

# **A DESIGN FOR ASSESSING OUTDOOR RECREATION DEMANDS IN CANADA (1967)**

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This report presents the design of a series of investigations to assess the demand for outdoor recreation in Canada. The purpose is to set out the major conclusions of this design effort, and to focus attention on the more critical points on which decisions will need to be made in the near future. The intent is to discuss only major inferences and concerns, and to point out those to which the earliest attention should be given. Extended discussion of the many methodological points and findings reached in the course of the design study can better be brought out in other communications and reports. See especially the CORD Study Data Collection and Documentation Volumes.

There are six major areas of conclusions:

1. A critical need exists to have a far more complete understanding and measurement of outdoor recreation demands in Canada, to guide investment and management planning, to identify and evaluate policy choices, and to forecast recreation use of resources in Canada as it relates to alternative development proposals.
2. Demand studies are fully feasible at the current time within reasonable cost limits. Results of the contemplated studies would be directly applicable to outdoor recreation program planning at the several levels of responsibility in Canada. Demand studies do not directly supply policy and planning solutions, but they do provide an important basis for making better decisions.
3. The necessary investigations should be done as a series of complementing tasks which combine into a strategy of studies rather than as a single, more limiting study of outdoor recreation demand. None by itself is a demand study, but the whole series will provide needed demand estimates.
4. The major components of the overall study would center first on tasks primarily to acquire data from:
  - a. household surveys,
  - b. park user surveys,
  - c. supply inventories.

The study would then utilize the results of these surveys in a series of analytical steps to assess demands and needs, and to formulate planning and policy implications. The result of the entire effort is heavily dependent on the data program. Work on each of the three data programs should be initiated early to supply the necessary information in sequence and to provide a comprehensive data base. There is a need for compatibility and uniformity in outdoor recreation data necessary for the demand study - which is collected by the different agencies and jurisdictions. While a focus may be on the National Parks, data and exchanges of data from other sources, especially the Provinces, are necessary to assess the demand for a wider spectrum of outdoor recreation and to appraise meaningfully the demand for use of the federal areas. Further, as the use of each recreation area, regardless of jurisdictional responsibility, bears relation to the use of others in a region, data associated with a full range of recreation opportunities will need to be obtained.

5. The several studies which are to be undertaken should be done in part by responsible agencies and organizations outside of Parks Canada and in part by staff members of the Department. The capabilities of the different groups differ widely, as do the requirements for individual tasks in the demand studies. Responsibility for coordination of the studies should best remain within Parks Canada.
6. The studies should be structured to provide for a continuing process of demand assessment. Demand responds to alterations in the population and to changes in the facilities and opportunities provided to that population. Therefore, there can be no “once and for all” determination of “the outdoor recreation demand.” To provide the useful guide to planning and policy for which it is designed, the assessments will need to be continuing. The major cost of the demand studies will be in the early stages with continuing programs of demand studies becoming far more routine, and subsequently, less expensive.

### **OUTDOOR RECREATION AND DEMAND**

A result of the accelerating effect of technological, economic, political, and social changes in our society and in our environment has been a rapidly increasing awareness of environmental amenities, their destruction, their lack of availability, and increases in the demands for them. This is especially true, and seems to find the sharpest focus in, the case of parks and outdoor recreation. It has been amply demonstrated that the demand for outdoor recreation is large and is growing. If the physical opportunities exist - and that is important - many people choose to spend time and money on outdoor recreation. This is reflected in all series of statistics or indices of magnitude - attendance counts, license fees collected, equipment sales, and recreation travel.

It is not enough to know that demand is increasing. Public bodies - at national, provincial, and local levels - and private firms need to have the nature of demand for activities and facilities defined in such a way that they can make rational policy and investment decisions to meet the expressed desires of the various user publics.

The chief need is a better definition and examination of the demand for recreation activities and facilities that vary by type, location, and management. Information is required on the future demand for present facilities and for alternative areas and facilities that might be added.

Demand studies have a very practical purpose. Their objective is to yield estimates or forecasts for improving or adjusting the supply of recreation opportunities and to estimate the probable effects of alternative programs and policies. Recreation planners at any jurisdictional level remain at a loss without some notion of how recreation use will respond to alternative recreation opportunities that might be provided.

What is needed is not a collection of miscellaneous facts, but an understanding of the relationships inherent in recreation behavior and ability to forecast the effects of proposed alternative actions. A more efficient and equitable provision of recreation opportunities is dependent upon the recognition of the wide spectrum of outdoor recreation possibilities in all regions of the country, and an assessment of the relative demands for different segments of this spectrum. Demand statements are tangible expressions of personal values that are most significant as guides to what people actually want.

Park and recreation area attendance statistics are collected by nearly all public park and recreation agencies. While there are difficulties associated with the accuracy and comparability of these figures, the major weakness is that far more data and analysis are required before an explanation can be offered for the patterns of use that occur. If the statistics from different areas are to be meaningful, and if much is to be learned from them, they must be related to economic, social, and physical environments.

Many past studies of recreation demand have yielded far less than would have been possible with similar resources. A major factor has been a misunderstanding of the quantitative results. This in large part stems from confusion of recreation demand terminology, given wide currency by the U.S. Outdoor Recreation Resource Review Commission studies. Many have unfortunately and uncritically read into this early work, and subsequently propagated, erroneous concepts of demand. The trouble arises from a confusion over the difference between demand and consumption. Use or attendance figures are incorrectly called demand, instead of being interpreted as consumption or the interaction of both demand, which certainly exists, and supply of opportunities, which also exists. The amount of recreation demand varies with the number of facilities available, thereby making some quantitative estimate of this dependence necessary for sensible planning.

This is more than semantics. It can direct planning efforts to wrong conclusions or to irrelevancies and blunt plans and investment policy in outdoor recreation. As Professor Wantrup warned years ago:

“existing projections of land and water use are neither conceptually nor empirically identical with projections of land and water demand. In the first place, use projections do not separate demand/supply conceptually nor statistically. If demand is to serve as a principal orientation for public land and water policy - that is to help in planning on the supply side - problems of demand and supply need to be separated conceptually and in empirical investigation, variables pertaining to demand must be differentiated from those pertaining to supply.”

The warning has been repeated in the technical literature, and empirical evidence supports the importance of distinguishing between consumption and demand. Consumption data refer to and are measures of participation. Participation is dependent upon demand but it is also dependent upon supply. In fact, participation rates seem more likely to vary with the supply of opportunities than with demand factors. For example, people make greater use of water recreation facilities per capita in the Maritimes than they do in the Prairies, the differences having far more to do with the availability of water than with differences in incomes, education, or age distribution between the two populations. The point is that observation of what occurs will not alone permit judgments of relative demands.

The extent to which the standardized methods and an improper notion and interpretation of demand can go astray was illustrated by public discussion of the Wisconsin Council of Ontario's Conference on Parks and Outdoor Recreation in April of 1967. The evaluation of the user statistics as demand followed the prevalent “demand” determination methods. This led to the conclusion that some \$93,000,000 was needed in further recreation facilities to catch up with demand. If these added facilities were put in place and the same study repeated, it would unfortunately show that instead of having

met the demand with the expenditure, as would have been expected, the gap between supply and demand would be even greater. The added facility supply would have brought about increased visitor numbers which would then be mistakenly read as even greater “demand”.

A methodology which mistakes consumption, or in the case of recreation, visits or use with demand, will indicate more demand for the same type of facilities in those areas where more of the facilities are located. This can have the important consequence of perpetuating the kind of facilities already in place in the areas already best served. Thus, as facilities are developed and used, new studies would report that more of the same should be built in these places. Nearly any manner or amount of investment can be “justified” and investment decisions may be severely warped. Furthermore, some of the most important recreation demands of the population are never brought to light. It says, in effect, that if only white bread is available for purchases, the subsequent buying of white bread by people shows that there exists a demand for white bread but none for brown and only more white bread should be supplied.

The standardization of methodology, the bulk of the reports, the mass of machine-derived numbers, and the dollar cost involved do not lessen the inherent weakness of these procedures. The concepts underlining the methods are simply inadequate for the intended purpose, making the subsequent collection of facts and figures almost worthless.

The single most serious and most fundamental deficiency in most demand surveys and studies is that they do not provide any means of determining how recreation use will respond to changes in supply - and that, after all, is the portion on which guidance is needed. The studies, consequently, are of little value as an aid to planning or to policy decisions.

Recreation demand studies, to be useful for planning purposes, must consider the effect of both supply and demand factors on recreation use or participation. Use data in the form of participation rates of population segments or visits to recreation areas must be obtained, but the interpretation must consider that both demand and supply variables explain or determine these rates. That is, the emphasis should be placed on determining and explaining patterns of use which emerge given an availability of opportunities and the characteristics of the using populations. Data should be collected and analyzed in such a way that predictions can be made of how the use patterns would be expected to change given changes in supply, that is, changes in the availability of recreation opportunity. This would allow estimates to be made of the consequences of varying recreation investments or varying recreation policies. For example, it would then be possible to make a forecast of the use that might be expected of a proposed provincial recreation area, taking explicitly into account such things as its location, size, facilities, and the existence of other recreation areas in proximity to it.

The important implication of this for the design of recreation demand investigations is that it is quite impossible to carry out studies in a meaningful way by only asking people how many times they participated in various kinds of outdoor recreation activities. The supply of opportunities is ignored; consequently, very little of the difference in participation rates among different individuals or even groups of individuals can be explained. A far more critical part of the explanation of recreation behavior is the supply side of the equation.

Statements can be made of the demand in Canada for any commodity - automobiles, houses, or beef - but these must be taken to mean the quantity demanded at the prevailing prices, incomes and given levels of other factors. If these prices or other factors were different, the amount demanded would differ. The demand for outdoor recreation similarly depends on various factors. One of the most important of these is the availability of opportunities; there can be no set quantity of recreation demanded by a population. Any prediction of recreation demand must, therefore, consider supply elements.

Listings of recreation areas, with their characteristics and other inventory data, are compiled in increasingly complete fashion. However, owing to lack of standardization in facility measurement, the difficulty of assessing general resource availability for activities such as hunting and fishing which take place outside organized recreation areas, and the complexity of coping with quality differences, measures of supply are not easily quantified. Whatever explicit measures of supply are available must be made an integral part of any studies to be undertaken.

The demand study should be designed to yield data for making estimates and gaining insights into the recreation demand phenomena throughout Canada for a very broad spectrum of outdoor activities. The spectrum of outdoor recreation should be as wide as possible. Remote recreation opportunities such as many of the National Parks, various types of intermediate areas such as many Provincial Parks, and user-oriented recreation areas typified by urban parks, should all be included. Studies should point out the demands for outdoor recreation in Canada, the roles played both by the National Parks and by other park and recreation areas in meeting this demand. In setting forth a broad view of recreation as a point of departure, insight can be gained into the varied demands for recreation and the interrelationships between these demands.

Data should be collected and analyzed in such a way that estimates of the complementarities and competitive aspects between recreation areas and facilities can be estimated, however crudely. It should be possible to say, for example, that if the facilities or opportunities are increased in an area by a certain amount, that the visits to existing areas should go up, down, or remain unchanged. This would have very important implications for investment decisions and policy formulation. For instance, it would be of great interest to know the effect of development of Provincial parks and recreation areas on the use which is made of National Parks and - probably even more important and of greater magnitude - the effect of development of urban-oriented outdoor recreation areas on Provincial parks.

Another aspect which the demand studies must consider is the pent-up demands not now currently being expressed by the population because of the non-availability of facilities or areas. The appraisal of this aspect of demand can prove most difficult. It is one thing to estimate how use would vary depending upon the proximity of population to a park or recreation area of a given type and quality, but it is quite another problem to estimate the use which would take place in an area or at a facility which does not currently exist. Some estimate or feeling beyond sheer conjecture of such demands is needed. The demands can perhaps be approximated by observing close parallels and extrapolating from this experience, or they may be partially assessed through household surveys.

Another general problem which is also difficult is to establish demand parameters in such a way that useful statements can be made about changes in demands over time, particularly over the long periods of time which are implicitly contemplated in recreation investments. Recreation in its current dimension is a rather recent phenomenon, certainly in large part stemming from the post World War II period. As such, the relationships have not been as stable as relationships existing for many commodities in which demand studies are often made, such as food products, apparel, automobiles, or appliances. There are within outdoor recreation activities degrees of faddism and rapid changes in taste, sometimes owing to changes in technology as, for example, in motor boating. That the general demand for outdoor recreation will be increasing throughout the foreseeable future is undeniable, but estimating the changes in the components of the demand is going to pose continuing difficulty. The study should be designed to yield some insight into these problems.

The study should also proceed so that further investigations can be carried on which will complement the initial or early studies. That is, the recreation demand study cannot be a “once and for all” study but should be a continuing program of research and planning with a series of new studies of updating data, incorporating new and continuing analysis, and exploring different spectrums of the recreation demand question.

The simple collection of facts and figures is not enough. The end should be an orderly classification and explanation of the interrelationships inherent in the figures. This explanation should be the central goal of a continuing program of recreation demand studies.

### **THE STUDY PROGRAM**

The demand study should be performed as a sequence of individual studies or tasks. These should be coordinated and scheduled in such a way that the information needed for one task is generated by the preceding work, and should build from work already performed or underway.

The major data generation phases will need to be initiated first. This will involve work on:

1. household surveys, in which recreation habits of Canadians will be determined;
2. park and recreation user surveys, to ascertain the nature of use of recreation areas of all types in all regions, together with characteristics of the users; and
3. recreation supply inventories, which will assess the extent and nature of recreation opportunities available to Canadians.

The subsequent phases will deal with analysis of the data and the determination of demand parameters. The program should lead to an assessment of relative demands and related needs and to the implications for planning recreation programs, policy formulation, and development strategy not only for the National Parks, but also for other recreation areas provided by all levels of government and private agencies.

#### ***TASK 1: RECREATION PARTICIPATION SCREENING***

This portion of the study will focus on participation rates among various population segments in all regions of Canada. It will yield information on the proportions of the population which take part in recreation activities and visits parks of different kinds. This should provide initial useful data and be invaluable for structuring later tasks.

This study should be performed early. It can, in view of the lack of availability of Statistics Canada surveys, such as the Labour Force Survey, be most expediently done by existing market research firms who have well established population probability samples covering all segments and all regions of the country. These surveys, which are commonly done twice a year, are designed to include a range of questions serving various clients and can be augmented to include a small number of questions relating to outdoor recreation participation. It is of the highest priority, in terms of timing; the scheduling of later studies and the necessary sequencing required that it be done in the fall of 1967.

The flow chart for these tasks, prepared by Knetsch, along with relevant information on which tasks were carried out when, are found in Volume I. One may wish to look at Figure 1 and Tables 1 to 5 of Volume I (note that in 2006 what matters is that the studies were carried out not what is in particular Volume 1 tables).

#### *TASK 2: A STUDY OF MOTIVATIONAL FACTORS*

This study is to isolate various motivational factors which are associated with participation in outdoor recreation activities among people in different socio-economic and locational situations. Activity participation rates vary enormously between different individuals. Part can be accounted for by differences in the opportunities available. Part can be explained by socio-economic variations. Yet major differences remain. The study would seek to discern the importance of personality and other motivating factors which are linked to preferences for outdoor recreation. Data collection for this can best be done under contract with existing market research firms. In depth interviews with recreation activity participants and non-participants are needed. Results from it are expected to provide guidance for structuring the household survey (Task 3) and to yield significant insight into the meaning of responses obtained in this and other components of the overall study. Results may have important planning and policy implications on their own.

#### *TASK 3: HOUSEHOLD SURVEY*

This study would not be designed to yield estimates of demands as such, but to give information on the habits and preferences of Canadians and on comparative participation rates among the population for various activities. It would be used to gain more insight into the proportions of participants and non-participants among population segments than obtained from the initial screening study (Task 2) and would explore preferences for things people like to do, isolate factors which are associated with engaging in outdoor recreation activities, and investigate reasons for nonparticipation. Variations in participation among very broad regions will be investigated, although the sample size will necessarily be too small to make meaningful inter-place comparisons among, small regions. This is a fundamental and major weakness of this technique – to link adequately use or participation rate differences with differences in recreation opportunity. In this study, insight would also be gained into the demand for activities for which there is little or no opportunity.

There are many problems associated with these household surveys. The cost can be very high if large samples and personal interviews are used. There are problems associated with mail surveys and with phone interviews as well. Furthermore, recall of number of days of participation and the characteristics of participation pose problems in

single interview surveys (repeated interviews over time, panels, offer solutions and other problems).

The use of survey panels of large numbers of individuals in all population strata in all regions of Canada which are maintained by market research organizations, offers a possible opportunity to minimize some of the disadvantages. For the immediate purpose, surveying using panels, which can be resurveyed and are “fairly” representative of the entire population, may provide an alternative: If such a panel interview study is conducted, or if any other method is chosen, consultation with Statistics Canada should be made an integral part of this phase of the work. Further work of this nature should also be coordinated with the Canadian Government Travel Bureau (Canadian Tourism Commission, CTC, in 2006) and the Canadian Wildlife Service, each of which have active program plans in the area. The design of the household survey should be carefully done and reflect the results of the initial screening and the motivational factor studies.

#### *TASK 4: ARDA LAND INVENTORY*

The next series of individual tasks relate to supply identification and structuring. The demands for recreation opportunities need to be assessed against the background of existing areas and facilities. Details will be required on the type, extent of facilities and development, location, size and degree of access of recreation areas in Canada. The data must have a high degree of uniformity of view and of classification across the whole country. The extent of the data collection can vary more than the classification scheme to be used and the kinds of data to be collected. A useful initial guide to classifying areas may be the existing Federal Provincial Park Classification Scheme. Inventories are difficult to structure owing to the lack of standardization, the imperfection of quality determinants, the many individual attributes and dimensions of park and recreation areas, and the existence of a wide spectrum of types of areas and facilities to be included.

It is necessary to have available in a manageable data system (“database”) information on existing present recreation supply. The demand study, by making explicit the supply data requirements, should aid materially in defining which inventory data should be collected and their most advantageous form. The inventory work should proceed so that it continuously and successively builds on what is learned from the initial data collected and assembled. The more complete the inventory, the more utility it has; but an incomplete inventory is still highly useful.

This task is concerned with the utilization of the Canada Land Inventory information system and with structuring of the supply determination effort. The initial task is to utilize and adjust the data to use the Canada Land Inventory computer mapping program. This work is in advanced stages (moving toward completion). Data collected should provide a most useful base, first because of the classification data that may be a useful part of the inventory itself, and second, because of the associated development of map and computer techniques which appear to be invaluable to the organization of inventory and supply data. All of the inventory information should be keyed to the computer mapping unit by the utilization of map coordinate data.

#### *TASK 5: INVENTORY OF NATIONAL AREAS*

This task can be done within the Federal agency. It involves an inventory of existing national areas relating to outdoor recreation supply. These data should be



classified by type, characteristics, and locations. The initially required information should be readily available. Data should be tabulated for each area with appropriate linkage for assembling into the data bank of the Canada Land Inventory computer mapping operation.

#### *TASK 6: INVENTORY OF PROVINCIAL AREAS*

This task will need to be done by appropriate agencies of the individual provinces. The inventory task is similar to that for the national areas and each should maintain a high degree of complementarity to the others. While the inventories will need to be continually amended, the initial phases of the assessment of supply should be compiled within the first year.

#### *TASK 7: INVENTORY OF LOCAL AREAS*

The work contemplated in this task would supplement the other inventory work by providing information on many of the remaining recreation areas and facilities not included by national or provincial agencies. Many of the areas to be included are urban and regionally oriented. Private areas, to the extent that areas provided are of a nature that they directly and significantly affect the use of public areas, by their effect on the relevant supply, should also be inventoried.

Much of the work can be done by local agencies, with the possibility that some of it may be more suitable for outside contract. In no sense would the inventory be a complete one, particularly in the initial phases of the program, but even partial information on many of the areas would add materially to the assessment of outdoor recreation supply in Canada.

#### *TASK 8: COORDINATING SUPPLY DATA*

This work, to be largely done internally, is one of coordinating the data collection and increasing the compatibility of the data collected from various sources. The various surveys or inventories may require somewhat different techniques and operations to acquire the desired data. The major objective of this task is to reduce the disparities, to standardized format so that the data can be related to other survey results in the demand study.

#### *TASK 9: REVIEW OF EXISTING USER SURVEYS AND DATA*

This task would consist of an assessment of ongoing data collection programs involving recreation use of various areas and facilities and recreation travel. To be included, beside the considerable efforts of park and recreation agencies in all parts of Canada, are the work of Roy Wolf Associates - DRS study of recreation statistics. Also of primary interest would be the highway origin and destination surveys, which are a continuing part of the highway and road development programs.

The applicability of the relevant U.S. surveys should be reviewed at this juncture. These could include information that would supplement the Canadian surveys in the 1960 National Recreation Survey of ORRRC, the later one sponsored by the U.S. Bureau of Outdoor Recreation, and any surveys conducted in border states. The usefulness of the data and surveys should be explored but will likely be limited. One study, currently underway at Rutgers University, may prove of benefit because of the attempt to relate the participation data to supply characteristics. (see TN 34 for a discussion of the study.)

### *10: NATIONAL PARK USER SURVEY*

This task, and the three to follow, focus on the collection of primary data on use made of existing areas and facilities. The purpose of this work is to collect data on the use and users of the full range of types of recreation facilities in all areas of the country; to assess the amount, timing and patterns of use of these areas and the characteristics of the users. This series of surveys will provide a major portion of the basic data for establishing recreation use relationships. Having the data will enable predictions to be made of the consequences of varying the types or quantities of recreation activities or facilities. The work will consist of isolating recreation areas and facilities throughout the country in which a full range of the array of important dimensions of characteristics of recreation areas are covered, including types of areas, locations of areas, and administration of areas.

It is important that reliable total visit statistics be obtained for each of the areas investigated. Out of the totals a very small sample of visitors are interviewed using a short questionnaire. The samples need only be drawn on perhaps less than eight or ten days throughout the year, with only a fraction of the visitors on those days actually questioned. The questions asked are similarly limited, with average interviews lasting one or two minutes. The major concerns are with the trip origin, purpose, and limited information about the party. Efforts of this level in other studies have proven very satisfactory. Fully adequate methods are available, which are relatively inexpensive, entail a minimum of difficulty at the site and to the park user, and yield meaningful results. The purpose of this task is to implement a system of gathering the relevant data on visits and visitors to the national areas.

### *TASK 11: PROVINCIAL RECREATION AREA USER SURVEYS*

The work to be accomplished in this task is to collect data on use of provincial areas parallel to that described for national areas. As the areas are more dissimilar and the data collected by different agencies, it is necessary that attention be given to careful design to assure that the results obtained from the different areas are fully compatible.

### *TASK 12: LOCAL RECREATION AREA USER SURVEYS*

The objective sought in this task parallel those of the preceding two series of surveys. The problems of uniformity are more severe and other problems will be more acute, but the requirement to obtain user data on local recreation areas remains. A representative range of condition of areas, facilities, and locational proximities should at the least be surveyed in each major region. These areas may well be among the most important in the total spectrum of outdoor recreation and have a direct bearing on the use of other areas.

### *TASK 13: BORDER EXIT SURVEY*

An important segment of use of many areas, particularly in certain regions of the country, originates with visitors from outside Canada -primarily the United States. Among the surveys should be included a border exit survey of a sample of nonresidents leaving the country. The information to be obtained would include the use which non-residents made of recreation areas within Canada, the type and location of areas visited, the number of times and the purpose. This would afford a means of adding the non-resident dimension to the total demand picture. The border survey should be done in complete

cooperation with the Canadian Government Travel Bureau (CTC in 2006). It can probably be most efficiently done with contract services.

#### *TASK 14: PARTICIPATION AND SUPPLY ANALYSIS*

This and the following segments of the recreation demand study consist of data and program analysis sections. In each, the major efforts of data processing and analysis should be centered in one location, although parts may well be contracted out or otherwise separated. In each case duplicate data tapes should be made available.

In many ways the problems become more complicated after the data has been collected. While there is a good deal of theoretical work to draw on that is directly applicable, the attempts to quantify recreation demand have been of far more limited scope than those envisioned here. Attempts would be made in this task to gain insight into participation in outdoor recreation activities by different segments of the whole population. Data from the motivational study, the household surveys, and the inventory data, with some input for the user surveys, would be used to formulate broad relationships between participation rates and regional supply. Socio-economic factors measure to some extent the physical capacity to engage in recreation pursuits and the propensity to participate, but this is not enough for rational planning. The supply dimension, to be examined in this task, needs to be taken into account in explaining the observed use rates.

#### *TASK 15: USE PREDICTION ANALYSIS*

This task would use as primary data the results of the user surveys, plus data from the supply and participation analysis task. It is a major element in the entire study. Use prediction models would be formulated, empirically relating recreation area use to the various factors contributing or detracting from this use, including such things as, the influence of proximity to population centers, the size of the area, the facilities developed, and the alternatives available in the same area. Also, degrees of substitutability between recreation areas would be ascertained utilizing this data. Estimates of how much use may be expected to change over time, given changes in the population characteristics, and given changes in the supply configuration, would be formulated. The relationships established in the data analysis work of this task would form a primary means of assessing the outdoor recreation demands in Canada.

#### *TASK 16: ASSESSMENT OF RELATIVE DEMANDS AND RELATIVE NEEDS*

The next analytical section of the overall study is concerned primarily with the assessment of relative demands and relative needs. Demand is not an absolute, but is a functional relationship between population characteristics and recreation opportunity. The whole outdoor recreation demand study will focus on the assessment of relative priorities and investments and policies established on the basis of relative deficiency of supply to demands. The chief data inputs would come from the preceding analysis studies and the inventory data in the initial surveys.

#### *TASK 17: DEVELOPMENT POLICY, PROGRAMS AND STRATEGY*

The purpose of this task is to pull together the data which have been generated in the prior tasks, and to formulate the recreation policy implications, the recreation development program and the broad strategy for coping with the indicated recreation

demands. There will be continuous flow of information useful for planning from many of the earlier steps, but the largest payoff will occur at this stage of the demand study.

It is anticipated that the program of studies outlined will provide the necessary data input for outdoor recreation planning processes to meet the multiple needs of the various agencies in Canada charged with recreation responsibilities.

#### *TASK 18: CONTINUING DATA AND ANALYSIS PROGRAM*

Planning for the provision of outdoor recreation opportunities is a continuous process. Similarly the data program and analysis should continue.

The initial round of surveys, data processing, and analysis can be fully expected to yield immensely useful planning, investment, management, and policy guides. The utility of this will increase, however, as the data becomes more complete, the survey operations and data analysis more routine, and the estimates more extensive and precise.

#### **PROGRAM TIME, COST, AND STAFF**

The initial round of studies should be initiated in the current fiscal year and programmed over the three fiscal years of 1967, 1968, and 1969. The efforts required will be substantial in terms of direct funding, staff of Parks Canada and that of cooperating agencies. There are various trade-offs that can be accomplished among these, but there are significant economies in having the work proceed in the manner described.

The demand study outlined can best be programmed in the following manner, with the professional staff requirements of Parks Canada and the direct outlay of funds which will be needed to carry out the individual tasks noted for each segment. These estimates of staff time and funds can vary greatly and should be regarded as very approximate at this stage of program planning.

#### *TASKS TO BE INITIATED IN 1967 INCLUDE THE FOLLOWING:*

Task 1 - work on the preliminary recreation participation screening should begin in the fall of fiscal year 1967. It is anticipated that staff time required would be approximately one half month, the cost in this year, \$15,000.

Task 2 - the motivational study, should be initiated during this fiscal year. It is anticipated that this would involve one half month, and \$15,000.

Initial inventory coordination work should be begun. This would be in connection with Tasks 4, 5, 6, and 7. The staff requirements here may be expected to be approximately two months, excluding work by the personnel at ARDA, and funds would be approximately \$5,000.

The review of user data and statistics, Task 9, should be carried out during this fiscal year. The time and costs requirements are anticipated to be three months and \$2,000.

The initial planning for user surveys should also be initiated during fiscal 1967. It is anticipated that this would take three person months of staff time, and approximately \$9,000 in expenditures.

The total staff time requirements for the projects which will need to be initiated during the current fiscal year are approximately nine person months; the total fund requirements are anticipated to be \$46,000.

*THE WORK TO BE UNDERTAKEN IN FISCAL YEAR 1968 INCLUDES THE FOLLOWING:*

The motivational studies, Task 2, should be completed very early in fiscal 1968. This will involve one person month of staff time and \$10,000.

A household survey should be initiated during fiscal 1968. It is anticipated that the Canadian Wildlife Service, the Canadian Government Travel Bureau (CTC), Statistics Canada and perhaps others, would be involved in this effort. Staff time required of Parks Canada is anticipated to be four person months; expenditure of funds is expected to be approximately \$50,000.

The inventories should be carried along. Staff time required during this year is four person months; the expenditures needed may total \$8,000.

The user surveys, Tasks 10, 11, and 12, should be carried on in an extensive manner during fiscal 1968. This will necessitate substantial staff time and includes expenditures for computer time, road counters, and supplemental field personnel. The staff time involvement is anticipated to be 15 months, and the expenditure \$60,000.

The border exit survey should be carried out during fiscal 1968. This work, Task 13, will involve, in addition to the Canadian Government Travel Bureau (CTC) people, one person month of time of Parks Canada, and perhaps \$5,000 in funds.

The analysis of participation data and user data, Task 14, should be well underway in fiscal 1968. This will require 13 person months of staff time and \$25,000 in expenditures.

Task 15, the formulation of use relationships should be initiated during this period. This effort will require 2 person months and \$3,000.

The total staff time required in fiscal 1968 is approximately 40 person months; the total expenditures of funds, \$161,000.

*THE WORK IN FISCAL 1969 SHOULD INCLUDE THE FOLLOWING:*

The user surveys, including border crossing survey, should be continued. This will involve ten person months and \$30,000 in funds.

Inventory accumulations and refinements should be continued in 1969. This will involve three person months and \$10,000 in expenditures.

The analysis tasks should be well underway in fiscal 1969. These would include the analysis of participation and supply data, Task 14; the analysis of visitor use data and formulation of use models, Task 15; and the assessment of the relative needs and demands, Task 16. This work will involve 22 person months, and \$30,000 in funds.

The development of program strategies and policy implications will be carried on in fiscal 1969. This will involve five person months, and an expenditure of \$20,000.

The total for 1969 for the work anticipated would involve approximately 40 person months and expenditures of \$90,000.

The total expenditures anticipated in the initial three year effort in the series of demand studies would be \$46,000 in fiscal 1967, \$161,000 in fiscal 1968, and \$90,000 in fiscal 1969, or a total over the three year period of \$297,000.

The demand studies are designed for a continuing program of surveys, and continuing development of the analysis is anticipated. The subsequent cost might run approximately \$30,000 for the surveys and another \$30,000 for the analysis and development work, or something in the order of \$60,000 in fiscal 1970.

The program which is envisioned will require that Parks Canada acquire additional staff whose major responsibility is the coordination of the demand studies and major participation in the analytical work. It is highly desirable that the personnel undertaking this work have qualifications in analytical methods. This would include econometrics, statistics, and familiarity with computer techniques. It is anticipated that four people should have major assignments over this period of time to work on the demand study.