks	72	-	-	72
<u>Private:</u>	766			766

Source: Manitoba Outdoor Recreation Facility Inventory, 1967 (Refer to Appendix A for detailed site information).

TABLE 4. PUBLIC RECREATION SITES, ATTENDANCE 1965-1969.

Site	Total Annual Attendance				
	1965	1966	1967	1968	1969
<u>Provincial Parks:</u>					
Grand Beach	-	239431	275941	N.A.	331600
Birds Hill			251284	N.A.	321960
Whiteshell	694474	754127	722295	707386	1201802
<u>Recreation Areas:</u>					
St. Malo		110387	98965	N.A.	155540
Norquay		48855	56298	N.A.	48760
St. Ambroise		15857	19558	N.A.	23990
Patricia Beach		Closed	Closed	N.A.	40369

Source: Provincial Parks Branch.

Visitations to provincial parks accounted for 88% of the total attendance at public sites in 1969. With few exceptions, the total annual park attendance has increased steadily in the last five years. Drops in attendance at specific parks

are usually attributable to climatic variations or flooding. In 1966 Grand Beach experienced severe flooding which shortened the season and eroded beach facilities. During the same season, the Whiteshell Provincial Park and St. Malo Recreation Area experienced a proportionate increase in attendance.

Provincial Parks

Grand Beach Provincial Park is located 57 miles north of Winnipeg; a favourable distance for day trips. Its major attraction is three miles of sandy beach on Lake Winnipeg. In 1967 400 tent and camper trailer sites were constructed which, together with picnic facilities, motel accommodation, a restaurant and a shopping centre, provides amenities for not only day and weekend outings but also for full length vacations.

Birds Hill Provincial Park was opened to the public in 1967 as a part of Manitoba's contribution to the Canadian Centennial. The park is located 14 miles northeast of downtown Winnipeg which makes it an ideal outdoor recreation area for Winnipeg residents. A recent origin-destination survey conducted by the Department of Transportation revealed that 87% of the total visitors to Birds Hill Park on

a typical summer Sunday are from metropolitan Winnipeg, especially the north-eastern half of the metropolitan area.¹ Park facilities include: an 80 acre man-made lake, camp sites, picnic tables, nature areas, hiking and riding trails, a tree nursery, a sports field, a riding stable and snow mobile trails.

The Whiteshell Provincial Park was established in 1962 and contains most of the land within the former Whiteshell Forest Reserve. Since 1962, the Parks Branch has developed a number of activity centers, most of which are within two hours travel time from Winnipeg. 72% of the total visits to the Whiteshell in 1968 originated from Winnipeg. Of the total number of visits, only 31% were day visits, 24% were weekend visits and 31% were visits by parties on vacation.²

At the present time, the Whiteshell is the most intensively developed park in Manitoba. A total of ten sites with swimming facilities, 31 boat launches and 20 picnic sites are available to the public in addition to facilities for golf,

¹Birds Hill Provincial Park, Residence of Sunday Visitors, pp.3-5.

²Manitoba Whiteshell Provincial Park, Visitor Survey, p.4.

tennis, horseback riding and winter facilities for skiing, skating, tobogganing and snow mobiles. Hiking, nature trails and canoe routes have been marked out for public use. The park can accommodate a total of 2413 visitors on any one night during the season. There are 370 commercial units and 2046 camping spaces. 950 of the present camping spaces are filled on a seasonal basis which means that the park can accommodate 1463 of the general public.¹

The Spruce Woods Provincial Park is scheduled to receive its first summer visitors in 1970. Existing facilities include 75 campsites, 65 picnic tables and 20 miles of motor toboggan trails.

The development of the Spruce Woods Park centers around four oxbow lakes. One of these will serve as the major core area while plans for the other three emphasize their protection and management in a semi-primitive state. This is a desirable program since the Spruce Woods habitat, consisting of shifting sand dunes, aspen woodland and spruce forest, is an immense attraction.

Recreation Areas

Recreation areas were conceived by the Parks Branch

¹Ibid., p.6.

to fulfill a regional need for outdoor recreation. There is no evidence to suggest that Winnipeg residents do not use these sites, however, in terms of physical attraction these sites are not comparable to Provincial Parks. They are smaller, possess fewer recreation resources and consequently demand a higher capital input. A number of sites, such as St. Malo and Stephenfield, require reservoirs and artificial lakes because natural expanses of water are not available. All Recreation Areas provide serviced campgrounds, picnic sites and where it is possible, boat launches.

Wayside Parks

The Parks Branch maintains 22 Wayside Parks within the Planning area. These parks are intended to be rest spots for in-transit travellers, however, they might serve as a day outing for Winnipeg residents.

Private Sites

There are 766 acres of privately-owned land within the day use range which provide facilities for camp ground accommodation, picnicing, boating, swimming and, in a few cases, specialized activities such as skiing and hiking.

The market structure does not favour private provision of outdoor recreation in Manitoba. Some areas require

a high capital input and subsequently are unable to compete with government facilities. The government is in a position, with greater manpower, financial capacity and control of highway location and other services, to influence demand at specific sites. With the exception of the St. Anne site, most privately owned recreation sites are less intensively developed than government sites.

2. Recreation Facilities

The following survey tabulates the facilities for a number of recreation activities typified as:

- . individual, such as, skiing, swimming, motor tobogganing;
- . activities in tandem, such as hiking, canoeing;
- . family activities, such as picnicing, camping.
(Refer to Chapter 4 for an explanation of the typology).

The total capacity of public and private facilities within the Planning Area and available figures on actual participation at these sites will be shown.

a. Land Based Activities.

Skiing

There are six skiing areas in operation in southern Manitoba that draw a major proportion of their skiers from Winnipeg. Annual attendance figures are shown in the following table.

TABLE 5. SKI AREA ATTENDANCE, 1962-1969.

Site	Annual Attendance						
	1962 -63	1963 -64	1964 -65	1965 -66	1966 -67	1967 -68	1968 -69
<u>Public:</u>							
Mt. Agassiz	2139	3628	10031	8641	14413	N.A.	10926
Falcon Lake	2367	6376	6487	5425	7641	7532	6358
<u>Private:</u>							
Holiday Mountain							6000
Stony Mountain							N.A.

Source: Survey of Visitors to
the Falcon Lake and Mount
Agassiz Ski Areas, 1969.

There was no upward or downward trend evident in seasonal attendance at Mount Agassiz and Falcon Lake from 1962-1969.

The pattern is one of persistent fluctuation, due primarily, to changing weather conditions. During the 1968-1969 season 57% of the visitors to Mount Agassiz were from Winnipeg while 85% of the visitors to Falcon Lake made their residence in Winnipeg. Tuxedo accounts for more skiers per capita than any other area in Winnipeg. Visitors to Mount Agassiz generally reside in the south western part of the metropolitan area, particularly St. James and River Heights, while visitors to Falcon Lake generally reside in the eastern part of the metropolitan area, especially in St. Boniface, St. Vital and Fort Garry.¹

¹Survey of Visitors to the Falcon Lake and Mount Agassiz Ski Areas, p.10.

In addition to the publicly owned facilities at Mount Agassiz and Falcon Lake there are privately operated facilities at Holiday Mountain and Stony Mountain which, together with the publicly owned facilities, offer a combined opportunity for 7100 skiers per hour.

TABLE 6. CAPACITY OF SKI AREAS, 1969-70.

Site	Capacity			
	No. of Slopes	Elevation feet	No. of Lifts	Skiers per hr.
<u>Public:</u>				
Mt. Agassiz	6	500	3	700
Falcon Lake	14	140	4	1500
<u>Private:</u>				
Holiday Mountain	10	300	5	4000
Stony Mountain	4	100	2	900

Source: Provincial Parks Branch.

In addition to these well developed facilities, there are two ski hills in metropolitan Winnipeg and a rope tow operation at Pinawa. Private interests are currently installing a rope tow at Snow Valley, located 60 miles south west of Winnipeg.

Snow Tobogganing

The nuisance created by these vehicles, in terms of noise, damage to vegetation and conflict with other vehicles, has forced municipalities in Metropolitan Winnipeg

to enact by-laws which restrict snow mobiles from city streets and parkland. Regulations which restrict the inordinate use of snow mobiles are necessary, however, they must be followed by planning measures which recognize the virtue of this form of outdoor recreation. The prime virtue of the snow mobile is that it has made previously un-used areas of the province accessible during the winter season.

TABLE 7. DESIGNATED SNOW TOBOGGAN AREAS, 1969

Site	Facilities	
	No. of Rentals	Miles of Trail
<u>Provincial Parks:</u>		
Whiteshell	10	250
Birds Hill	7	50
Spruce Woods	<u>N.A.</u>	<u>20</u>
Total	17	320

Source: Provincial Parks Branch.

At the present time, the provision of snow mobile facilities, on a rental accommodation basis, has occurred primarily in public recreation areas.

Hiking

Birds Hill Provincial Park, Spruce Woods Provincial Park and the Whiteshell Provincial Park are the only public recreation lands within the Planning Area that provide hik-

ing and nature trails. The Whiteshell, with five different trails, has the most provision for this activity. Unfortunately, there is no precise information on the length of these trails.

Picnicing

The total number of picnic tables and adjoining parking spaces in the Planning Area is tabulated in Table 9. 49% of the public use picnic tables are on privately owned lands. Wayside parks constitute 9% of the total number of picnic tables.

TABLE 8. PICNIC FACILITIES, 1967.

Site	Facilities	
	No. of Tables	Parking Spaces
<u>Public:</u>		
Provincial Parks	400	6050
Recreation Areas	500	2370
Wayside Parks	195	650
<u>Private:</u>	<u>1033</u>	<u>3160</u>
<u>Total</u>	<u>2128</u>	<u>12230</u>

Source: Manitoba Outdoor Recreation Facility Inventory, 1967.

Camping

There are 5470 tent and trailer campsites available for public use throughout the Planning Area. 57% of this number are on public recreation land.

TABLE 9. TENT AND TRAILER FACILITIES, 1967.

Site	Facilities	
	No. of Campsites	No. of Trailer Sites
<u>Public:</u>		
Provincial Parks	2586	154
Recreation Areas	252	24
<u>Private:</u>	<u>1575</u>	<u>879</u>
<u>Total</u>	<u>4413</u>	<u>1057</u>

Source: Manitoba Outdoor Recreation Facility Inventory, 1967.

With few exceptions, all campgrounds on publicly owned lands have a creditable quality rating. This is not always the case with privately owned, commercially operated campgrounds. 65% of the total number of privately owned tent and trailer camp grounds have been rated 'primitive' by the Manitoba Outdoor Recreation Inventory.

Attendance figures for camp grounds, other than those in the Whiteshell Provincial Park, are not available. Camp grounds in the Whiteshell Park constitute 72% of publicly owned campsites and 46% of the total number of camp sites in the Planning Area. The number of camping permits sold in the Whiteshell Park in 1969 was an increase of 50% over the 1962 sales figure. In 1969, the July occupancy rate was 75% of the total capacity of 60,357, while in August the occupancy rate was 84.3% of the capacity. Trend lines

indicate that camping permit sales will reach 31000 by 1971 and that 104 more camp sites will be required at that time.¹

b. Water Based Activities.

Swimming

The distribution of swimming beaches is not uniform throughout the Planning Area. Publicly owned beaches, which account for 72% of the total available beach shoreline, are located primarily in the Whiteshell Provincial Park or on Lake Winnipeg. The south eastern portion of the Planning Area is deficient in good quality beaches and must rely, to a large extent, on reservoirs. Privately owned, commercially operated beaches are scattered throughout the Planning Area.

TABLE 10. TOTAL BEACH SHORELINE, 1967

Site	Total Shoreline in feet
<u>Provincial Parks:</u>	
Whiteshell	12,400
Birds Hill	9,000
Grand Beach	15,840
Recreation Areas	3,571
Private	<u>10,530</u>
Total	<u>49,341</u>
Source: Manitoba Outdoor Recreation Facility Inven- tory, 1967.	

¹ Manitoba Whiteshell Provincial Park, Visitor Survey, pp. 25-26.

Canoeing

Canoeing, as used here, refers to trip canoeing on a stream or a combination of streams and lakes. Suitable water for this type of activity is found in the White-shell Provincial Park. The Parks Branch has demarcated a total of 123 miles of canoe routes throughout this area.

With the exception of skiing and camping activity, there is little information which reveals the actual use by Winnipeg residents of facilities provided within the Planning Area. Unfortunately this limitation reduces the effectiveness of a systematic approach to recreation planning for no meaningful relationship can be drawn between supply, or those facilities serving Winnipeg residents and the expressed and unexpressed demand. This dilemma is resolved in the following section where it is shown that expressed demand is consumption or a factor dependent on supply and unexpressed or unfulfilled desire. In view of the limitation imposed by the deficiency of the data on supply of facilities, expressed demand for outdoor activities by Winnipeg residents can be taken as an approximation of supply.

CHAPTER IV

DEMAND ASPECTS

Prior to a concise determination of present market demands for outdoor recreation facilities and before any projections of future demands are made, it is necessary to note the full range of recreation activities.

A. Recreation Activities

Recreation activities are usually distinguished as being general and casual or specific and intensive. The differentiation is that generalized casual activities require a minimum of planning, preparation and equipment.

According to the "Outdoor Activities" section of the Canadian Outdoor Recreation Demand Study, 33% to 50% of the respondents reported participation in generalized, casual activities such as: relaxation, driving around, looking at scenery and seeing new places. Specific activities were characterized by a smaller degree of participation. The only exceptions are swimming, picnicing and fishing, which exhibit participation rates from 27% to 42%.¹

A more recent study of outdoor recreation in Canada has acknowledged that Canadians prefer relaxation to recreation.²

¹ Park Visits and Outdoor Activities of Canadians: 1967 An Overview of Outdoor Activities. p.2.

² Crow, B. W. & Associates, Ltd., A Study of Leisure Needs in Canada.

It also establishes that:

- Canadians express a strong unfulfilled need to spend more leisure time away from home. All survey groups expressed a desire to relax outdoors rather than at home.
- There is generally a greater appeal for non-competitive rather than competitive sports. Although there is a recognition of the need for exercise, it was found that most people prefer exercises where there is a minimum of direct demands.
- There is a small unfilled need to play sports; with variations between survey groups. The average Canadian is a spectator rather than a player.

The fact that Canadians prefer casual activities to specific activities is substantiated in Appendix B, by an overview of participation by Canadians in outdoor recreation. These participation rates are slightly higher than those exhibited by metropolitan Winnipeg residents.

TABLE 11. OUTDOOR ACTIVITY PARTICIPATION RATES, METROPOLITAN WINNIPEG, 1967.

Activities (% of sample)								
Picnics	Camping (tent)	Scenic Driv- ing	Nature Study	Power Boat- ing	Swim- ming	Hik- ing	Ski- ing	Fish- ing
%	%	%	%	%	%	%	%	%
31	15	31	3	17	29	7	2	26

Source: "Outdoor Activities", Canadian Outdoor Recreation Demand Study, 1967.

The expressed demand for skiing, hiking and nature study by Winnipeg residents is substantially below the national average. This comparison is not meaningful by itself, for there are a wide range of variables which determine preferences and the eventual pattern of outdoor activity. The problem in estimating demand is to develop a system that is capable of giving consideration to as many variables as possible.

A recent study of the recreation potential of the west shoreline of Lake Winnipeg utilized a single system approach in order to gauge activity range availability.¹ The determinant of the activity classification is a socio-psychological term of reference, concerned with the number of persons required to operate the activity. Subsequently, a set of ideal types was derived running from the most individualized, least structured, least site oriented, least economic investment and least communicative to the most social, most structured, most particularly site oriented, most investment required, and most communicative recreative activities. The following is the typology which was used to gauge the activity range availability of metropolitan Winnipeg, the west shoreline of Lake Winnipeg and Manitoba.

¹Recreation, West Shoreline of Lake Winnipeg.

"Type I - Singular and individual activities in which the single participant makes all the decisions and is restrained only by the general environmental situation and his own survival.

Examples: Relaxation, sun bathing, swimming, fishing, hunting, trapping, playing, riding, skiing, skating, gymnastics and/or tobogganing.

Type II - Activities in tandem, in which communications between the participants is only rudimentary, and follows a linear chain. Decisions are horizontal and thus equally weighted.

Examples: Hiking, canoeing, water skiing, climbing, boxing, dancing, tennis, handball and/or squash.

Type III - Familial activities in which communications are diagonally and instinctively structured, and (in the case of instrumental) horizontal. Decisions are governed by societal and psycho-biological survival, or need.

Examples: Picnicing, camping, trailer camping, (boating), cook-outs, restaurants, night clubs.

Type IV - Small group activities in which communications tend to travel over pre-established lines. Decisions are often weighted by tradition and governed by societal survival or goals, predetermined rules and psycho-biological requirements.

Examples: Football, hockey, curling, soccer, racing, contests, tournaments, festivals, ceremonies and religious services.

Type V - Group activities in which communications travel in all directions, but in which each individual is either the recipient or the sender at any one time (not both). Decisions are weighted by the policy of the situation and governed by: societal survival, unity of the group, psycho-biological survival, societal goals, and policies determined by abstract and often economic mechanics.

Examples: Bingo, tours and sightseeing, circuses, television, radio, opera, motion pictures, libraries, art galleries, auctions and fashion shows.

Type VI - Mass activities, in which communications are instantaneous and decisions are always one product of joint consideration on the part of all participating social elements. The most structured by type, and the only type to use and implement plans and programmes.

Figure 2
Greater Winnipeg 1965

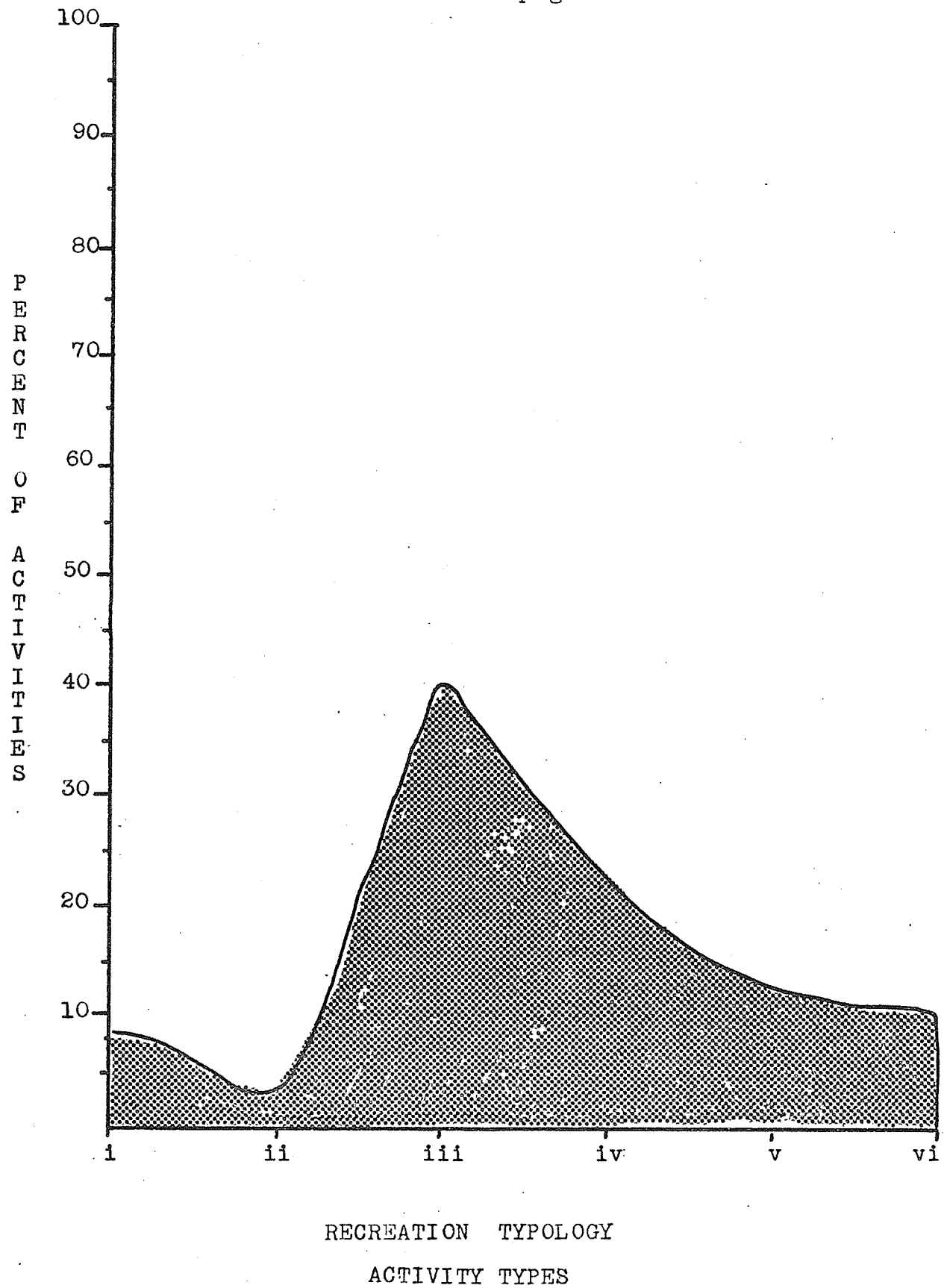
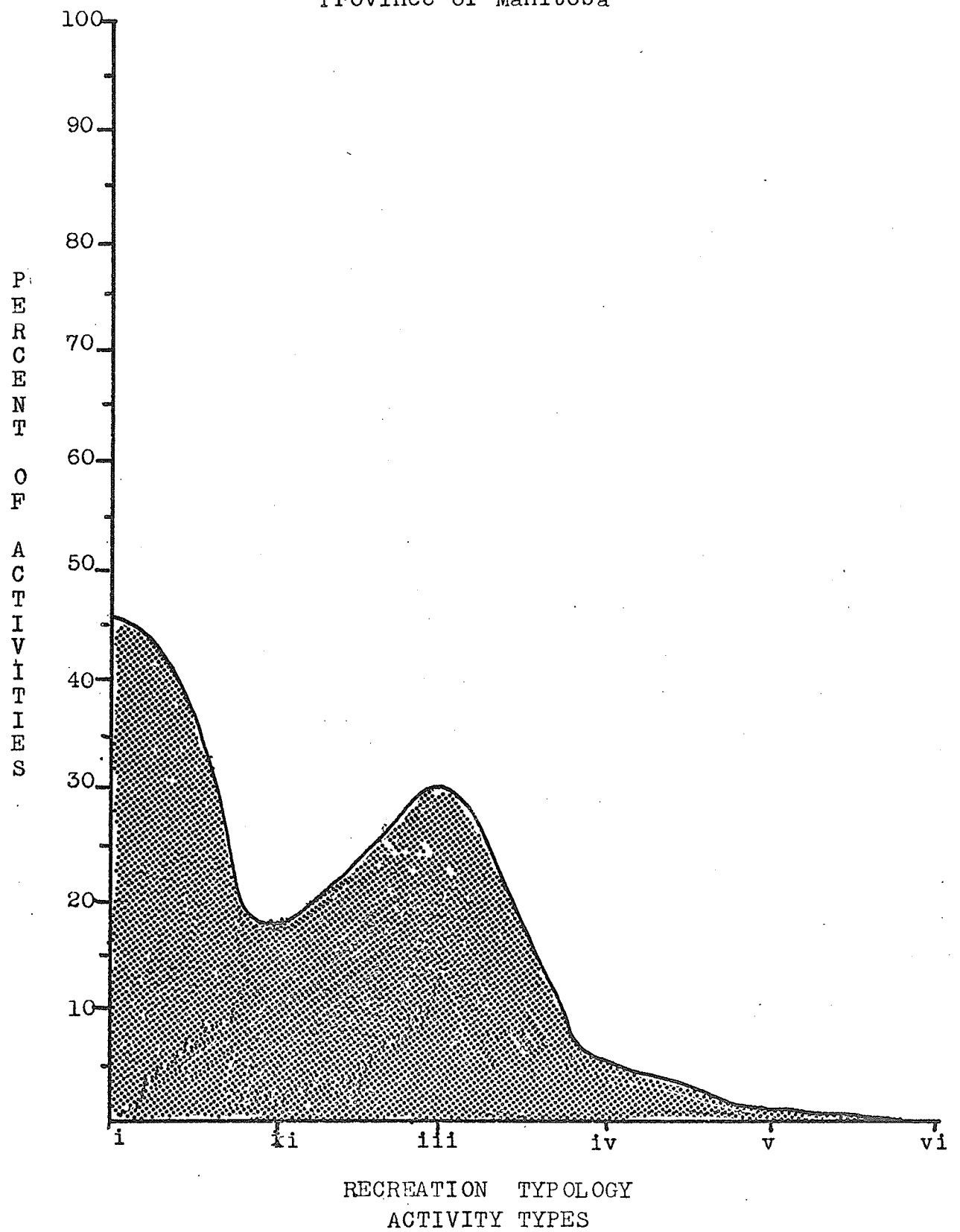


Figure 3

Province of Manitoba



Examples: Educational surveys, meetings, discussions and activities, arts and crafts, fine arts, ballet, music and tactical games.¹

It is evident that the recreation market in Winnipeg is typified by Type III, IV and V activities. (Refer to Figure 2). On the other hand, non-urban recreation development consists largely of Types I, II and III activities, (Refer to Figure 3). The family activity range is a relatively recent aspect of recreation in Manitoba.

The Parks Branch will most certainly continue to emphasize development of individual and family facilities so that the spatial imbalance in the recreation market will persist. It is clear that people who are looking for both individual and social recreation must either stay in Winnipeg - or forego the former for the latter, and travel.

¹Ibid., pp.21-22.

B. Projection of Demand for Recreation Activities

The conceptual problems associated with the measurement of demand for outdoor recreation, as noted in Chapter II, create difficulties in connection with the projection of future outdoor recreation activity. The accuracy of techniques for projecting demand is limited since the conditioning factors of outdoor recreation activity will change simultaneously, in either a correlated or haphazard way. It is impossible to isolate the effect of any one factor. For instance, the quantification of recreation demand involves costs of three kinds: money, time and travel. There can be a trade off between these factors and it is inconceivable that these shifts can be foreseen. Consequently, techniques for projecting future outdoor recreation participation rely heavily on the past range of experience.

There should be a distinction drawn between the technique which simply projects the number of people who participate and the technique that estimates, in a limited fashion, both the actual participation and the unexpressed or unfulfilled desire to participate. The former concept is commonly used in planning for outdoor recreation. It is argued that the distinction between the two concepts is very slight, especially in a changing socio-economic pattern. The author

feels that this criticism is not valid; that the computation of desire or latent demand is a worthy exercise. Through comparison of actual participation and estimated desire for recreation activity, it is possible to calculate the deficiency of available opportunities.

TABLE 12. PROJECTED PARTICIPATION IN OUTDOOR RECREATION ACTIVITIES, METROPOLITAN WINNIPEG, 1966-1986.

Year	Activities							
	Picnics	Camping Tent	Trailer	Swim- ming	Hik- ing	Canoe	Ski- ing	Power Tobog.
	31%	15%	8%	29%	7%	4%	2%	6%
1966	110090	53270	28410	102990	24860	14200	7100	21300
1969	115800	56000	29800	107000	26200	14800	7450	22400
1976	139000	67270	35880	130060	31390	17940	8970	26910
1986	148000	72000	38400	138000	33600	19400	9600	28800

The figures for 1966 represent the actual participation by Winnipeg residents over 15 years of age. Projections for 1969, 1976 and 1986 assume a constant participation rate. Actually the projected figures are only an expression of present consumption patterns, expanded in proportion to the expected population growth. It was possible to calculate the latent desire for the years 1966 and 1976. Unfortunately, there was not sufficient data to project participation for all activities. Only picnicing, camping, swimming, hiking and skiing were treated.

TABLE 13. LATENT DESIRE FOR OUTDOOR RECREATION ACTIVITIES,
METROPOLITAN WINNIPEG.

1966

Age	Activities									
	Picnics		Camping(tent)		Swimming		Hiking		Skiing	
	%	#	%	#	%	#	%	#	%	#
15-24	43	35800	23	19300	66	55000	24	20000	15	12500
25-34	51	31700	19	11800	55	34200	17	10600	9	5600
35-44	54	35400	17	11100	51	33300	13	7700	7	4600
45-54	45	26000	13	7500	37	21400	13	7500	4	2300
55+	27	<u>23600</u>	5	<u>4270</u>	12	<u>10500</u>	7	<u>6100</u>	2	<u>1750</u>
Totals		152500		53970		154400		51900		26750

1976

Age	Activities									
	Picnics		Camping(tent)		Swimming		Hiking		Skiing	
	%	#	%	#	%	#	%	#	%	#
15-24	49	42000	23	22500	66	64500	24	23400	15	14700
25-34	51	42300	19	15800	55	45700	17	14100	9	7450
35-44	54	33500	17	10500	51	31600	13	21000	7	4340
45-54	45	29300	13	8500	37	24100	13	20000	4	2600
55+	27	<u>26400</u>	5	<u>4900</u>	12	<u>11700</u>	7	<u>6850</u>	2	<u>1960</u>
Totals		173500		62200		177600		85350		31050

Age is the most interesting population characteristic because of its high correlation with economic, social and cultural capacities. The foregoing analysis applies various participation rates to specific age groups and in this manner measures the wholesale change in participation by age groups.

For instance, the most significant change in the age structure of the population force of Metropolitan Winnipeg for the period 1966-1976 is anticipated in the 15 to 24 year age group. This age group will form a growing component of the total number of outdoor recreation consumers in Winnipeg. This has implications for the facility requirements of skiing, hiking and swimming.

Having determined the demand in numerical terms, the next step is the translation of demand into the facilities required. To accomplish this the projected demand figures were converted to a more manageable form. Since the heaviest demand for recreation facilities usually falls on weekend days, the average weekday figures have been transformed to average summer or winter seasonal weekend day participation rates.

TABLE 14. AVERAGE SEASONAL WEEKEND DAY PARTICIPATION RATES.

Projected Demand

Year	Summer Activities					Winter Activities		
	Picnic	Camping Tent Trailer	Swim- ming	Hik- ing	Canoe	*Ski- ing	Power Tobogg.	
1966	11350	4480 2420	18350	9800	2500	5200	15500	
1969	12400	4680 2490	19350	10400	2600	5450	16350	
1976	14620	5500 3010	23600	12600	3160	6550	19600	
1986	15560	5700 3220	24900	13450	3420	7000	21000	

Latent Desire

1966	16050	4580	-	28000	20600	-	19500	-
1976	19400	5250	-	32100	33800	-	22800	-

The following table tabulates the total quantity of recreation facilities required by Winnipeg residents in the Planning Area. Total facility requirements were derived by applying figures for the projected demand and the estimated latent need to the use standards listed in Appendix C.

TABLE 15. TOTAL RECREATION FACILITY REQUIREMENTS, 1966-1986.

Year	Activities						
	Skiing Oppor- tunities	Snow Tobog. miles of trail	Hiking miles	Picnic tables	Camp sites	Beach feet	Canoe- ing miles
1966	5200	258	245	2772	2300	7000	70
1969	5450	271	260	2480	3390	7350	72
1976	6550	328	315	2928	2836	9000	88
1986	7000	350	336	3112	2973	9500	96
1966	19500	-	515	4012	-	10600	-
1976	22800	-	945	4850	-	12400	-

CHAPTER V

EVALUATION

A Facility Requirements

A schedule of facility requirements for 1976 and 1986 is presented below. The anticipated facility requirements were derived by subtracting projected figures for 1969, 1976 and 1986 from the estimated demand in 1966. Unanticipated facility requirements were derived by subtracting latent desire in 1966 and 1976 from the estimated demand in 1966.

TABLE 16. ANTICIPATED FACILITY REQUIREMENTS, 1966-1986.

Facility	Total Demand		Added Requirements	
	1966	1969	1976	1986
Skier Opportunities	5200	250	1350	1800
Snow Tobogganing, Miles of Trail	258	13	70	92
Hiking, Miles of Trail	245	15	70	91
Picnic Tables	2272	208	656	840
Camping Sites	2300	90	536	673
Swimming Beach, Feet	7000	350	2000	2500
Canoeing, Miles of Stream	70	2	18	26

TABLE 17. UNANTICIPATED FACILITY REQUIREMENTS, 1966-1976.

Facility	Added Requirements	
	1966	1976
Skier Opportunities	14300	17600
Hiking, Miles of Trail	170	600
Picnic Tables	1740	2578
Swimming Beach, Feet	3600	5400

A comparison of Tables 16 and 17 reveals that:

The latent desire for skiing, hiking, picnicing and swimming in 1966 was far in excess of expressed demand or actual participation.

The unanticipated facility requirements for 1976 exceed the anticipated requirements for that year. For the most part, the anticipated facility requirements are far too conservative. For this reason, unanticipated facility requirements were used as the relevant demand statements.

The second step in the evaluation of facility requirements involves the determination of the net need for facilities. This is accomplished by a comparison of existing supply to projected demand. The balance sheet (Refer to Table 18) indicates either a surplus or deficit in the supply-demand relationship. It should be noted that demand applies only to the Winnipeg population and that factors such as, the accelerated increase of American tourists and pollution, could effect the present relationship of supply and demand.

TABLE 18. BALANCE STATEMENT; DEMAND IN RELATION TO SUPPLY:
1966-1976.

Facility	Supply	1966	Versus Supply	1976	Versus Supply
		Demand Total		Demand Total	
Skier Opportunities	7100	19500	-12400	22800	-15700
Snow Tobogganing (miles)	320	258	+ 62	328	- 8
Hiking Trails (miles)	*N.A.	515	- 270	845	- 600
Picnic Tables	2128	4012	- 1884	4850	- 2722
Camping Sites	4413	2300	+ 2113	2836	+ 1577
Swimming Beach (feet)	49341	10600	+38741	12400	+36941
Canoeing (miles)	123	70	+ 53	88	+ 35
Boat	N.A.	4270		5350	

Skiing, hiking and picnicing are activities in which there is a backlogue of demand for facilities.

In 1966, there existed a need for 12,400 additional skier opportunities or 415 acres of developed ski area. By 1976, there will be an additional need for 3300 more skier opportunities or 110 developed acres of ski slope. The combined total for 1976 is 525 acres. In 1970 a private ski operation at Snow Valley will accommodate an estimated 700 skiers per hour. This reduces the backlogue of facility requirements to 392 acres.

By 1976, 600 miles of hiking trail will be required by Winnipeg residents. This projected figure is well in excess of the present estimated requirement.

There will be demand for 2722 additional picnic tables

by 1976. 1884 of this number represent an existing backlog of demand. Programmed development at Hecla Island, Spruce Woods Provincial Park, Winnipeg Beach Recreation Area and Stephenfield will provide close to 300 additional tables. This creates a net need for 2452 additional picnic tables or 305 acres of developed picnic area.

The Balance Statement indicates that there is a sufficient quantity of camping, swimming, canoeing and snow tobogganing facilities. This situation will remain in effect if the anticipated facility requirements, as outlined in Table 16, are met in the future.

The land requirements for these activities is noted below.

TABLE 19. LAND REQUIREMENTS, 1969, 1976.

Activity	Land Required						Total
	1966-1969			1969-1976			
	Miles	Developed	Backup	Miles	Developed	Backup	
		Acreage	Acreage		Acreage	Acreage	
Skiing	-	390	-	-	110	-	500
Snow							
Tobogganing	13	-	-	57	-	-	70
Hiking	170	-	-	430	-	-	600
Picnicing	-	200	3800	-	105	1995	5795
Camping	-	18	342	-	90	1710	2052
Swimming	.67	17	51	.34	9	27	78
Canoeing	2	-	-	16	-	-	18

B Site Evaluation

Plate 11 illustrates a number of zones located in the Planning Area that are designated for future recreational usage. A number of sites within these zones could conceivably accommodate the facility requirements of Winnipeg residents to 1976.

The designated zones were selected on the basis on the suitability of land for particular recreation activities (Refer to outlined areas, Plates 6a-e) and the accessibility of the site. Zones 1, 2 and 3 are characterized by the most favourable combination of these variables.

Zone 1. Victoria Beach and Traverse Bay are ideally located for day use activity, particularly: picnicing, camping and hiking. According to the Canada Land Inventory these sites possess very high capability for recreational usage. Highway 59 links the area to Winnipeg.

Zone 2. The Winnipeg River zone has a number of recreation sites offering excellent possibilities for swimming, camping, picnicing, canoeing and hiking. Highway 44 provides access to Winnipeg.

Zone 3. Netley Creek affords opportunity for canoeing and camping activity.

Zone 4, is comprised of a single possibility, Snow Valley.

A horizontal scale bar with a double-line border. It is labeled "Scale in miles" below it. The bar has tick marks at 0, 25, and 50 miles.



A ski operation is presently being constructed for 1970.

With the addition of a reservoir, this area could become a year round activity site.

Zone 5. A site near Windygate could be developed primarily as a ski area.

CHAPTER VI

CONCLUSIONS

The feasibility of the provision of public facilities in the designated areas is, in the final analysis, dependent on the discretion of the Department of Tourism and Recreation. At the present time, the demand for outdoor recreation in Manitoba is so great that public recreation areas are being developed as fast as finances will allow. According to Parks Branch officials there is no pressing need for an estimation of long range demand; their case being, that recreation facilities are being provided on a continuing basis. The study does not question the rationale of the current parks program. There is a great backlog of demand which could conceivably grow to even greater proportions.

What then is the value of the planners overview and long range projection? The planners primary aim should be to establish a set of development priorities which can be utilized by the recreation specialist. Cooperation between the planner and the recreation specialist rather than standards for recreation facilities, must be sought and developed. The Planner may aid the specialist in performing his task by emphasizing the value of config-

uration planning, for the recreation complex concept is a planning necessity.

A number of development priorities are listed below:

Year round recreation complexes should be developed. The need for winter outdoor recreation experiences has been emphatically stated by the growing popularity of the snow mobile. The full seasonal use of recreation facilities would mean that added benefits could be derived from fixed capital inputs. This program would also create a greater range of opportunities available to the participant. While skiing in Manitoba is limited by physical contours, it would be possible, by adding to the variety of activities on a site, to make skiing not a sport but an experience. Otherwise, skiing takes on the luster of just another form of consumption, devoid of significance. Opportunities should be provided so that outdoor recreation can be experienced on a social as well as an individual level.

The Parks Branch should continue its present emphasis on the integration of natural features into the park landscape for the purpose of preserving our natural heritage and instilling in people an appreciation of the

outdoors. This might be accomplished by installation of information and nature interpretation centres in all parks. The Parks Branch should also induce people, through their public relations format to visit a variety of recreation areas. Part of this involves the public awareness of existing facilities and the image people hold of them. The Whiteshell is generally considered to be a haven for the middle class while it is thought that the west shoreline of Lake Winnipeg is reserved for lower classes of people. This belief is held largely in response to the available physical facilities in these areas, and will be rectified through the provision of adequate recreation opportunities.

APPENDIX A

Supply Aspects

TABLE A-1

NATIONAL TIME BUDGET AND TIME DIVISION OF LEISURE, 1900, 1950, and 2000

Use of time	Billion hours	% of total leisure time	Billion hours	% of total leisure time	Billion hours	% of total leisure time
1. Total time for entire population	667	100	1329	100	2907	100
2. Sleep	265	40	514	39	1131	39
3. Work	86	13	132	10	206	7
4. School	11	2	32	2	90	3
5. Housekeeping	61	9	68	5	93	3
6. Preschool population nonsleeping hours	30	4	56	4	110	4
7. Personal care	37	6	74	6	164	6
8. Total (items 2-7)	490	73	876	66	1794	62
9. Remaining hours, largely leisure	177	27	453	34	1113	38
10. Daily leisure hrs.	72	41	189	42	375	34
11. Weekend leisure hrs.	50	28	179	39	483	44
12. Vacation	17	10	35	8	182	16
13. Retired	6	3	24	5	56	5
14. Other, including unaccounted	32	18	26	6	16	1

Source: Adapted from Mary A. Holman, "A National Time-Budget for the Year 2000," Sociology and Social Research, Vol.46, No.1, (October, 1961).

TABLE A-2

METROPOLITAN WINNIPEG
POPULATION BY AGE AND SEX GROUPS
1966

Age Group	Total Population	Males		Females			
		Male Population	Of the Male as a % of total Population	Female Population	of the female as a % of the total Population		
0 - 4	50,058	25,789	10.46	5.12	24,269	9.42	4.81
5 - 9	50,946	25,917	10.52	5.14	25,029	9.71	4.96
10 - 14	47,032	24,015	9.74	4.76	23,017	8.93	4.57
15 - 19	44,335	21,422	8.69	4.25	22,913	8.89	4.54
20 - 24	38,975	18,712	7.59	3.71	20,263	7.87	4.02
25 - 34	62,165	30,929	12.55	6.13	31,236	12.12	6.02
35 - 44	65,434	31,450	12.76	6.24	33,984	13.19	6.74
45 - 54	57,748	27,747	11.26	5.50	30,001	11.64	5.95
55 - 64	41,331	19,743	8.01	3.92	21,588	8.38	4.28
65 - 69	14,775	6,809	2.76	1.35	7,966	3.09	1.58
70+	31,377	13,951	5.66	2.77	17,426	6.76	3.46
TOTAL	504,176	246,484	100.00	48.89	257,692	100.00	50.93

TABLE A-3. COMPARISON OF NUMBER OF MALES AND FEMALES
BY 10 YEAR AGE GROUPS, METROPOLITAN WINNIPEG;
1966-1976.

Age Groups	1966			1976		
	Males	Females	Total	Males	Females	Total
0 - 4	-	-	-	-	-	-
5 - 14	49932	48046	97978	-	-	-
15 - 24	40134	43176	83310	49800	48000	97800
25 - 34	30929	31236	62165	40000	43000	83000
35 - 44	31450	33984	65434	30800	31200	62000
45 - 54	27747	30001	57748	31370	33800	65170
55 - 64	19743	21588	41331	27500	29800	57300
65+	20760	25392	46152	19350	21270	40620

Source: Dominion Bureau of Statistics. Canadian Mortality Life Tables were used to derive the probability of survival for the 10 year age groups.

TABLE A-4. LABOUR FORCE, METROPOLITAN WINNIPEG, 1961.

Occupation	Males	Females	Total
Managerial	15,474	1,344	16,818
Professional	11,252	8,589	19,841
Clerical	14,567	23,758	38,325
Sales	9,540	5,680	15,220
Services	13,874	15,076	28,950
Transportation	11,792	1,241	13,033
Primary	2,200	113	2,313
Craftsmen	38,528	7,518	46,046
Labourers	8,572	643	9,215

TABLE A-5. WAGES AND SALARY INCOME, METROPOLITAN WINNIPEG, 1961.

Wage Level	Male	Female
-1000	7,752	13,751
1000 - 1999	8,888	15,794
2000 - 2999	16,217	17,506
3000 - 3999	29,319	7,828
4000 - 5999	35,506	3,129
6000+	14,943	600
6000 - 9999	12,150	-
10000+	2,793	-
Average Wage	3,907	1961

TABLE A-6. EDUCATION, METROPOLITAN WINNIPEG, 1961.

Education Level	Population	
	Attending School	Not Attending School
None	-	66,525
Elementary	76,712	94,445
High School, 1-2	14,148	76,435
High School, 3-5	10,653	105,275
University, 1+	<u>5,322</u>	<u>26,474</u>
Total	106,835	369,154

Source: Dominion Bureau of Statistics, 1961.

TABLE A-7. FAMILY RECREATION EXPENDITURE PATTERNS,
BY CITY.

City	Average \$ Expenditure per Family							
	1957	% of total	1959	% of total	1962	% of total	1964	% of total
Montreal	107	2.1	129	2.4	125	2.3	174	2.7
Toronto	164	3.2	162	2.9	180	3.3	260	3.6
Winnipeg	139	2.9	163	3.4	185	3.5	165	3.0
Edmonton	198	4.0	210	3.4	218	3.8	190	3.3
Vancouver	159	3.3	162	3.4	191	3.4	196	3.4

TABLE A-8. FAMILY RECREATION EXPENDITURE PATTERNS, BY
INCOME GROUP.

Income Group	Average \$ Expenditure per Family							
	1957	% of total	1959	% of total	1962	% of total	1964	% of total
2500 - 2999	111	3.5	68	2.2			77	2.5
3000 - 3499	112	3.3	104	2.8	87	2.3	86	2.3
3500 - 3999	120	2.9	112	2.8			111	2.7
4000 - 4499	134	3.0	121	2.8	123	2.7	110	2.4
4500 - 4999	124	2.5	126	2.6			140	2.8
5000 - 5499	167	3.1	130	2.4	158	2.8	156	2.8
5500 - 5999	175	3.1	163	2.9			207	3.4
6000 - 6999	338	5.2	172	2.8	215	3.3	206	3.1
7000 - 7999			265	3.7	291	4.0	276	3.6
8000 - 9999			249	3.0			292	3.4
10,000+			391	3.2			467	3.7

TABLE A-9. FAMILY RECREATION EXPENDITURE PATTERNS,
BY AGE OF HEAD.

Age Group	1957 % of total		Average \$ Expenditure per Family 1959 % of total		1962 % of total		1964 % of total	
-25	170	3.5	188	4.0	154	2.9	190	4.1
25 - 34	149	3.1	171	3.1	172	3.1	245	3.7
35 - 44	143	2.8	180	3.0	176	3.1	241	3.3
45 - 54	140	2.8	169	2.7	164	2.8	260	3.4
55 - 59	114	2.4	147	2.5	197	3.5	199	3.0
60 - 64	117	2.5	136	2.6	168	3.1	132	2.3
65+	129	3.2						
65 - 69			136	2.8	114	2.5	70	1.7
70+			78	2.2	145	3.2		
70 - 74							93	2.2
75+							64	2.0

TABLE A-10. DETAILED AVERAGE RECREATION EXPENDITURE,
METROPOLITAN WINNIPEG.

Recreation	\$ Expenditure			
	1957	1959	1962	1964
Movies	8.2	14.3	10.1	
Plays	1.5	4.2	1.8	N.A.
Sports Events	5.3	11.2	14.1	
Toys	8.6	9.8	9.0	
Games, Sports	13.6	17.1	7.9	
Social, Club Dues	8.7	14.4	15.9	
Radio	12.0	20.1	18.9	
T.V.	36.5	29.2	24.2	
Musical Instrument	1.6	16.2	7.1	
Repairs for Radio, T.V.	7.9	14.2	15.3	
Record Sheet Music	4.6	7.7	6.1	
Photography	13.2	19.8	14.5	
Pets	4.3	7.7	8.1	
Decoration	2.8	6.6	2.1	
Other	9.9	5.5	3.9	
Total	139	198.2	185	

Source: Dominion Bureau of Statistics.

TABLE A-11. EXISTING RECREATION FACILITIES, 1967.

Site	Acre- age	Beach in ft.	Campgrounds		Picnic		Snowmobile	
			No.of camp- sites	No.of trailer sites	No.of tables	Park-ing	No.of Rentals	Miles of Trail
<u>Public:</u>								
<u>Provincial Parks</u>								
Grand Beach	6080	15840	320	109	50	2000	-	-
Birds Hill	9300	7000	220	45	100	3500	7	50
Whiteshell	<u>675840</u>	<u>12400</u>	<u>2046</u>	<u>N.A.</u>	<u>250</u>	<u>550</u>	<u>10</u>	<u>250</u>
Total	690220	35240	2586	154	400	6050	17	300
<u>*Spruce</u>								
Woods(1970)	58176	N.A.	75	-	65		-	20
<u>Recreation Areas</u>								
St.Malo	242	N.A.	102	-	200	440	-	-
Norquay	107	-	100	24	200	430	-	-
St.Ambroise	100	N.A.	Prim.	-	50	-	-	-
Patricia Beach	<u>152</u>	<u>1320</u>	<u>50</u>	<u>-</u>	<u>50</u>	<u>1500</u>	<u>-</u>	<u>-</u>
	601	1320	252	24	500	2370		
<u>*Wpg.Beach</u>								
(1970)	100	2250	N.A.	N.A.	N.A.	N.A.	-	-
<u>Wayside Parks</u>								
Whitemouth Falls	5				35	150		
St.Adolphe	3				4	15		
St.Agathe	3				4	15		
Hyde Park	3				4	10		
Norquay	2				7	20		
Norris Lake	8				9	10		
Netley Creek	2				13	10		
Breezy Point	1				5	10		
Hadashville	10				15	-		
Agassiz	3				15	75		
Richer	3				15	-		
Marchand	3				6	-		
Dawson Trail	3				7	-		
Whitemouth River	15				18	250		
Pineland Nursery	2				7	30		
Blueberry Hill	3				15	-		
E.Braintree	1				11	20		
Winnipeg River	3				4	20		
Letellier	<u>N.A.</u>				<u>N.A.</u>	<u>N.A.</u>		
	72				195	650		

Continued TABLE A-11.

Site	Acre- age	Beach in ft.	Campgrounds		Picnic	Snowmobile	
			No. of camp- sites	No. of trailer sites	No. of tables	Park- No. of Rentals	Miles of Trail
<u>Private:</u>							
St. Malo	7	200	*Prim.	Prim.	2	-	-
Beausejour	41	200	"	"	150	-	-
Lac Du Bonnet	8	1100	50	"	8	100	-
Lac Du Bonnet	25	150	Prim.	"	5	30	-
Lac Du Bonnet	4	100	"	"	3	30	-
Lac Du Bonnet	50	300	"	140	200	-	-
Lac Du Bonnet	10	-	"	Prim.	25	-	-
Lac Du Bonnet	8	-	"	"	12	-	-
Lee River	20	-	"	"	15	-	-
St. Adolphe	13	-	"	40	45	-	-
St. Anne	19	-	"	24	50	-	-
St. Anne	174	3960	1000	600	380	3000	-
Woodlands	40	150	75	75	123	N.A.	-
St. Laurent	10	900	Prim.	Prim.	-	-	-
Grunthal	38	120	-	"	15	-	-
Steinbach	10	-	Prim.	-	-	-	-
Miami	4	-	-	-	-	-	1
Grand Marais	1	-	-	-	-	-	-
Lakeshore Hgts	160	2600	-	-	-	-	-
Almsdale Cove	60	250	-	-	-	-	-
Beaconia	60	500	-	-	-	-	-
Total	766	10530	1575	879	1033	3160	-

*Primitive

Source: Manitoba Outdoor Recreation
Facility Inventory, 1967.

This inventory has not been finalized by the Parks Branch. Coverage is inadequate in a number of areas, particularly the Interlake and the shoreline of Lake Winnipeg. A number of sites have not been surveyed.

Some are: Bison Park, Kinsmen Lake, Stonewall, St. Andrews Locks, The Oasis, Lower Fort Garry, Chesleys, Petersfield Park, Sportsmans Paradise Lodge, Matlock Beach, Wytewold Beach, Ponemah Beach, Sandy Hook Beach, Willow Island, Gimli, Victoria Beach.

APPENDIX B

Demand Aspects

TABLE B-1. AN OVERVIEW OF OUTDOOR ACTIVITIES OF
CANADIANS, 1967.

	Activities										
	Picnics	Camping (tent)	Looking at Scenery	Nature Study	Power Boating	Swimming	Hiking	Skiing	Fishing	None	
	%	%	%	%	%	%	%	%	%	%	%
<u>TOTAL</u>	<u>42</u>	<u>14</u>	<u>37</u>	<u>6</u>	<u>15</u>	<u>39</u>	<u>14</u>	<u>6</u>	<u>27</u>	<u>10</u>	
<u>REGION</u>											
Atlantic											
Provinces	42	15	38	7	12	36	6	4	33	10	
Quebec	33	11	26	5	11	31	21	8	21	15	
Ontario	44	13	42	7	19	47	11	6	29	8	
Prairies	50	14	38	4	13	34	9	5	26	38	
British											
Columbia	45	21	48	6	20	49	17	7	31	8	
	%	%	%	%	%	%	%	%	%	%	%
<u>URBAN</u>	43	15	39	6	17	43	15	7	27	10	
<u>RURAL</u>	37	11	30	5	10	29	9	4	27	10	
	%	%	%	%	%	%	%	%	%	%	%
<u>Socio-Economic</u>											
<u>Level</u>											
Upper	46	14	46	9	22	50	16	11	29	5	
Middle	51	18	39	7	17	46	17	8	32	6	
Middle	39	14	35	5	12	37	12	4	26	9	
Lower	39	14	34	5	13	36	13	4	26	11	
Lower	28	7	27	4	6	21	7	2	20	23	

Continued Table B-1.

Age	Activities									
	Picnics	Camping (tent)	Looking at Scenery	Nature Study	Power Boating	Swimming	Hiking	Skiing	Fishing	None
	%	%	%	%	%	%	%	%	%	%
18-24 years	43	23	39	6	26	66	24	15	33	4
25-29 years	51	19	39	5	21	55	17	9	28	7
30-39 years	54	17	37	7	16	51	13	7	32	7
40-49 years	45	13	39	7	14	37	13	4	30	8
50 years and over	27	5	34	5	7	12	7	2	18	18
	%	%	%	%	%	%	%	%	%	%
<u>Family Consumption</u>										
No Children in Household	29	10	37	5	13	29	12	6	22	15
Any Children in Household	50	17	37	7	17	47	15	7	31	7
Any Children										
15-17 years	44	17	39	8	17	44	16	7	33	8
10-14 years	48	16	37	7	16	45	15	7	31	8
5-9 years	54	16	36	7	16	48	14	6	31	7
2-4 years	56	16	36	6	15	49	13	6	29	8
Under 2 years	52	16	35	6	14	44	11	5	26	9

Source: Parks Visits and Outdoor Activities of
Canadians: 1967 An Overview of Outdoor Activities.

TABLE B-2. FREQUENCY OF PARTICIPATION FOR GROUPS THAT PARTICIPATE.

Frequency/Year	Activities					
	Picnic	Camping	Swimming	Hiking	Skiing	Power Boating
Mean Number	6.7	-	15.0	25.6	21.9	12.0
Median Number	6.8	-	9.2	17.6	15.9	6.0

Source: A Study of Leisure Activities in Canada, 1968.

TABLE B-3. AVERAGE SUMMER ATTENDANCE, RECREATION SITES IN PLANNING AREA, 1969.

Period	Average Attendance		Ratio
	Average Week-end Day	Average Week Day	
May	4074	2250	1.82
June	6720	3650	1.84
July	12111	6850	1.76
August	12952	9240	1.30
Season	9381	5020	1.87

*Coverage: Whiteshell Provincial Park, Grand Beach Provincial Park, Birds Hill Provincial Park, Norquay Beach Recreation Area, Patricia Beach Recreation Area, St. Malo Recreation Area, St. Ambroise Recreation Area.

Source: Provincial Parks Branch Gate Counts.

APPENDIX C

EVALUATION

POTENTIAL USAGE RATINGS FOR SITES WITHIN 60
MILES OF GREATER WINNIPEG.

Metropolitan Winnipeg Parks Systems and Stan-
dard Study.

The ratings given for each site refer to the sum of four scores given to the site: two scales, the Distance Scale and the Facilities Scale and two ratings, the Site Proximity Rating and the Lake Proximity Rating.

These ratings and scales are detailed below:

The Distance Scale takes into consideration the decreasing usage potential the farther a site is from Metropolitan Winnipeg. The scale is as follows:

- 3 - 20 miles or less from Greater Winnipeg,
- 2 - 40 miles or less from Greater Winnipeg,
- 1 - 60 miles or less from Greater Winnipeg.

The Site Proximity Rating takes into account the increase in usage potential when two or more parks and/or recreation sites are in close proximity, that is, within five miles of each other. Where this occurs each site is given a proximity rating of 3.

The Lake Proximity Rating takes into account the increase in usage potential where a site is at or within $\frac{1}{2}$ mile of a lake and is given as rating of 4.

The Facilities Scale gives each facility a rating in accordance with its likely impact upon usage potential.

The total potential usage rating of each site is pre-

sented as follows:

Site Name	Total Potential Usage Rating
Whiteshell Provincial Park	15
Otter Falls	28
Nutimik Lake	<u>30</u>
Total	73
Chesley's	33
Sportsman's Paradise Lodge	27
Petersfield Park	26
Sandy Hook	25
Grand Beach Provincial Park	23
Gull Lake (polluted)	23
Winnipeg Beach	22
Bison Park	22
Holiday Beach	21
Rotary Lake	21
Willow Island	20
Hillside Beach	20
Gimli	19
Patricia Beach	18
Matlock Beach	17
Wytewold Beach	17
Ponemah Beach	16
Lake Riviera	16
Adolphe Park	16
St. Ambroise Beach	15
Norris Lake	15
St. Andrew's Locks	13
Lower Fort Garry	13
St. Malo	13
Carmen	13
Kinsmen's Lake	13
The Oasis	12
Rendezvous Park	11
Agassiz Provincial Forest	11
Sandilands Provincial Forest	11
Delta Marsh	11
Island Park	10
Miami Beach	10

Site Name	Total Potential Usage Rating
Town of Selkirk	9
Norquay Beach	9
Stonewall	8
Lee River Provincial Recreation Area	5
Steinbach	4
Morris	4

APPENDIX D

Standards

STANDARDS

Wisconsin's Outdoor Recreation Plan has been used by the author as a guide for appropriate use capacity standards. These standards are not sufficiently researched and should be considered as guides and not creditable standards.

Use standards differ from design standards in that they are not highly detailed and where design criteria have a range of values, use standards have a single value for intensity of use per acre, per mile of trail, etc. Use standards must reflect design criteria but their primary function is to relate existing and potential supply to existing and potential demand. Hence knowledge of recreation activity participation (actual and desired) is essential.

The following guides have been used and relate supply to demand for recreation facilities.

Land Based

Picnicing

- Use guides
- a. One developed acre for 40 picnics at 8 tables per acre per day.
 - b. Nineteen back-up (undeveloped) acres per one developed acre (allowing less than $\frac{1}{2}$ acre parking for 10 cars).
 - c. Turnover rate of 1.6 per table per day, and over 3 people for each table equals 40 persons per day per developed acre.

General Comments

- a. Wayside picnic areas would not need more than 2 or 3 acres of back-up land per developed acre.
- b. Wayside picnic areas would not need to be located within 25 miles of each other.

Camping

- Use guides
- a. One acre of developed land (site area) accommodating 5 camping units.
 - b. Nineteen acres of back-up (undeveloped) land per one acre developed land.
 - c. At 3 campers per unit, the 20 acres accommodates 15 campers per day.

General Comments

- a. Campsite areas used for transient overnight trade do not require large (20 acres) areas of back-up land.
- b. Standards should be established for different types of camp grounds (primitive to highly developed).

Hiking and Nature Study

- Use guides
- a. Hiking - 40 people per mile of hiking trail per day.
 - b. Nature study - 50 people per mile of trail per day.

General Comments

- a. A general turnover rate on 1 or 2 mile trails may be 8 times creating capacity for 400 people per mile per day.

Skiing

Use guides: One acre of developed slope per 30 skiers.

General Comments

Site capacity of a ski area is limited by tow capacity. This is in turn, affected by required safety standards, type of equipment, speed of ascent, rigors of ascent slope, and physical requirements imposed upon people by tow design. However, physi-

cal space of the ski area is an overall limiting factor, assuming investment capital is available for equipping the area with maximum lift capacity facilities.

Water Based

Swimming

Use guides: 555 swimmers per beach acre per day; 185 swimmers per acre at anytime with a daily turnover rate of 3*. Assume 3 back-up acres per acre of beach and 200 ft. of beach per swimmer. * Estimated that swimmers over age 12 represent 85% of the total.

Boating

Use guides

- a. 1 person per 6 acres of surface water.
- b. At an average of 2.5 persons per boat equals 15 acres per boat.
- c. A daily turnover rate of 3 boats give the equivalent of 2 acres surface water per person per day.

General Comments

- a. 15 acres per boat may not be attainable as a goal in some areas; 10 acres per boat may be necessary and feasible with future demand pressures and widely adopted use regulations.
- b. Small lakes with restricted motor sizes could support more than one boat per 15 acres.

Canoeing

Use guides

- a. 1 person per $\frac{1}{4}$ mile of stream.
- b. At an average of 2.0 persons per canoe equal $\frac{1}{2}$ mile of stream per canoe.
- c. With 18 canoes per mile per day equals 36 people per mile per day.

Snow Tobogganning

- Use guides
- a. Assume 1 person per 2/3 mile.
 - b. At an average of 1.5 persons per snow mobile equals 1 mile of trail per snow toboggan (travel rate 20 m.p.h, loading time).
 - c. With 40 snow mobiles per mile per day equals 60 people per mile per day.

General Comments

- a. Assume average travel speed 15 m.p.h. considering loading - reloading phase, stoppages, conservation, noise level.
- b. Turnover rate is twice per days assuming a three hour period of ski-dooing.

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