Recreation in the Rocky Clearwater Forest: An Examination of Forest Recreation Area Campers

Field Season Report

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EXECUTIVE SUMMARY

The Rocky Clearwater Forest has an abundance of scenery, timber, mineral resources, fish and wildlife, and recreational opportunities. The varied demands for renewable and nonrenewable resources in the area requires the incorporation of nontimber goods and services in management decisions. Outdoor recreation is one nontimber use that is typically undervalued in decisions involving allocation and management of Crown Lands. This study examines one recreational use, camping at Alberta Land and Forest Service Forest Recreation Areas, to illustrate methodologies which can help public managers make better allocation and management decisions. The goals of the project were to illustrate the use of current site registration procedures in data collection, establish a data base that allows the construction of economic models, extend the registration system through on-site and mail surveys, link recreation use data with socioeconomic data from the national census and use Geographic Information Systems techniques to measure travel distances. This report describes the data collection process, provides summary statistics from the camping fee permit data, and field observations from on-site interviews. Subsequent reports will examine the results from on-site interviews and mail surveys.

During the summer of 1994 a study was conducted of campers at Forest Recreation Areas (FRAs) in the Rocky Clearwater Forest. Camping fee permits were redesigned to include information necessary to estimate total use, provide data on campground users, and develop socioeconomic models. Permits were collected from all 33 FRAs in the Rocky Clearwater Forest that collected fees in 1994. A total of 18,350 useable permits were collected, representing 15,704 trips to Forest Recreation Areas.

Analysis of the permit data revealed:

- The majority of users are from small towns or rural communities in Alberta (67%) and live within a 1 - 2 hour drive of the Forest.
- Most of the urban visitors are from Edmonton.
- Forest Recreation Areas differ in their market areas.
- Most people (66%) camp in small parties comprised of 2 or 3 people.
- 50% of the visitors have not been to the campground in the last 10 years.
- Most visits occur in July (35%) and on weekends.

- The August long weekend was the busiest weekend.
- Most campers (81%) stay only one or two nights.
- Cluster analysis of permit data produced 2 clusters. The distribution of the clusters across FRAs suggest that FRAs attract different types of campers. Chambers Creek, Thompson Creek, and Two O'Clock Creek attract a larger proportion of people who stay 1 or 2 nights, who have visited the campground in the past, and who are from outside Alberta. Brazeau Reservoir, Fish Lake, Goldeye Lake, and Medicine Lake attract a larger proportion of people who stay more than 2 nights, are first time visitors, and from Alberta.

In addition to collecting data from camping fee permits, 1,006 interviews of Alberta residents were conducted at 10 FRAs. The on-site interviews collected more detailed information on use patterns and trip characteristics and collected names and addresses of respondents willing to participate in a follow-up mail survey. Observations by staff conducting on-site interviews suggested that:

- Many campers are interested in participating in other outdoor recreational activities while camping but are not familiar with the opportunities that exist in the Rocky Clearwater Forest. A recreational activity guide for the area would probably be very helpful for campers.
- Most campers did not have an understanding of the costs associated with operating the campgrounds. To help inform campers it may be effective to post the costs of operating the FRAs at registration kiosks.
- Some campers expressed concern over the possibility of charging for firewood in the future. Initiating a separate fee for firewood such as selling bundles of firewood would not be acceptable to most FRA users.
- FRAs could provide a point of contact with people who random camp. Many campers viewed random camping as a substitute for the FRA campgrounds.
- Campers welcome the opportunity to talk about camping issues or other issues relevant to the forest. People managing the FRAs should be encouraged to talk to campers to get current information on

campers' opinions and receive input from a segment of forest users who might not otherwise express their opinions.

This study has demonstrated that mandatory registration systems such as camping fee permits provide a readily available means to collect user information or answer specific management questions. The identification of subgroups of campers suggests that visitors to FRAs are not a homogenous group and therefore, may have differing management preferences. This will be explored further in subsequent reports using the on-site and mail survey data.

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INTRODUCTION

In Canada many forms of outdoor recreation involving forests on Crown Land are free or involve a modest fee. As a result outdoor recreation has been undervalued in decisions involving allocation and/or management of Crown Lands. This is particularly evident on lands that are allocated to forest industry development. While attempts are now made to incorporate nontimber goods and services in management decisions through public involvement approaches, these attempts remain problematic due to the lack of formal mechanisms to explicitly incorporate the wants and desires of the full range of user and nonuser groups. One of the problems in this process is the lack of knowledge by managers of what the full range of benefits of forests on Crown Land are, how to measure or assess their significance, and how to explicitly incorporate them in management decisions. This study attempts to address this deficiency for one type of forest use by identifying and modifying current information collection mechanisms, and by illustrating some methodologies which can help public land managers make better allocation and management decisions.

Public involvement in forest management can be controversial and expensive. In general, formal mechanisms to incorporate public input can involve, or be assisted by, knowledge of economic measures of various forest uses and attitudes and perceptions of forest users. This information in turn involves social science theories and methodologies that can be combined in one or more models of "structured public involvement" to inform and guide the management decision making process. While the range of forest uses to be considered is an issue in this regard, an approach worthy of examination is the concept of "indicator" uses, much the same as indicator species in considering biological dimensions in forest management (e.g., Biodiversity Science Assessment Team, 1994:9-40). These indicator uses are flexible in that a combination relevant for one forested area may be different than a combination for another forested area. Once this combination has been chosen, information collection mechanisms must be established to gather baseline data that can be used by forest managers in making decisions which incorporate the indicator uses.

In this study we focus on the information collection aspect of this problem for an activity we believe is an indicator use for a forest in Alberta. This use involves forest recreation at specific sites managed by the Alberta Government in the Rocky Clearwater Forest. Given that information collection is an expensive process,

we modified and extended an existing information collection process in order to gather data for developing both economic models and the measurement of attitudes towards forests. Our goals in this process were: 1) illustrate that current site registration procedures could be used to gather more useful data on forest use; 2) establish a recreation use data base that allows the construction of socioeconomic models; 3) extend the registration system through on-site interviews and mail surveys; 4) link the recreation use data with socioeconomic data from the national census; 5) use GIS techniques to compute travel distance.

This report describes the data collection process, provides a summary of the camping fee permit data and field observations from on-site interviews at Forest Recreation Areas (FRAs) in the Rocky Clearwater Forest. First, an introduction to natural resource use in the Rocky Clearwater Forest and FRAs is given. Second, a description of all methods used in the study is provided and third, a summary of the camping fee permit data is presented for all FRAs collecting camping fees and the 10 FRAs receiving the most use. Finally, a summary and recommendations are provided. Results of economic models and the on-site and mail surveys will be available at a later date.

METHODS

Study Area

The Rocky Clearwater Forest is situated in the foothills of the Rocky Mountains (Figure 1). It contains an area of approximately 1.8 million hectares and is comprised primarily of publicly owned forested land. The Forest is situated between Rocky Mountain House in the east, Banff and Jasper National Parks in the west, the Pembina River in the north and the Clearwater River in the south.

The Forest lies within the Lower Foothills of the boreal and subalpine forest regions (Rowe, 1972). Several ecosystems are represented within the Forest including alpine meadows, montane valleys, and boreal forest (Alberta Environmental Protection, 1993). Characteristic species in the region include white (Picea glauca) and black spruce (Picea mariana), alpine fir (Abies lasiocarpa), lodgepole pine (Pinus contorta), and trembling aspen (Populas tremuloides) and balsam poplar (Populas balsamifera) near the eastern sections. Topography

varies greatly across the Forest from low rolling rounded hills in the east to mountainous topography with steep slopes and high elevations nearing the Rocky Mountains in the west. The main access route is Highway 11, the David Thompson Highway, which traverses the Forest in an east-west direction. The only other paved access routes include Highway 22 which runs in a north-south direction in the eastern portion of the Forest. Most other access is by gravel road. The main graveled route is the Forestry Trunk Road which runs in a north-south direction in the western portion of the Forest.

The major towns in the area are Rocky Mountain House and Drayton Valley. Rocky Mountain House has a population of 5,465 (Statistics Canada, 1991), and lies just outside the Forest on its eastern boundary. Residents of Rocky Mountain House have easy access to the Forest via Highway 11. Drayton Valley with a population of 5,980 (Statistics Canada, 1991), is situated in the northeast corner of the Forest. The other settlement of note within the Forest is Nordegg. It is situated about midway along Highway 11.

Established in 1911, Nordegg was once a prosperous coal mining town reaching a population of about 2,500 in the 1940's (J. Baker, personal communication, January, 1995). The coal from the Nordegg mines was used primarily as fuel by the railroad. In later years a briquette plant was established which attracted a commercial market. In 1955 the entire coal operation was shut down due to loss of the market when the railroad switched to diesel engines. With the closure of the mine most of the residents left and within two years Nordegg was virtually a ghost town. The Alberta government took over ownership of the town from the mining company and in 1963 the Department of Corrections established a minimum security camp in Nordegg. At one time it housed 200 inmates and was the main industry in the town. The camp was in operation until October 1994 but during the last few years it housed fewer than 10 inmates during weekdays only. Today the winter population of Nordegg is about 60. Little remains of the original town. A visitor information centre and mine museum are located in Nordegg. Guided tours of the mine site are conducted from May to October. The town is a service centre for visitors to the area, with a gas station, restaurant and bar, and a hotel. Basic provisions can be purchased at the gas station. In the near future the MD of Clearwater will take over ownership of the town from Alberta Environmental Protection and will proceed with economic and tourism development plans for Nordegg and the surrounding area.

Edmonton and Calgary, the two major urban centres in the province, with populations of 616,740 and 710,675, respectively, (Statistics Canada, 1991) are about a 2 hour drive from the Forest. There are three Indian Reserves in the Forest: the Sunchild, O'Chiese, and Big Horn Reserves.

The area has an abundance of scenery, timber, mineral resources, fish and wildlife, and recreational opportunities. It was the abundance of natural resources that first attracted settlers to the region during the 1700's and continues to attract people today. The first settlers established fur trading posts at Rocky Mountain House in 1799. When the fur trade ended people continued to exploit the opportunities offered by the abundant resources of the area.

The use of timber first began with the aboriginal peoples who came into the foothills for long, straight, young pine for tepee poles and travois (Rocky Mountain House Reunion Society, 1977:21-36)). Timber was also used by the fur trading companies to build trading posts, stockades and york boats. From this developed a lumber industry upon which the entire district became dependent for its economic livelihood. The demand for mine props, ties for mines and railways, fence posts, firewood, and telephone poles produced a prosperous industry in the Rocky Mountain House area. Today there are two Forest Management Agreements (FMA) in the Rocky Clearwater Forest. Weyerhaeuser Canada Ltd. has one in the northern part of the Forest and Sunpine Forest Products has the other in the south which extends into the Bow Crow Forest. There are some exceptions for miscellaneous use such as quota holders. In 1992, the annual allowable cut for the Forest was 1,323,130 cubic metres (Alberta Environmental Protection, 1993). The Sunpine FMA was enlarged recently to approximately 599,000 hectares and a new Linear Veneer Lumber plant has been established near Strachan (D. Coish, personal communication, January, 1995).

The oil and gas industry is another prominent industrial user of the area. The first oil well was drilled around 1935 near Horburg but nothing was found (Rocky Mountain House Society, 1977:233-239). A few other wells were drilled without much success until 1955 when widespread exploration and commercial discoveries occurred. Since that time there has been a rapid development and extensive exploration. Today the area produces thousands of barrels of oil per day. Rocky Mountain House which was once supported only by the

forest industry now gains most of its economic activity from the oil industry. A sour gas processing facility was established in 1971 at Strachan, about 35 km southwest of Rocky Mountain House.

Other industrial activity includes agriculture and hydroelectric power. Grazing activity in the Rocky Clearwater Forest dates back to the early 1900's. Approval is required for grazing and in 1992, about 13% of the Forest was allocated to grazing permits (Alberta Environmental Protection, 1993). Two hydroelectric dams exist within the Forest, the Brazeau and Bighorn Dams.

About 6% of the Forest is dedicated to protected areas which do not permit resource extraction (Alberta Environmental Protection, 1993). These include the White Goat (276 square km.) and Siffleur Wilderness Areas (255 square km.) which are open to backpacking, mountain climbing, and camping. Hunting, fishing, motorized vehicles, and horses are not permitted in the wilderness areas. There are two ecological reserves, Kootenay Plains and Marshybank. The Kootenay Plains Ecological Reserve, which is the largest of the two, was established for the preservation of a sample of the Montane Region of the Rocky Mountains. In order to protect the ecological integrity of the Reserve activities such as operating motorized vehicles, horseback riding, camping, hunting, and fishing are not permitted. In 1992, there were also 10 Natural Areas in the Forest. These are relatively small, totalling 5,111 hectares and encompassing only 0.3% of the Forest.

The entire Forest provides an abundance of recreational opportunities. Hunting, fishing, use of off highway vehicles, camping, hiking, and horseback riding are some of the more popular activities.

In order to accommodate current demands for renewable and nonrenewable resources in the area the Alberta Government adopted the Eastern Slopes Policy on integrated resource planning in 1977. The Policy is intended to guide land allocation "to provide for the maximum delivery of the full range of values and opportunities" in the region to all Albertans (Alberta Energy and Natural Resources, 1984). Under the Policy public lands in the Rocky Clearwater Forest are designated into eight land use zones. These range from prime protection zones, which preserve environmentally sensitive terrain and valuable ecological and aesthetic resources, to facility zones, which support settlement and commercial development. Most FRAs in the Forest are located within multiple use or general recreation zones.

Forest Recreation Areas

Forest Recreation Areas (FRAs) were first established in the early 1960's by the Alberta Forest Service in response to concern over wildfire resulting from careless use of campfires and the environmental impacts produced by people camping at random in the forest (D. Coish, personal communication, January, 1995). FRAs were established at some of the most popular random camping sites and provided very basic camping services. A major upgrade took place in the early to mid 1980's in most of the FRAs. This involved removing some pull through sites and establishing more back in sites. The sites were altered to accommodate an increase in motorhomes and a decline in the number of tents and trailers using the sites.

Forest Recreation Areas provide a semi-primitive camping experience. The FRAs are classified as providing rustic or basic services. The campgrounds have drive-in sites with a picnic table, fire pit, gravel tent pad and pit or vault toilets. Other facilities common to the basic campgrounds include firewood and water pumps (Figures 2 to 4). The level of development, quality of facilities and variety of recreational opportunities are relatively homogenous across the campgrounds. However, rustic campgrounds may not have a drinking water supply and have less maintenance and servicing. Some campgrounds have special attributes such as the designation as a Watchable Wildlife Viewing Site with viewing platforms and interpretive signs (e.g., Brazeau Reservoir), others have special scenic attractions (e.g., Ram Falls), or include lakes stocked with trout (e.g., Goldeye Lake). In general, FRAs differ from campgrounds found at Provincial or National Parks in that they are less developed, providing fewer services and facilities.

When FRAs were first established there was no fee for camping. In 1992, the Alberta Forest Service began charging for campground use. The fee was $5.50 for rustic campgrounds and $7.50 for basic campgrounds. In 1992, visitor use of campgrounds decreased by 50% from the previous year (Alberta Environmental Protection, 1993). In 1994, the fee was increased to $7.00 and $9.00, respectively.

The Alberta Land and Forest Service operates a Volunteer Campground Host Program at some of its FRAs. Campground hosts provide visitors with information on local attractions, answer questions about facilities and services, and assist in emergency situations.

Historical Data

In preparing to conduct this study historical information on camping in the Rocky Clearwater Forest was gathered. Two sources of information were found: user statistic reports and on-site surveys. User statistics are compiled annually by the Alberta Land and Forest Service and provide an estimate of total use extrapolated from periodic inspections of campgrounds. The user statistics provide an estimate of the total number of parties using a FRA. On-site surveys have been conducted at selected FRA campgrounds in the Rocky Clearwater Forest since 1983. These surveys were initiated by the Alberta Land and Forest Service to provide data for a Long Range Recreation Development Plan. Forest Guardian staff collected information on place of origin, destination, party size, length of stay, and participation in recreational activities while staying at the FRA. Although this information was important for planning purposes, it lacked much of the data necessary for estimating total use and economic values of camping. However, the data were used to assist in determining a sampling strategy for this study and to assess the potential of using Travel Cost Models to value camping at FRAs. The 1992 on-site surveys were used to develop preliminary models and examine the relationships among the variables.

Registration Permits

Data for the study were collected in three phases. The first phase involved collecting data using self-registration permits. Camping fees in FRAs are collected by means of a self-registration system. Campers are required to pay a camping fee by means of an envelope, upon which they are requested to respond to a few questions, and deposit the envelope at a registration kiosk (Figure 5). Using fee envelope data has been shown to be a reasonable method for estimating economic values (Richards & Brown, 1992). In consultation with the Alberta Land and Forest Service and the Alberta Parks Services, camping fee permits were redesigned to include information essential for the development of socioeconomic models. Figure 6 shows the fee envelope before and after the redesign. Before the permit redesign, only information necessary to verify payment was collected (e.g., vehicle licence number, campsite number, date, and total payment). Questions were added in the redesign on the number of people in the camping party, the number of previous visits to the FRA, and the respondents postal code.

Data from the permits were entered into a database using PARADOX, version 4.5 for windows (Borland International Inc., 1992). The variables and their characteristics are shown in Appendix I. The data were exported to an ASCII, comma delimited file for conversion to a statistical software package. Data were analyzed using SAS statistical package release 6.09 (SAS Institute Inc., 1989). The SAS program for the conversion and data file structure is shown in Appendix II.

Registration envelopes were collected from all 33 FRAs in the Rocky Clearwater Forest that collected fees in 1994. Locations of the campgrounds used in the study are shown in Figure 1. Envelopes were collected from May to October, the duration of the fee collection season. Envelopes provided estimates of total visits to each of the campgrounds for the 1994 camping season. Approximately 18,985 envelopes were collected. About 375 of the old style envelopes were inadvertently distributed to various campgrounds by Alberta Forest Service staff. Since these lack the information necessary for Travel Cost Modelling they could not be included in the economic analyses. An additional 260 envelopes were considered not useable because they had only the date and/or the amount paid sections completed. This resulted in a total of 18,350 useable envelopes.

Visitors on multiday trips have the option of paying on a daily or a multiday basis, therefore, not every envelope represented a unique trip. Thus, it was sometimes necessary to combine envelopes into single trips. This was only possible for those envelopes with the vehicle licence number, the date, and the number of days or fee paid. Envelopes were combined into a single trip if, for a given vehicle licence number, the purchase date plus the number of days paid was only one day short of the next purchase date. If there was a break of at least one day not paid for, then the envelope was considered a new visit. Combining multiple visits in this manner resulted in 15,704 trips reported by the 18,350 envelopes.

Linking with Census Data

The collection of a postal code for each camping party allows an estimation of individual campers socioeconomic status, the determination of party origin and market areas, and travel distance. Estimates for socioeconomic data were obtained from Statistics Canada 1991 Census Data. Data on total population, age

structure, average household size, total lone parent families, education, unemployment rate, and household income were obtained from the 2A and 2B profiles of the census for each postal code.

Using the postal code conversion file (PCCF) from the census data we linked the postal code from each record to the corresponding Enumeration Areas (EAs) of the 1991 census. EAs represent the smallest census geographic unit. Only records with an Alberta postal code were linked with the census data because we lacked census data for most postal codes outside the province.

Of the 13,997 records with an Alberta postal code, 12,772 matched a postal code in the PCCF (Figure 7). The remaining postal codes were either missing or invalid codes. Each postal code could consist of several EAs because every EA which partially or wholly intersected a postal code was included. Therefore, when matched with corresponding EAs the resulting census data file contained 85,544 records. EAs then had to be collapsed to obtain one census record for a postal code. It was not possible to weight socioeconomic data by the proportion of the EA population intersecting a postal code. Thus, socioeconomic estimates for an individual were based on information from all individuals occurring in every EA that corresponded to the individual's postal code. For example, to obtain the total population in a postal code, total populations were summed across all EAs that partially or wholly intersected the postal code and to obtain average household income the mean of the average household income for all EAs that partially or wholly intersected the postal code was used.

Market Areas and Travel Distance

The origin of each camping party was classified as Edmonton, Calgary or non-urban using the first three digits of the postal code. Origins were delineated further into market areas using the PCCF. The PCCF gives a latitude and longitude which represents a geographical location for each EA centroid. If a postal code intersects more than one EA then there will be a corresponding number of EA centroids and geographical locations. In order to represent each postal code as a single geographical point, each postal code that was linked to more than one EA centroid was located at the geographic mean of the centroids, weighted by the total population for each EA. Market areas were then mapped for the Rocky Clearwater Forest based on the frequency of trips originating from 100 square mile blocks defined arbitrarily using a grid system. To measure travel distance for Travel Cost

Models we used Geographic Information (GIS) technology. Forest Recreation Area locations were digitized and matched to the Alberta highway network which was derived from ESRI Inc. (1992). With a postal code location, FRA location, and road network databases assembled, the GIS was used to compute the shortest distance along the roads between each postal code location and FRA location (Figure 7). Because an EA centroid was seldom located on a road it was necessary to assume a route to link the centroid with the road network. This was done by computing the shortest distance between the centroid and the network using a grid system. The error introduced due to this artificial routing is minimized because Alberta roads tend to be based on a north-south, east-west grid.

Camper Subgroups

Observations of campers at FRAs suggested that FRAs could be attracting distinguishable subgroups of campers. For example, it was observed that some campgrounds such as Medicine Lake seemed to attract primarily local residents many of whom had visited the campground several times in the past and were staying for several days. In contrast, other campgrounds such as Chambers Creek seemed to attract people who stayed only one night and many had not visited the campground previously. The possibility of subgroups was explored using cluster analysis. A disjoint clustering procedure (FASTCLUS procedure, SAS Institute Inc., 1989) was used to create two discrete clusters of campers from information on the registration permit. Permits from the 10 FRAs at which on-site interviews were conducted (see below) were used in the analysis. Three variables, the number of nights stayed, the number of previous visits to the FRA in the last 10 years, and origin of the camping party were used in the analysis. Origin of visitors was coded as 1 = Alberta and 0 = outside of Alberta. Variables were standardized to a mean of zero and standard deviation of one for the analysis.

On-site Interviews

Phase two of data collection involved on-site interviews with campers at the 10 FRAs that receive the highest use: Brazeau Reservoir (including the West canal), Chambers Creek, Crescent Falls, Fish Lake, Goldeye Lake, Medicine Lake, Prairie Creek, Ram Falls, Thompson Creek, and Two O'Clock Creek. The on-site

interview was used to collect more detailed information on use patterns and trip characteristics and names and addresses for the third phase of data collection. Questions for the interview were formulated in consultation with the Alberta Land and Forest Service and Alberta Parks Services. A pretest of the on-site interview was done on May 14 at Chambers Creek and Fish Lake campgrounds. Based on the pretest, some questions were dropped from the survey and wording and question order were changed in others to make easier transitions between questions. Questions asked during the interview are presented in Appendix III. In addition to the questions asked from the interview form, respondents were asked to trace the route they drove to the FRA and their expected route home on photocopied sections of an Alberta highway map. This will allow a comparison of the respondents' actual travel distance, the distance that would be assumed using traditional Travel Cost methods of determining travel distance, and the distance obtained by linking postal codes with GIS data. However, travel cost analysis is not presented in this report but will be done at a later date.

Interviews were conducted from the Victoria Day weekend in May through the Labour Day weekend in September. The sample schedule and number of interviews for each FRA is presented in Appendix IV. Interviews were conducted from approximately 9:00 am to 4:00 pm and 6:30 pm to 9:30 pm each day with most interviews conducted in the morning or evening when visitors were most likely to be at their campsites. On any sample day all available visitors to a sampled campground were asked to participate in the survey. Every campsite where an individual was present was sampled. A total of 1,023 interviews were conducted. Of these, 1,006 were from Alberta. The variables from the on-site interviews and their characteristics are shown in Appendix V.

In addition to formal interviews with campers, qualitative data were collected in the form of field notes. Staff kept notes of field observations each time a FRA was sampled. Notes on conditions effecting occupancy, campers' concerns and comments, and other items of interest about the campgrounds and campers were kept.

Mail Survey

Phase three of data collection involved the development and administration of a mail questionnaire. The mail survey was used to collect information not conducive to on-site surveys or the fee envelope data collection

system. Attitudes toward forest management, preferences for facilities and services at FRAs, camping experience, and socioeconomic data were collected by means of a mail questionnaire (Appendix VI). A total of 964 names and addresses were collected from the on-site interviews. The initial mailing occurred in January 1995. About one week after the initial mailing a reminder postcard was sent (Appendix VII) and about one month after the initial mailing another questionnaire was sent to those who had not yet responded (Appendix VIII). A total of 805 questionnaires were returned. Adjusting for undeliverables, this represented an 87% response rate. The variables from the mail survey and their characteristics are shown in Appendix IX.

RESULTS

Only summary statistics based on the camping fee permit data and field observations collected during the on-site interviews are presented in this report. First, an overview is given of all FRAs in the Rocky Clearwater Forest. Then, results are presented for the 10 FRAs that received the most use. These are the same FRAs sampled for the on-site surveys. Results of the on-site and mail surveys will be available at a later date.

Summary of FRA Use

Campground Use

A total of 15,704 trips were made to the FRA campgrounds in the Rocky Clearwater Forest representing 28,544 user nights. A user night is defined as one campsite occupied for one night. On average visitors spent 1.80 nights at the campgrounds. The distribution of user nights at each FRA is presented in Table 1. The majority of users (53%) spent only one night and 40% spent 2-3 nights (Table 2). This suggests that FRAs are used primarily as one night stopovers or as weekend or long weekend trips. The distribution of trips across week days, weekends, and long weekends tends to support this. The greatest number of trips occurred on weekends and long weekends (Figures 8 to 12). The August long weekend (July 29 - 31) received the highest number of trips (907) of all weekends and week days (Figure 10). Most trips occurred during the month of July with a total of 5,346 trips (Figure 13). This represented 35% of the total camping trips taken to the Rocky

Clearwater Forest. The distribution of trips to the individual FRAs shows that Thompson Creek received the largest proportion (13.6%) of the total trips followed by Fish Lake (11.3%) and Medicine Lake (7.1%) (Table 3).

To examine multiple trips to the FRAs by individuals an analysis was done on the vehicle licence numbers. The frequency of multiple trips was determined by examining the number of occurrences of the vehicle licence numbers. This analysis assumes that a vehicle licence number is attributed to one individual. While this may not be true, it is the best indicator of individual or household use available. About 82% of the visitors made only one camping trip to the Rocky Clearwater Forest (Table 4). However, there are some individuals who made as many as 20 trips to the area during the 1994 camping season.

Market Areas

Most visitors (90%) were from Alberta, followed by other provinces (primarily British Columbia 4% and Saskatchewan 1.9%) (Figure 14). About 1% of the visitors were from the United States and 2% were from other countries primarily Germany, Switzerland, and the Netherlands. Using the postal codes to determine geographical location for user origins, market areas were determined for the Rocky Clearwater Forest (Figure 15). About 31% were from the urban centres of Edmonton or Calgary suggesting that the FRAs are used primarily by Albertans from small towns or rural communities. Medicine Lake and Shunda Viewpoint received the largest proportion of trips from rural areas or small towns with 89% and 98%, respectively. The largest proportion of trips originating from urban areas occurred at Aylmer (56%), Horburg (52%), and Saunders (52%). However, most visitors to the Rocky Clearwater Forest originate from within a one to two hour drive of the Forest.

Visitor Characteristics

Most of the camping parties were comprised of two people (52.5%) and 94% had five or less in their party (Table 5). There appear to be three groups of visitors based on the number of previous visits to the FRAs: first time users which comprise 50% of the visitors; those with 1-4 previous visits (27%); and experienced users who have been to a particular campground 5 or more times in the last 10 years (23%) (Table 6). Differences in

the amount of experience visitors have with a campground has been shown to influence their management preferences and reasons for camping (McIntyre & Pigram, 1992). The mail survey data will be used to explore the relationship between camping experience and management preferences at FRAs in subsequent reports.

Brazeau Reservoir

Field Observations

Brazeau Reservoir is situated about 57 km southwest of Drayton Valley, the largest population centre within the Rocky Clearwater Forest. The last 10 km of the road is gravel. The Brazeau FRA can also be accessed by a 25 km gravel road, the Power House road, at Lodgepole. The road is primarily a logging road. The Sunchild Road which provides a shortcut from the Rocky Mountain House area is about 65 km of gravel. There are a lot of logging trucks on this road and one can expect to meet several trucks even on weekends. The road is extremely dusty in dry weather and becomes slippery and muddy in places when it rains. It is very narrow in places and dust reduces visibility such that it is sometimes necessary to pull to the side to let on-coming traffic pass.

There are three campgrounds at the FRA. One is situated at the main Reservoir near the dam and two are located along the canal designated as the West and East canal campgrounds. The main Reservoir has 33 sites, an overflow camping area, and a group camp. The cutting of mature diseased aspen has left few campsites with any shade and very little privacy. Campers tended to congregate in a small section of the campground that had a few mature spruce. There is a boat launch and day use area which overlooks the reservoir. Motorboats are permitted, however, water levels fluctuate greatly and there is floating debris in the reservoir. The FRA is designated as a Watchable Wildlife Viewing Site (Alberta Forestry, Lands and Wildlife, 1990). There is a short interpretive trail and viewing platform with interpretive signs at the West canal campground. The platform provides a good view of an osprey nesting site. Nesting platforms have been installed in the reservoir by the Buck for Wildlife Program. Islands in the reservoir provide nesting sites for osprey and bald eagles. The West canal campground is situated about 5 km from the Reservoir campground on a narrow gravel road that is maintained by Trans Alta Utilities. This is a private road and travel on the road is at your own risk. The West

canal campground has 18 sites with mature spruce/fur trees that provide shade and privacy between sites. There is a boat launch and day use area. The East canal is situated about 13 km from the main Reservoir campground along the same gravel road that provides access to the West canal. It has six sites that are not well marked and a boat launch. The campground is situated on a point of land overlooking the canal.

In addition to birdwatching, fishing, boating, swimming, and ATV riding seem to be the more popular activities engaged in by campers. Fish species include dolly varden (Salvelinus malma), Rocky Mountain whitefish (Prosopium williamsoni), and pike (Esox lucius). There is also a self-guided auto tour in the area. The Natural Resources Tour is 125 km and provides an overview of forest, petroleum, water, fisheries, wildlife, and recreation resource management in the area. Some points of interest on the tour include the Weyerhaeuser Canada Mill, sand dunes, Nova pipeline, saw and lumber mills, a bird nesting colony, and the Brazeau Dam.

Our general impression of this area was that there is a lot of industrial activity. On the road from Lodgepole there are oil and gas developments, the Tall Pine Timber Company, lots of logging trucks, and of course the dam itself.

Campground Use

A total of 1,155 trips, representing 2,403 user nights, were made to the Brazeau campgrounds in 1994 (Tables 1 and 3). This comprised 6.3% of the total trips to the FRA campgrounds in the Rocky Clearwater Forest.

The Reservoir had 587 trips representing 1,210 user nights and 3.7% of all trips to all of the FRAS (Tables 1 and 3). The length of stay at the Reservoir varied from 1 to 14 nights (Table 7). Thirty seven percent stayed only one night and 55% stayed 2 - 3 nights. On average visitors spent 2.06 nights at the Reservoir.

The West canal had 439 trips representing 915 user nights and 2.8% of the trips to all FRAs (Tables 1 and 3). The length of stay varied from 1 to 8 nights with 39% staying one night and 52% staying 2 - 3 nights (Table 7). On average campers spent 2.08 nights at the campground.

The East canal had 129 trips representing 278 user nights and 0.8% of the trips to all FRAs (Tables 1 and 3). The length of stay varied from 1 to 7 nights with 33% staying one night and 58% staying 2 - 3 nights (Table 7). On average campers spent 2.16 nights at the campground.

The proportion of campers staying more than one night at these 3 campgrounds was greater than most of the other FRAs in the Rocky Clearwater Forest. Fewer visitors used these campgrounds as one night stopovers.

Market Areas

Of the 3 campgrounds, the Reservoir received the highest number of foreign visitors. About 1.4% were from outside Alberta (Table 8). Of the West canal campers, about 1% were from outside Alberta. The East canal campers were all from Alberta. Of the trips originating from within Alberta, 39% of those to the Reservoir were from Edmonton (Table 9). This is considerably more than the 27% going to the West canal and 21% to the East canal. The Reservoir received a greater proportion of its trips from Edmonton than most other FRAs.

Visitor Characteristics

Most of the camping parties were comprised of two people: 46% of Reservoir, 48% of West canal, and 61% of East canal visitors travelled in twos (Table 10). Less than 10% had more than five in their camping parties. Of the three campgrounds, the Reservoir received the highest proportion of first time visitors (48%) (Table 11). Twenty six percent had been there five or more times in the last 10 years. The West canal received fewer first time visitors (40%) and about 28% had been there five or more times. The East canal appears to attract primarily repeat visitors. Only 31% had not been there before and 41% had been there five or more times.

From these results it appears that the 3 campgrounds at Brazeau attract different types of campers. The canal campgrounds attract campers who are familiar with the area whereas the reservoir campground attracts more first time visitors. This difference in the proportion of first time visitors could be due to lack of awareness by first time visitors of camping opportunities along the canal. The Reservoir is the first campground

encountered and is very well marked. The other 2 campgrounds are situated off the main road and are not well marked. It is not immediately apparent upon arriving at the Reservoir that there are 2 other campgrounds in the area.

Medicine Lake

Field Observations

Medicine Lake campground is situated about 50 km north of Rocky Mountain House along Highway 22. The campground is accessed by a 12 km gravel road. Access is also possible on gravel secondary roads travelling from Rimbey. These roads are not shown on provincial highway maps but local residents know the roads and use them as a short cut to Medicine Lake.

The campground is situated in a mainly aspen forest. There are good birdwatching opportunities during the latter part of May and early June. However, the site is not designated as a Watchable Wildlife Viewing Site and no campers were observed with binoculars. The sites are large, well shaded, with ample space between them. Most sites are large enough to accommodate more than one camping unit and many campers camp in groups of two or more with several vehicles occupying one site. There are 38 camping sites, a day use area, cook shelter, and boat launches. Gas powered motor boats are allowed on the lake but there is a speed limit restriction of 12 km/hr. Fishing appears to be the primary activity of campers. Pike (Esox lucius) is the main species of fish. There was a fishing derby held the weekend of July 16-17. The event attracted a lot of participants. The campground was overflowing with people camping anywhere they could find a spot. There are several secondary gravel roads and trails in the vicinity which attract off highway vehicle users. There is a popular random camping area about 3 km from the Medicine Lake campground in what appears to be an abandoned homestead. There were usually people camping here during our field visits even when the Medicine Lake campground was not full.

Campground Use

A total of 1,118 trips were made to Medicine Lake in 1994 representing 2,663 user nights and 7.1% of the trips to all FRAs (Tables 1 and 3). The length of stay varied from 1 to 14 nights with 30% spending only one night, 57% spending 2 - 3 nights, and 12% spending 4 - 7 nights (Table 7). On average visitors spent 2.36 nights which is longer than the average length of stay at any of the other FRAs. Compared to most other FRAs, a smaller proportion of visitors spent only one night with more of them spending weekends or making this FRA a vacation destination.

Market Areas

Very few visitors were from outside of Alberta (1.6%) (Table 8). Of the trips originating from within Alberta, 89% were from small town or rural areas. Medicine Lake received a much smaller proportion of trips from Edmonton (only 7%) than the other FRAS. This contrasts sharply with Brazeau Reservoir which is about the same distance from Edmonton but received a high proportion of its trips from Edmonton (39%).

Visitor Characteristics

Most of the camping parties were comprised of two people (52.5%) and 92% had five or less in their party (Table 9). Medicine Lake had fewer first time visitors (28%) than many of the other FRAs (Table 10). Over 43% had been to the campground five or more times in the last 10 years.

These data suggest that Medicine Lake serves as a primary camping destination for many small town or rural Albertans. The campground attracts people who have visited the campground several times in the past, they tend to stay longer than most visitors to other FRAs, and they live within a relatively short distance from the campground.

Prairie Creek

Field Observations

Prairie Creek is situated about 40 km southwest of Rocky Mountain House on Highway 752. Highway 752 is a paved secondary highway in good condition with a speed limit of 90 km/hr. Just a few kilometres beyond the Prairie Creek campground Highway 752 becomes gravel. This road leads to the Forestry Trunk road which provides access to many recreational opportunities including the use of off highway vehicles and fishing.

There are 50 camping sites, a day use area with a cook shelter, and an interpretive trail. There is a group camp a short distance down the highway from the main campground. Fishing is a popular activity with the nearby creek having several trout species: rainbow (Salmo gairdneri), cut throat (Salmo clarki), brook (Salvelinus fontinalis), and bull trout (Salvelinus confluentus). The campsites are located among large spruce/fur trees with lots of shade and privacy. Some campsites were closed for part of the summer for repairs to the toilets which had been vandalized.

Campground Use

A total of 627 trips were taken to Prairie Creek representing 1,346 user night and 4.0% of the trips to all FRAs (Tables 1 and 3). Prairie Creek received 4% of the trips to the Rocky Clearwater Forest FRAs. The length of stay varied from 1 to 14 nights with 31% staying one night, 58% staying 2 -3 nights, and 10% staying 4 - 7 nights (Table 7). The average length of stay was 2.14 nights. Prairie Creek is similar to Medicine Lake in that compared to other FRAs, a larger proportion of visitors use the FRA as a weekend camping or vacation destination.

Market Areas

Ninety nine percent of the visitors were from Alberta (Table 8). There were no visitors from outside North America. Of the trips originating from within Alberta, 85% were from rural areas or small towns (Table 9). This FRA received among the highest visitation rates from rural or small town Alberta compared to the other FRAs.

Visitor Characteristics

Most of the camping parties (56%) were comprised of two people (Table 10). Only 5% had more than five people in their parties. Most visitors to Prairie Creek are repeat visitors (Table 11). Only 30% of the campers had not been to the campground in the last 10 years whereas 43% had been there five or more times.

These results suggest that Prairie Creek is very similar to Medicine Lake in that it seems to serve as a primary camping destination for many rural and small town Albertans. The campground attracts people who have visited the FRA several times in the past, they tend to stay longer than most visitors to other FRAs, and they live within a relatively short distance from the campground.

Chambers Creek

Field Observations

Chambers Creek is situated 30 km west of Rocky Mountain House along Highway 11. The campground has 26 camping sites, a day use area, and a cook shelter. The campground is well shaded with reasonable space between the sites. There is a group camp across the Highway. The Chambers Creek FRA has 87 km of snowmobile trails which are used by ATV users in the summer. Some campers complained about the unsatisfactory conditions of the trails for ATV use. Fishing is a popular activity at the FRA. Chambers Creek runs through the FRA and provides a very tranquil setting. A campground host was present during July and August. Their impression of the campers at this campground was that they are primarily passing through the area and stop at Chambers Creek for only one night. Most campers would leave in the morning and new campers would arrive in late afternoon and evening.

Campground Use

The FRA received a total of 721 trips representing 1,141 and 4.6% of the trips to all FRAs in the Rocky Clearwater Forest (Tables 1 and 3). The length of stay varied from 1 to 12 nights with 65% staying only one

night, 32% staying 2 - 3 nights (Table 7). On average, campers spent 1.57 nights. These data tend to support the campground host's observation of Chambers Creek being used primarily as a one night stopover and not as a primary camping destination.

Market Areas

Only 86% of the campers were from Alberta (Table 8). This is considerably less than the proportion of Albertans found visiting other campgrounds such as Medicine Lake. About 12% were from other provinces and the remaining 2% were from outside Canada. Of the trips originating from within Alberta, 79% were from small town or rural areas (Table 9).

Visitor Characteristics

Most of the camping parties (58%) were comprised of 2 people (Table 10). Less than 5% had more than 5 people in their party. Fifty three percent of the campers were first time visitors (Table 11). Twenty two percent had visited the campground 5 or more times in the last 10 years.

These results suggest that Chambers Creek is serving a wider market area, including out of province residents, than many of the other FRAs. It is being used primarily as a stopover and not as a camping destination.

Goldeye Lake

Field Observations

Goldeye Lake is situated 11 km west of Nordegg on Highway 11. The campground has 44 camping sites. Nineteen of these are situated in an area close to the lake and the other 25 are located across the access road out of sight of the lake. Both sections of the campground are well treed, however, the sites near the lakeshore are closer together and less private that the sights situated across the road. The sites near the lake fill first. The lake provides a very tranquil setting. Fishing is probably the most popular activity, along with hiking

and canoeing or boating. The lake is stocked with rainbow trout (Salmo gairdneri) and there have been reports of fish as large as 2 kg being caught. The lake appears to be a popular family fishing spot. Many campers with children were observed fishing along the shore and in boats. For some children this was their first fishing experience. The lake is also popular with fly fishermen. Gasoline powered boats are not permitted on the lake. Ospreys, loons, king fishers, and bald eagles are frequently seen. There is a hiking trail that goes around the lakeshore. There is a day use area and boat launch. In early June there is an abundance of wildflowers along the lakeshore with several species of orchids observed.

Campground Use

A total of 1,032 trips representing 1,961 user nights were taken to Goldeye Lake (Tables 1 and 3). Trips to Goldeye represented 6.6% of the camping trips to the Rocky Clearwater Forest. The length of stay varied from 1 to 15 nights with 50% staying one night, 40% staying 2 -3 nights and 9% staying 4 - 7 nights (Table 7). On average visitors spent 1.89 nights. It appears that campers here are about evenly split between those who use Goldeye as a camping destination and those who use it as a stopover.

Market Areas

Most of the visitors (92%) were from Alberta, 6% were from other provinces and 2% were from outside Canada (Table 8). Of the trips originating from within Alberta, 68% were from small town or rural areas and 23% were from Edmonton (Table 9). Goldeye received more urban visits than Fish Lake which offers a very similar setting and is situated only 3 km away.

Visitor Characteristics

Most of the camping parties (51%) were comprised of 2 people with 96% having 5 or less in their party (Table 10). About half of the campers (49%) were first time visitors and 17% had been to the FRA 5 or more times (Table 11).

Fish Lake

Field Observations

Fish Lake is situated 8 km west of Nordegg on Highway 11. It is the largest campground in the Rocky Clearwater Forest with 91 sites. The campground is comprised of 4 sections: 2 are located by the lake and the 2 largest sections are located across the road out of sight of the lake. The lakeside section contains 22 sites. The lakeside sites are closer together and have less privacy than the sites located across the road in the upper sections. A few sites in the uppermost section are located by a small lake. The upper sections have large sites with a lot of space between them. The forest here is mature spruce which provide ample shade. Fish Lake also has a day use area and boat launch. Popular activities include fishing, boating or canoeing, and swimming. The lake is stocked with rainbow trout (Salmo gairdneri) and fish as large as 4 kg have been caught. Gas powered boats are not allowed on the lake. Ospreys and bald eagles are common. We received several complaints from campers with large trailers and motorhomes that some of the turns and sites in the campground were difficult to negotiate.

Campground Use

A total of 1,778 trips representing 3,952 user nights were made to Fish Lake (Tables 1 and 3). This represented 11.3% of the camping trips made to the Rocky Clearwater FRAs. Fish Lake rated second on number of trips, behind Thompson Creek, but it had the most user nights. This suggests that visitors to Fish Lake tend to stay longer than visitors to Thompson Creek. On average, campers spent 2.22 nights at Fish Lake compared to 1.29 at Thompson Creek (Table 7). Fewer visitors (40%) spent only one night at Fish Lake than at most of the other FRAs. Forty six percent spent 2 - 3 nights, 13% spent 4 - 7 nights, and 1.4% spent more than 7 nights. This suggests that Fish Lake is a primary camping destination for many of its visitors.

Market Areas

About 91% of the campers were from Alberta, 7% were from other provinces, and 2% were from outside Canada (Table 8). Of the trips originating from within Alberta, 73% were from small town or rural areas (Table 9).

Visitor Characteristics

Most of the camping parties (53%) were comprised of two people and 94% had 5 or less in their party (Table 10). Only 43% were first time visitors and 29% had been there 5 or more times in the last 10 years (Table 11). This represents fewer first time visitors at Fish Lake than many of the other FRAs.

These results suggest that Fish Lake is a primary camping destination for many Albertans who have visited the FRA many times in the past.

Crescent Falls

Field Observations

Crescent Falls is located 25 km west of Nordegg. The campground is accessed by a 6 km gravel road which is narrow and very steep in places. To reach the campground visitors must drive across a shallow stream that does not have a bridge. The steepness of the road may be a deterrent to many campers with trailers and motorhomes. There are 20 sites. Three sites are walk-in sites and are located on the shore of the Big Horn River. Separate from the main campground is an overflow area and horse and ATV staging areas which also have camping. This FRA has a scenic attraction, Crescent Falls. A fenced section provides a safe area for viewing the falls. Popular activities include fishing, use of off highway vehicles, horseback riding, and hiking. In late September 1994, there was a forest fire near the campground and the campground had to be evacuated.

Campground Use

A total of 736 trips were made to Crescent Falls, representing 1,235 user nights and 4.7% of the total trips to the FRAs (Tables 1 and 3). The length of stay varied from 1 to 11 nights with 55% staying one night, and 41% staying 2 - 3 nights (Table 7). On average, visitors spent 1.67 nights at the FRA. This campground serves primarily as a one night stopover or weekend destination.

Market Areas

About 91% of the visitors were from Alberta, 6% were from other provinces, and 2% were from outside Canada (Table 9). Of the trips originating from within Alberta, Crescent Falls received among the lowest proportion of rural or small town trips (58%) and among the highest proportion of Edmonton trips (35%) (Table 9).

Visitor Characteristics

Most of the camping parties (53%) were comprised of 2 people and 95% had 5 or less in their parties (Table 10). Crescent Falls received a relatively large proportion of first time users (Table 11). About 59% were first time visitors and only 9% had been there 5 or more times.

Ram Falls

Field Observations

Ram Falls is situated about 65 km south of Nordegg via the Forestry Trunk Road or 96 km southwest of Rocky Mountain House via gravel roads. The gravel roads in this area are narrow and windy. Driving conditions depend on the weather but vary from dry and dusty to wet and slippery. Logging trucks also use these roads. During the on-site interviews many campers complained about the road conditions. There appear to be far fewer trailers and motorhomes at this campground, probably because of the road conditions.

There are 54 camping sites and an overflow camping area. The campground is divided into 4 sections. Only on long weekends were all sections of the campground open. The FRA is designated as a Watchable

Wildlife Viewing Site (Alberta Forestry, Lands and Wildlife, 1990) and is situated adjacent to the spectacular Ram Falls. Wooden stairs provide access to a safe viewing area for the falls. Big horn sheep are often seen on the slopes near the falls. The FRA has a popular day use area. The FRA provides access to many hiking, mountain biking, horseback riding, and off highway vehicle trails. There are also ample fishing opportunities in the Ram River or other rivers and streams along the Forestry Trunk Road. An airstrip is located across the road from the campground. A guardian and host stayed on-site during July and August.

Campground Use

A total of 904 trips were made to Ram Falls representing 5.8% of total trips to FRAs and 1,560 user nights (Tables 1 and 3). The length of stay varied from 1 to 6 nights which is considerably shorter than the other FRAs. Forty eight percent stayed only one night and 49% stayed 2 -3 nights (Table 7). On average, campers spent 1.71 nights. Campers are evenly divided between those who used the FRA as a vacation (>3 nights) and those who used it as a stopover or weekend trip (≤3 nights).

Market Areas

About 94% of visitors were from Alberta, 5% were from other provinces, and 1% were from outside Canada (Table 8). Of the trips originating from within Alberta, Ram Falls received a higher proportion of trips from Calgary (17%) than most other FRAs (Table 9). Only 56% of the trips originated in small towns or rural areas.

Visitor Characteristics

Most of the camping parties (52%) were comprised of 2 people and 94% had 5 or less in their party (Table 10). Ram Falls had a large proportion of first time visitors (61%). Only 12% of the visitors had 5 or more previous visits (Table 11).

These results suggest that a large proportion of the campers at Ram Falls are first time visitors. Since the maximum length of stay was 6 nights, this would suggest that Ram Falls is not a major vacation destination for Albertans. Trips to Ram Falls represent primarily short term stays or one night stopovers.

Two O'Clock Creek

Field Observations

Two O'Clock Creek is located about 65 km west of Nordegg and about 25 km from the Banff National Park boundary on Highway 11. The campground is situated in the Kootenay Plains, surrounded by spectacular scenery. The campground has 20 sites, a day use area, and cook shelter. The sites are situated on a grassy plain with few trees for shade. The sites are very open with little privacy. Because of its location this campground probably receives less rain than any of the other FRAs in the Rocky Clearwater Forest. There is a group campground (Cavalcade) adjacent to the main campground.

The Kootenay Plains Ecological Reserve is adjacent to the FRA. The Reserve was established to protect the unique grasslands and vegetation in the area, therefore, many recreational activities are restricted. For example, use of motorized vehicles and horses is not permitted. The trail head for Siffleur Falls is located about 1 km from the campground. The easy 5 km hike leads to the falls and provides access to the Siffleur Wilderness Area. The trail is very popular and on most weekends the trail head parking lot is full.

There was a black bear siting at the campground the last week of June and a live trap was set by Fish and Wildlife. However, nothing was caught and the bear was not seen again. The trap was removed before the July 1 weekend. A campground host stayed in the campground during July and August.

Campground Use

A total of 1,078 trips were made to Two O'Clock Creek representing 6.9% of the total trips to the FRAs and 1,747 user nights (Tables 1 and 3). Length of stay varied from 1 to 19 nights with 67% spending only 1 night and only 27% spending 2 - 3 nights (Table 7). The high proportion of campers spending only one night

suggests that Two O'Clock may serve primarily as a stopover for people travelling through or as an overflow camping area for Banff National Park rather than a primary camping destination.

Market Areas

Only 83% if the campers were from Alberta, 11% were from other provinces, and 6% were from outside Canada (Table 8). This relatively large proportion of out of province residents using the campground supports the notion that the FRA may be serving as a stopover. Of the trips originating from within Alberta, 71% were from small town or rural areas (Table 9).

Visitor Characteristics

Most of the camping parties (57%) were comprised of 2 people and 94% had five or less in their camping party (Table 9). About 44% of the campers were first time visitors (Table 10). A large proportion of the visitors (30%) had been to the campground 5 or more times. Even though most visitors were spending only one night they were familiar with the campground and had been there in the past.

Thompson Creek

Field Observations

Thompson Creek is located about 85 km west of Nordegg and about 6 km from the Banff National Park boundary on Highway 11. There are 55 sites, a day use area, and a cook shelter. A stream running through the campground divides it into 2 sections. The campground is located in a mature forest surrounded by spectacular mountains. The sites are well shaded and private. Day trips into Banff National Park are easily achieved from this campground. On the evening of Friday, July 8 a bear was sited near the campground entrance. The next day there were only about 6 campers left in the campground.

Campground Use

Thompson Creek received the highest number of trips of all the FRAs in the Rocky Clearwater Forest. There were 2,128 trips representing 13.6% of all trips to the FRA campgrounds and 2,780 user nights (Tables 1 and 3). The length of stay ranged from 1 to 8 nights with 81% of visitors spending only one night and 17% spending 2 - 3 nights (Table 7). On average, campers spent 1.29 nights. These results suggest that Thompson Creek is serving primarily as a stopover for people travelling through the area or as an overflow camping area for Banff National Park.

Market Areas

Only 73% of the visitors were from Alberta, the lowest proportion of all the FRAs (Table 8). About 17% were from other provinces and 10% were from outside Canada. This provides further evidence that the campground is serving primarily as a stopover. Of the trips originating from within Alberta, 65% were from small towns or rural areas and 26% were from Edmonton (Table 9). These results suggest that visitors to Thompson Creek comprise a different market than visitors to the other FRAs in the Forest.

Visitor Characteristics

Most of the camping parties (52%) were comprised of 2 people and 95% had 5 or less in their party (Table 10). A large proportion of campers (59%) were first time visitors and only 14% had been to the campground 5 or more times (Table 11).

Thompson Creek provides a stopover for people travelling through the area. It differs from Two O'Clock Creek and Chambers Creek in that most of the campers have not been to this FRA in the past and more of the visitors are from out of province.

Camper Subgroups from Permit Data

Two distinct clusters were produced from the cluster analysis. Cluster 1 was comprised of 9,895 camping parties. It had a higher proportion of its members from outside of Alberta (12.1%), most stayed only one or two nights at an FRA (Table 12), and a larger proportion had visited the FRA in the past (Table 13). Cluster 2 consisted of 1,382 camping parties. All members of cluster 2 stayed longer than two nights, more of them were first time visitors, and almost all (96%) were from Alberta. To test the hypothesis that FRAs attract different types of campers the distribution of the two clusters across the FRAs was examined. A larger proportion of cluster 1 campers stayed at Chambers Creek, Thompson Creek, and Two O'Clock Creek whereas a larger proportion of cluster 2 campers stayed at Brazeau Reservoir, Brazeau West Canal, Fish Lake, Goldeye Lake, and Medicine Lake (Table 14). These results tend to confirm field observations and the initial analysis of permit data and support the hypothesis that distinct subgroups of campers may be attracted to different FRAs. The possible existence of subgroups visiting different FRAs has implications for the planning and management of FRAs. It suggests that managing FRAs in a homogenous fashion to provide the same experience at all campgrounds may not be meeting the desired camping experiences of the visitors. However, this represents a preliminary analysis based on only three variables. The existence of subgroups and their management preferences will be examined further at a later date using on-site interview and mail survey data.

Selected Observations from Field Staff Notes

- The Forestry Trunk Road is gravel, narrow, and windy. Driving conditions vary depending on the weather and frequency of road scraping by the Department of Transportation. When it is dry it is very dusty and when the road is wet it becomes slippery. To get to Ram Falls one has to travel about 65 km from Nordegg or 55 km from Rocky Mountain House on this road. Logging trucks also use the road.

- Crescent Falls is accessed by 6 km of gravel road which is narrow and very steep in places. To reach the campground one must drive across a shallow stream with no bridge.

- Highway 11 is in good condition, paved shoulders and a speed limit of 100 km/hour. It provides access to the mountain parks.

- The Sunchild Road which provides a shortcut from Highway 11 to Brazeau Dam is gravel, very dusty, and narrow in places. Conditions depend on the weather and frequency of road scraping. One can expect to encounter several logging trucks on this road. The trucks have long wide loads which take up most of the road and they travel very fast considering the road conditions.

- Campground hosts or guardians were present in July and August at Chambers Creek, Fish Lake, Goldeye Lake, Two O'Clock Creek, Thompson Creek, and Ram Falls.

- Camping fee envelopes without the stickers for collecting Travel Cost Model information were used for about 14 days (from approximately June 3 - 15) at some FRAs. Periodically, throughout the summer envelopes without stickers were found by field staff.

- May long weekend - Cold, rainy with snow flurries - the campgrounds were not full.

- July long weekend - July 1 was a Friday. A black bear siting at Two O'Clock Creek campground the previous week and a bear trap was set by Fish and Wildlife. A grizzly bear was sited at the David Thompson Resort, a privately operated campground, and a trap was set.

- July 8 (Friday) Thompson Creek had a bear siting. Occupancy was very low the next day.

- There was a fishing derby at Medicine Lake on July 16 - 17. The campground was full and people camped anywhere they could find a spot. However, it was difficult to do interviews because everyone was away from their camping sites participating in the derby.

- July 22 - Sections of Prairie Creek campground were closed for part of the summer for wash room repairs.

- August long weekend - Goldeye and Fish Lakes were full by mid-afternoon on Friday. All FRA campgrounds were overflowing. It was a hot, sunny weekend with a very high forest fire index.

- Cutting of diseased trees at Brazeau Reservoir left few campsites with any shade and very little privacy. Campers in this campground tended to congregate in a small section of the campground that had a few mature spruce trees.

- Medicine Lake has good birdwatching opportunities in late May and early June but the area is not advertised as such and no campers were observed with binoculars during our visits.

- The summer of 1994 was an ideal camping season. There was not much rain and the temperatures were warm.

- Most campers were pleased that we talking to them and conducting a survey. As one group said, it was nice to have someone to voice their opinions to. They felt that writing a letter to someone in government would not do any good and that talking to people in the field would have more of an impact. This appreciation of having a voice and having someone take the time to talk to campers was evident throughout the summer and particularly evident in the number of campers who wanted to continue participating in the project by signing up for the mail survey. Many expressed concerns over FRAs closing, fees increasing, and charging for firewood. Campers who had camped at campgrounds that sold firewood in bundles were not at all pleased with this system. The general feeling among these campers was that they were sitting in the middle of crown land with trees and windfall all around them, why should they have to pay for firewood? It was not only the price they objected to it was the whole concept of paying for wood when they were in the middle of crown land in a provincially operated campground. Of all issues that concerned campers this was probably the one that was raised most frequently.

- There was a genuine concern over the camping fee. The concern went beyond their own ability to pay. Campers were more concerned with the impact the fee was having on the rest of the forest. They were concerned about what they saw as an increase in the numbers of people random camping and the fact that people are pushing further into more remote areas. Their concern is over environmental impacts e.g., raw sewage and the risk of forest fires. As one camper said all it would take is one good forest fire and the province would end up spending more on fire fighting than it has ever collected on camping fees from FRAs. They felt that the fee is defeating the purpose of the FRAs. Many campers questioned whether the Alberta Land and Forest Service cared about the Forest or if it was more concerned with cost recovery.

- There is a real need to provide information to campers on recreational opportunities in the area. When field staff were collecting data they were often approached by campers wanting to know where they could fish, ride their ATVs, hike, etc. A good example of this occurred on the August long weekend at Crescent Falls when the field staff returned to the car to get more questionnaires. As we were getting supplies from the car a

que of about 6 people formed behind us. They all had questions about activities and regulations. Unfortunately, we were not able to help most of them.

- Campers have no idea what it costs to operate a campground. Many are not aware that the raw sewage has to be removed from the toilets and disposed of elsewhere, they are not aware of the quantity of firewood that is used at FRAs or what it costs to supply the wood, remove garbage, or what other maintenance is required. Because there are few facilities at FRAs most campers are under the impression there is little or no cost associated with operating them.

SUMMARY AND CONCLUSIONS

By redesigning the camping fee permit to include three additional pieces of information we were able to determine a lot about visitors to FRAs in the Rocky Clearwater Forest. For example, the postal code showed that the majority of users are from small towns or rural areas and live within a 1 - 2 hour drive of the Forest. Most of the urban visitors are from Edmonton. FRAs differ in their market areas with some serving almost exclusively a rural or small town market. Most people camp in small parties comprised of 2 or 3 people and 50% of the visitors have not been to the campground in the last 10 years. By analyzing other information on the permit we were able to determine visitation rates to each FRA and seasonal and weekly visitation rates. Most visits occur in July and on weekends and most campers stay only one or two days. Subjecting the data to multivariate analysis we were able to delineate two distinct subgroups of campers that appear to be attracted to certain FRAs. This suggests that campers to FRAs are not a homogenous group and therefore, may have differing management preferences. This will be explored further using the on-site and mail survey data. This study has demonstrated that whenever an agency has a user contact mechanism in place it can be used as a data collection system.

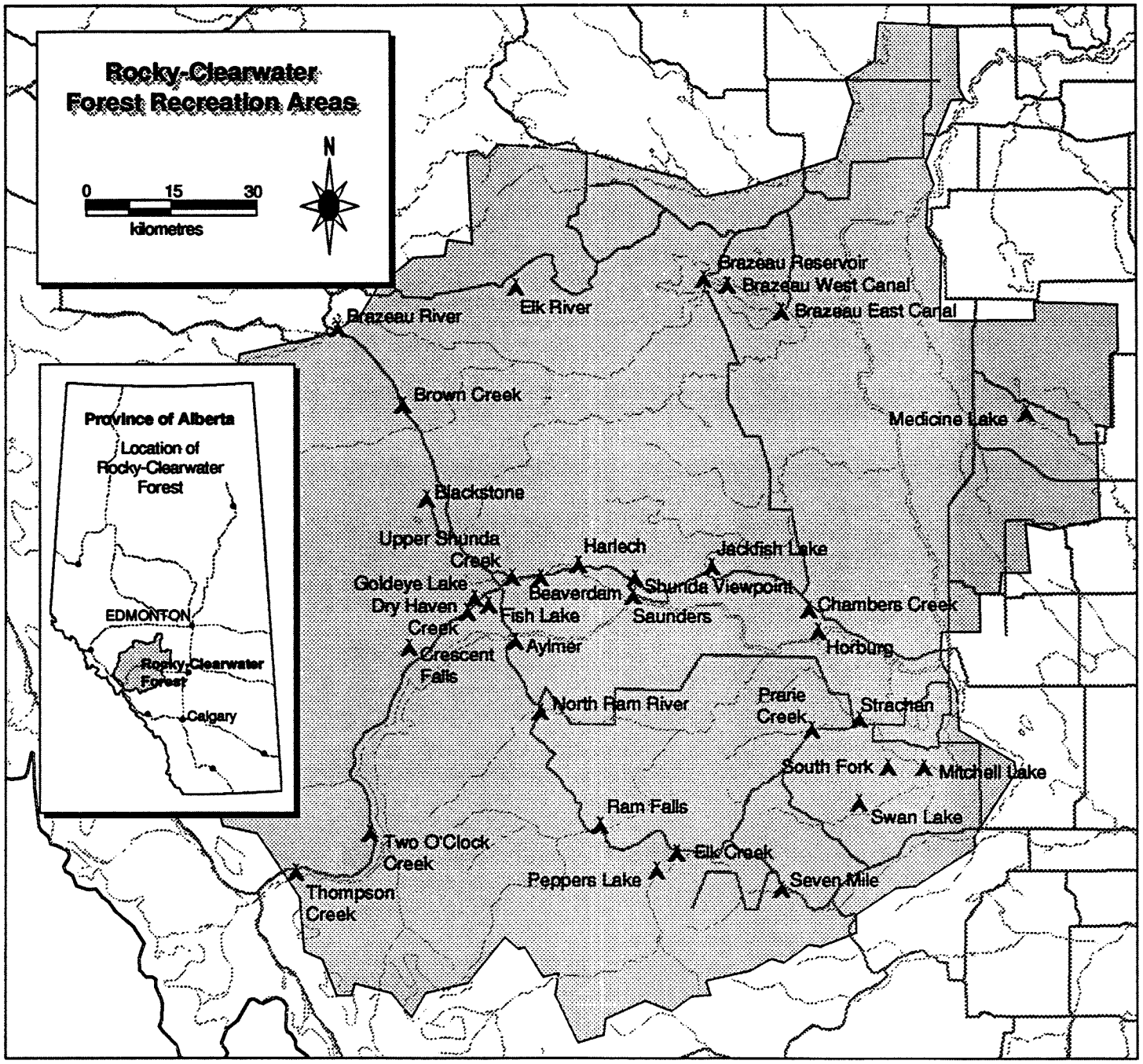


Figure 1. Location of the Rocky Clearwater Forest and Forest Recreation Areas.

Figure 2. A Typical Forest Recreation Area Campsite.

Figure 3. Water Supply at Forest Recreation Areas.

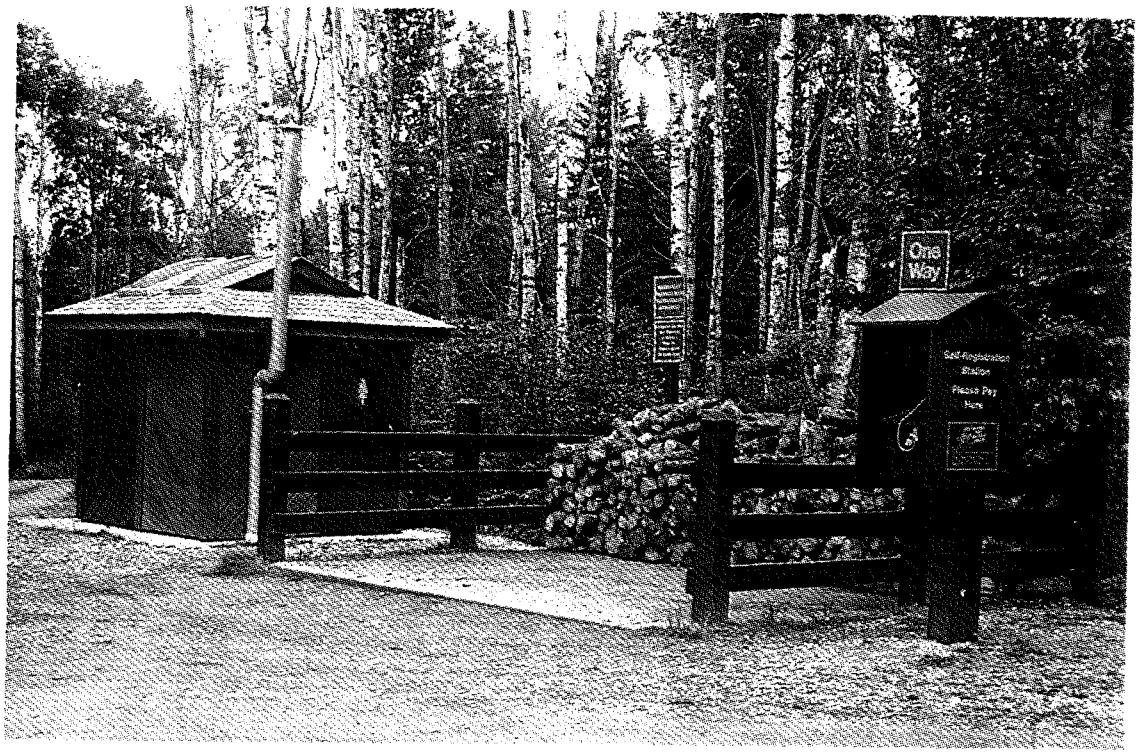
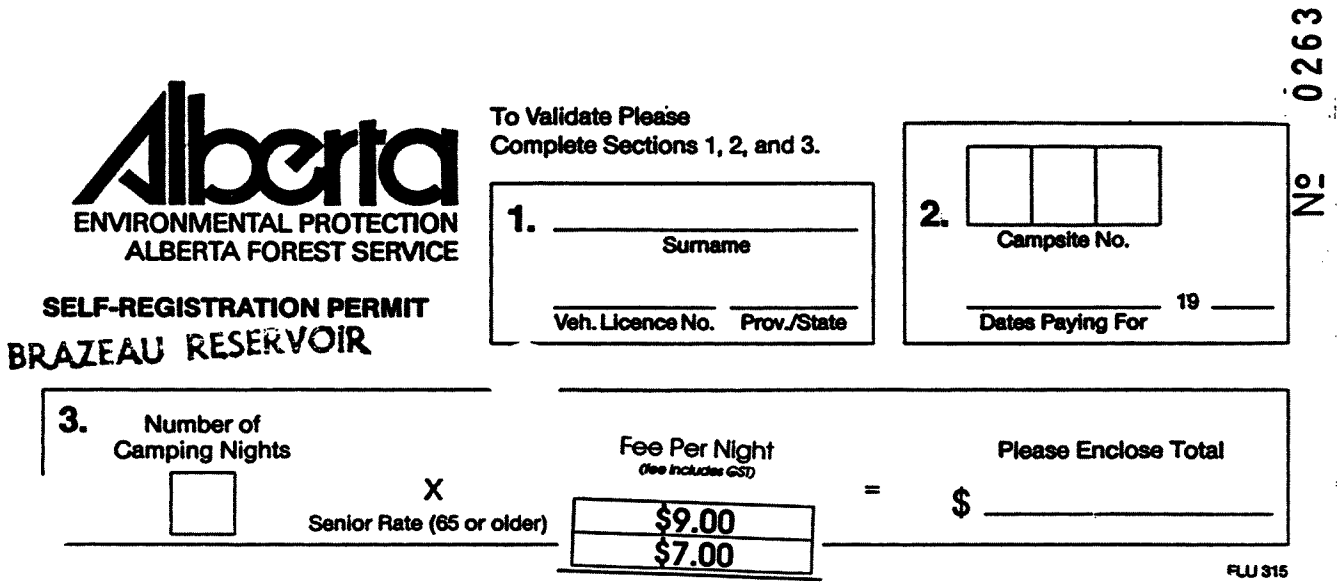


Figure 4. Toilets, Fire wood, and Registration Kiosk at Forest Recreation Areas.



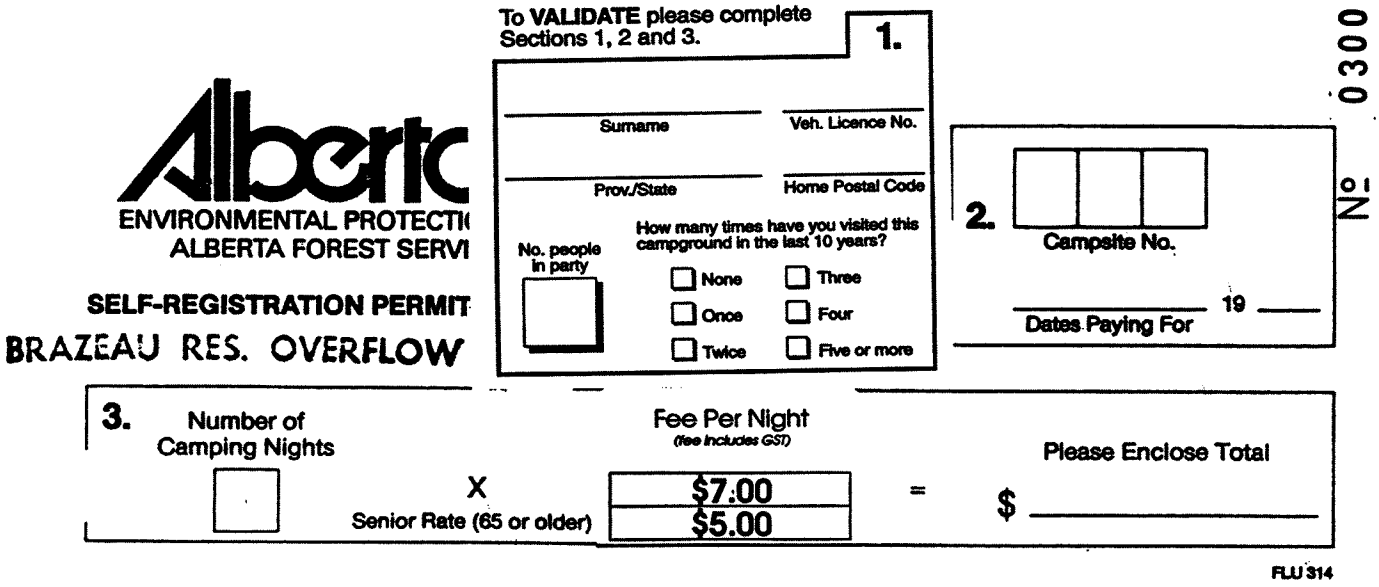


Figure 6. Self-registration Permit: Before (top) and After (bottom) Being Redesigned.

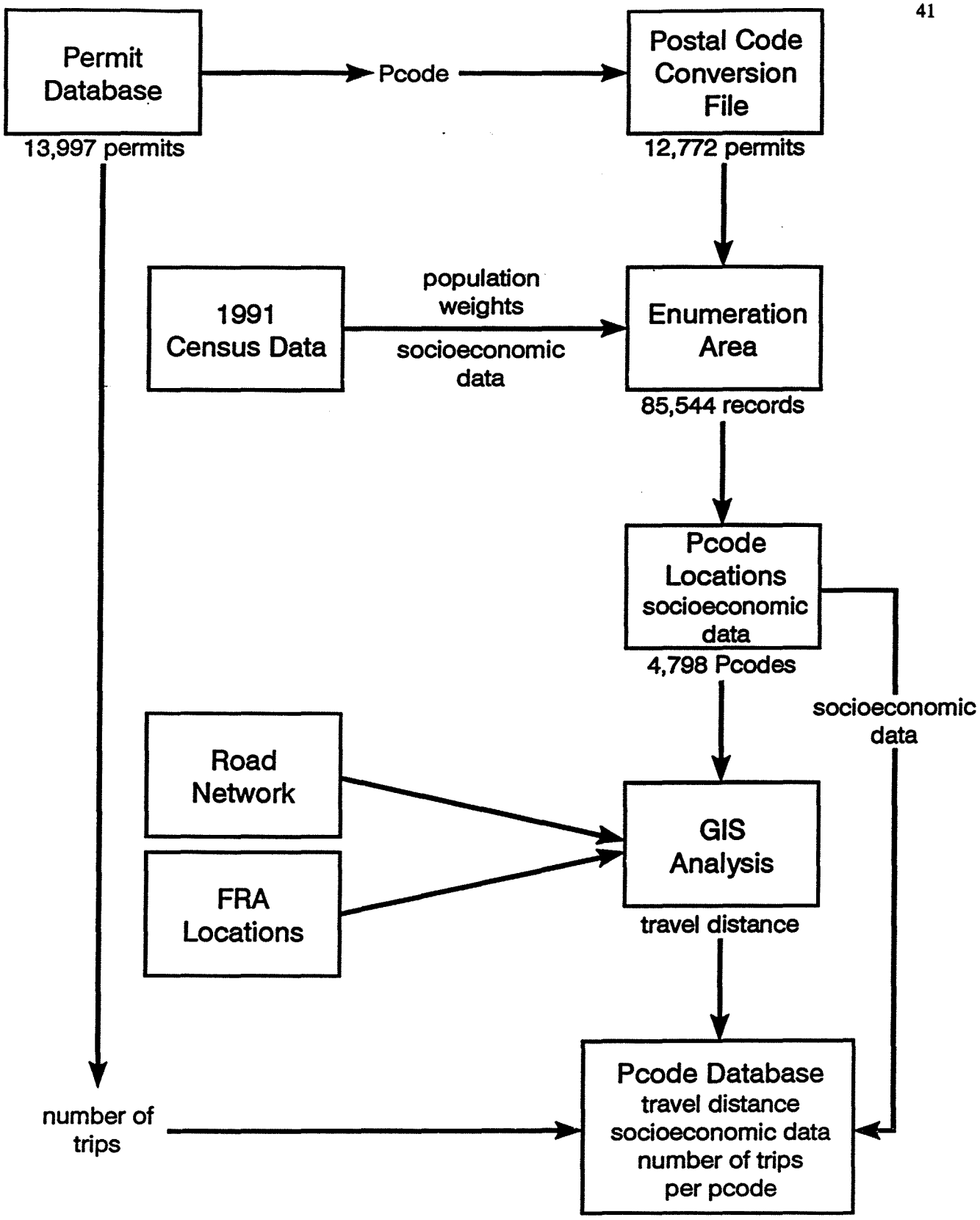


Figure 7. Diagram of Database Linkages.

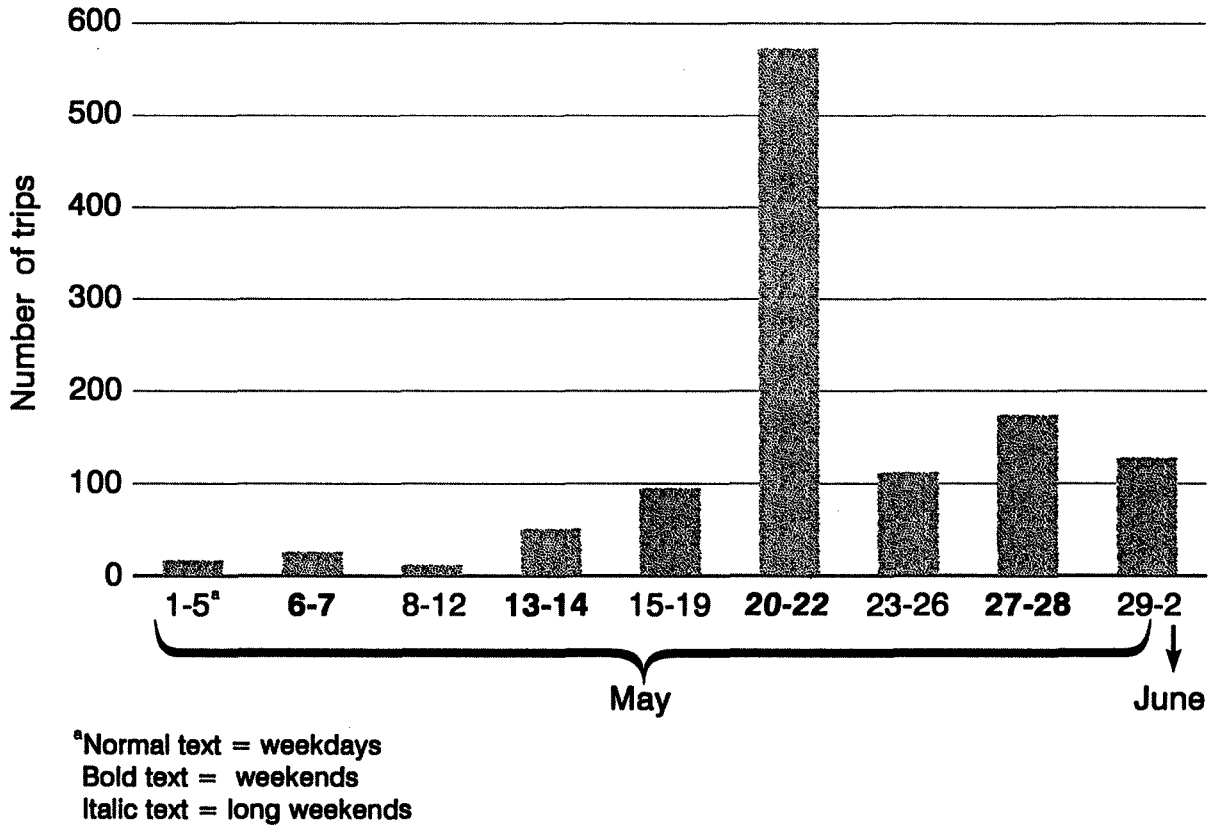


Figure 8. Distribution of Trips During May, 1994.

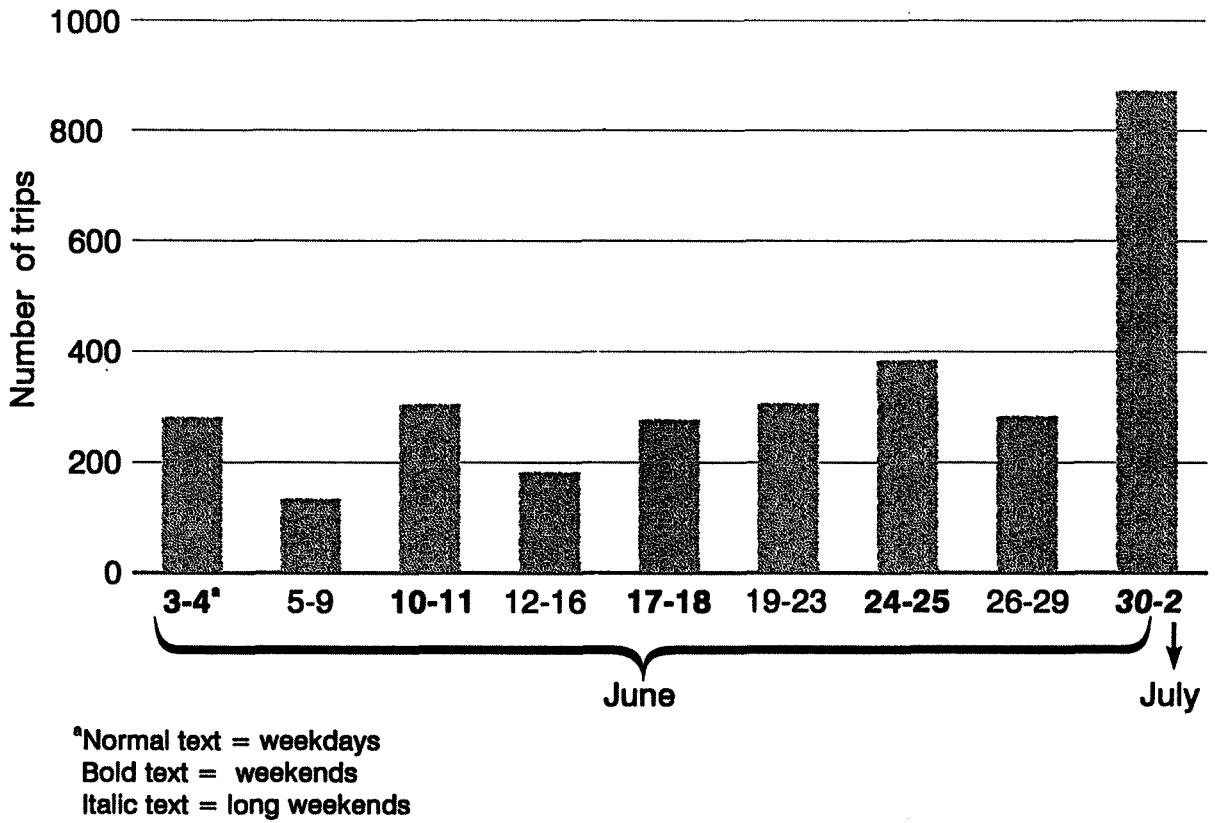
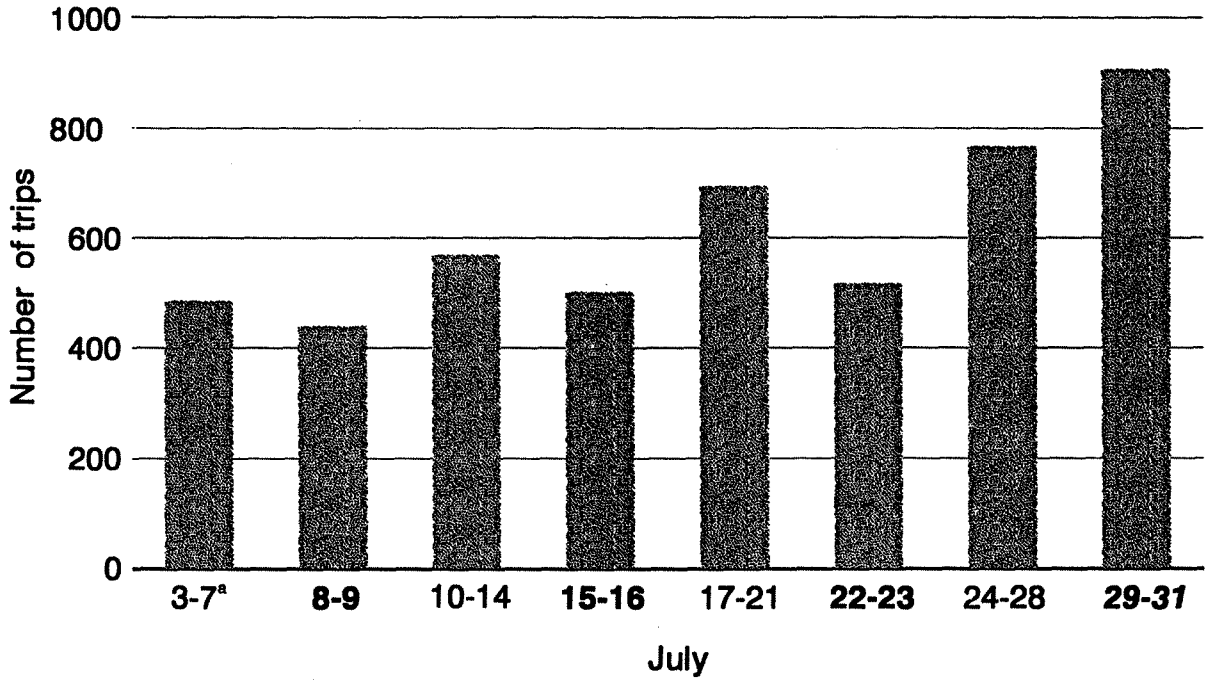


Figure 9. Distribution of Trips During June, 1994.



[a]Normal text = weekdays
Bold text = weekends
Italic text = long weekends

Figure 10. Distribution of Trips During July, 1994.

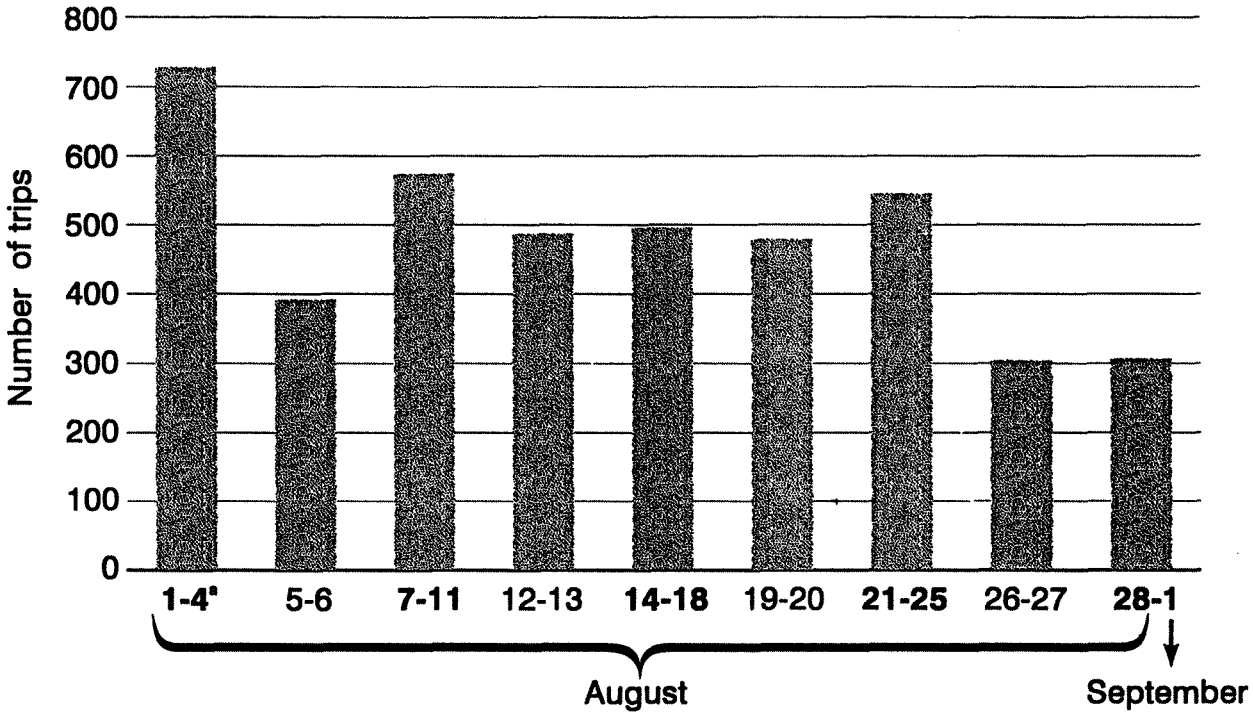


Figure 11. Distribution of Trips During August, 1994.

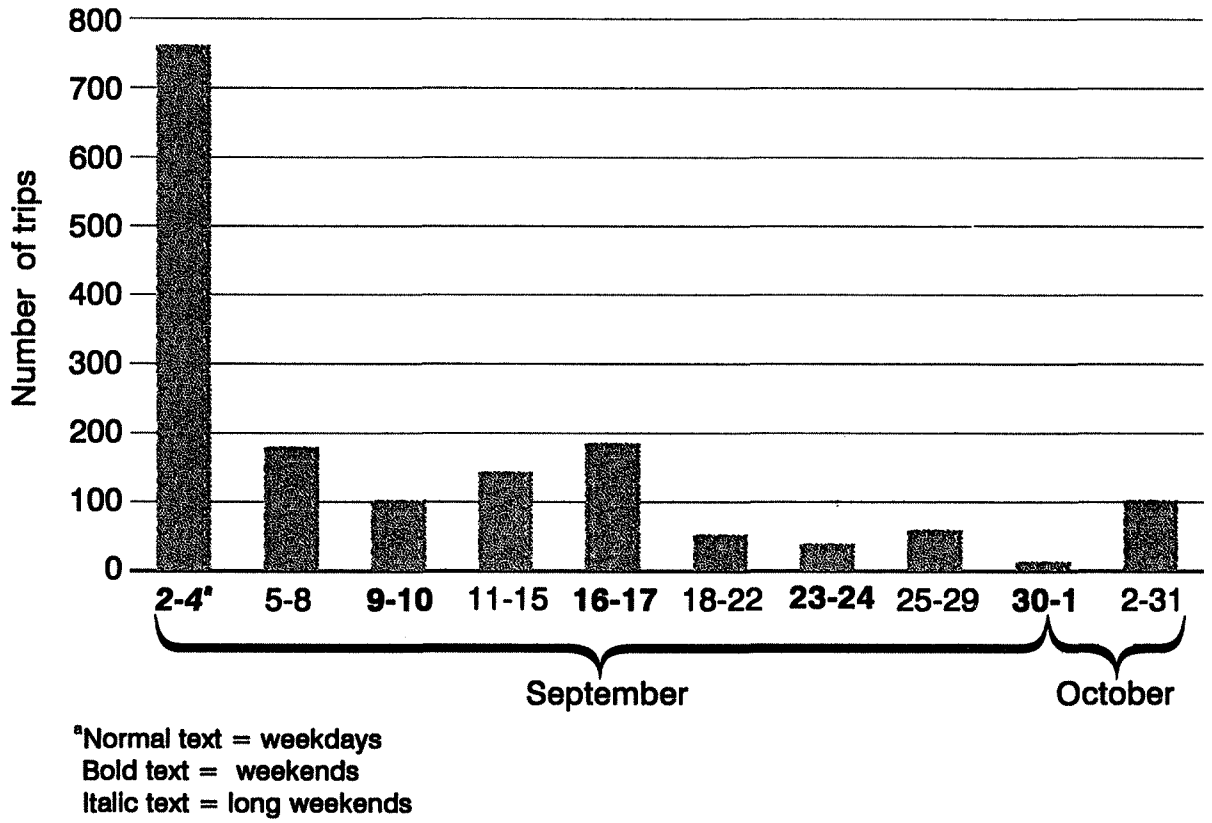


Figure 12. Distribution of Trips During September and October, 1994.

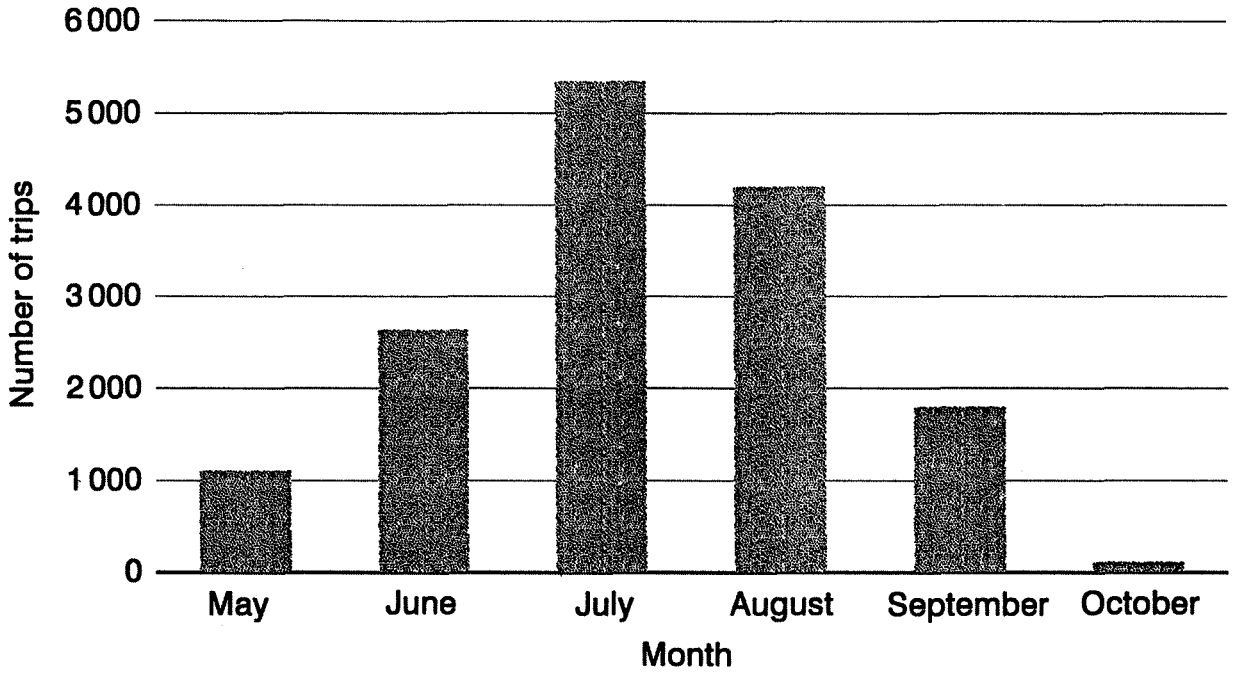


Figure 13. Distribution of Trips by Month.

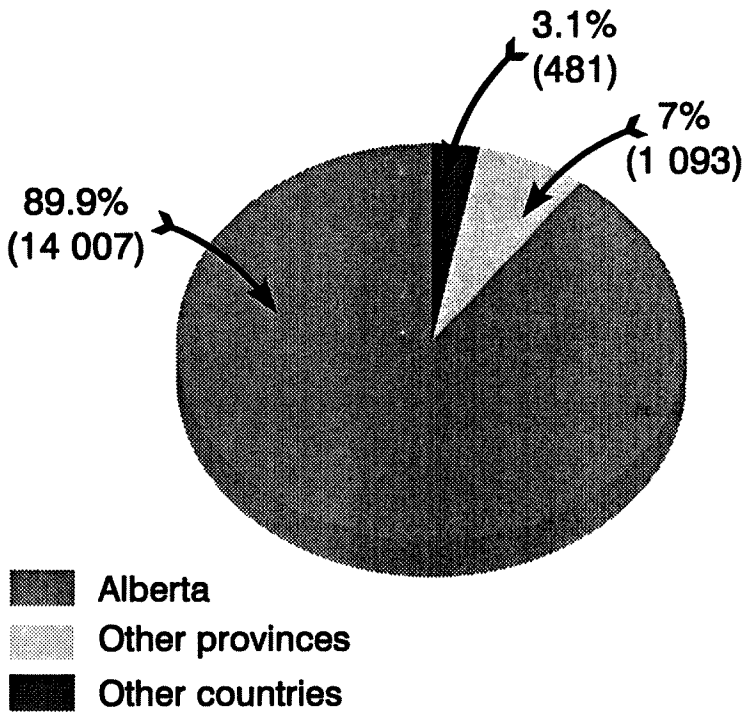


Figure 14. Origins of Forest Recreation Area Campers.

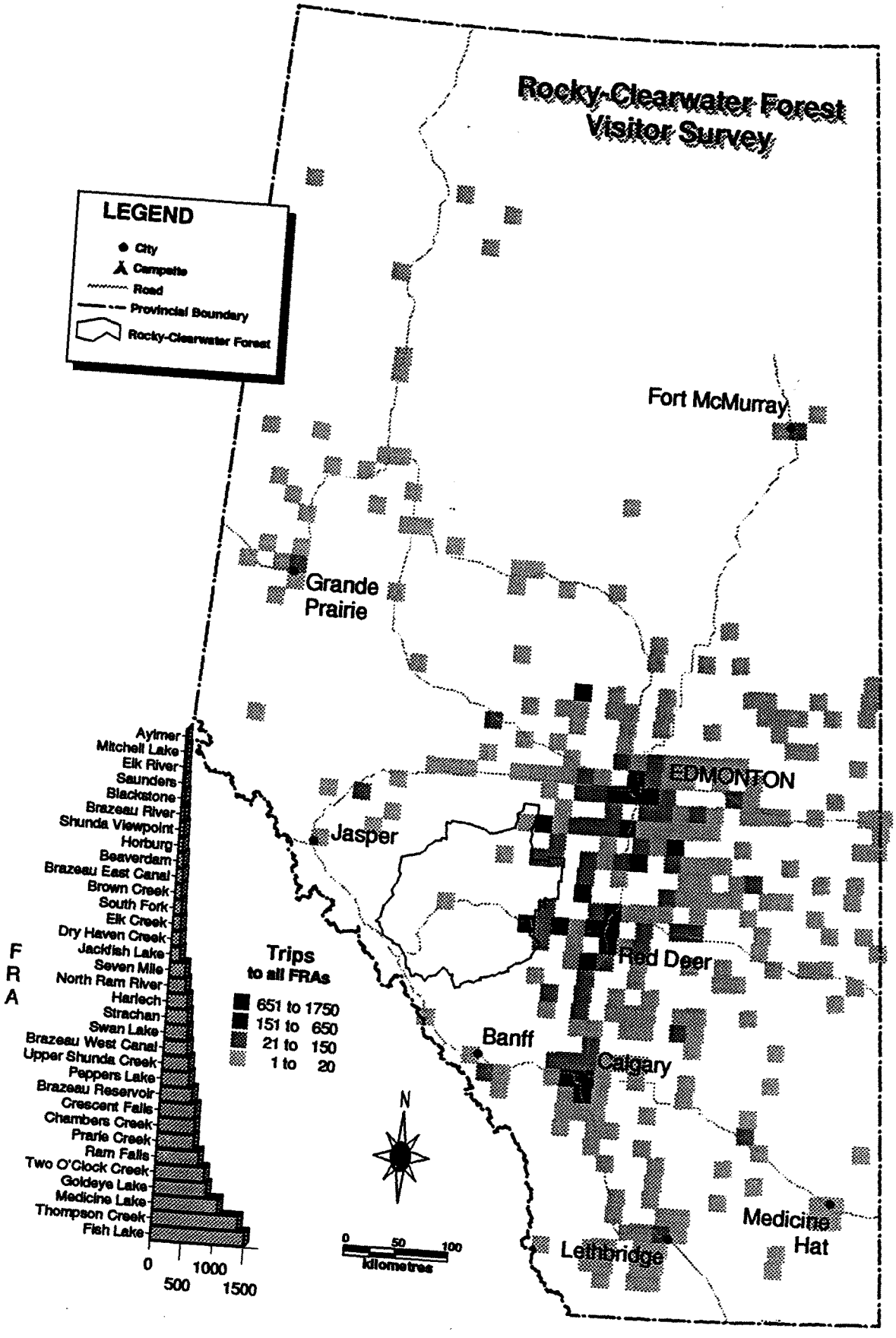


Figure 15. Market Area Map for the Rocky Clearwater Forest.

Table 1. Distribution of User Nights for Forest Recreation Areas

Forest Recreation Area	Total Nights	Mean Nights	Std. Dev.
Fish Lake	3952	2.22	1.62
Thompson Creek	2780	1.29	0.73
Medicine Lake	2663	2.36	1.60
Goldeye Lake	1961	1.89	1.25
Two O'Clock Creek	1747	1.60	1.30
Ram Falls	1560	1.71	0.84
Prairie Creek	1346	2.14	1.21
Crescent Falls	1235	1.67	0.96
Brazeau Reservoir	1210	2.06	1.27
Chambers Creek	1141	1.57	1.08
Peppers Lake	988	1.95	0.99
Swan Lake	932	2.26	1.54
Brazeau West Canal	915	2.08	1.26
Upper Shunda Creek	853	1.58	1.03
Strachan	758	1.95	1.10
North Ram River	618	1.74	1.05
Harlech	580	1.27	0.65
Seven Mile	514	1.71	0.89
Dry Haven Creek	297	1.40	0.96
Elk Creek	294	1.77	1.07
Jackfish Lake	292	1.53	0.77
Brazeau East Canal	278	2.16	1.22
South Fork	268	1.87	1.00
Brown Creek	229	1.58	0.94
Beaverdam	208	1.47	0.92
Shunda Viewpoint	203	2.24	1.13
Horburg	165	1.48	0.58
Blackstone	148	2.14	1.74

Table 1. continued

Forest Recreation Area	Total Nights	Mean Nights	Std. Dev.
Brazeau River	105	1.31	0.61
Saunders	99	1.77	0.87
Aylmer	72	1.27	0.53
Mitchell Lake	71	1.65	0.81
Elk River	59	1.44	0.71
TOTAL	28,544	1.80	1.22

Table 2. Distribution of Nights Stayed at Forest Recreation Areas

Number of nights	Frequency	Percent
1	8349	53.2
2	4320	27.5
3	1980	12.6
4	591	3.8
5	205	1.3
6	104	0.7
7	65	0.4
8	32	0.2
9	14	0.1
10	10	0.1
more than 10	31	0.2

Table 3. Distribution of Trips to Forest Recreation Areas

Forest Recreation Area	Number of trips	Percent of total trips
Thompson Creek	2128	13.6
Fish Lake	1778	11.3
Medicine Lake	1118	7.1
Two O'Clock Creek	1078	6.9
Goldeye Lake	1032	6.6
Ram Falls	904	5.8
Crescent Falls	736	4.7
Chambers Creek	721	4.6
Prairie Creek	627	4.0
Brazeau Reservoir	587	3.7
Upper Shunda Creek	531	3.4
Peppers Lake	501	3.2
Harlech	450	2.9
Brazeau West Canal	439	2.8
Swan Lake	409	2.6
Strachan	383	2.4
North Ram River	351	2.2
Seven Mile	296	1.9
Dry Haven Creek	207	1.3
Jackfish Lake	185	1.2
Elk Creek	163	1.0
Brown Creek	144	0.9
South Fork	141	0.9
Beaverdam	138	0.9
Brazeau East Canal	129	0.8
Horburg	101	0.6
Shunda Viewpoint	90	0.6
Brazeau River	79	0.5

Table 3. continued

Forest Recreation Area	Number of trips	Percent of total trips
Blackstone	69	0.4
Saunders	53	0.3
Aylmer	52	0.3
Mitchell Lake	43	0.3
Elk River	41	0.3
TOTAL	15,704	100.0

Table 4. Distribution of Multiple Trips by Individuals to Forest Recreation Areas

Frequency of Occurrences of Vehicle Licence Numbers	Frequency	Percent
1	8363	81.5
2	1314	12.8
3	360	3.5
4	143	1.4
5	46	0.4
more than 5	40	0.4

Table 5. Distribution of Number of People in Camping Party

Number of people	Frequency	Percent
1	619	4.3
2	7613	52.5
3	1977	13.6
4	2417	16.7
5	1038	7.2
6	488	3.4
7	151	1.0
8	97	0.7
9	39	0.3
10	18	0.1
more than 10	39	0.3

Table 6. Distribution of Previous Visits in the Last 10 Years to Forest Recreation Areas

Number of previous visits	Frequency	Percent
0	7086	49.7
1	1523	10.7
2	1132	7.9
3	734	5.2
4	539	3.8
5 or more	3235	22.7

Table 7. Number of Nights Stayed by Camping Parties at Forest Recreation Areas

Forest Recreation Area	Distribution (%) of Number of Nights Stayed					Mean number of nights
	1 night	2-3 nights	4-7 nights	8-14 nights	>14 nights	
Aylmer	76.9	23.1	0.0	0.0	0.0	1.27
Beaverdam	68.1	29.0	2.9	0.0	0.0	1.47
Blackstone	33.3	62.3	1.4	2.9	0.0	2.14
Brazeau Reservoir	37.1	55.4	6.6	0.9	0.0	2.06
Brazeau East Canal	32.6	58.2	9.3	0.0	0.0	2.16
Brazeau West Canal	39.2	51.5	8.4	0.9	0.0	2.08
Brazeau River	77.2	22.8	0.0	0.0	0.0	1.30
Brown Creek	63.9	29.8	6.2	0.0	0.0	1.56
Chambers Creek	64.7	32.0	2.8	0.5	0.0	1.57
Crescent Falls	55.4	40.6	3.8	0.1	0.0	1.67
Dry Haven Creek	76.8	19.8	3.4	0.0	0.0	1.40
Elk Creek	49.1	47.2	2.4	1.2	0.0	1.77
Elk River	65.9	31.7	2.4	0.0	0.0	1.44
Fish Lake	40.0	45.9	12.7	1.4	0.0	2.22
Goldeye Lake	50.3	40.3	9.0	0.3	0.1	1.89
Harlech	81.8	16.0	2.2	0.0	0.0	1.27
Horburg	56.4	43.6	0.0	0.0	0.0	1.45
Jackfish Lake	62.2	36.2	1.6	0.0	0.0	1.53
Medicine Lake	29.5	57.4	11.7	1.4	0.0	2.36
Mitchell Lake	55.8	44.2	0.0	0.0	0.0	1.65
North Ram River	55.6	37.9	6.6	0.0	0.0	1.74
Peppers Lake	37.1	57.3	5.6	0.0	0.0	1.95
Prairie Creek	31.4	58.0	10.3	0.2	0.0	2.14
Ram Falls	48.2	48.7	3.1	0.0	0.0	1.71
Saunders	47.2	49.1	3.8	0.0	0.0	1.77
Seven Mile	51.0	45.6	3.4	0.0	0.0	1.71
Shunda Viewpoint	18.9	72.2	10.8	1.1	0.0	2.24

Table 7. continued

Forest Recreation Area	Distribution (%) of Number of Nights Stayed					Mean number of nights
	1 night	2-3 nights	4-7 nights	8-14 nights	>14 nights	
South Fork	41.1	56.8	1.4	0.7	0.0	1.87
Strachan	40.2	52.3	7.3	0.3	0.0	1.95
Swan Lake	33.0	54.8	11.0	1.0	0.2	2.26
Thompson Creek	81.1	17.0	1.7	0.1	0.0	1.29
Two O'Clock Creek	67.4	27.1	4.6	0.9	0.1	1.60
Upper Shunda Creek	63.6	32.6	3.5	0.4	0.0	1.58
TOTAL	53.2	40.1	6.2	0.5	0.0	1.80

Table 9. Distribution (%) of Trip Origin for Forest Recreation Areas

Forest Recreation Area	Origin			Total trips
	Edmonton n = 2933	Calgary n = 1084	Rural or small town n = 8979	
Aylmer	29.6	25.9	44.4	27
Beaverdam	33.0	1.9	65.1	106
Blackstone	26.2	6.6	67.2	61
Brazeau East Canal	20.5	3.4	76.1	117
Brazeau Reservoir	38.6	5.5	55.9	526
Brazeau West Canal	27.4	1.0	71.6	391
Brazeau River	31.3	7.5	61.2	67
Brown Creek	28.9	9.1	62.0	121
Chambers Creek	15.3	6.1	78.6	595
Crescent Falls	34.7	7.6	57.7	602
Dry Haven Creek	35.8	3.3	60.9	151
Elk Creek	25.6	12.4	62.0	137
Elk River	40.5	0.0	59.5	37
Fish Lake	18.9	7.8	73.3	1537
Goldeye Lake	23.4	8.6	68.1	865
Harlech	29.9	4.4	65.7	344
Horburg	33.3	19.1	47.6	84
Jackfish Lake	15.6	10.0	74.4	160
Medicine Lake	7.4	3.7	88.9	1060
Mitchell	26.3	15.8	57.9	38
North Ram River	41.0	11.0	48.0	293
Peppers Lake	18.4	16.5	65.1	456
Prairie Creek	10.2	4.5	85.3	597
Ram Falls	27.6	16.5	55.9	709
Saunders	30.4	21.7	47.8	46
Seven Mile	24.2	20.5	55.3	264

Table 9. continued

Forest Recreation Area	Origin			Total Trips
	Edmonton	Calgary	Rural or small town	
Shunda Viewpoint	2.4	0.0	97.6	82
South Fork	12.6	9.5	77.9	127
Strachan	15.3	5.1	79.6	354
Swan Lake	12.0	20.6	67.4	374
Thompson Creek	25.9	9.0	65.1	1417
Two O'Clock Creek	23.0	5.9	71.1	812
Upper Shunda Creek	30.3	7.1	62.6	439
TOTAL	22.6	8.3	69.1	12,996

Table 10. Distribution (%) of Number of People in the Camping Party

Forest Recreation Area	Number of People in Camping Party						Total Parties
	1	2	3	4	5	more than 5	
Aylmer	7.7	42.3	15.4	15.4	7.7	19.2	26
Beaverdam	3.1	56.3	14.1	10.2	6.3	10.2	128
Blackstone	3.3	51.7	21.7	16.7	5.0	1.7	60
Brazeau Reservoir	3.2	46.2	14.7	17.7	10.7	7.5	532
Brazeau East Canal	3.5	60.9	8.7	9.6	8.7	8.7	115
Brazeau West Canal	3.4	47.8	15.1	16.7	9.9	7.0	383
Brazeau River	1.4	56.2	15.1	12.3	2.7	12.3	73
Brown Creek	2.9	55.8	20.3	13.0	4.3	3.6	138
Chambers Creek	4.5	58.3	12.4	15.1	5.1	4.5	683
Crescent Falls	3.6	52.8	15.1	16.6	6.2	5.5	674
Dry Haven Creek	4.0	58.0	6.0	14.0	12.0	1.5	200
Elk Creek	5.1	53.8	17.9	16.0	3.2	3.8	156
Elk River	8.1	51.4	10.8	18.9	8.1	2.7	37
Fish Lake	2.9	53.4	13.4	16.8	7.9	5.6	1675
Goldeye Lake	4.0	51.1	13.8	17.9	8.9	4.3	962
Harlech	6.8	52.5	14.1	16.9	6.4	3.3	425
Horburg	3.3	22.0	20.9	17.6	14.3	22.0	91
Jackfish Lake	6.0	38.1	18.5	22.6	7.1	7.7	168
Medicine Lake	2.6	52.5	11.9	16.7	8.4	8.0	1052
Mitchell Lake	7.3	53.7	12.2	9.8	14.6	2.4	41
North Ram River	8.1	55.0	13.1	15.6	3.1	5.0	320
Peppers Lake	6.5	49.9	15.9	17.5	5.0	5.2	479
Prairie Creek	3.5	55.6	12.5	15.8	7.7	4.9	594
Ram Falls	4.2	52.3	14.7	15.2	7.3	6.4	769
Saunders	3.9	52.9	5.9	17.6	3.9	15.7	51
Seven Mile	4.8	47.6	18.6	17.1	4.1	7.8	269
Shunda Viewpoint	2.6	59.0	11.5	17.9	5.1	3.8	78

Table 10. continued

Forest Recreation Area	Number of People in Camping Party						Total Parties
	1	2	3	4	5	more than 5	
South Fork	6.0	34.6	23.3	23.3	9.0	3.8	133
Strachan	2.7	55.9	14.7	16.6	5.7	4.4	367
Swan Lake	3.9	52.0	15.7	17.1	5.8	5.5	381
Thompson Creek	4.9	52.2	12.8	18.6	6.8	4.7	1949
Two O'Clock Creek	6.3	56.7	10.3	14.5	6.2	6.0	987
Upper Shunda Creek	4.6	53.3	13.2	16.4	7.2	5.4	501
TOTAL	4.3	52.5	13.6	16.7	7.2	5.8	14,497

Table 11. Distribution (%) of Camping Parties' Previous Visits to Forest Recreation Areas

Forest Recreation Area	Number of Previous Visits in the Last 10 Years						Total Parties
	0	1	2	3	4	5 or more	
Aylmer	61.5	3.8	15.4	3.8	0.0	15.4	26
Beaverdam	63.0	12.6	10.1	1.7	1.7	10.9	119
Blackstone	57.8	9.4	4.7	0.0	1.6	26.6	64
Brazeau Reservoir	48.1	11.4	5.7	5.1	3.6	26.0	526
Brazeau East Canal	31.9	7.8	9.5	6.9	2.6	41.4	116
Brazeau West Canal	40.4	12.5	9.6	5.2	4.7	27.6	384
Brazeau River	58.7	12.0	5.3	1.3	4.0	18.7	75
Brown Creek	58.4	10.2	8.0	6.6	1.5	15.3	137
Chambers Creek	53.2	10.3	6.2	5.0	3.1	22.1	678
Crescent Falls	58.9	13.1	9.3	6.4	3.2	9.1	657
Dry Haven Creek	71.2	7.3	8.4	4.2	1.0	7.9	191
Elk Creek	60.0	6.0	8.7	3.3	2.7	19.3	150
Elk River	60.0	5.7	17.1	11.4	0.0	5.7	35
Fish Lake	43.3	9.8	8.7	4.9	4.5	28.7	1646
Goldeye Lake	48.8	12.3	11.6	6.2	3.9	17.2	934
Harlech	63.4	10.6	4.8	6.5	2.2	12.5	415
Horburg	44.3	6.8	9.1	10.2	6.8	22.7	88
Jackfish Lake	62.3	10.5	4.9	4.9	2.5	14.8	162
Medicine Lake	28.3	9.6	7.7	5.8	5.4	43.2	1026
Mitchell Lake	67.5	15.0	5.0	2.5	2.5	7.5	40
North Ram River	46.6	12.0	9.2	4.6	6.1	21.5	326
Peppers Lake	50.6	15.6	9.7	4.4	5.9	13.7	474
Prairie Creek	30.2	9.3	6.1	7.3	3.7	43.3	589
Ram Falls	61.4	11.9	8.7	4.2	1.7	12.0	756
Saunders	51.0	13.7	0.0	3.9	7.8	23.5	51
Seven Mile	59.9	11.9	5.9	1.9	3.3	17.1	269
Shunda Viewpoint	15.8	2.6	5.3	2.6	3.9	69.7	76

Table 11. continued

Forest Recreation Area	Number of Previous Visits in the Last 10 Years						Total Parties
	0	1	2	3	4	5 or more	
South Fork	56.7	8.7	7.1	4.7	0.8	22.0	127
Strachan	41.9	10.3	8.4	6.7	3.1	29.6	358
Swan Lake	47.1	11.1	10.3	5.8	4.5	21.2	378
Thompson Creek	59.0	11.7	6.6	4.9	3.3	14.4	1920
Two O'Clock Creek	43.8	7.5	8.7	4.9	5.1	30.1	968
Upper Shunda Creek	64.8	9.2	5.3	3.1	3.5	14.1	488
TOTAL	49.7	10.7	7.9	5.2	3.8	22.7	14,249

Table 12. Distribution (%) of Nights Stayed by Camping Clusters.

Nights	Cluster 1 n = 9893	Cluster 2 n = 1382
1 - 2	90.9	0.0
3 or more	9.1	100.0

Table 13. Distribution (%) of Previous Visits to Forest Recreation Areas by Camping Clusters.

Previous Visits	Cluster 1 n = 8949	Cluster 2 n = 1251
0	46.6	54.2
1 - 4	27.6	31.0
5 or more	25.8	14.7

Table 14. Distribution (%) of Camping Clusters at Forest Recreation Areas.

Forest Recreation Area	Cluster 1	Cluster 2	χ^2	p
Brazeau Reservoir	4.92	7.24	13.16	0.003
Brazeau West Canal	3.69	5.35	8.99	0.000
Brazeau East Canal	1.16	1.01	0.24	0.625
Chambers Creek	6.75	3.84	17.23	0.000
Fish Lake	14.46	25.11	103.50	0.000
Goldeye Lake	8.90	10.93	5.97	0.015
Medicine Lake	9.22	14.91	43.95	0.000
Thompson Creek	20.44	7.60	130.73	0.000
Two O'Clock Creek	10.12	5.57	28.97	0.000

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Appendix I. Codebook for Permit Data File

Variable Name	Description
year	default value set to 1994
fra	Forest Recreation Area (abbreviated)*
surname	respondents surname
vln	vehicle licence number, entered in lower case with no embedded space
prov	the province, state or country of origin (abbreviated)**
pcode	respondents postal code, entered in lower case with no embedded space
totparty	number of people in the camping party
previsit	how many times the respondent had visited the campground in the last 10 years 0 = none 1 2 3 4 5 or more
site	camping site number ovf = overflow
dates	the first date being paid, entered as ddmmmyy e.g., 24may94 missing value = 01jan94
nights	number of camping nights
fee	fee per night

* Forest Recreation Area Abbreviations:

aylmer	Aylmer
beaver	Beaverdam
blackstn	Blackstone
brazr	Brazeau Reservoir
braze	Brazeau Reservoir East Canal
brazw	Brazeau Reservoir West Canal

brazriv	Brazeau River
browncr	Brown Creek
chcrk	Chambers Creek
cresfall	Crescent Falls

Forest Recreation Area Abbreviations (continued):

dryhaven	Dry Haven Creek
elkcrk	Elk Creek
elkri	Elk River
fishlk	Fish Lake
goldeye	Goldeye Lake
harl	Harlech
horburg	Horburg
jackfsh	Jackfish Lake
medlk	Medicine Lake
mitchell	Mitchell Lake
nram	North Ram River
peppers	Peppers Lake
prairie	Prairie Creek
ram	Ram Falls
saunders	Saunders
sevenml	Seven Mile
shunview	Shunda Viewpoint
southfrk	South Fork
strachan	Strachan
swanlk	Swan Lake
tomcrk	Thompson Creek
twocrk	Two O'Clock Creek
ushunda	Upper Shunda Creek

** Province, State and Country of Origin Abbreviations:

ab	Alberta
bc	British
sk	Saskatchewan
mb	Manitoba
on	Ontario
pq	Quebec
nf	Newfoundland
nb	New Brunswick
ns	Nova Scotia
pei	Prince Edward Island
nwt	Northwest Territories
yk	Yukon

alb	Alabama
al	Alaska
ak	Arkansas
ca	California
dc	District of Columbia

co	Colorado
fl	Florida
id	Idaho
in	Indiana
ia	Iowa

Province, State and Country of Origin abbreviations (continued):

ma	Massachusetts
mi	Michigan
mn	Minnesota
mo	Missouri
mt	Montana
nbr	Nebraska
nv	Nevada
oh	Ohio
or	Oregon
pa	Pennsylvania
sd	South Dakota
tx	Texas
ut	Utah
vt	Vermont
va	Virginia
wa	Washington
wi	Wisconsin

aus	Australia
ast	Austria
ch	Chezkoslovakia
den	Denmark
frn	France
ger	Germany
itl	Italy
jap	Japan
net	Netherlands
nz	New Zealand
sct	Scotland
swt	Switzerland
uk	United Kingdom

Appendix II.

SAS Program to Convert Paradox Data Files to SAS Data Files

```
libname convert '/home/urda1/bmcfarla/fra/1994/permits';
filename outdata 'sasfile.dat';

data paradox;
infile permit delimiter=',';
        input year fra $ surname : $15. vln $ prov $ pcode $ totparty previsit site $ dates date7.  nights  fee 4.2;

if surname='999' then surname=' ';
if vln='999999' then vln=' ';
if prov='999' then prov=' ';
if totparty=99 then totparty=.;
if previsit=9 then previsit=.;
if site='999' then site=' ';
if nights=99 then nights=.;
if dates=12419 then dates=.;
if pcode='999999' then pcode=' ';

data newsas;
        set paradox;
        file outdata;
        put year 6. fra $ 9.  surname $ 15. vln $ 8. prov $ 4. pcode $ 8. totparty 3. previsit 2. site $ 4.
        dates date 7.  nights 3. fee 5.2;
run;
```

Appendix III

Forest Recreation Areas On-site Survey 1994

FRA: _____ Interviewer: _____

Date: _____ Time: _____

Site No. _____

Hello, my name is _____. I work for the Canadian Forest Service. We are doing a study of on Forest Recreation Areas in the Rocky Clearwater Forest. We are trying to determine what factors influence camping at these sites and the importance of Forest Recreation Areas to campers in the province.

Have you completed this survey already this summer?

0. No

1. Yes Would you like to do it again? 0. No 1. Yes

Could I have about 10 minutes of your time to answer some questions about your camping trip? (If no, thank them and leave. If yes, then proceed.)

IF MORE THAN ONE VEHICLE ON SITE: We are interviewing people on a per vehicle basis so could I speak to one person from each vehicle?

All information you provide is strictly confidential and is reported only as statistics from all participants of the study.

1. Which of the following best describes your stay at this campground?

1. A weekend or overnight camping trip
2. Your major vacation destination
3. One stop on a vacation tour
4. An overnight travel accommodation stop
5. Other: _____

2. Have you been to this campground before? 0. No 1. Yes How many times in the last 10 years? _____

3. Which of the following will someone in your group participate in while you are here? (Circle all that apply) Just say yes or no as I read these.

1. fishing	8. canoeing or boating
2. walking or day hikes	9. swimming
3. backpacking (overnight)	10. horseback riding
4. mountain biking	11. using off highway vehicles
5. driving or sightseeing	12. socializing with other campers
6. birdwatching (using binoculars)	13. relaxing at your site
7. watching, studying, or photographing other wildlife	14. other: _____

4. Which one of these activities will your group participate in the most while you are here? _____

5. How many people travelled in your vehicle? _____

   In total, how many people are in your camping party? _____

6. Have you or will you stay at other campgrounds during this trip?

   0. No

   1. Yes Do you know which ones? _____

7. On this trip, if this campground had been full what other campground would you have chosen?

   _____

(if don't know ask if it would likely be the next one down the road)

Now I'd like to ask some questions about your **TRIP** to this campground. This helps us determine where people come from, how far they travel to camp here, the routes they take, and other factors that influence how far people drive to go camping.

8. Which village, town, city, or community are you from?

   _____

9. What is your home postal code? _____

10. Is everyone who travelled in your vehicle from the same community?

    0. No Where are they from? _____ Postal code: _____

    Number of people: _____

    1. Yes

11. How far did you travel from your home to this campground? _____ km _____ miles

12. How many hours (to the nearest 1/2 hour) did you spend driving here? Include the time spent at stops along the way. _____ hours (e.g., 3 1/2 hours)

13. Did you make any stops along the way? 0. No 1. Yes How many? _____ stops

14. How many children travelled <u>in your vehicle</u> to this campground? ___

    What are their ages? _____

15. Some people enjoy the drive to a campground while others do not. On your trip to this campground did you find the drive enjoyable or unenjoyable or neither? Probe for specific category.

very unenjoyable	somewhat unenjoyable	somewhat enjoyable	very enjoyable	neither enjoyable nor unenjoyable
1	2	4	5	3

16. Did you share your travel expenses (e.g., gas, camping fees, food) with anyone in your camping party?

    0. No

    1. Yes Equally? or probe for some other combination.

17. Type of vehicle:

1. Compact car	5. 1/4 ton	9. RV
2. Mid-size car	6. 1/2 ton	10. Full size van
3. Full size car	7. other type of truck	11. Camper van
4. Mini van	8. Motorcycle	12. Other: _____

18. Type of camping equipment: (Circle all that apply)

1. Tent	4. Trailer
2. RV	5. Truck camper
3. Van	6. Tent trailer

19. What would you most likely be doing if you hadn't come on this trip? Would you be:

1. Visiting some other campground
2. Engaging in some other recreational activity (specify _____)
3. Working around your home or garden
4. Working regular time at your main job
5. Working overtime or extra shifts at your main job
6. Working a second job
7. Doing something else (specify _____)

20. Respondent is: 0. Male 1. Female 2. >1 person

In the second part of our study we are mailing questionnaires to selected participants of this survey. The questionnaire will collect information on your outdoor activities, how you feel about forests and forestry, and your reasons for camping. Would you be willing to participate in the second part of this study?

0. No
1. Yes (Record name and address on separate sheet)

VLN: _____

THANK YOU VERY MUCH FOR YOUR TIME!

Comments: _____

_____

_____

_____

Appendix IV. Schedule for On-site Interviews at Forest Recreation Areas

Date	Forest Recreation Areas										
	Brazeau Reservoir	Brazeau West	Chambers Creek	Crescent Falls	Fish Lake	Goldeye Lake	Medicine Lake	Prairie Creek	Ram Falls	Thompson Creek	Two O'Clock
May 20						18					
May 21			7		14	14		19		4	12
May 22			7		17					17	
May 23							17				
June 4	9	0									
June 8							1				
June 9	0	0									
June 24	0	3	10								
June 25			2					18	15		
June 26							21				
June 30	4	3			28						
July 1					17	21			22	22	4
July 2						8		16			6
July 3	8	4					0*				

Appendix IV. continued

Date	Forest Recreation Areas										
	Brazeau Reservoir	Brazeau West	Chambers Creek	Crescent Falls	Fish Lake	Goldeye Lake	Medicine Lake	Prairie Creek	Ram Falls	Thompson Creek	Two O'Clock
July 8						21					
July 9				7	14					4	9
July 10					12						
July 15					11	5				6	3
July 16				15					11		
July 17							11				
July 22			2		7			5			12
July 23				12					16		
July 24	3	7									
July 29 (Fri)					12	18					
July 30				29	11	9			19	19	14
July 31			21		34			19			
Aug 1	5	10					15				
Aug 9			3								
Aug 10				13		12		4			

Appendix IV. continued

Date	Forest Recreation Areas										
	Brazeau Reservoir	Brazeau West	Chambers Creek	Crescent Falls	Fish Lake	Goldeye Lake	Medicine Lake	Prairie Creek	Ram Falls	Thompson Creek	Two O'Clock
Aug 11					16					1	5
Aug 12							7				
Aug 13	13	6									
Sept 2					17	18					
Sept 3				15					20	13	10
Sept 4			5		24						
TOTAL	42	33	57	91	234	144	72	81	103	86	75

0 = The FRA was visited but no campers were available for interviewing

* Medicine Lake was visited and campers were present but heavy rain prevented any interviews.

An additional 5 interviews were conducted at Brazeau East and Harlech and included in the data base. These FRAs were dropped from the sampling strategy because of relatively low occupancy rates.

Total interviews includes 13 that were from out of province respondents not included in the data base and the 5 from Harlech and Brazeau.

TOTAL INTERVIEWS = 1,023

Appendix V

Fra On-site Survey Codebook

Survey Question #	Variable name	Code	Missing Values
introduction	id	ID number	
introduction	fra	Abbreviation of the Forest Recreation Area. *	
introduction	date	Interview date entered as ddmmmyr e.g., 24may94	
introduction	site	Campsite no. ovf = overflow	999
introduction	intervr	mcfar = McFarlane maraj = Maraj rush = Rush dolph = Dolphin	999
introduction	intime	Time of interview in 2400 hrs	9999
	repeat	Participated previously 0 = No 1 = Yes	0
1. Type of stay	staytype	1 = weekend or overnight 2 = major vacation destination 3 = one stop on vacation tour 4 = overnight accommodation stop 5 = other	9
2. Number of previous visits to the FRA in the last 10 years	previsit	0 = none 1 2 etc.	999

3. Activities participating in	fish	0 = No 1 = Yes	
	hike	"	
	bpack	"	
	bike	"	
	drive	"	
	bird	"	
	wildl	"	
	canoe	"	
	swim	"	
	horse	"	
	ohv	"	
	social	"	
	relax	"	
	other	"	
4. Activity participating in the most	actmost	Entered as activity number in Q3.	99
5. People in vehicle	totalveh	1, 2, 3, etc.	99
People in party	totalpar	1, 2, 3, etc.	99

6. Stay at other campgrounds	campgr	0 = No 1 = Yes	9
Campground names	camp1 camp2 camp3 camp4 camp5	If campgr=1 then campground name entered up to 7 characters. See campground abbreviations list[b] If campgr = 0 then camp1 to camp5 = 9.	9
7. Substitute campground	subsite	Campground name up to 7 characters. See campground abbreviation list.	9
8. Home city, town, etc.	origin	Name up to 20 characters, no spaces	9
9. Home postal code	postcode	Postal code with no spaces	9
10. Everyone in vehicle from same community	origingr	0 = No 1 = Yes	9
Home town of others	origin2	Name up to 20 characters, no spaces	9
Postal code of others	grpcode	Postal code no spaces	9
Number of people from this community	grpnum	Number indicated	99
11. How far did you travel	perdist	One way distance in **km**	9999
12. How long did it take to drive	time	Hours indicated with decimal to nearest half hour	9999
13. Make stops along the way	stops	0 = No 1 = Yes	9
Number of stops	numstops	Number indicated	99

14. How many children in the vehicle	child	Number indicated	99
Age of children	child1	Age in years. If child=0 or child=99 then child1 to child5=99	99
	child2	"	
	child3	"	
	child4	"	
	child5		
15. Enjoyment of drive	enjoy	1 = very unenjoyable 2 = somewhat unenjoyable 3 = neither enjoyable nor unenjoyable 4 = somewhat enjoyable 5 = very enjoyable	9
16. Share travel expenses	share	0 = No 1 = Yes	9
17. Type of vehicle	vehicle	1 = compact car 2 = midsize car 3 = full size car 4 = mini van 5 = 1/4 t truck 6 = 1/2 t truck 7 = other truck 8 = motorcycle 9 = rv 10 = full size van 11 = camper van 12 = other	99
18. Type of camping equipment	equip	1 = tent 2 = rv 3 = van 4 = trailer 5 = truck camper 6 = tent trailer	9

19. What would you be doing if not on this trip	subact1	1 = visiting other campground 2 = some other recreational activity 3 = working around home or garden 4 = working regular job 5 = working overtime or extra shifts 6 = working second job 7 = something else	9 9
	subact2	If a second substitute activity was indicated. Coded as subact1.	
20. Gender of respondent	gender	0 = Male 1 = Female 2 = >1 person	9
21. Participate in mail survey	mail	0 = No 1 = Yes 2 = already on mailing list	9
22. Vehicle licence number	vln	Number with no blanks	9
	vln2	If a second vln is indicated	9
Travel distance as measured using traditional cost methods	naidist	Calculated 2 way distance in km from charts	9999 9999
Travel distance measured from respondents actual route indicated on map	mapdist	2 way distance in km	
Did respondent comment	comments	0 = No 1 = Yes	

Campground	Abbreviation	Campground	Abbreviation
Crescent Falls	cresfall	Crimson Lake	crmlk
Creston	creston	Cypress Hills	cypress
David Thompson Resort	dthmres	Dinosaur Prov. Park	dinosur
Dickson Dam	dickson	Drayton Valley	drayton
Drumheller	drumhel	Dry Haven	dryhaven
Elbow Falls	elbow	Elk Creek	elkcek
Elk Pointe	elkpt	Elk River	elkri
Em-tee Town	emtee	Fairfax	fairfax
Fairmount	fairmt	Fickle Lake	fickle
Fish Lake	fishlk	Frontier Lodge	frontier
Garvis	garvis	Glacier	glacier
Goldeye	goldeye	Graveyard Lake	graveyd
Gray Flats	grayfl	Green Lake, B.C.	greenlk
Gull Lake	gulllk	Harlech	harl
Hinton	hinton	Honeymoon Lake	hmoonlk
Horburg	horburg	Hummingbird	humming
Jackfish Lake	jackfsh	Joffre	joffre
Johnston Canyon	banff	Jasper	jasper
Kananaskis	kanaskas	Kimberley, B.C.	kimber
Kooteney Lake	kooteney	Limestone	limest
Long Lake	longlk	McLeod River	mcleodr
Medicine Lake	medlk	Mink Creek	minkcrk
Minnow Lake	minnow	Miquelon Lake	miquelon
Mitchell Lake	mitchell	MacKenzie Crossing	macken
Mt. Kidd	mtkidd	Mt. Robson	robson
Muskiki	musk	Nordegg	nordegg
North Ram River	nram	Obed	obed
Old MacDonald	oldmac	Onion Lake	onionlk
Open Creek	opencrk	Peppers Lake	peppers
Peter Laugheed Prov. Prk	laugheed	Pine Harst	pine
Pocohontas	jasper	Prairie Creek	prairie
Prince Alberta N.P.	panp	Radium	radium
Ram Falls	ram	Rampart Creek	rampart
Red Deer	reddeer	Red Deer River Crossing	rdrcross
Rimbey campground	rimbey	Riverview	riverv
Robb	robb	Rochon Sands	rochsnd
Salmon Arm, B.C.	salmon	Saskatchewan River	saskriv
Saunders	saunders	Seven Mile	sevenml
Shunda Viewpoint	shunview	Snaring River	jasper
Snow Creek	snowcrk	South Fork	southfrk
Strachen	strachen	Sulfur Falls	sulfur
Sunchild Reserve	sunchild	Sundre	sundre
Swan Lake	swanlk	Switzer Prov. Prk	switzer
Sylvan Lake	sylvan	Thomspon Creek	tomcrk
Thunder Lake	thunder	Timbrick Falls	timfall
Triple Diamon Ridge	tripldr	Tunnel Mtn	banff
Twin Lakes	twinlk	Two O'Clock Creek	twocrk
Upper Shunda	ushunda	Wasa Lake	wasalk
Waterfowl Lakes	waterfl	Waterton	waterton
Westbank	westbank	Westward Ho	westward

Campground	Abbreviation	Campground	Abbreviation
Whistler	whisler	Willie West	williew
Wolf Lake	wolflk	Yoho	yoho
Yukon	yukon		

Natural Resources Canada | Ressources naturelles Canada

Canadian Forest Service | Service canadien des forêts

Northwest Region | Région du Nord-Ouest

Northern Forestry Centre
5320 - 122 Street
Edmonton, Alberta
T6H 3S5
(403) 435-7210
Fax (403) 435-7359

Centre de foresterie du Nord
5320 - 122e rue
Edmonton (Alberta)
T6H 3S5
(403) 435-7210
Fax (403) 435-7359

Your file *Votre référence*

Our file *Notre référence*

Dear Study Participant:

During the summer, one of our staff interviewed you at a Forest Recreation Area campground in the Rocky Clearwater Forest. At that time you provided us with information about your camping trip and expressed an interest in participating in our mail survey on camping. Camping is a very popular activity in Alberta, however, very little is known about people's camping activities and opinions about campgrounds and forest management.

You were selected from a sample of campers we interviewed during the summer. Because only a few people have been selected it is very important that each questionnaire be completed and returned. The success of the study depends on each person in the sample returning their questionnaire.

This study will provide valuable information for those involved in the planning and management of campgrounds in Alberta. The results of the study will be made available to provincial and federal government departments, including the Alberta Forest Service and Alberta Parks Services, and the public.

If you wish to be included in a draw to win **two nights of free camping** in 1995 at a Forest Recreation Area campground, please complete the enclosed prize ballot and return it with your completed questionnaire. **Please do not write your name on the questionnaire**. A total of 25 prizes will be awarded. The chances of winning will depend on the number of returned questionnaires.

All of your answers are completely confidential. The questionnaire has an identification number for mailing purposes only. This is so we may check your name off the mailing list when your questionnaire is returned. Your name will never appear with your answers.

We would be very happy to answer any questions you might have. Please write or call us at (403) 435-7210. If you are calling long distance, call collect and identify yourself as a participant in the Alberta Camping Study. If you are calling collect, you will be required to leave your phone number.

Thank you for your assistance with this study.

Sincerely,

Peter C. Boxall
Nontimber Valuation Specialist

Bonnie L. McFarlane
Human Dimensions Specialist

Canada

ALBERTA'S FOREST RECREATION AREAS:

A SURVEY OF CAMPERS' ACTIVITIES AND OPINIONS

Thank you for taking the time to complete this questionnaire. Please try to answer all of the questions. They can be answered by circling the number next to the answer you choose or writing in the blank space provided. If there are any questions you do not wish to answer, please omit them and move to the next question.

All information you provide is strictly confidential. Your name will never appear with your answers. Only a summary of the results will be publicized.

Please return your completed questionnaire in the postage paid envelope provided.

We appreciate your help with this project.

Peter C. Boxall
Nontimber Valuation Specialist

Bonnie L. McFarlane
Human Dimensions Specialist

Phone: (403) 435-7210

Canadian Forest Service
Northern Forestry Centre
5320 - 122 Street
Edmonton, AB
T6H 3S5

Canada Alberta
Partnership Agreement in Forestry
Entente d'association en foresterie

SECTION I. YOUR CAMPING EXPERIENCE

One aspect of this study is understanding the importance of camping to Albertans. So we would like to ask about your camping experience and how you feel about camping.

1. How many years have you been camping? (Circle the number that best describes your answer)

    1. 1 to 5 years
    2. 6 to 10 years
    3. 11 to 15 years
    4. 16 to 20 years
    5. 21 to 25 years
    6. more than 25 years

2. How many camping trips do you usually take during the year to the following areas in Alberta? (Circle the number that best describes your answer)

Camping trips to:

National parks (for example, Banff, Jasper, Elk Island)	None	1 to 5	6 to 10	11 to 15	16 to 20	more than 20
Provincial parks (for example, Aspen Beach, Crimson Lake, Pigeon Lake)	None	1 to 5	6 to 10	11 to 15	16 to 20	more than 20
Forest Recreation Areas (for example, Fish Lake, Thompson Creek, Medicine Lake)	None	1 to 5	6 to 10	11 to 15	16 to 20	more than 20
Random areas (areas on public land that are not officially designated as campgrounds)	None	1 to 5	6 to 10	11 to 15	16 to 20	more than 20

3. Listed below are several statements on what camping may mean to you. Please indicate how you feel about these by circling the number that best reflects your agreement or disagreement with each statement.

	strongly disagree				strongly agree
a. Camping is one of the most satisfying things I do	1	2	3	4	5
b. I do not particularly like camping	1	2	3	4	5
c. Camping is one of the most enjoyable things I do	1	2	3	4	5
d. I have little or no interest in camping	1	2	3	4	5
e. Camping is nothing more than a place to stay while I do other things	1	2	3	4	5
f. Camping is very important to me	1	2	3	4	5
g. Camping offers me relaxation when life's problems build up	1	2	3	4	5
h. When I am camping I can really be myself	1	2	3	4	5
i. Camping says a lot about who I am	1	2	3	4	5
j. I find that a lot of my life is organized around camping	1	2	3	4	5
k. Most of my friends are in some way connected with camping	1	2	3	4	5
l. I enjoy discussing camping with my friends	1	2	3	4	5
m. You can tell a lot about a person when you see them camping	1	2	3	4	5

SECTION II. FOREST MANAGEMENT

4. Another important part of our study is understanding how campers feel **Alberta's forests** should be managed. Please indicate how you feel about the following by circling the number that best reflects your agreement or disagreement with each statement.

	strongly disagree				strongly agree
a. Typical examples of Alberta's forest regions (for example boreal and aspen parkland) should be protected from resource development such as forestry and oil and gas extraction	1	2	3	4	5
b. Providing jobs and economic development is one of the most important uses of our forests	1	2	3	4	5
c. Forest management should emphasize a variety of plants and wildlife in our forests	1	2	3	4	5
d. Forest management should emphasize timber and lumber products	1	2	3	4	5
e. Our forests are being managed successfully to meet our present and future needs	1	2	3	4	5
f. The economic benefits from forestry practices usually outweigh any negative consequences	1	2	3	4	5
g. Setting aside forests from timber harvesting is not desirable if it means lower wages or fewer jobs	1	2	3	4	5
h. Legislation should be established to protect endangered species of plants and wildlife in our forests	1	2	3	4	5
i. Forestry practices generally produce no long term adverse effects on the environment	1	2	3	4	5
j. Potential timber supplies should be harvested even if they occur in remote areas	1	2	3	4	5
k. Enough harvested trees are being replaced by planting new ones or by natural seeding to meet all of our future timber needs	1	2	3	4	5
l. Our forests should be managed to meet the needs of as many people as possible	1	2	3	4	5
m. As many uses (for example forestry, wildlife habitat, recreation, and oil and gas) should be made of as much forested public land as possible	1	2	3	4	5

6. Who do you think should own and operate Alberta's Forest Recreation Area campgrounds? (Circle your answer)

   1. Forest Recreation Areas should be owned and operated by the provincial government
   2. Forest Recreation Areas should be owned by the provincial government and privately operated
   3. Forest Recreation Areas should be privately owned and operated

7. Overall, how satisfied are you with Alberta Forest Recreation Area campgrounds? (Circle your answer)

   1. Very dissatisfied
   2. Somewhat dissatisfied
   3. Neither satisfied nor dissatisfied
   4. Somewhat satisfied
   5. Very satisfied

If you are dissatisfied, please tell us why: _____

_____

_____

_____

SECTION IV. ABOUT YOU

Finally, we would like to ask a few questions about you to help determine if there are connections between people's backgrounds and camping. Your name never appears with your answers, however, if for some reason there is a question you do not want to answer, just leave it blank and move to the next question.

8. You are: 0. Male 1. Female

9. What is your age? _____ Years

10. Including yourself, how many people live in your household? _____ People

11. Do you belong to a fishing, hunting, birdwatching, natural history, wildlife conservation, or an environmental association?

    0. No

    1. Yes → Which one(s): _____

    _____

    _____

    _____

    _____

12. Do you or any of your immediate family depend upon a forestry agency such as the Alberta Forest Service, Canadian Forest Service or the forest industry for your economic livelihood?

    0. No

    1. Yes

13. Which is the highest level of education that you have completed? (Circle your answer)

    1. Never attended school
    2. Grade school (grades 1 to 9)
    3. Some high school
    4. High school graduate
    5. Technical school
    6. Some university
    7. Under graduate university degree
    8. Some graduate study
    9. Post graduate university degree

Appendix VII

Follow up Post Card for Mail Survey

Canadian Forest Service
5320 - 122 Street
Edmonton, AB T6H 3S5

About a week ago we sent you a questionnaire on camping and forest management. If you have already returned the questionnaire, please accept our sincere thanks. If you have not had an opportunity to complete it, please take a few minutes to fill it out today and return it. Because only a small number of campers have been selected for the study, your response is important to its success. If you did not receive the questionnaire, or it got misplaced, please call us, collect (403-435-7210) and we will mail you another.

Thank you for your help.

Peter C. Boxall
Nontimber Valuation Specialist

Bonnie L. McFarlane
Human Dimensions Specialist

Natural Resources Canada | Ressources naturelles Canada

Canadian Forest Service | Service canadien des forêts

Northwest Region | Région du Nord-Ouest

Northern Forestry Centre
5320 - 122 Street
Edmonton, Alberta
T6H 3S5
(403) 435-7210
Fax (403) 435-7359

Centre de foresterie du Nord
5320 - 122e rue
Edmonton (Alberta)
T6H 3S5
(403) 435-7210
Fax (403) 435-7359

Your file *Votre référence*

Our file *Notre référence*

Dear Study Participant:

About a month ago, we wrote to you seeking your opinion on campgrounds and forest management. As of today we have not received your completed questionnaire.

This study will provide valuable information necessary for the future planning and management of campgrounds in Alberta. Our research unit has undertaken this study to provide campers with an opportunity to express their opinions on Alberta's Forest Recreation Areas.

We are writing to you again because of the importance of each questionnaire to the usefulness of this study. Your name was selected from a sample of Forest Recreation Area campers that we interviewed during the summer. In order for the results to be representative of the opinions of Forest Recreation Area campers it is essential that each person in the sample return their questionnaire.

In the event that your questionnaire has been misplaced, a replacement is enclosed. Please return only one questionnaire.

We would be very happy to answer any questions you might have. Please write or call us at (403) 435-7210. If you are calling long distance, call collect and identify yourself as a participant in the Alberta Camping Study. If you are calling collect, you will be required to leave your phone number.

Your cooperation is greatly appreciated.

Sincerely,

Peter C. Boxall
Nontimber Valuation Specialist

Bonnie L. McFarlane
Human Dimensions Specialist

Canada

Appendix IX

Mail Survey Code Book

Question #	Variable Name	Coding Instructions	Missing Values
	id	enter id # from back cover - 4 digits	9999
1. years of camping experience	years	1 = 1 to 5 years 2 = 6 to 10 3 = 11 to 15 4 = 16 to 20 5 = 21 to 25 6 = >25	9
2. usual # of trips per year in AB	nparks (national parks) pparks (provincial parks) fras random	the four variables are coded as: 0 = none 1 = 1 to 5 trips 2 = 6 to 10 3 = 11 to 15 4 = 16 to 20 5 = >20	9

3. camping specialization	affecta (most satisfying) affectb (do not like) affectc (most enjoyable) affectd (little interest) affecte (place to stay) affectf (very important) affectg (relaxation) affecth (be myself) affecti (who I am) affectj (a lot of my life) affectk (friends) affectl (discussing camping) affectm (tell a lot)	the 13 variables are coded as: 1 = strongly disagree 2 3 4 5 = strongly agree	9
4. forest management	foresta (Typical examples ...) forestb (Providing jobs) forestc (variety of plants) forestd (timber & lumber) foreste (managed successfully) forestf (economic benefits) forestg (Setting aside forests) foresth (Legislation) foresti (no adverse effects) forestj (Potential timber) forestk (Enough harvested) forestl (meet the needs) forestm (As many uses) forestn (presence of wildlife) foresto (economies of local)	the 18 variables are coded as: 1 = strongly disagree 2 3 4 5 = strongly agree	9

5. facilities and services at FRAs	showers toilets boatrent bikerent horsrent stores fastfood firewood patrols maps otheract close paved lodges hotels	the 15 variables coded as: 1 = not at all desirable 2 3 4 5 = very desirable	9
6. who should own and operate FRAs	manage	1 = owned & operated by government 2 = owned by government & privately operated 3 = privately owned & operated	9
7. satisfaction with FRAs	satisfy	1 = very satisfied 2 = somewhat satisfied 3 = neither satisfied nor dissatisfied 4 = somewhat satisfied 5 = very satisfied	9
	reason1 reason2 reason3	reasons for dissatisfaction were classified[a]	99
8.	sex	0 = male 1 = female	9

9.	age	enter actual number of years	999
10. household size	hhsize	enter actual number of people	99
11. conservation organizations	orgs	0 = no 1 = yes	9
	orgnum	enter number of organizations indicated	99
	hunt natural conserve	each organization is classified as a fishing/hunting, birding/nat. history, or conservation/environmental and the number in each category entered [b]	99
	local prov national internat	each organization is classified as local, provincial, national, or international and the number in each category entered[b] (if orgs=9 or orgs=1 but other info is missing then all other variables=99. if orgs=0 then all other variables=0)	99
12. forest sector income	industry	0 = no 1 = yes	9
13. respondent's education	educatn	1 = never attended school 2 = grade school 3 = some high school 4 = high school graduate 5 = technical school 6 = some university 7 = under grad. degree 8 = some grad. study 9 = post grad. degree	99

14. total household income 1994	income	1 = <$10 K 2 = 10 - 19,999 3 = 20 - 29,999 4 = 30 - 39,999 5 = 40 - 49,999 6 = 50 - 59,999 7 = 60 - 69,999 8 = 70 - 79,999 9 = 80 - 89,999 10 = 90 - 99,999 11 = >= 100 K	99
15. participate in future projects	research	0 = no 1 = yes	9
16.	comment	0 = no 1 = yes	9

* Reasons for Dissatisfaction with FRAs

Classification	Reason
reservations-	should be able to reserve sites
privatizing-	don't want privatization of FRAs
firewoodfee-	don't want a firewood fee
campfee-	fees too high, should not charge for >1 unit/site
wood-	poor quality firewood, green and wet, not enough
fee-	costs too much to camp; do not raise fees (camping or wood)
sites-	sites too small, need more drive throughs, poorly located, environmental impacts
tentpads-	gravel tent pads too hard for tent pegs
staff-	unfriendly AFS staff, rude, hassles campers
firepits-	use fire pits instead of fire stands, pits too small
security-	more patrols are needed
sanitation-	toilets not clean, garbage
closures-	should not close campground and roadside campsites
conveniences-	too many conveniences in campgrounds, do not over develop
remote-	need more campgrounds that are further from the main road
campers-	other campers noisy or disturbing, garbage left, reserving sites with equipment
crowding-	not enough sites for the number of campers, some campground sections closed
water-	poor quality drinking water, need more pumps
showers-	want showers
handicap-	no or poor provisions for physically challenged
hookups-	want hookups
sanitation+	FRAs kept very clean
staff+	FRA staff do a good job
firewoodfee+	supports a firewood fee
swimming-	areas contaminated with oil, algae etc. not good for swimming
rules-	too many regulations
paved-	do not want paved roads in campgrounds
shelters-	want kitchen shelters
phone-	should have an emergency phone
ATV-	should be allowed to drive ATVs in campgrounds
design-	don't like general campground design - flat field types not good
extraction-	logging, oil and gas detracting from the area

Classification	Reason
supervise-	AFS staff should supervise maintenance staff, poor quality control
winter-	more campgrounds should be open for a longer season
facilities-	campgrounds are deteriorating
road-	poor road conditions to FRA
trails-	need more hiking/biking trails

[b] Mail Survey Organizations

Organization	Classification	
AB Soc. Professional Biologist	conserve	prov
AB Whitewater Assoc.	conserve	prov
AB Wilderness Assoc.	conserve	prov
AB Fish & Game	hunt	prov
Alpine Club of Canada	conserve	internat
Adopt A Whale	conserve	national
Audubon	natural	internal
Bird Club	natural	
Can Parks and Wilderness Soc.	conserve	national
Can Geographic Soc.	conserve	national
Can Wildlife Fed	conserve	national
Devon Fish & Game	hunt	local
Ducks Unlimited	hunt	internat
Edmonton Hat History Soc.	natural	local
Federation of AB Naturalists	natural	prov
Friends of the North	conserve	local
Green Peace	conserve	internat
John Janzen Nature Centre	natural	local
Kerrywood Nature Centre	natural	local

Organization	Classification	
Lacombe Environmental Trust	conserve	local
Millet Fish & Game	hunt	local
Morinville Fish & Game	hunt	local
N.A. Fish Assoc	hunt	internat
N.A. Hunter Assoc	hunt	internat
Old Timer Fishing Club	hunt	local
Onoway Fish & Game	hunt	local
Pacific Whale Foundation	conserve	national
Ponoka Fish & Game	hunt	local
Red Deer River Naturalists	natural	local
Rock Mtn. Elk Foundation	hunt	internat
Sarcee Fish & Game	hunt	local
Sherwood Park Fish & Game	hunt	local
Trout Unlimited	hunt	internat
Walleye Unlimited	hunt	internat
Waskehigon Trail Assoc	conserve	local
World Wildlife Fund	conserve	internat