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Hanmer Forest Park

Visitor Survey.

Torsten Baker.
HANMER FOREST PARK

USER SURVEY

TORSTEN BAKER

1985

This dissertation is submitted as part of the requirements for the Diploma in Parks and Recreation, Park Ranger Option, Lincoln College.
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1. INTRODUCTION

1.1 HANMER FOREST PARK

The Hanmer Forest was one of the first Government owned exotic forests, being established around the turn of the century. It is situated 135 km north of Christchurch (see fig. 1).

The park consists of exotic plantations and native vegetation, from beech remnants in the lower slopes of the Hanmer Range to sub-alpine vegetation along the tops.

Hanmer Forest Park was gazetted in 1978. Thus the area is managed for a range of functions, including soil and water conservation, recreation and timber production.

The recreational side of the forest is still being developed and upgraded. The recent introduction of Recreation Operations Planning System (ROPS) is expected to help with co-ordination of recreational facility developments and maintenance in order to provide an improved recreational experience.

The park runs an information centre, which is open 7 days a week, and is situated 1 km from the town centre. It has been extensively renovated in the last year. A range of information and interpretation leaflets and books are available at the information centre.
The park runs a summer programme from late December to mid-January, consisting of walks, talks and bus trips.

Fig 1: The Location of Hanmer Forest Park
1.2 HANMER'S RECREATION OPPORTUNITIES

Hanmer Forest Park contains a wide range of recreational opportunities from highly organised and developed walks and facilities, to untracked wilderness. These come close to the two extremes of the Recreation Opportunity Spectrum (ROS), see fig. 2):

![Fig. 2: Recreation Opportunity Spectrum (Holder et al, 1983)](image_url)

Removal due to copyright

ROS is based on the settings, activities and experiences of recreation. The settings and activities create the experience. ROS is used to try and provide a full range of settings and activities, this is shown in figure 3.
Figure 3: The Recreation Opportunity Spectrum and how it works.

Because of the relative closeness of Lake Sumner Forest Park and Lewis Pass National Reserve, Hanmer Forest Park is managed mainly to provide for walks up to 4 hours, day tramps and scenic driving.

There is a large cultural element in the most highly used of the parks' activities as they pass through many exotic forest (short walks and driving) and wooded areas.

As far as predominant visitor use is concerned, Hanmer Forest Park would fall in the C category as shown in fig. 2, with significant components of A and B.

Recreational development and visitor use is concentrated around the Hanmer Springs township. This is shown in fig. 4.
Fig 4: Map of Survey Points, Tracks and Facilities
1.3 OUTDOOR RECREATION PLANNING AND MANAGEMENT

Groome (1984:1), discusses the role and process of recreation planning in management of recreation. She states:

"Recreation offers an escape from day to day routine. Increasingly this 'escape' is based on forests and other outdoor areas, as people become more aware of the natural environment, through the news media, outdoor education and publicity.

Inevitably an increase in use leads to greater pressures, in this case on the forest resource. Consequently, because "the resource is not infinite and most people need guidance to pursue their recreational activity ... without having a detrimental effect on the environment ..., it is necessary that recreation be planned for and managed accordingly" (Holder, 1983).

A management plan must be adhered to by both planners and managers if cohesiveness is to be achieved. However, the plan is a "living instrument" which should be capable of change where necessary as the plan progresses and use patterns alter. This should be maintained through constant reassessment."

From the Recreation Opportunity Spectrum we have seen that recreation planning has three key elements: activities, settings and experiences. In relation to these, there exists recreation desires and the opportunities that are provided by managers.
Figure 5 shows how these are linked in recreation planning.

Figure 5: Link between recreationists' desires and the opportunities provided by managers. (Stankey and Wood, 1982).

The planning process followed to link these desires and opportunities includes:

1. "demand (use) and resource capability,
2. inventorying current opportunities,

3. recreation recommendations and integration with other resources,

4. action and project plan development."

(Groome, K., 1984).

A user survey gives some objective information of demand and 'resource capability as visitors see it. It can also be used to get user input into management. Surveys provide objective information on the desires of users which has previously been subjectively assessed by managers.

Hence it is hoped that the information contained in this report can be assimilated into the recreational planning process to better provide the desired experiences.
2. RECREATIONAL USER SURVEY

2.1 REASONS FOR THE SURVEY

The Hanmer Forest Park Management Plan (p.59) states:

"There is a definite need to ascertain the nature and scale of the various demands for recreational use of forests. Such assessment should provide quantitative information to ensure that management of the park progresses in a manner satisfactory to park users. A survey will therefore be conducted within the first 3 years of the duration of this plan."

Moreover, on page 60 it says:

"It is prescribed that -

a) More adequate measures shall be developed for the assessment of recreational needs of users of the Forest Park. A survey of recreational use will be carried out by 1984, with the objectives of collecting information from Hanmer Forest Park users to guide the Forest in determining the local form and extent of recreational development desired by users."

It is important for the management of the park to have a knowledge of the types of user of the park and also their reaction to facilities, services and changes that are made in the park. This is especially so due to the rationalisation and development that is being carried out at the moment.
Surveys can be used to elicit user satisfaction in an objective fashion as well as estimating current demand on the park. This can be used to estimate future demand and to guide staff in development decisions.

2.2 SURVEY OBJECTIVES

The objectives of this survey were threefold:

1. To develop a visitor profile and establish a data base which the management can use in decision making.

2. To elicit user assessment of services and facilities. This can be used in the maintenance or upgrading of present facilities and the development of new ones.

3. To attempt to derive an economic valuation of the park using contingent and travel cost valuation methods.

2.3 SUBJECTIVE USER PROFILE

In running the park the staff develop a subjective user profile. This comes from contact with the users at the information centre, during summer programmes, on the walks and at other times. They may also develop a subjective assessment of facility evaluation through feedback, such as letters or conversation.
There is no definite organised method for collecting this information, instead it is assimilated over the years to form "experience".

It could be considered that this experience and knowledge is good enough to not warrant expensive and time consuming surveys. To evaluate this Rudy Tetteroo, the Recreation Ranger at Hanmer Forest Park, set out the staff's evaluation of the user profile. This can be compared against the findings of the user survey. We can set this subjective evaluation up as an hypothesis:

That the subjective evaluation of the user profile made by the staff is accurate enough for management needs.

A major point to keep in mind however, is that this subjective evaluation is for the whole year whereas the survey only covered the summer period. This will be discussed in section 2.5.

2.4 Survey Procedures

Information was gathered using a 2 stage method. Firstly each group was approached and asked a few short questions (see Appendix A). They were then given a questionnaire for the group (see Appendix B). Those groups staying less than two days were given a postage paid addressed envelope. They were asked to drop the completed questionnaire in to the information centre, the hot pools, or post it in.
Six sampling points were chosen, being the ends of the tracks and at the information centre (see fig. 4).

A sampling system was developed prior to surveying to try and maximise randomness. In the sampling plan the Conical Hill walk had twice as many sampling periods as other facilities. The information centre had 3 times as many, but covered use of the Woodland Walk and the Forest Walk. The bias towards the Conical Hill walk should be remembered when using the results.

The six locations were numbered:

1. Chatterton River Track.
2. Mt Isobel Track.
3. Waterfall Track.
5. Conical Hill Walk.*
6. Information Centre, Forest and Woodland Walks.*

Those above marked with an asterisk (*) being the most heavily used.
Each sampling day was divided into four time slots. These being:

- Morning: 9 am - 11 am
- Noon: 11 am - 1 pm
- Afternoon: 2 pm - 4 pm
- Evening: 6 pm - 8 pm

Next a weekly sampling scheme was set up (see fig. 6):

![Fig. 6: Weekly sampling scheme](image)

<table>
<thead>
<tr>
<th>Day</th>
<th>Mon</th>
<th>Tue</th>
<th>Wed</th>
<th>Thur</th>
<th>Fri</th>
<th>Sat</th>
<th>Sun</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time</td>
<td>am</td>
<td>noon</td>
<td>pm</td>
<td>even</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| Locations
| am  | 3   | 6   | 5   | 1    | 4   | 3   | 3   |
| noon| 6   | 1   | 3   | 6    | 5   | 6   | 5   |
| pm  | 6   | 5   | 3   | 2    | 6   | 1   | 4   |
| even| no survey | no survey | 5 | no survey | 6 | 5 |

Before Christmas it was only possible to sample for 5 days. After Christmas 7 day sample weeks were used.

Sample weeks were:

- December: 13-17
- January: 3-9
- January: 10-16
- January: 17-23
- February: 11-17

Sampling was carried out entirely by myself.
Overall 716 questionnaires were handed out and 399 were usable, giving a response rate of 55.7%. This represents 1257 adults (over 15) and 526 children (under 15). This compares favourably with Groome's foothills survey (58.5%).

All questionnaires were coded by myself and analysis of the data was by the computer package: Statistical Package for the Social Sciences (SPSS).

2.5 PROBLEMS AND CONSTRAINTS

2.5.1 Logistical Problems

There are always problems with the running of this type of survey (such as weather, vehicle availability, questionnaire printing, etc), I will not go into these.

There were a few problems peculiar to this survey that I will mention for the benefit of future surveyors. It is important for planners to keep these in mind when using the results.

(a) This survey only covered the tracks, walks and Information Centre. It did not cover routes or the entrance to the forest drive. (Visitors are meant to get a permit from the Information Centre in which case they would have been included in the population being surveyed. However, it is possible that a substantial number do not get a permit.) Neither did it cover hunters and others not using tracks or people using the Jacks Pass Road to get to Molesworth Station. The survey is therefore biased away from these people and this must be kept in mind by planners.
(b) The time constraint in developing the questionnaire meant that avoidable mistakes were left in.

(c) Twice as much survey time was allocated to the Conical Hill Walk than other walks. This has already been noted.

2.5.2 Problems with Interpreting the Data

Groome (1984 : 13) describes the limitations inherent in interpreting data. These consist mainly of the problems of seasonal sampling, defining recreational supply and demand and the factors which influence recreational behaviour.

The main constraint of this survey has been its seasonal extent. The bulk of the samples have been taken during the peak Christmas Holiday period. To try and compensate for this a little and to give a basis for comparison, visitors were surveyed for a week in February after the end of the school holidays. This summer season bias will show up in a number of factors which would vary with season. Examples of factors most likely to be effected are length of stay, home town and activities pursued. The existence of this bias must be kept in mind when using the results.

Further limited survey work and analysis of data from this survey may help to give an indication of the amount of this bias. For instance comparing peak season January visitors with post peak season February visitors in this survey would give an indication of the bias introduced by summer holidaymakers. Comparing the number of hunting permits issued and Information
Centre visitor numbers would give an indication of the importance of hunting as a recreational pursuit.

Groome (1984: 13) discusses the problem of recreational supply and demand, she states:

"Recreation participation rates cannot be equated with recreational demand. Just because people 'do' some recreational activity, does not necessarily reflect what they 'want to do' - it actually is an indication of what they are 'able to do'. Assuming the existing use of sites and facilities is equivalent to demand can lead to management supplying increasing quantities of what already exists and thereby neglecting other sites."

In order to try and alleviate this problem the Hanmer survey incorporates questions on the attractive features of the region (question 9), user evaluation of present facilities (question 10a) and improvements users would suggest (question 10b). See Sections 3.1.2, 3.3.1 and 3.3.2 respectively for the results of these questions.

Groome (1984: 13) also notes that participation rates tell us little about the quality of the experience:

"If sites and facilities are available (especially at no cost to the user) then they will be used, but people may not necessarily be satisfied with them or they may not be aware of other opportunities. Similarly, other people may be happy without facilities."

Finally, Groome (1984: 13) notes the factors which influence
recreation behaviour:

"Many factors affect the recreational behaviour of people and therefore the recreational use of sites. Socio-economic factors alone (such as sex, age, education, occupation, residence) account for only about 30% of the variance in outdoor recreation activity (Mercer, 1977). The interaction of other variables (experiences in childhood, preferences of other family members, position in the 'life-cycle') as well as the actual supply situation of resources and opportunities in a given locality or just as important. For example there are likely to be more people in Canterbury than Northland who ski, and swimming and beach activities are more likely to be popular amongst Bay of Plenty residents than in Southland."
3. SURVEY RESULTS

3.1 GENERAL INFORMATION ON HANMER SPRINGS

3.1.1 Information Source

Results

Table 1 shows the responses to question 3 of the questionnaire: "How did you first find out about Hanmer Forest Park?"

Table 1: Visitor information source for Hanmer Forest Park compared with the Canterbury lowland forests (from Groome 1984: 14)

<table>
<thead>
<tr>
<th>INFORMATION SOURCE</th>
<th>HANMER</th>
<th>CANTERBURY LOWLAND FORESTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Word of month</td>
<td>62.7</td>
<td>47.4</td>
</tr>
<tr>
<td>Road signs</td>
<td>12.8</td>
<td>9.4</td>
</tr>
<tr>
<td>Newspaper</td>
<td>1.3</td>
<td>5.8</td>
</tr>
<tr>
<td>Radio or television</td>
<td>0.3</td>
<td>-</td>
</tr>
<tr>
<td>Forest Service booklet or brochure</td>
<td>9.8</td>
<td>10.9</td>
</tr>
<tr>
<td>Other publication</td>
<td>4.0</td>
<td>10.3</td>
</tr>
<tr>
<td>Other</td>
<td>7.5</td>
<td>16.1</td>
</tr>
</tbody>
</table>

Discussion

The major response to this question was 'word of mouth', with almost 63% of responses. This is higher than that found for Canterbury lowland forests (Groome, 1984: 14). The Canterbury
Promotion Council picnic book accounted for a significant proportion of responses in the lowland forest study (10.3%).

In comparison to 'word of month' only 'road signs' and 'Forest Service booklet' showed much response. Other responses are low compared to the Canterbury lowland forests.

People responding that they had 'always known about it' made up a large proportion of the 7.5% of 'other' responses. These are generally people who have been visiting Hanmer since childhood with their families.

3.1.2 Attractive Features

Results

Figure 7 shows the responses to question 9 "what do you consider are the main attractive features of the region?"

Fig 7: User assessment of attractive features in the Hanmer region.
Discussion

In designing the questionnaire I was trying to elicit different information in questions 8 and 9. However, a quick comparison of figures 7 and 8 will show that on the whole the responses are quite similar. The reasons that people have for visiting an area seem to be closely related to the main attractive features as the visitor sees them.

In comparing the two questions; "scenery", "natural features" and "pleasant surrounds" could be considered equivalent. The same goes for "atmosphere" and "relaxing".

Apart from minor response categories, the only difference in the two questions is in natural features. These rank considerably higher in question 9 (attractive features) than question 8 (reasons for visit). This may be because visitors expect natural features in any similar location, but consider the pools and forest activities to be unique to the Hanmer region. Therefore, natural features take a lower ranking in their choice of visiting Hanmer Springs.

3.1.3 Reasons For Visiting Hanmer Springs

Results

Figure 8 shows the responses to question 8: "what were your main reasons (in order of importance) for coming to Hanmer Springs?"
Fig. 8: Reasons for visiting Hanmer Springs

Discussion

Since this was an open ended question, there was a wide variety of response categories. Figure 9 only shows the major ones. The "other" category represents the total of up to 18 other responses (such as "availability of accommodation", "closeness to home" and the other activities in question 5 [see Appendix 7.2]).

Compare these responses with Fig. 7 and Fig. 8, in section 3.2.1, the activities involved in during the stay at Hanmer Springs.
It seems that there are many contributing reasons towards the decision to visit Hanmer Springs. However it is probably due to combinations of reasons rather than any single reason that such a decision is made.

Forest activities, including walking, tramping and the summer programme are the main reasons for visiting Hanmer Springs. The second reason is the hot pools.

Relaxing was also a main factor in influencing the visit to Hanmer Springs, the hot pools and forest are both likely to contribute to the relaxing atmosphere.

Since this survey was of Forest Park users, these motivations may not be true for the entire visitor population of Hanmer Springs. The survey is naturally biased away from the hot pools as a motivation. This is because people who only visit the park were surveyed, whereas people who only visit the hot pools were not.

To summarise, it is probably mainly a combination of the hot pools and the Forest Park which attracts visitors to Hanmer Springs.
3.2 USER PROFILE

In developing a user profile of the visitors to any facility, be it park or rugby ground, it is important not to fall into the trap of defining a 'typical' visitor. The variety of visitor types and thus their variety of expectations and experiences are important. In managing any facility it is important to provide for the needs of this variety of visitors.

3.2.1 General Activities

Information about the general activities that users were involved in during their stay was gathered from the interview and from the questionnaire. In general the results for the two questions were similar. However, there are a few reasons why the results would be expected to vary and I have outlined these below:

1. List bias: when given a list of activities, as in the questionnaire, there is a tendency to include activities that you had not already thought of. There is also a tendency to rank them as they appear on the list.

2. Timing: the immediacy of the interview situation may have led respondents to stress the activity they were currently involved in (ie, walking in most cases). It is also possible that at the time of interview, respondents had not decided what they were going to do for the rest of the trip.
3. Time to think: the questionnaire allows respondents time to think about their answer.

Since the answers to the two different questions did not vary significantly, I will present only those for the questionnaire (question 5).

Results

Figure 9 shows the responses to question 5: "please indicate in the boxes in order of priority the main activities during your stay at Hanmer Springs". The 'other' category covers more than 20 activities of which picnicking, camping, caravanning, photography and nature study were the main ones.

Fig. 9: Major activities pursued at Hanmer Springs
Questionnaire analysis.
Discussion

In general this question was well answered with respondents filling out four activities.

From figure 9 it can be seen that the hot pools, forest walks and tramps are the main activities for visitors to the park. If you add the 'day tramps' and 'walks' together they rank slightly ahead of the hot pools.

'Lazing' ranks highly as a first choice. This could be expected as Hanmer is an area which is oriented towards relaxing activities rather than strenuous ones.

Most of the minor activities become increasingly chosen as 2nd, 3rd or 4th responses. Camping and caravaning were the two main exceptions being the main activity for some groups.

3.2.2 Park Activities

Results

Figure 10 shows the results of question 6, which asks which of the forest park activities have been done during this visit (see Appendix 2).

Discussion

The most popular activities were visiting the Information Centre, the Conical Hill Walk and the Woodland Walk.
Since more sampling time was allocated to the Conical Hill Walk (see section 2.4), there is a bias towards it in this question. However, since most people used more than one of these walks and facilities, some groups using many, this bias is substantially reduced.

Fig. 10: Park activities on this visit.

Several patterns of use emerge from study of the data. These patterns are by no means representative of all the visitors to the park, but do represent significant groups.

Visitors often visit the Information Centre on arrival, they then go on to do one or more of the walks. Alternatively, especially amongst older visitors, they first visit the Information Centre and then do the Forest Drive. The activities which various types of group tend to do will be discussed in the next section (3.2.3).
People using the Conical Hill Walk are often not aware of the other facilities in the park. Some are not even aware that it is part of the park despite the sign at the beginning of the walk. One person told me he thought it belonged to the motel at the bottom of the hill. These people do not usually use any other park facilities.

As with the Conical Hill Walk, the Chatterton River Track is used by people unfamiliar with the rest of the park. I met several groups who were staying at the A.A. motorcamp and had found out about the track there.

Conical Hill Walk and Chatterton River Track are therefore in need of interpretation and information dissemination from places other than the Information Centre. Pamphlets held at the motorcamps and motels in town combined with interpretative boards at the track ends would help remedy this situation.

3.2.3 Park Activities and User Group Types

Results

Table 2 shows a cross-tabulation of the composition of groups (according to interviewer assessment) and activities that they partake of. The table shows the number of groups that do the activity as well as those that do not.
These numbers are totalled along the bottom of the table, the percentage doing the activity corresponds to information shown in figure 10.

Table 3 shows the percentage of each user group which uses the facility. The mean and standard deviation for each activity was calculated. This has been used to produce table 4 in which the number of standard deviations for each user group and each activity are shown.

Table 4 gives an indication of the relative popularity of each facility to the various groups. Standard deviations are used in order to get statistical reliability. Although there may be an apparent correlation, it is only significant if the standard deviation is lower than -1 or greater than 1.

For example, on the Woodland Walk, we can conclude that it is most popular amongst young and middle aged family groups. It is not popular amongst single people, young couples and older families. For the other groups we cannot draw any definite conclusions.

3.2.4 Types of User Groups

The type of user group was evaluated twice:
(a) By interviewer assessment whilst interviewing the group (see question schedule, Appendix 1).

(b) By visitor response to a fixed alternative question in the questionnaire (see Appendix 2, question 15).

The reason for this was to compare subjective (interviewer) assessment with the more objective questionnaire assessment. Unfortunately the categories used were different meaning that a chi squared test for correlation could not be used.

When comparing them the following points should be taken into account:

* At the time of the interview not all of the group may have been present, thus the number of couples recorded in the interviewer assessment may be high.

* It is difficult in the interview assessment to tell extended family groups and family and friends groups apart.

* The difference between two friends of the opposite sex and a 'couple' is difficult to assess in the interviewer assessment.

* In order to successfully compare the various group types the categories should have been identical.

Results

Table 5 shows the results of interviewer assessment of group types and visitor response to question 15 "what type of group are you in?"
Table 5: Group type: interviewer assessment and visitor response.

<table>
<thead>
<tr>
<th>INTERVIEWER ASSESSMENT</th>
<th>VISITOR RESPONSE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Category label</td>
<td>% Response</td>
</tr>
<tr>
<td>Alone</td>
<td>5.5</td>
</tr>
<tr>
<td>Young couple</td>
<td>10.8</td>
</tr>
<tr>
<td>Middle-aged couple</td>
<td>11.3</td>
</tr>
<tr>
<td>Older couple</td>
<td>11.5</td>
</tr>
<tr>
<td>Young family</td>
<td>14.5</td>
</tr>
<tr>
<td>Middle-aged family</td>
<td>16.8</td>
</tr>
<tr>
<td>Older family</td>
<td>4.8</td>
</tr>
<tr>
<td>Extended family</td>
<td>12.3</td>
</tr>
<tr>
<td>Friends or club</td>
<td>11.5</td>
</tr>
</tbody>
</table>

Discussion

Difficulties in making subjective observations and different interpretation of group definitions (e.g. what constitutes a couple), mean that the two types of data vary. Most of the differences may be explained by the points mentioned earlier.

3.2.5 Normal Length of Stay

Results

Figure 11 shows the responses to the question: "what is your usual length of stay at Hanmer Springs?"
Discussion

It is clear that the majority of visitors stay for 1 to 3 days, most stay for a week or less. There are small peaks of visitation at 7 and 14 days. This is probably due to holidays occurring during weeks off work and also approximation of stay length by respondents.

The high number of non-responses for usual length of stay represents first time visitors.

Fig. 11: Length of stay: usual length of stay and length of stay on this trip

Note: High non-response for usual length of stay represents first time visitors.
3.2.6 Length of Stay on This Trip

Results Figure 11 shows the responses to the question: "on this trip to Hanmer Springs, how long are you staying?"

Discussion

In general patterns of stay length are similar to usual lengths of stay. However there is a noticeable increase in the number of longer stays (far more than can be accounted for just by first time visitors). This could indicate the bias introduced by a summer survey or conceivable that due to increased travel costs, people are staying longer. The former is most likely to be the case.

3.2.7 Time Spent in the Forest Park

Results

Figure 12 shows the results of the question: how much time (in total) did you spend inside the forest park on this visit to Hanmer Springs? (e.g., picnicking, walking, etc)."

Discussion

The average time spent in the park was 2-4 hours. The pattern is quite similar to that found by Groome (1984: 27), with the exception of the larger portion staying 2 or more days.
This is consistent with the pattern of walk and facility use (section 3.2.2). A significant proportion of visitors do a couple of walks and maybe visit the Information Centre. On a day trip from Christchurch, visitors may do one or two short walks, have a picnic and go to the hot pools.

3.2.8 Frequency of Visits

Results

Figure 13 shows the results of the question: “how often do you come to Hanmer Springs?” This included first time visitors and visitors who had previously been to Hanmer Springs.
Discussion

Almost 30 percent of respondents were first time visitors. Of re-visitors, just over half visit 2 times a year or less. Of the more regular visitors, few visit more than six times a year. Those who do are likely to have some accommodation available to them (e.g., a bach or friends to stay with).

Fig. 13: Frequency of visits

![Frequency of visits diagram]

3.2.9 Seasons of Use

Results

Figure 14 shows the results of the question: "At what times of the year do you usually visit?" In this question it was common for respondents to tick more than one season. Study of these multi-responses reveals only one definite pattern: that people
who visit in spring and autumn usually are also summer visitors (70% of spring visitors and 77% of autumn visitors also visit in summer). However, the reverse is not necessarily true (13% and 18% of summer visitors also visit in spring and autumn respectively).

It should be noted that first time visitors were not asked to answer this question. This covers 29.1% of the respondents.

Fig. 14: Season of visits

Note: First time visitors were not asked to answer this question, hence the high non-responses.
Discussion

As would be expected with a survey taken during the summer, the highest proportion of responses was for summer. A significant proportion responded that they visited all year round.

3.2.10 Accommodation Used

Results

Figure 15 shows the accommodation used by respondents to the survey.

Discussion

Motels, motorcamps and private houses or baches were generally used, motorcamps being the most popular by far. The Trust Camp may be under represented in this survey due to the summer school holidays as the camp caters mainly to school groups.

Of those respondents in the "other" category, a significant proportion camped in the forest. Most of these were surprised by the general policy of not allowing camping in the park and thought it should be changed. The opinion voiced was that the type of people who wanted to camp in the forest, with minimal facilities, did not wish to use motorcamps. Hence in providing areas for camping, the park would not be going into competition with local business.
This is consistent with the Recreation Opportunity Spectrum planning system (section 1.2). While the activity of camping is the same, the style of activity is so different that a different setting is required. Only the Forest Park has the resources to be able to provide the forest-based minimum facility setting required. Such settings need not be accessible by road.

Fig. 15: Accommodation used

Note: The "other" category contains a significant proportion of respondents who camped within Hanmer Forest Park.
3.2.11 Individual Characteristics

Discussion

Characteristics such as age, sex and education cannot be considered in isolation from one another. They all interact in various ways to influence recreational behaviour. The amount of influence of each characteristic is an area which is not well understood. However, research into the nature of leisure behaviour is throwing light on this confusing area.

A report by ORRRC (Outdoor Recreation Resources Review Commission, 1962) found that demographic characteristics such as age, sex and occupation only accounted for 30% of variation in park use.

The Family Life Cycle concept (Rappaport and Rappaport, 1975) has become popular recently in explaining leisure behaviour. The essence of the concept is that tastes for leisure are set when one is young. The recreation activities that are taken part in, especially the style of activity, then change through life in accordance with position in "the life" cycle. Inherent in this family life cycle concept is the fact that:

"at certain stages in the life cycle and for much of the time, the family functions together as the primary recreational unit for many activities, but this unity dissolves as the children grow older and become more independent"     (Mercer, 1977).

Thus the recreational activity and style of the family depends
on the youngest members and their capabilities. Families with disabled members commonly find themselves at an arrested position in the family life cycle.

It would appear that people using Hanmer Forest Park fit into this scenario (see table 4).

Groome (1984: 21), discusses two opposing theories that link leisure behaviour with occupation, these are:

1. Familiarity theory: that people tend to seek recreational experiences that are similar to their work experiences, e.g. physically demanding work motivates towards physically demanding recreation.

2. Compensatory theory: that people tend to do something completely different in order to 'get away from it all'. Recreation acts as a 'safety valve' allowing an outlet, thus compensating for the frustration of every-day life.

Birch (1969), uses these two theories in a third theory:

3. Personal Community theory: in which the gross social issues and psychological drives (i.e., theories 1 and 2 above) are filtered by the social circles that we move in of work mates, family and friends.

In the Hanmer Forest Park survey, a similar pattern was found to Groome's foothill study, in that most people fit into the second of the above relationships. They are looking for a 'change of scene'. This is backed by the motivations for the visit (see
Section 3.1.3).

There seems to be a relationship between education, occupation, income and recreation. It has been noted that people visiting Arthur's Pass National Park (Simmons, 1979) have a significantly higher education than the population average.

Fig. 16: The relationship between education, occupation, income and recreation.

* aware of recreation opportunities
* better understanding and knowledge of wilderness and therefore not afraid of 'unknown'.
* compensatory recreation
* can afford equipment and travel cost
It could be argued that people with higher education levels are likely to be more aware of the opportunities (i.e., research abilities). It could also be argued that higher educations give individuals some level of knowledge and understanding of nature in wilderness areas. This allows the individual to feel more comfortable in that setting. Lack of knowledge and 'fear of the unknown' may be demotivators for less educated people.

People with higher education tend to have indoor mentally demanding occupations. The compensatory theory suggests that these people would naturally seek outdoor recreation.

Individuals in indoor mentally demanding occupation are commonly on higher incomes. In financially hard times such as at present, many people have a hard enough time making ends meet. As most outdoor recreation activities require some expensive equipment and considerable expense on travel and accommodation, only those on higher income can afford it. University students are the obvious exceptions. However, ability to budget, minimising living expenses and living beyond financial means can account for their participation. The motivation from education and occupation is very high amongst students.

These theories and relationships should be kept in mind when using the individual characteristics as described in this section.
In addition it should be remembered that these individual characteristics are only from one member of each group. In most cases this person was the representative of that group. In families it would generally have been the father or mother rather than children filling out the questionnaire. The data are not readily comparable with the New Zealand population as a whole. They are best used as an indication of leisure behaviour in relation to the family life cycle.

A) **Home Situation**

**Results**

Figure 17 shows the home situation of respondents.

**Fig. 17 : Home situation of respondents**

![Home Situation Graph](attachment:image.png)

**Note :** Respondents were asked to indicate situation according to their youngest child.
Discussion

A large proportion (48.2%) of respondents have families still at home. This compares with 48.4% of family groups in the interview assessment and 52% of family groups in the questionnaire assessment (see Section 3.2.4).

The results are similar to those found by Groome (1984 : 17), for the Canterbury foothill forests. Variations are probably due to the nature of the survey, selecting only group representatives.

Respondents represent the full range of the family life cycle as described by Rappaport and Rappaport (1975). It is therefore expected that a full range of recreation opportunities is desired around Hanmer Springs.

B) Age and Sex

Results

In many cases those who answered the questionnaire would have been the ‘dominant’ (for want of a better word) member of the group. This is illustrated by the fact that 44.3% of the respondents were female and 55.7% were male. The actual ratio of visitors is probably far closer to 50/50.
Table 6 shows the age of respondents.

Table 6: Ages of respondents

<table>
<thead>
<tr>
<th>Age</th>
<th>Number of respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 15</td>
<td>16</td>
</tr>
<tr>
<td>15 - 19</td>
<td>6</td>
</tr>
<tr>
<td>20 - 29</td>
<td>16</td>
</tr>
<tr>
<td>30 - 39</td>
<td>57</td>
</tr>
<tr>
<td>40 - 49</td>
<td>118</td>
</tr>
<tr>
<td>50 - 59</td>
<td>65</td>
</tr>
<tr>
<td>60 +</td>
<td>40</td>
</tr>
</tbody>
</table>

Note: The questionnaire was only handed to people over 15 years of age. It appears that in some cases parents have given the questionnaire to one of the children to fill out.

C) Education

Results Figure 18 shows the highest formal education achieved by respondents compared to Canterbury foothills users and the New Zealand population as a whole. It should be noted that in almost all cases, the respondents are adults.

It is therefore expected that the general level of education would be slightly higher than if all ages were included (many children still at school were not included).
Fig. 18: Level of formal education achieved: Hanmer Forest Park survey respondents, Canterbury Foothills users and New Zealand population as a whole.

Note:
1 Canterbury foothills survey includes people 12 years or older.
2 Hanmer Forest Park survey includes people 15 or older.

In this survey 5.3% of the respondents were still at an educational institution. This compares with 13% in the Canterbury Foothill Forests (Groome, 1984: 20).
Discussion

In the foothills survey there was a moderately higher level of formal education than in New Zealand as a whole. This survey shows a dramatically higher level of formal education among Hanmer Forest Park visitors. The influence of this education level can be seen in occupations.

Knowledge of the education level of visitors is important in interpretation. Managers can use this information as a guide for the intellectual level of interpretative programmes, interpretative signs, pamphlets and books. It may be that interpretative signs can be aimed at a relatively high comprehension ability, parents or teachers being able to explain their contents, if need, be to children. However it is important that they be aimed at relatively high comprehension abilities and not at high levels of current knowledge. For example, scientific names are aimed at high levels of current knowledge, explanation of ecological systems at high levels of comprehension.

D) Occupation

Results

Table 7 shows the occupation of respondents compared with those for the Canterbury foothill survey (Groome, 1984: 21).
The proportion of respondents in indoor, mentally demanding occupation is notably higher and probably reflects the higher education level. The higher number of retired people is probably due to accommodation and the hot pools.

Table 7: Occupation of respondents

<table>
<thead>
<tr>
<th></th>
<th>Hanmer</th>
<th>Canterbury foothills</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indoor and mentally demanding.</td>
<td>44.9%</td>
<td>25%</td>
</tr>
<tr>
<td>Management of family and/or home.</td>
<td>14.8</td>
<td>16</td>
</tr>
<tr>
<td>Still at an educational institution.</td>
<td>5.3</td>
<td>13</td>
</tr>
<tr>
<td>Other indoor paid occupation.</td>
<td>6.0</td>
<td>10</td>
</tr>
<tr>
<td>Outdoor paid occupation</td>
<td>5.0</td>
<td>6</td>
</tr>
<tr>
<td>Indoor/outdoor paid occupation.</td>
<td>3.5</td>
<td>5</td>
</tr>
<tr>
<td>Retired from paid work</td>
<td>11.5</td>
<td>8</td>
</tr>
<tr>
<td>Did not specify</td>
<td>2.5</td>
<td>17</td>
</tr>
</tbody>
</table>

Note: The number of students is lower in the Hanmer Survey due to the higher cut-off age (15 compared with 12 years).
Discussion

Virtually identical questions were used in the Canterbury foothill forest and Hanmer Forest Park surveys. Response rates were:

- Hanmer Forest Park: 92.4%
- Canterbury foothill forests: 71.4%

Groome (1984: 21) states:

"some people maintained that the question was too personal and would not answer it."

It may be that in the Hanmer survey meeting the person who was running the survey personally (i.e. during the interview) helped in getting the higher response.

3.2.12 Area of Residence

Results

Table 8 shows the area of residence for respondents compared with those for the people who were interviewed, but did not return a questionnaire.

Discussion

As with the Canterbury foothill forests (Groome, 1984: 22), the majority of respondents (51.1%) came from Christchurch (63.7% for the foothill forests).
In general area of residence was similar for respondents and non-respondents. Although no statistical checks were made there appear to be some general trends.

* In general response from rural areas was lower than from major South Island urban areas.
* Response from North Island and overseas visitors was lower than average.
* Response from Hanmer Springs residents was very low.

Table 8: Area of residence: respondents and non-respondents

<table>
<thead>
<tr>
<th>LOCATION</th>
<th>RESPONDENTS (%)</th>
<th>NON-RESPONDENTS (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Christchurch</td>
<td>51.1</td>
<td>43.8</td>
</tr>
<tr>
<td>Outer Christchurch south</td>
<td>0.5</td>
<td>1.6</td>
</tr>
<tr>
<td>Lincoln-Taitapu</td>
<td>0.3</td>
<td>-</td>
</tr>
<tr>
<td>Loburn area</td>
<td>0.3</td>
<td>-</td>
</tr>
<tr>
<td>Rangiora area</td>
<td>3.8</td>
<td>5.2</td>
</tr>
<tr>
<td>Darfield</td>
<td>1.0</td>
<td>1.0</td>
</tr>
<tr>
<td>Banks Peninsula</td>
<td>0.5</td>
<td>1.3</td>
</tr>
<tr>
<td>Dunedin</td>
<td>9.8</td>
<td>3.6</td>
</tr>
<tr>
<td>South Canterbury</td>
<td>6.0</td>
<td>5.8</td>
</tr>
<tr>
<td>North Canterbury rural</td>
<td>0.5</td>
<td>1.3</td>
</tr>
<tr>
<td>Southland and Otago</td>
<td>2.8</td>
<td>3.9</td>
</tr>
<tr>
<td>Westland</td>
<td>0.3</td>
<td>1.0</td>
</tr>
<tr>
<td>Nelson</td>
<td>2.8</td>
<td>2.3</td>
</tr>
<tr>
<td>Marlborough</td>
<td>1.3</td>
<td>2.6</td>
</tr>
<tr>
<td>North Island city</td>
<td>10.0</td>
<td>12.3</td>
</tr>
<tr>
<td>Overseas</td>
<td>8.0</td>
<td>10.7</td>
</tr>
<tr>
<td>Hanmer Springs</td>
<td>0.8</td>
<td>3.6</td>
</tr>
</tbody>
</table>
3.2.13 Part of a Longer Trip?

Results

Figure 19 shows the response to the question: "is this trip part of a longer trip, or only to Hanmer Springs?" It should be noted that the large 'not applicable' response is due to a mistake in the filter in question 2A (see Appendix 2). It was not intended that first time visitors miss out question 2D. Unfortunately this mistake was not picked up until a significant proportion of the questionnaires were given out. In the interests of consistency the filter was not corrected in the remaining questionnaires.

Fig 19: Proportions of respondents only visiting Hanmer Springs and on a longer trip.
Discussion

The majority of respondents (52%) stated that their trip was only to Hanmer Springs. There is also a significant proportion of visitors who were making Hanmer Springs a stop on a longer tour. It is expected that the majority of those responding 'not applicable' would be making it a longer trip. Visitors from the North Island, overseas or the extremities of the South Island would tend to be on an island tour. They are also more likely to be first time visitors. Hence the proportion of visitors making a longer trip is thought to be greater than that represented by Figure 18.

In retrospect, in order to get a good idea of the proportion of the overall trip devoted to Hanmer Springs, a different approach could have been used. A proportion time or scale of importance rating would have been more useful. However this information is probably more important in establishing an accurate user valuation of the park than for management needs.
3.3 FACILITY EVALUATION

3.3.1 Facility Evaluation by Users

Results

Table 9 shows the response to question 10A (see Appendix 2), asking respondents what they thought of facilities that they used.

<table>
<thead>
<tr>
<th>FACILITY</th>
<th>Non-response use</th>
<th>Did not use</th>
<th>Very Poor</th>
<th>Okay</th>
<th>Good</th>
<th>Very good</th>
</tr>
</thead>
<tbody>
<tr>
<td>Access roads</td>
<td>8.8</td>
<td>8.0</td>
<td>0.0</td>
<td>0.3</td>
<td>10.0</td>
<td>36.3</td>
</tr>
<tr>
<td>Forest roads</td>
<td>10.5</td>
<td>17.5</td>
<td>0.0</td>
<td>1.3</td>
<td>14.5</td>
<td>35.6</td>
</tr>
<tr>
<td>Parking areas</td>
<td>6.3</td>
<td>7.3</td>
<td>0.0</td>
<td>1.0</td>
<td>14.0</td>
<td>40.1</td>
</tr>
<tr>
<td>Picnic areas</td>
<td>8.3</td>
<td>18.0</td>
<td>0.0</td>
<td>0.8</td>
<td>4.3</td>
<td>26.3</td>
</tr>
<tr>
<td>Toilets</td>
<td>10.0</td>
<td>20.6</td>
<td>1.0</td>
<td>14.0</td>
<td>40.1</td>
<td>31.3</td>
</tr>
<tr>
<td>Rubbish bins</td>
<td>10.0</td>
<td>18.3</td>
<td>0.5</td>
<td>4.0</td>
<td>16.8</td>
<td>29.8</td>
</tr>
<tr>
<td>Short walks</td>
<td>3.3</td>
<td>4.3</td>
<td>0.0</td>
<td>0.8</td>
<td>2.5</td>
<td>23.3</td>
</tr>
<tr>
<td>Tracks</td>
<td>8.3</td>
<td>6.3</td>
<td>0.0</td>
<td>0.5</td>
<td>4.0</td>
<td>28.1</td>
</tr>
<tr>
<td>Road signs</td>
<td>5.3</td>
<td>2.5</td>
<td>1.0</td>
<td>2.8</td>
<td>14.3</td>
<td>32.6</td>
</tr>
<tr>
<td>Track signs</td>
<td>6.3</td>
<td>4.0</td>
<td>1.0</td>
<td>2.0</td>
<td>12.5</td>
<td>32.6</td>
</tr>
<tr>
<td>Information Centre</td>
<td>5.5</td>
<td>7.0</td>
<td>0.0</td>
<td>0.3</td>
<td>3.5</td>
<td>18.3</td>
</tr>
<tr>
<td>AVERAGE</td>
<td>7.5</td>
<td>10.3</td>
<td>0.3</td>
<td>1.5</td>
<td>10.2</td>
<td>29.8</td>
</tr>
</tbody>
</table>
Discussion

The users of the Forest Park facilities generally see them as being good or very good. The Information Centre, walks, tracks and picnic areas are the best rated facilities with more than 50% of responses being 'very good'. Toilets and rubbish bins are the lowest rated facilities. However, in both cases nearly 50% of respondents rated them good or very good. The relatively large proportion of 'did not use' cases should be noted for both toilets and rubbish facilities. As the majority of users are doing short walks they may prefer to 'hold on' until they have access to high quality toilet facilities.

Groome (1984: 43) suggests that controlling litter is ...

"best done by a simple line on the main sign at an area which says "Please take all rubbish home". Supplying rubbish bins only creates litter, encourages vermin and wasps and forest managers can spend their time doing useful things rather than acting as rubbish collectors. People still need to be reminded that they should take their rubbish home (many already do, so they are capable of it)".

Educating the public on the outdoors minimum impact code and to take home all rubbish should be the main aim for rubbish control. Current rubbish facilities do not assist this aim.

3.3.2 Respondents Comments

Results

Table 10 lists improvements that respondents suggested for
Hanmer Forest Park. The format of the questionnaire allowed for two separate suggestions, very few respondents made more.

More specific comments made by respondents are listed in appendix 3.

Table 10: Suggested Improvement for Hanmer Forest Park

<table>
<thead>
<tr>
<th>No comments</th>
<th>1st response</th>
<th>2nd response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Walks: more</td>
<td>3.5</td>
<td>0.5</td>
</tr>
<tr>
<td>improve</td>
<td>6.0</td>
<td>1.3</td>
</tr>
<tr>
<td>better maintenance</td>
<td>0.8</td>
<td>0.5</td>
</tr>
<tr>
<td>Interpretive signs: more</td>
<td>1.8</td>
<td>0.3</td>
</tr>
<tr>
<td>Roads: improve</td>
<td>0.5</td>
<td>-</td>
</tr>
<tr>
<td>more</td>
<td>0.3</td>
<td>-</td>
</tr>
<tr>
<td>Parking: more</td>
<td>0.3</td>
<td>-</td>
</tr>
<tr>
<td>improve</td>
<td>0.3</td>
<td>-</td>
</tr>
<tr>
<td>Picnic sites: improve</td>
<td>1.0</td>
<td>0.3</td>
</tr>
<tr>
<td>more</td>
<td>0.5</td>
<td>-</td>
</tr>
<tr>
<td>Toilets: improve</td>
<td>0.3</td>
<td>6.3</td>
</tr>
<tr>
<td>more</td>
<td>0.3</td>
<td>-</td>
</tr>
<tr>
<td>better maintenance</td>
<td>0.3</td>
<td>-</td>
</tr>
<tr>
<td>Signs: improve</td>
<td>6.3</td>
<td>0.5</td>
</tr>
<tr>
<td>more</td>
<td>1.0</td>
<td>0.5</td>
</tr>
<tr>
<td>better maintenance</td>
<td>0.3</td>
<td>-</td>
</tr>
<tr>
<td>Information: improve</td>
<td>2.5</td>
<td>1.0</td>
</tr>
<tr>
<td>more</td>
<td>4.0</td>
<td>2.3</td>
</tr>
<tr>
<td>better maintenance</td>
<td>0.3</td>
<td>0.3</td>
</tr>
<tr>
<td>Rubbish fac: improve</td>
<td>0.3</td>
<td>-</td>
</tr>
<tr>
<td>more</td>
<td>0.5</td>
<td>0.3</td>
</tr>
<tr>
<td>General comment</td>
<td>18.8</td>
<td>11</td>
</tr>
</tbody>
</table>

| 100%                    | 100%         |
3.4 VALUATION METHODS

3.4.1 The Valuation of Non-Market Goods

Strong governmental emphasis on financial accountability and following market forces has created a demand for valuation studies in parks. This has led to the use in New Zealand of 'non-market good' valuation methods developed in the United States. Some examples of where these valuation methods have been used in New Zealand are:

- The Milford Track (Woodfield and Cowie, 1977)
- The Kaimanawa and Kaweka Forest Parks (Sandrey and Simmons, 1984)
- Lake Tutira (Harris and Meister, 1981).

In order to see how such valuations are derived, we must first look at what is meant by a 'non-market good'. Secondly we must look at the valuation methods used, their assumptions and limitations. These include the travel-cost and willingness to pay methods. From this we can see how values derived by such methods can be utilised and their reliability and validity. This study of Hanmer Forest Park should be regarded within this conceptual framework.

3.4.2 What is a Non-Market Good?

In New Zealand at present parks can be considered to be 'non-market goods'. That is one for which "no clearly established market price exists" (Sandrey and Simmons, 1984: 3).
A demand curve for a non-market good can be estimated by plotting the amount of the good used at a particular price (see figure 20). Thus at price $P_1$, $D_1$ is the amount of good demanded. At any fixed price the total value of the good consists of the revenue received ($\text{price} \times \text{demand}$) plus the consumer surplus. The consumer surplus is the area beneath the demand curve and above the existing price line (the hatched area in fig 20). This is found by the mathematical method of integration. If the price is zero, consumer surplus measures the value of the good.

![Simplified demand curve](image)

**Notes:**

1. At any price $P_1$ the consumer surplus equals the hatched area and the revenue equals the shaded area.
2. The value of the good equals revenue plus consumer surplus.
3. At zero price \((P_0)\) demand will be at some level \((D_0)\). Consumer surplus (the area under the curve) equals the value of the good.

For non-market goods we must estimate the demand curve by non-traditional techniques. Two such techniques are acceptable on theoretical grounds (Randall, 1981). These are the travel cost and willingness to pay methods. Sandrey and Simmons (1984), Randall (1981) and Leathers, et al (in press), discuss these methods in some detail. I will sum up the methods as they relate to this study.

3.4.3 The Travel Cost Method

The travel cost method involves developing a demand curve, similar to that in figure 20, using the cost of travel to a recreation site as a surrogate for an admission fee. In figure 20 the 'price' axis becomes the 'travel-cost' axis.

In this study visitors were asked their home town or locality. Concentric zones of distance from Hanmer Forest Park were defined into which all home localities were fitted. All visitors from each zone were considered to have approximately constant travel costs. The number of respondents from each zone was divided by the population of the zone to give relative visitation rates. Travel costs were plotted against those relative visitation rates to give the demand curve shown in figure 21.
From this demand curve consumer surplus can be estimated, being the area under the curve and above the average travel cost. This consumer surplus with the expenses actually incurred in travel is then used to construct the total value of the site. This is done for Hanmer Forest Park in Section 3.4.8 (a).

3.4.4 Assumptions of the Travel Cost Method

Sandrey and Simmons (1984 : 7) describe the four major assumptions that must be satisfied in order that the travel cost method provides useful estimates of the benefits.

They are:

1. **Entry fees**: It is assumed that an individual would react to an increase in travel cost in exactly the same manner as that individual would react to an increase in, or imposition of, entry fees. This is the fundamental assumption for using the cost of travel as a proxy for the cost of entry. This assumption may be more acceptable for local sites than those especially attractive sites which draw from a national or international market area, e.g. Mt Cook and Westland National Parks.

2. **Specification**: All the relevant and statistically significant variables must be properly specified to find unbiased estimates of the slope of the site demand curve. These include, or may include, the availability of substitute sites, travel time, demographic variables, and a site quality index. An example of a site quality index may be hunting or fishing success rate at a particular site.
3. **Capacity constraints**: It is assumed that demand is not constrained by crowding. This may not be a serious problem, although there may be an inter-relationship between congestion and a quality index, e.g. crowding reducing satisfaction for some people or the quality of a site changing throughout the season.

4. **Homogenous taste** The final important assumption made is that once we have divided people into zones, we expect each zone to reflect the same ideas and tastes about recreation. It may be a little unrealistic to expect people living in an isolated rural community to have the same tastes as those people living in an inner city area. This assumption is known as the homogenous (the same kind of) taste assumption and if the researcher has some thoughts that the tastes may be different, a test can be run by placing the zones into two or more separate categories.
3.4.5 Limitations of the Travel Cost Method

The limitations of the travel cost method can be seen in the non-fulfillment of the above assumptions. Leathers, et al (in press) have investigated the limitations of the travel cost valuation method.

The following observations have been made from the review of previous New Zealand works and from the experience of running this survey:

1. **Entry fees**: visitors to a park may not react to an entry fee in the same way as they would to an increase in travel cost. Sandrey and Simmons (1984: 9) state:

   "An increase in entry fees tends to be a visible increase, whereas increases in travel cost may tend to be less visible or 'hidden' costs. However it is likely that most people are well aware of their travel costs, at least those incurred directly, such as petrol and oil."

In my opinion, tradition and social inertia (non-acceptance of change) throw doubt on the validity of this assumption in the New Zealand situation. In the United States where travel cost methods were developed, people are used to paying for many things, including National Parks, directly. In New Zealand there is a tradition of parks being 'free' for all, having been paid for in taxes. To many park users, entry fees are distasteful because of this tradition. In comparison the costs of running a motor vehicle are continuously
increasing. Such increases are accepted and are as much part of tradition as 'free' parks.

Social inertia is people's aversion to changes in the normal pattern of things, for instance resistance to the idea of charging entrance fees to previously 'free' parks. Social inertia means that people's reaction to a fee for park entrance is not likely to be the same as their reaction to an increased travel cost. This hypothesis is tested by using two different willingness to pay questions which will be discussed shortly.

2 **Specification** : The availability and relative attractiveness of various substitute sites and site quality index are examples of variables, which are very difficult to specify. How such variables effect recreational choice is not very well understood. Therefore their effect in the travel cost valuation method is similarly poorly understood.

3 **Capacity constraint** : Perception of crowding is very subjective. While some people may be quite happy with present use levels, some others may already have found the area 'overcrowded'. The last settler syndrome is a reflection of this process. The last people to 'discover' a site tend to be happy with the way it is. However, earlier users, arriving at a time when use was lower, are unhappy about the increasing use. They feel themselves being crowded out. Thus everybody wants to be the last settler.
For any recreational site there will be some demand constraint because of perceived crowding. However, this probably does not have much effect on the validity or reliability of the travel cost method.

3.4.6 The Willingness to Pay Method

The willingness to pay method is the most important of the 'contingent valuation' methods (Sandrey and Simmons, 1984 : 11). As with the travel cost method, it involves the derivation of a demand curve. In order to derive this demand curve ...

"Respondents are basically asked:

(a) how much they would be prepared to pay rather than forego the experience (compensatory variation), or

(b) how much they would require to forego the experience and be as well off (equivalent variation)."

(Sandrey, 1985 : 1)

The responses are considered to represent an hypothetical market, reflecting what would occur if the situation were reality. A demand curve is derived by plotting willingness to pay (as a surrogate for price) against the number of respondents (demand).
In this study respondents were asked two questions to elicit 'willingness to travel' and 'willingness to pay a toll' demand curves (see Appendix 2, questions 11 and 13 respectively). There were two main reasons for this:

1. To investigate the effect of various questions on willingness to pay valuations. By comparing the two sets of results and the travel cost results this 'vehicle bias' can be investigated. Sandrey (1985), has investigated this vehicle bias for both this survey and a postal survey of canoeists using the Wanganui River, using similar questions.

2. To test the first assumption of the travel cost method, i.e. the hypothesis that reaction to an 'entry fee' is the same as reaction to increases in travel cost.

3.4.7 Potential Problems with the Willingness to Pay Methods

Some important problems may be encountered with willingness to pay valuation methods. Some of the main ones are discussed briefly below:

1 Strategic behaviour: The response may be biased by the respondents view of how the information is going to be used. For example if they suspect that the authorities are moving towards a user-pays approach for the resource, the value may be biased downwards. However, if the respondent considered that the response may effect some alternative use of the recreational resource (e.g., logging of an area of native bush), the answer is likely to be biased upwards. It is difficult to avoid this bias if the area being
studied is politically sensitive for any reason. Apart from negative reaction to the imposition of tolls idea, Hanmer Forest Park is not a contentious area. Hence this strategic behaviour is likely to be minimal.

2 **Starting point bias**: Starting point bias exists when the questionnaire starts from an inappropriate figure, thus influencing the respondent's view. This could be considered a problem in this survey as different scales were used for the two willingness to pay questions. A more objective approach may be to leave the questions open ended (i.e. do not give a scale to tick). This would avoid starting point and scale bias, but may result in lower response rates to the question. Hence validity may be increased by reducing the bias, but reliability is reduced due to lower response rates.

Leathers, *et al* (in press) discuss these and other sources of bias in more detail.
3.4.8 Results

Ron Sandrey (1985), used the data from the valuation questions in this survey in order to:

(a) provide a comparison between alternative forms of a direct question approach, and

(b) provide another comparison between these questions and a travel cost approach.

Regression analysis was used in order to estimate the consumer surplus as measured by the willingness to pay questions and to develop the travel cost model (which includes expenses incurred and consumer surplus).

Table 11 (from Sandrey, 1985: 6) shows the results from this regression analysis.

Figure 21 shows the consumer surplus segment of the demand curves. For the willingness to pay questions, this represents the entire derived curve. For the travel cost method the average cost of travel for each group ($81.70) was used as a price line. The demand curve in figure 21 represents only that part of the curve which was above this price line (i.e., equivalent to the hatched area in figure 20).
Table 11: Regression analysis for willingness to pay responses and travel cost estimates (from Sandrey 1985: 6).

(estimated of number from sample who would pay this amount or more)

<table>
<thead>
<tr>
<th>Price</th>
<th>Extra Distance</th>
<th>Toll</th>
<th>Travel Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>336</td>
<td>256</td>
<td>306</td>
</tr>
<tr>
<td>5</td>
<td>311</td>
<td>102</td>
<td>252</td>
</tr>
<tr>
<td>7.5</td>
<td>-</td>
<td>224.5</td>
<td>-</td>
</tr>
<tr>
<td>8.3</td>
<td>-</td>
<td>0</td>
<td>-</td>
</tr>
<tr>
<td>10.0</td>
<td>287</td>
<td>208</td>
<td></td>
</tr>
<tr>
<td>25.0</td>
<td>213</td>
<td>117</td>
<td></td>
</tr>
<tr>
<td>50.0</td>
<td>90</td>
<td>44</td>
<td></td>
</tr>
<tr>
<td>68.4</td>
<td>0</td>
<td>22</td>
<td></td>
</tr>
<tr>
<td>90.0</td>
<td></td>
<td>10</td>
<td></td>
</tr>
</tbody>
</table>

Regression results (t’s in brackets)

| Constant | 336 (20.6) 256 (4.8) 306 (2.8) |
| Slope    | -4.91 -30.88 -0.0386 |
| R        | .86 .61 .79 |
| F        | 44.0 10.5 39.0 |
| Observations | 8 7 11 |

Consumers' Surplus from Survey

| Total  | $11,476.9 | $1,062.7 | $8,513 |
| Per head | $28.76 | $2.66 | $21.34 |

Notes

1. Above an average cost of $81.7. This was obtained from 3 persons per car at 46 cents per km. Adjustments were made for multiple visits to the site and 11 zones were used.

2. Integrating from $81.7 (the mean travel cost value) to $181.7 (the "overseas" value used).
Figure 21: Demand curves for willingness to travel, willingness to pay a toll and that part of the travel cost demand curve above the average travel cost of $81.7 (from Sandrey 1985 : 9).
The total and per head consumers' surplus for each valuation are also shown in table 11.

The per head consumer surplus of $21.34 for the travel cost valuation is comparable with figures derived for other similar recreational sites. Sandrey and Simmons (1984 : 31), calculated a mean average travel cost value of $47.65 and a consumer surplus of $27.16 per visitor for the Kaimanawa and Kaweka Forest Park. Harris and Meister (1981 : 26) calculated the consumer surplus of visitors to Lake Tutira to be $8.00 per head.

Much of the difference in the consumers' surplus derived from the two willingness to pay questions can be attributed to vehicle bias (i.e., the way in which the questions are asked). Respondents who answered 'would not pay' were asked to give their reason. The results, shown in table 12 reflect the vehicle bias.

Table 12: Respondents reasons for replying 'would not pay' to question 13 (willingness to pay a toll).

<table>
<thead>
<tr>
<th>Reason</th>
<th>Number of respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>On principle</td>
<td>106</td>
</tr>
<tr>
<td>Paid taxes</td>
<td>49</td>
</tr>
<tr>
<td>What is the toll for?</td>
<td>9</td>
</tr>
<tr>
<td>Paid rates</td>
<td>2</td>
</tr>
<tr>
<td>Can't afford to pay</td>
<td>8</td>
</tr>
</tbody>
</table>

It can be seen from comparing the various consumer surplus's
that the payment vehicle used to solicit willingness to pay answers is important. Comparing the results indicate that asking how much further the respondent would be willing to travel gives a similar result to the travel cost method. Therefore, if the vehicle bias is minimised, the willingness to pay valuation method can be used to get a similar value as that derived from actual behaviour (travel cost).

The very low average consumer surplus obtained from the willingness to pay a toll indicates several things. Firstly, the hypothesis proposed in section 3.4.5 that people's reaction to a fee for park entrance is not likely to be the same as their reaction to an increased travel cost, is supported by these results. Secondly, that selecting systems such as a road toll introduces a considerable degree of vehicle bias in willingness to pay valuations. Such systems should be avoided in future research unless used specifically as a measure of resistance to toll imposition.

3.4.9 Towards a Recreational Value for Hanmer Forest Park

Travel cost and willingness to pay valuation methods can be used to assess the recreation value of parks. This includes the value of facilities that users perceive, value of the recreation for itself and other values such as scenery. However, it does not include all of the non-production values. Nature conservation values per se are not assessed by these methods.
In order to derive a total value for Hanmer Forest Park, we must first estimate the annual visitation rate. This in itself is not easy since records are only available for the information centre. In order to get an approximation to the annual visitation rate, we can assume that 75% of visitors to the park visit the information centre (from section 3.2.2). Over the 1983/84 financial year, 31 125 visitors were recorded at the information centre. Over the previous five years, numbers had risen from 17 862, giving an overall annual increase of 14.8%. In the 1984/85 year, this increase probably slowed down considerably. If we take a 10% increase the figures would have been around 34 250 visitors to the information centre. As this represents three quarters of the total, visitation to the park is estimated at 46 000 per annum.

The total consumer surplus can be calculated as the number of visitors by the average consumer surplus (willingness to pay a toll is not included as the figure is unjustified on theoretical grounds).

Consumer surplus is thus:

For willingness to travel extra distance

\[ 46 \, 000 \times \$28.76 = \$1,322,960 \]

For travel cost

\[ 46 \, 000 \times \$21.34 = \$981,640 \]

To this figure can be added the amount actually spent in travel, $1,252,580 (46 000 people averaging $81.7/3 = $27.23), to represent a tentative estimated economic benefit value derived from recreation in Hanmer Forest Park. This gives a total benefit of $2,575,540, for the willingness to travel method and
$2,234,220 for the travel cost method.

Using the current 10 percent discounting rate (1) employed by Treasury in project evaluation, results in a present visitation value of Hanmer Forest Park of:

\[
\frac{1}{\text{discount rate}} \times \text{annual value} = \frac{1}{0.10} \times 2,234,220 \text{ travel cost} = \$22,342,200
\]

(1) "Discounting is a technique used to equate a sum of money at a particular time in the future with a sum in current dollars. It is generally held that a future dollar is of less value than a current dollar, even when inflation is accounted for and discounting reflects this time preference for money. If an annual value is discounted and summed over all future years, the present value or current value can be found by the formula.

\[
\frac{1}{\text{discount rate}} \times \text{(Annual value)}
\]

In this example of a 10% discount rate, the formula is:

\[
\frac{1}{0.10} \times \text{(Annual value)}, \text{ or ten times the annual value}
\]

(Sandrey and Simmons, 1984 : 32.)
It should be noted that the rate of visitation increase may exceed the discount rate of 10%. If this increase is sustained then the total visitation value is impossible to calculate.

If, for example, the visitation rate increased steadily at 5% per annum, the effective discount rate would be $10\% - 5\% = 5\%$. The total present value according to the travel cost valuation, then becomes:

$44,684,400.$

"Economists would argue that it (these derived values) can be used as a direct comparison with dollars/benefits derived from other resource uses, such as commercial hunting and timber extraction. It can also stand alongside ecological, social or political arguments for existing uses."

(Sandrey and Simmons, 1984 : 32.)

However, values for resource uses such as timber extraction can be assessed with a great deal of accuracy, whereas these derived recreational values are best used as general indicators or 'ball-park' figures. It would not be wise, under these circumstances, to make a dollar for dollar comparison between the two as the answers may be misleading. Because of the general nature of the recreational values, comparisons are best made at a general level.
4. KEY ISSUES AND RECOMMENDATIONS

4.1 POLICY

4.1.1 Access

One respondent commented on the lack of access to the top of Conical Hill by road (members of the group being too old to climb the hill). In such cases access would probably not be denied, but visitors need to be aware of the possibility. A sign at the beginning of Pawsons Road indicating "Conical Hill: road access for the disabled" with "permit available from the Information Centre". Keys could be lent on a deposit to ensure their return.

4.1.2 Camping

Several respondents expressed a desire to be able to camp in the forest (see the discussion in section 3.2.10). The current policy of no camping needs to be reviewed. The provision of several small camping areas, accessible by foot in some cases and road in others, is consistent with providing a spectrum of recreation opportunities and would not affect visitors who preferred to stay at motorcamps, motels or hotel.

4.1.3 Dogs

The current policy on dogs needs to be clarified and the public made aware of the restriction through pamphlets, signs and other publicity items.
In general accompanied dogs are not a problem in the park. However, in picnic areas they should be tethered. A fine for infringement of policy (where it is made clear to the public) would make this policy more enforceable. At present visitors are either not aware of the policy or flout it.

4.2 INTERPRETATION

4.2.1 Publicity

The public have a right to know what outdoor recreation opportunities are available to them. Many people who do not visit the forests are probably unaware of the facilities and services that are available. If people are aware of the opportunities available, they are able to make a choice.

Currently a large proportion of visitors hear about Hanmer Springs by word of mouth. Other publicity media are under-utilised. Displays in shopping malls, schools and community centres are a good method of publicity, the materials are used again and again and have the potential for high impact.

Newspaper advertisements in the entertainment section for the summer programme seemed to have little effect for Hanmer Forest Park. Size and layout and such adverts has a large effect on their impact.
The large proportion of North Island and overseas tourists indicate that Hanmer Forest Park could be publicised effectively through the AA, hotels, motels, camp grounds, car hire firms, tourist bureaus, Canterbury Information Centre and the Outdoor Recreation Information Centre.

4.2.2 Information

Publicity of Hanmer Forest Park within Hanmer Springs is very poor. A bulletin board with information about the forest park, especially during the summer programme is needed in a prominent position in the town centre.

A range of pamphlets, especially for the Conical Hill Walk and Chatterton River track, should be available at motels and camp grounds.

Interpretative signs at the beginning of Conical Hill walk and Chatterton River track for visitors without pamphlets is advisable.

The information centre is the best place for distribution of information. However, visitors first have to find the information centre. A more distinctive and visible sign is needed than the current AA sign on the lodge corner.
Some respondents wished to have more information on the fauna, flora and walks.

Interpretative signs need a great deal of improvement. People wish to know more than just scientific and common names. Siting of many interpretative signs was poor in relation to height, angle and position in relation to plants. Leaf drawings on the sign helps in identifying the plant referred to. In some cases the plant referred to is not even there! Nailing signs to trees is a definite no-no, where this has happened (e.g. Norwegian spruce on the Forest walk), they should be removed.

4.3 FACILITIES

Use of an area can lead to the need for facilities such as toilets and picnic tables. On the other hand provision of such facilities will lead to increased use of an area. The Forest Service should point out that picnicking is not restricted to the designated areas.

4.3.1 Toilets

In general the current toilets were considered to be good. However, the maintenance cost of these toilets is high and chemical treatment inhibits natural breakdown. The current method of disposal of the sewerage leaves much to be desired. Lower maintenance, higher capital cost and less ecologically damaging toilet systems should be investigated for any future sites.
4.3.2 Rubbish Disposal Facilities

Visitors should be encouraged to take home all their own rubbish. The current rubbish facilities have a high maintenance cost and encourage vermin and wasps.

The possibility of phasing out rubbish facilities should be investigated.

4.3.3 Fireplaces

Fireplaces established by the NZ Forest Service, can control fireplace sites, but encourage people to destroy nearby vegetation for fuel. On the other hand, uncontrolled fire sites can cause damage to recreation sites.

The current fireplace and barbeque facilities at the Hanmer River Recreation area and Information Centre picnic area, are probably sufficient for visitor use. No more fireplaces should be provided. Where fireplaces already exist fuel should be supplied.

Visitors should be encouraged to use their own solid or liquid fuel cookers.

Drinking water should be available in the picnic area below the Information Centre.

4.3.4 Seating on Tracks

Rest spots, preferably with seating and a point of interest, should be developed along the longer tracks.
4.3.5 Walks and Tracks

Many visitors felt that there should be more walks and tracks, especially shorter walks and walks connecting the existing ones.

Conical Hill Walk

There is currently a problem with people short cutting the Conical Hill Walk zig-zag. The waratah and wire barriers seem to be doing little to stop this. There are 3 options for improving this situation:

1. To re-align the entire track: an expensive task which would not do much to solve the problem.

2. To prevent people using shortcuts. This can be done by either erecting permanent barriers at the exit and entrance points to shortcuts or dense planting in these areas and extensive planting in trampled areas.


The roadside sign needs to be replaced with a clear and directional sign. The track also needs to be improved in order to make the track direction clear.
Some visitors suggested a source of drinking water at the top of the hill. The lookout roof could be used to collect this water.

**Woodland Walk**

The Woodland Walk and Wheelchair track need to be indicated with different colour direction markers in order to avoid confusion. Where the walk has been realigned, the old track needs to be planted. The wire barriers present an eyesore.

The steps on bridges and walkways are much too close together. The steps down to Dog Stream are positively dangerous. These structures need to be redesigned and replaced, using a minimum tread length of 400 mm and maximum riser height of 150 mm.

**Forest Walk**

A short loop could be developed, using the first part of the Forest Walk, into a second wheelchair access walk.

**Wheelchair Walk**

The surface material of the track is too coarse for some wheelchair users. A fine, smooth surface should be developed.

**Chatterton River Track**

The signs currently on the track appear to cause some confusion amongst users. This sign system needs to be reviewed and improved.
**Lower Dog Stream Track**

Many visitors expressed concern with the run down condition of this track and its facilities. Any future developments in this area should be planned to include a full maintenance schedule and budget. If redevelopment is to occur, materials with a long lifespan should be used (e.g., tanalised timber instead of untreated larch poles).
5. SUMMARY OF RECOMMENDATIONS

* Allow for dispersed motorised and non-motorised camping.

* Clarify and make public aware of the policy on dogs.

* Develop an information board within the township itself.

* Promote dissemination of information through as many sources as possible, especially local accommodation areas and tourism information areas.

* Improve interpretative signs.

* Alternative toilet systems should be investigated.

* The possibility of phasing out rubbish disposal facilities should be investigated.

* More short walks should be developed, especially walks connecting existing walks and tracks.
6. REFERENCES


APPENDIX 1: QUESTION SCHEDULE

1. Could you please tell me where you are from?
   - Suburb
   - Town/rural area
   - Country

2. How long are you planning to stay at Hanmer Springs during this visit?
   - Less than 1 day
   - 1 day
   - 2-3 days
   - 3-7 days
   - More

3. Could you describe your main activities whilst in the area, eg pools, walks etc.
   (1) 
   (2) 
   (3) 

4. Composition of group
   - Alone
   - Young couple
   - Mid-aged couple
   - Older/retired couple
   - Young family
   - Mid-aged family
   - Older family
   - Extended family group
   - Friends/club
   - Other

5. Have you any comments to make about the service and facilities that are provided within Hanmer Forest Park? (eg criticisms or improvements of facilities, directions, information centre etc.)
APPENDIX 2: QUESTIONNAIRE

Hanmer Forest Park
Visitor Survey

Help us help you enjoy your forests
Dear Visitor
This questionnaire is being run by Lincoln College with the assistance of the Forest Service to find out about how you use Hanmer Forest Park. We would like to know your feelings and thoughts about the park so we can manage and develop your forests so they best serve your needs. This questionnaire takes only about 10 to 15 minutes to fill out and it is important that you do so as it is your voice in the running of this park. Your opinions do matter. No names are required and confidentiality is guaranteed. Could you please return the completed questionnaire either by:
- Mail in the postage paid envelope, or
- In the boxes provided at the end of the track and at the hot pools, or
- To the Information Centre.
Thank you very much for your help.

Torsten Baker & Ron Sandrey
LINCOLN COLLEGE
Summer 1984/85
Recreational User Survey
Hanmer Forest Park

SECTION 1
These first questions tell us how and when you use Hanmer Forest Park.
1. Are you a
   visitor?  
   permanent resident?  
   If you are a permanent resident please go to Question 8.

2. (A) How often do you come to Hanmer Springs? (Please tick box.)
   
   If this is the first visit go to Q. 3  
   Less than once a year  
   1-2 times a year  
   3-6 times a year  
   7-12 times a year  
   More than 12 times a year
(B) At what times of the year do you usually visit?  
(Tick boxes.)

<table>
<thead>
<tr>
<th>Season</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Spring</td>
<td></td>
</tr>
<tr>
<td>Summer</td>
<td></td>
</tr>
<tr>
<td>Autumn</td>
<td></td>
</tr>
<tr>
<td>Winter</td>
<td></td>
</tr>
<tr>
<td>All year</td>
<td></td>
</tr>
</tbody>
</table>

(C) Do you visit mainly at: (Tick boxes.)

<table>
<thead>
<tr>
<th>Time Period</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Weekends</td>
<td></td>
</tr>
<tr>
<td>Weekdays</td>
<td></td>
</tr>
<tr>
<td>Long weekends</td>
<td></td>
</tr>
<tr>
<td>School holidays <em>(indicate which)</em></td>
<td></td>
</tr>
<tr>
<td>Easter</td>
<td></td>
</tr>
<tr>
<td>Christmas break</td>
<td></td>
</tr>
<tr>
<td>Other <em>(please specify)</em></td>
<td></td>
</tr>
</tbody>
</table>

(D) Is this trip:  
(Tick one)

<table>
<thead>
<tr>
<th>Option</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>part of a longer trip?</td>
<td></td>
</tr>
<tr>
<td>or only to Hanmer Springs?</td>
<td></td>
</tr>
</tbody>
</table>

3. How did you first find out about Hanmer Forest Park? *(Tick box.)*

<table>
<thead>
<tr>
<th>Method</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Word of mouth</td>
<td></td>
</tr>
<tr>
<td>Roadside signs</td>
<td></td>
</tr>
<tr>
<td>Newspaper</td>
<td></td>
</tr>
<tr>
<td>Radio/television</td>
<td></td>
</tr>
<tr>
<td>Forest Service booklet/brochure</td>
<td></td>
</tr>
<tr>
<td>Other publication <em>(please name)</em></td>
<td></td>
</tr>
<tr>
<td>Other <em>(please specify)</em></td>
<td></td>
</tr>
</tbody>
</table>

4. (A) What is your usual length of stay at Hanmer Springs? *(in days)*

<table>
<thead>
<tr>
<th>Length of Stay <em>(in days)</em></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(B) On this trip to Hanmer Springs how long are you staying? *(in days)*

<table>
<thead>
<tr>
<th>Length of Stay <em>(in days)</em></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(C) If you are staying overnight at Hanmer Springs could you please indicate whereabouts.

<table>
<thead>
<tr>
<th>Whereabouts</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Hotel</td>
<td></td>
</tr>
<tr>
<td>Motel</td>
<td></td>
</tr>
<tr>
<td>Motor Camp</td>
<td></td>
</tr>
<tr>
<td>Trust Camp</td>
<td></td>
</tr>
<tr>
<td>Bach/private house</td>
<td></td>
</tr>
<tr>
<td>Other <em>(please specify)</em></td>
<td></td>
</tr>
</tbody>
</table>
5. Please indicate in the boxes in order of priority the main activities during your stay at Hanmer Springs.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Put activity numbers in here</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) Lazing</td>
<td></td>
</tr>
<tr>
<td>(2) Visiting the hot pools</td>
<td></td>
</tr>
<tr>
<td>(3) Picnicking</td>
<td></td>
</tr>
<tr>
<td>(4) Sightseeing/driving</td>
<td></td>
</tr>
<tr>
<td>(5) Forest drive</td>
<td></td>
</tr>
<tr>
<td>(6) &quot;Collecting&quot;</td>
<td></td>
</tr>
<tr>
<td>(7) Camping</td>
<td></td>
</tr>
<tr>
<td>(8) Caravaning</td>
<td></td>
</tr>
<tr>
<td>(9) Nature Study</td>
<td></td>
</tr>
<tr>
<td>(10) Photography</td>
<td></td>
</tr>
<tr>
<td>(11) Summer programme (bus tours/films)</td>
<td></td>
</tr>
<tr>
<td>(12) Fishing</td>
<td></td>
</tr>
<tr>
<td>(13) Firewood gathering</td>
<td></td>
</tr>
<tr>
<td>(14) Walking (casual walks)</td>
<td></td>
</tr>
<tr>
<td>(15) Day tramping</td>
<td></td>
</tr>
<tr>
<td>(16) Jogging/Running</td>
<td></td>
</tr>
<tr>
<td>(17) Orienteering</td>
<td></td>
</tr>
<tr>
<td>(18) Horse riding</td>
<td></td>
</tr>
<tr>
<td>(19) Four-wheel driving</td>
<td></td>
</tr>
<tr>
<td>(20) Trail bike riding/motorcycling</td>
<td></td>
</tr>
<tr>
<td>(21) Cycling</td>
<td></td>
</tr>
<tr>
<td>(22) Hunting</td>
<td></td>
</tr>
<tr>
<td>(23) Other (please specify)</td>
<td>3</td>
</tr>
</tbody>
</table>

6. Which of these activities within the forest park have you done on this visit? (Tick boxes.)

- Woodland Walk
- Forest Walk
- Chatterton River Track
- Mt Isobel Track
- Waterfall Track
- Waterfall/Spur Track Loop
- Nature Trail
- Conical Hill Walk
- Forest Drive
- Visited Information Centre

7. How much time (in total) did you spend inside the forest park on this visit to Hanmer Springs? (e.g. picnicking, walking etc) (Tick one.)

<table>
<thead>
<tr>
<th>Time</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 1 hour</td>
<td></td>
</tr>
<tr>
<td>1-2 hours</td>
<td></td>
</tr>
<tr>
<td>1/2 day, 2-4 hours</td>
<td></td>
</tr>
<tr>
<td>1 day</td>
<td>4</td>
</tr>
<tr>
<td>2 or more days</td>
<td></td>
</tr>
</tbody>
</table>
SECTION 2
These next few questions are about the Hanmer Springs area.

8. What were your main reasons (in order of importance) for coming to Hanmer Springs?

(1) __________________________________________
(2) __________________________________________
(3) __________________________________________

9. What do you consider are the main attractive features of the region?

(1) __________________________________________
(2) __________________________________________
(3) __________________________________________

10. (A) Below is a list of facilities and services provided in Hanmer Forest Park. Please indicate (by ticking the appropriate box) what you thought of these facilities that you used.

<table>
<thead>
<tr>
<th>FACILITY</th>
<th>DONT USE</th>
<th>VERY POOR</th>
<th>POOR</th>
<th>OK</th>
<th>GOOD</th>
<th>VERY GOOD</th>
<th>COMMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Access roads to forest</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Roads within forest</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Parking areas</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Picnic areas</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Toilet facilities</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Rubbish disposal facilities</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Short walks</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Tracks</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Signposting on roads</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Signposting on tracks</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Information Centre</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Other (please specify)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>

(B) Are there any improvements you would suggest that the Forest Service could make?

________________________________________________________________________
________________________________________________________________________
SECTION 3
These next few questions are a guide to the managers of Hanmer Forest Park of what the park means to you. Please try and answer them fully.

11. Imagine if you move house so that you were further away from Hanmer Springs than you are at present:
   (A) How much further would you be prepared to travel to visit Hanmer Springs? (one way)
   
<table>
<thead>
<tr>
<th>Km</th>
<th>Miles</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>10</td>
<td>6</td>
</tr>
<tr>
<td>25</td>
<td>15</td>
</tr>
<tr>
<td>50</td>
<td>30</td>
</tr>
<tr>
<td>75</td>
<td>45</td>
</tr>
<tr>
<td>100</td>
<td>60</td>
</tr>
<tr>
<td>150</td>
<td>90</td>
</tr>
</tbody>
</table>
   
   (B) Would the number or length of your visits change? (Please comment, e.g. less visits and longer stays.)

12. If for some reason you could not come to Hanmer Springs (say if the Ferry Bridge was under repair) where else would you go?

13. (A) If a road toll was placed on the Ferry Bridge into Hanmer Springs, how much would you be willing to pay? (per car load)

<table>
<thead>
<tr>
<th>$1</th>
<th>$2</th>
<th>$4</th>
<th>$6</th>
<th>$8</th>
<th>$10 or more</th>
<th>Would not pay</th>
</tr>
</thead>
</table>
   
   (B) If you answered “would not pay” could you please explain why not?
(C) How did you travel? (e.g. car, motorcycle, bus etc)  

(D) To give us some idea of how much it costs you to travel to Hanmer, could you please estimate how many miles per gallon your vehicle averages? 
m.p.g.  

SECTION 4  
A few details about yourself and your group.  

14. Are you: (Tick one) 

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>alone? (Go to Question 18)</td>
<td>with a group?</td>
</tr>
</tbody>
</table>

GROUP  
15. What type of group are you in? (Tick one) 

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Family</td>
<td>Family and friends</td>
<td>Friends</td>
</tr>
<tr>
<td>Couple</td>
<td>School trip</td>
<td>Club trip</td>
</tr>
<tr>
<td>Other (please specify)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

16. In your group how many people are aged: 

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Over 15</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Under 15</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

INDIVIDUAL These last few questions involve only you.  

17. Are you:  

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

18. What age group are you in:  

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Under 15</td>
<td>15-19</td>
<td>20-29</td>
</tr>
<tr>
<td>30-39</td>
<td>40-49</td>
<td>50-59</td>
</tr>
<tr>
<td>60+</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
19. What is the highest level of education you have reached? (Tick box.)

- Primary
- Secondary
- Trade qualifications
- Polytech (feco/nursing)
- University

20. What is your work at the moment? (Please be specific, e.g. polytech student, self employed builder, retired, unemployed, housewife.)

21. Which of the following best describes your home situation? (If you have children tick box relating to your youngest child.)

- By yourself
- Shared accommodation (e.g. flat)
- Live with parents
- Couple with no children
- Parent(s) with pre-school children at home
- Parent(s) with primary school children at home
- Parent(s) with secondary school children at home
- Parent(s) with working/student children at home
- Parent(s) with children no longer at home
- Other (please specify)

Thank you very much for your help.

Please feel free to make any further comments about your forest and its recreational uses.

Please return this as soon as possible by:
- Posting in the boxes provided (see map), or
- Handing into the Information Centre, or
- Posting in the postage paid envelope.

For further information about the park or this survey contact:
Hanmer Forest Park
PO Box 214
Hanmer Springs
NOTES FOR FUTURE RESEARCHERS

These notes are included in the hope that future researchers can avoid making the same mistakes as I have in preparing this questionnaire.

1. Filter question should have read "go to question 5."

2. Filter question should have read "go to question 2(D)."

3. "Golf" should have been listed as it was quite a popular activity amongst some groups of users.

4. Options should have extended up to "4-5 days."

5. Questions 14 and 15 could have been condensed into one question with 'alone' as the first category.

6. Some respondents answered for themselves and their partner. This is a problem peculiar to group questionnaires. A better questionnaire system might involve a group questionnaire with the bulk of the questions and individual questionnaires for each member of the group asking for this demographic data.

7. Box on cover for respondent number in order to match it with the question schedule.
APPENDIX 3: EXAMPLES OF RESPONDENTS COMMENTS.

1. Information Availability.

"You need daily advice posters showing weather conditions etc on the longer tracks."
"Better signposting (in town) for people new to the area."
"More history in the pamphlets would be interesting."
"Better promotion of Hanmer Springs is needed outside the town."
"We would have liked some information about trees and flora; stock identification booklets, leaflets and charts."
"More information on native flora common in native forests."
"More advertising of services and facilities, especially the summer holiday programme."
"Ensure maps of the area are up to date."
"Until this visit we were unaware of the facilities regarding forest walks with the exception of walking up Conical Hill."
"Information after hours (how about pamphlets outside the information centre?). Information at track ends. Specific information at motels & campgrounds."
"Interpretation programme during the occasional weekends (develop a "park weekend")."
"More self guiding pamphlets describing the natural environment."

2. Track Comments.

"Forest litter makes a much softer and surer surface to walk on on Conical Hill Walk. The gravel is too hard and causes feet
to slide especially on sharp corners." (Bark strippings were also suggested.)

"We would like to see the Nature Trail extended much further. The Chatterton needs a toilet and some improvement in areas. Handrails for senior citizens."

"The Forest Walk could be made into a good wheelchair walk if the roots towards the end of the track were removed." "The steps up and down the footbridge on the Woodland Walk are far too narrow for old people" (Refer to the step guidelines in the H.F.P. design manual.)

"Replace the trees where they have become diseased or have been removed (especially along Jollys Pass Rd and on Conical Hill )."

3. Naming of Trees and Plants.

"Name more trees on the Conical Hill Walk." Also "Some I.D. of birds on the tracks."

"Some signs on the Nature Trail could be relocated in order to lower the tripping hazard."


"Develop camping facilities in forest recreation areas for larger families." "We would like more areas like the Hanmer River recreation area."

"A list of Forest Park campsites (throughout the country) needs to be made available."
5. More Tracks.

"We would like to see the Nature Trail extended much further."
"More short walks within childrens capabilities, around about one hour or double back loops."
"More walks near the town center taking 2-3 hours."
"More leisurely walking tracks within the forest."
"More tracks would be appreciated to enhance future visits.
We enjoy and appreciate what is already there."
"Longer walks should be circular and not just one way."
"More tracks through forest of one hour duration."


"Seats are needed on the longer walks."

7. Forest Roads.

"Dust was a problem."

8. Recreational Areas.

"You could do with another picnic ground near the AA campground." (There is a river access track near the begining of the Chatterton River Track which appears to be ideal for such a purpose.)
"Please be more informative about plans for the recreational part of the park. Safeguard this part."

"Grow more native trees."

"The preservation of trees on the forest walk is essential. All efforts to 'utilise' them should be resisted—except for windfalls. A unique stand of exotic trees."

"Plant birches along the roads where they are being removed."

"Plant trees to encourage native birds."

"The public should see where exotics are being planted and where they shouldn't be. Stop clearing kanuka/manuka for exotics, leave regeneration alone." (This may be a case of misinformation or a genuine grievence. In either case action is required.)

10. Water.

"Availability of outside taps for drinking water and dishwashing." (i.e. in convenient and visible locations.)

"Drinking water needs to be available at the top of Conical Hill."