

# Visitor satisfactions, impact perceptions, and attitudes toward management options on the Lake Waikaremoana Track

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Gordon Cessford

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### **Great Walks visitor research programme**

This report is the third from the Great Walks visitor research programme. Reports from other track samples are published through the same series. While data were collected predominantly during January-February 1994, those visitor responses still provide valid indications of visit experiences and evaluations. Any significant management or use-pattern changes since then can be interpreted in light of these results. Apart from ongoing facility maintenance and some improvement of campsite facilities (e.g., shelters), the Waikaremoana Track has remained largely unchanged. Management reports indicate that use-levels on the track and the lake have not substantially increased.

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# Abstract

Walkers on the Lake Waikaremoana Track in Urewera National Park were surveyed in the summer of 1993/1994, as part of a wider study of track users in New Zealand. Their visit evaluations were highly positive, suggesting little dissatisfaction or any need for urgent management action. Other results indicated that further improvements to visit quality would be best achieved through addressing minor physical impact concerns, and improving the use of space in huts. Perceptions of crowding were low, but assessment of social and physical impacts perceptions indicated that visit-experience problems would gradually emerge with future increase in use-levels, particularly due to greater hut congestion difficulties. Visitors favoured information-based management approaches to address these increasing use-pressures rather than more regulatory controls, apart from a strong preference for controls on motorboat access. Current low crowding levels suggest that time is available to allow information-based approaches to be applied as the main means for achieving long-term control, without more direct measures being required at present.

# Executive summary

This report summarises key results from a survey of 349 walkers on the Lake Waikaremoana Track, during the summer of 1993/1994. The survey was undertaken to complement results of a broader study of people doing overnight trips on tracks managed as “Great Walks”. It provides information about visitor satisfactions with their visit experiences, about which aspects of visits may be detracting from the quality of these experiences, and about management options to address these issues.

## **Evaluation**

Evaluations of the visit were very positive. Overall satisfaction scores were high, and few visitors considered the experience was in any way below their expectations. However the overall satisfaction measure was not linked to any other variables in the survey, which limits its practical value as possible tool for any monitoring of visit-experience quality. Low crowding perceptions indicated visit experiences were not being substantially compromised, but were found to have some association with impact perceptions related to hut congestion. In general, crowding scores appear to represent a more sensitive measure of compromises to visit-experiences.

## **Satisfaction with facilities and services**

Satisfactions with specific facilities and services were high, and no substantial sources of dissatisfaction were apparent. There were no links between these specific satisfactions and overall evaluations of the visit. While satisfaction scores did not highlight any important issues, the significant differences identified between the satisfactions of different visitor groupings did highlight some issues relating to crowding perceptions (uncrowded/crowded) age-group (under 40/over 40 years), gender (male/female) and nationality (New Zealand/overseas). In summary, crowded visitors were more dissatisfied with hut conditions; older male visitors were more satisfied with information services; and crowded overseas visitors were more dissatisfied with track conditions. While quite simplified, these summary points highlight hut conditions and information services as areas where satisfactions were particularly variable, particularly if visitors felt crowded. However, these differences occurred in a context of very high satisfaction levels. This suggests no immediate need for significant management interventions. Should use pressures increase, attention to the space and facility capacity of huts appears to be the main area where attention may first be required.

## **Impact perceptions**

Most visitors noticed physical impacts related to uncertain water hygiene and track trampling damage. Many also noticed litter and seeing too many people in huts. However the proportions of visitors bothered by these impacts were much lower, indicating considerable impact tolerance. The only impacts bothering more than 20% of visitors were related to uncertain water hygiene, track

trampling and littering. Any compromises to the quality of current visit experience appear likely to be related only to these physical impact sources. Overall, these impact perceptions do not indicate any priority need for current management action beyond normal maintenance programmes.

While overall impact perceptions highlighted physical impact issues, the significant differences identified between the impact perceptions of different visitor groupings highlighted issues relating to crowding perceptions (uncrowded/crowded). In summary, crowded visitors were significantly more bothered by impact perceptions related to hut/track congestion. This related to seeing too many people in huts and experiencing insufficient bunk numbers. While these negative perceptions of hut congestion impacts were not notably high overall, they were linked with greater perceptions of crowding. These results indicate that any detrimental effects on future visit experiences will arise first among the perceptions of social congestion associated with increasing pressure on hut conditions. These results also emphasise that management actions to minimise any future compromises to visit-experience quality should focus first on hut conditions, as should any related monitoring.

### **Attitudes toward management options**

Visitors were most positive toward the use of information to encourage better choices of trip timing and appropriate behaviour on them. They were also particularly supportive of options controlling motorboat activity (e.g., control boat access, water-taxi use). However, their preferences were mainly divided or negative toward options encouraging alternative types of visits and accommodation (e.g., camping, guided trips, new tracks), rationing or manipulating-use to channel or reduce visitor numbers (e.g., booking systems, permits, peak pricing, one-way walk, reduce facilities), and increasing the accommodation capacity of huts (e.g., more huts, more bunks in huts).

While overall visitor attitudes favoured information management options, the significant differences identified between the attitudes toward management of different visitor groupings highlighted issues relating to crowding perception (uncrowded/crowded), nationality (New Zealand/overseas), and gender (male/female). In summary, crowded visitors were less opposed than uncrowded visitors to increasing accommodation capacity; New Zealand visitors were more opposed than overseas visitors to limiting boat use, but less opposed to rationing/use-limits; and crowded males were less opposed to limiting boat use or increasing accommodation options. While a simplified summary of complex interactions, these points highlight areas where attitudes to management options were most variable, and distinguish the visitor groupings more resistant to management options.

### **Recommendations**

High satisfaction and low crowding scores indicated there were no urgent needs for immediate management actions to address current problems. The most productive directions for preventative actions to minimise future compromises to the quality of visit-experiences appear to be:

- Identifying and reducing any physical impact hot-spots (e.g., litter, track damage)

- Optimising/increasing the acceptable facility capacity and bunk capacity of huts
- Optimising/reconfiguring the use of space for comfort and facility use in huts
- Provision of general information about the features of using Lake Waikaremoana and the Track, and for planning visits to it
- Provision of information approaches which forecast visitor numbers and hut loadings in advance, accompanied by suggestions on visit timing and operation to minimise 'crowded' and 'conflict' experiences (e.g., other walkers, motorboat users).

Most initial gains should be made by concentrating upon short-term physical changes along the track, and to hut facilities and their operation, complemented by more long-term promotion of beneficial changes through information approaches. Appropriate research and information back-up, not necessarily confined to the Lake Waikaremoana system, could include:

- Identification of visitor preferences for facility, bunk and space standards in huts
- Assessing options for optimising the use of space and facilities in huts
- Assessing the effectiveness of information-based techniques in influencing visitor use;
- Investigating the role of staff-based information services in huts and visitor centres
- Investigating differences in the expectations and evaluations of visits by different visitor groups, particularly relating to hut conditions and congestion, and including boat users;
- Investigating the greater perception of social hut congestion impacts by crowded visitors
- Investigating the distinctions between noticing and tolerating impacts, and being bothered by them
- Investigating the more negative visitor attitudes to direct management options, particularly by New Zealand visitors
- Identifying the use patterns on the track, and particularly those associated with boat use.

Any monitoring of visit-experience quality should concentrate first upon hut congestion conditions at key huts. Emphasis should be on a variety of approaches as simple measures of overall satisfaction are unlikely to provide a useful means to monitor changes in these conditions. Some assessment and periodic monitoring of activity patterns and facility loadings should be undertaken on the Lake Waikaremoana Track, and should include boat use.

# Acknowledgements

The overall Great Walks study covered a wide variety of different track and recreation situations, and raised a number of large operational and analytical challenges. Help and advice on statistical approaches to these analyses was provided at various times by Margaret O'Brien and Ian West of Science and Research Division, and Roger Wilkinson of Landcare Research. Data entry for the project was carried out very effectively by the Tourism Green project team of Michael Chan, Victor Keo and Sulia Aumua. Ian Mackenzie of Science and Research Division provided the overall editorial assistance for final production of the reports. Thanks are also due to other Departmental staff who viewed the draft reports and made useful suggestions on their overall approach and contents.

For the Lake Waikaremoana Track survey, overall co-ordination was managed by Dave Thompson of East Coast Conservancy and Glen Mitchell of Aniwanuiwa Field Centre. The actual application of the survey in the field was carried out mainly by Maureen Paurini from the Tourism Green project team.

# 1. Introduction

The Lake Waikaremoana Track is a 3–6 day loop track through forest around the main lake in Urewera National Park. The lake is used by other recreationists in motorboats and canoes, some of whom also use the hut and campsite facilities on the track. This survey of track walkers was undertaken in the summer of 1993/94, as part of a broader study of people doing overnight trips on the Great Walks. Tracks classified and managed as Great Walks are the primary locations for multi-day walking trips in the New Zealand backcountry. They are of high scenic and recreational value, and are characterised by high and increasing use-levels. This use pressure, and the need to provide for quality outdoor recreation experiences, requires that these tracks be specifically managed to provide high levels of facility and service provision without compromising the quality of the visit experience. To achieve this outcome, managers require information about visitor satisfactions with their visit experiences, and what aspects of visits may be detracting from these experiences. On this basis, the objectives of the Great Walks study were to:

- Provide brief description of overnight visitors to the Great Walks
- Identify visitor satisfactions with the facilities and services provided
- Identify visitor perceptions of crowding and use-impacts
- Identify visitor attitudes towards management options

Departmental staff at key huts administered standardised questionnaires to visitors on each track<sup>1</sup> on their last trip night. Overall, 349 Lake Waikaremoana Track visitors completed the survey questionnaire. After data coding and entry, preliminary results were initially presented to managers as percentage tables. These descriptive results are summarised here in the questionnaire format (refer Appendix 1).

Other analyses were carried out on the database, and this report summarises the main findings derived from these descriptive and analytical results. The report presents overall evaluations by visitors of their visit experiences, and then investigates the specific aspects of facility and services satisfactions, social and physical impact perceptions, and attitudes toward different management options. Analyses are undertaken which assess how these specific responses vary between different groups of visitors, and how they relate to the overall evaluations. This approach enables any significant current or potential compromises to the quality of visit experiences to be clearly identified.

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<sup>1</sup> A standardised questionnaire (Appendix 1) was developed for overnight walkers on the Great Walks system, which comprises the Abel Tasman, Heaphy, Kepler, Milford, Rakiura, Routeburn, Tongariro, and Waikaremoana tracks, and the Wanganui River journey. Surveys of the Travers-Sabine and Dart-Rees track circuits were also included, although flooding prevented any work being possible on the latter. A sample of sea-kayakers was also collected in Abel Tasman National Park. Some site-specific questions were used where required, particularly for questions related to boat use on the Wanganui River and the Lake Waikaremoana and Abel Tasman Tracks; some non-applicable questions were omitted on the Milford Track; and it was possible to survey at Easter on the Tongariro, Heaphy and Kepler Tracks. German and Japanese translations were provided.

## 2. Visitor information

In summary, visitor characteristics were representative of a diversely aged group of mainly New Zealand visitors, and a smaller group of distinctly younger overseas visitors, largely unfamiliar with the Lake Waikaremoana Track and generally inexperienced in backcountry walking. Short hut-based trips predominated. Some summary findings (refer Appendix 1 for details) included:

- An even number of males (51%) and females (49%)
- Most (75%) were from New Zealand, with a few German (11%) and British (5%)
- Most (67%) were aged between 20–40, although 21% were aged under 20 and 11% over 50
- Most (82%) were on a first visit to the track, 26% were on their first overnight walking trip, 41% had done 1 to 5 similar walks, and 10% had done more than 20 such trips
- Their group sizes averaged just over 4 people, although with one large group this reached almost 7
- Trip durations were mostly 3 nights (44%) or 4 nights (39%)
- Many (62%) stayed only in huts, many others (29%) used a combination of huts and campsites, and the remainder (6%) used only campsites.

New Zealand visitors represented a broader age-range, came in larger groups, and had more previous experience of the Lake Waikaremoana Track. Overseas visitors were more often in the 20–40 year age-range (78% *vs* 38% for New Zealand visitors), came in smaller groups (mean of 4.4 *vs* 7.6 for New Zealand visitors), and were more often on first-visits to the track (93% *vs* 79% for New Zealand visitors).

Comparisons were also made of the characteristics of visitors who indicated they were either ‘crowded’ or ‘uncrowded’<sup>2</sup>. However, the only notable differences were that more overseas visitors felt crowded (51% *vs* 39% for New Zealand visitors), and crowded visitors had smaller party sizes (means 6.4 *vs* 7.1 for uncrowded visitors). Overall, apart from nationality, the crowded and uncrowded visitors could not be distinguished from each other on the basis of their descriptive characteristics.

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<sup>2</sup> Refer to Section 3.2 and Appendix 3 for descriptive discussion of this crowding distinction.

# 3. Evaluation of the quality of visit experiences

Overall evaluation of the quality of visit experiences was assessed through four questions related to overall satisfaction and perceptions of use-levels (refer Appendix 1 for question details).

## 3.1 EVALUATION OF OVERALL SATISFACTION

Two questions allowed visitors to evaluate the quality of their overall visit experiences:

- An *overall satisfaction* score (how satisfied or dissatisfied with the trip—Question 5)
- An *expectation fulfilment* score (was the trip better or worse than expected—Question 4)

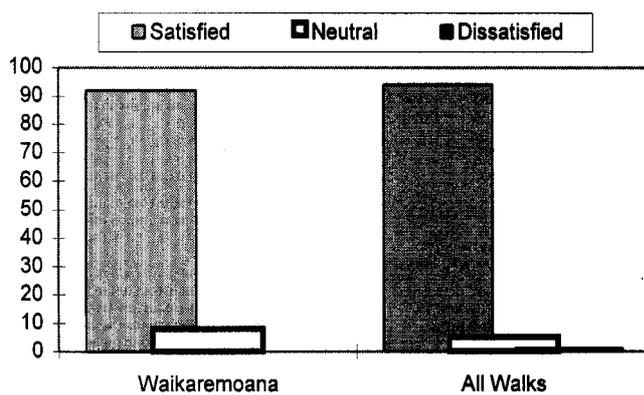
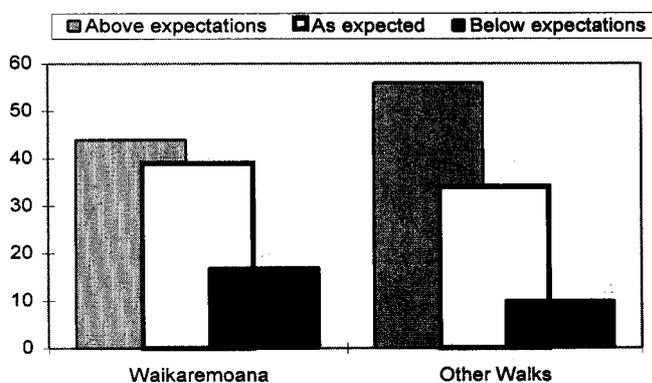


Figure 1. Overall satisfaction.



Positive responses from visitors to these questions represented their evaluation that they had achieved high quality recreation experiences on their visit. Figures 1 and 2 show that satisfaction on the Lake Waikaremoana Track (and other tracks) was very high (95%), and most experiences were as good as had been expected, or better (83%). These responses were similar in degree and highly correlated with each other ( $r = .90$ ). Satisfaction responses were consistent with those from other tracks, and virtually nobody indicated they were dissatisfied with their trip. However, it appears visitor expressions of the trip being better than expected were less positive than were the same assessments on the other tracks. The main conclusion drawn from these overall evaluations is that visitors are achieving quality experiences on the Lake Waikaremoana Track, although these evaluations were not as consistently above expectations as were those on other tracks.

Figure 2. Fulfilment of trip experience expectations.

### 3.2 EVALUATION OF USE-LEVELS

Two further questions allowed visitors to evaluate the quality of their visit experiences in relation to use-levels:

- A score for perception of *crowding* (overall, did they feel crowded on the trip—Question 2)
- An evaluation of *expected visitor numbers* (seeing more/same/less than expected—Question 3)

Positive responses from visitors indicating low levels of crowding, and not seeing more people than expected, would have reinforced overall evaluations of achieving high quality visit experiences. Figures 3 and 4 show that crowding perceptions were not great, and that few visitors saw more others than they expected. These crowding and expected use-level evaluations were weakly correlated with each other ( $r = .38$ ), indicating those who experienced higher use-levels than they expected generally tended to have higher crowding scores<sup>3</sup>.

Levels of reported crowding were much lower on the Lake Waikaremoana Track (42%) than on other tracks (62%).

Other questions were asked which aimed to identify any focal points for crowding perceptions on the Lake Waikaremoana Track (Question 3). Overall, 54% of visitors ( $n = 187$ ) indicated that some places were more crowded than others, and of these visitors, 96% included hut sites in their examples while only 3% included track sections. Appendix 1 summarises other crowding

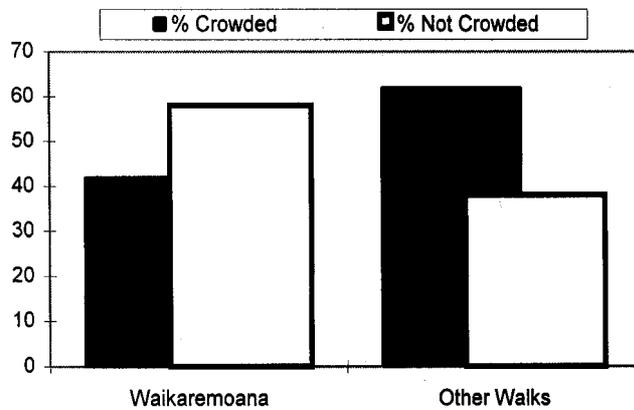


Figure 3. Crowding perception summary.

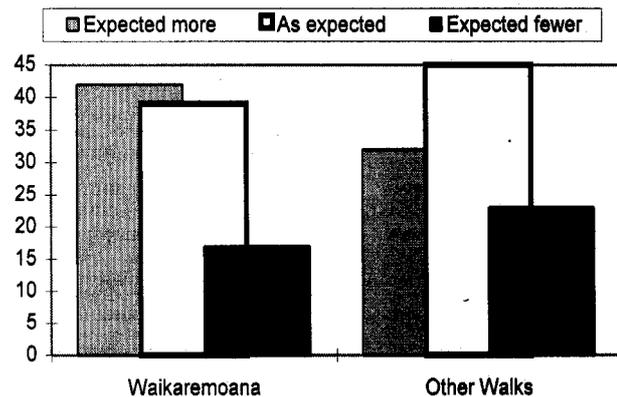


Figure 4. Fulfilment of visitor number expectations.

<sup>3</sup> In addition, an ANOVA test ( $F(2,326) = 71.26$ , signif.  $F = .000$ ) showed mean crowding scores increased from those expecting more people (1.92), through those expecting the numbers seen (2.61), to those expecting fewer people (3.78). Similar analyses found no significant differences between use-level expectations and overall satisfaction mean scores.

information from Question 3, which indicated that visitors who indicated some focus for hut crowding (n = 180) specified Maruiti Hut (31%) and Panekiri Hut (31%). These results indicated issues related to hut use were the key to crowding perceptions, with track issues not apparent.

These low crowding perceptions (42% crowded) could be interpreted as representing use-levels which are only at 'low normal conditions' (refer Appendix 3) suggesting there is not a problem with perceptions of excessive use-levels at this time. These low crowding scores were not significantly linked with overall satisfaction. In other words, lower crowding perceptions were not associated with higher evaluations of satisfaction with the trip, or it being considered better than expected. While only a minority of visitors indicated they did experience crowding, and many experienced lower use-levels than they expected, this did not appear to affect how they felt about their overall trip. These low crowding and high satisfaction evaluations suggest that the quality of visit-experiences is not being compromised by conditions associated with current use-levels (refer Appendix 3). Subsequent sections in this report present analyses which indicate where future compromises may occur in relation to satisfactions with particular facilities and services (refer Section 4.2), or with perceptions of particular social and physical impacts (refer Section 5.2).

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