

7. Summary and discussion

7.1 OVERALL VISIT EVALUATIONS

Current visitors appear to be having positive visit experiences on the Tongariro Circuit. Overall levels of dissatisfaction were negligible, and very few considered the experience was below their expectations. Some caution is required when interpreting this satisfaction finding, as there is a tendency for visitors to give approval to the status-quo of social and environmental conditions they experienced on a visit, particularly if they have little previous experience of the site and do not have strong expectations as to what constitutes appropriate conditions. Over time in a situation of changing use conditions, overall satisfactions of such visitors can remain consistently high despite considerable changes in visit experiences. First-time visitors with inaccurate expectations of social and physical conditions on visits, or repeat-visitors with expectations based on previous conditions are those most likely to be indicating overall dissatisfaction. These types of visitors are usually also those most subject to being subsequently displaced to different sites, times or activities, and giving negative feedback to others about their experiences. Reliance on overall satisfaction measures as a monitor of visit experience quality can be misplaced.

Perceptions of crowding appeared a more sensitive monitor of effects on visit experiences, being significantly higher during the high-use Easter period. While these crowding perceptions indicated visit experiences were being affected in some way, there was no relationship with how the trip was evaluated overall (e.g., overall satisfaction). In other words, the overall satisfaction score was not as sensitive to the types of recreation experience effects being captured by the crowding scores (e.g., the Easter /Summer difference).

7.2 SATISFACTION WITH FACILITIES AND SERVICES

No notable levels of dissatisfaction were apparent for any of the facilities and services on the Tongariro Circuit. These results indicated a lack of any specific visitor problems with track management infrastructure, and suggested there were no immediate needs for management interventions beyond normal maintenance. However, while facility and service satisfactions were high, variations in the degree of this satisfaction between different types of visitors highlighted information services and hut conditions as two areas where improved management outcomes could be achieved in the future.

Improvements to the already well-regarded information services appear to represent the most worthwhile way to enhance the visit-experiences of overseas visitors and younger visitors in particular. Key information services where improvements appear most important for these visitors were the advice and information from visitor centres, the advice from hut wardens, the quality of maps and brochures, and the information signs by the track. The relatively lower

degree of satisfaction for these among overseas visitors may reflect a lower level of prior knowledge about the track, and a consequent greater general desire for good pre-visit information. Among younger visitors lower satisfaction may reflect less experience of the activity or different expectations of facilities, services and visit-experiences on the Tongariro Circuit. Whatever the contributing factors may be, and given the context of overall high satisfaction with facilities and services, these differences do not suggest any urgent need for developments in information services. Rather they represent the main area where visit-experiences may be further enhanced if the need to do so is given priority. However, given the high levels of support apparent among visitors for information-based approaches to visitor management, there appears to be good reason to undertake investigations that provide better understanding of information services and their applications.

Improvements to hut conditions, particularly those related to sufficient bunk numbers, general space in huts, and space for using hut facilities, appear to represent the most worthwhile way to minimise future satisfaction problems. This appears particularly important among visitors who indicated they felt crowded, particularly during conditions of higher use-levels (e.g., such as represented by Easter conditions). If continued increases in visitor use is anticipated, there is justification for greater focus of attention on understanding the social and physical conditions in huts at Easter, when there is a much higher proportion of crowded visitors. Emphasis appears necessary on the availability and use of space in huts, as well as hut bunk capacity. These results do not represent an urgent need for immediate management action. Rather, they indicate where initial preventative actions will most likely be required to minimise any future compromises to visit-experiences based on increasing use-pressures.

Crowded visitors also indicated lower satisfaction with track conditions, particularly the constructed facilities of steps, bridges and boardwalks. While these data do not provide an explanation, one possibility is that the lower satisfactions with track constructions (e.g., steps, boardwalks and bridges) are associated with perceptions of overdevelopment through perceptions of crowding. Crowded visitors did indicate greater perceptions of overdevelopment, and exploration of mean values suggested that the visitors more dissatisfied with these track constructions also had higher perceptions of overdevelopment. But analyses to date have not confirmed any significant links, and more research will be required if this question is to be resolved.

7.3 PERCEPTIONS OF IMPACTS

Some social and physical impacts were noticed by the majority of visitors, particularly those impacts related to hut and track congestion, physical trampling along the tracks, perceptions of track overdevelopment, and perceptions of water hygiene. But apart from the 'uncertainty of water hygiene', most visitors noticing these impacts were not substantially bothered by them. This could be considered indicative of substantial impact tolerance. Some types of impacts appeared to be tolerated very little by visitors (e.g., seeing litter,

toilet paper/waste, and woodcutting), and while these were not prominent impacts overall, they do suggest particular visitor sensitivity to this type of perceived inappropriate behaviour by other people in natural settings.

The high overall awareness of impacts in general (including both the 'tolerant' and 'bothered' visitors), does indicate compromises to the quality of visit experiences were occurring. This conclusion is also supported by the weak but significant association between crowding and both the hut and track congestion impacts.

Reflecting this, while almost all impact perceptions were significantly higher among crowded visitors, they were most distinctly higher for hut and track congestion. For hut congestion, the impacts featured visitors being more bothered by 'seeing too many in the huts' and to a lesser extent 'insufficient bunk numbers'. The greater prominence for 'seeing too many in the huts' was an interesting finding, suggesting that managing hut congestion needs to go beyond simply addressing bunk capacity, and investigate other components of congestion in busy huts. For track congestion, the impacts featured being more aware of and bothered by 'seeing too many on the track', and to a lesser extent 'seeing too many big groups'. Very similar results were found when comparing Summer and Easter responses, reflecting the greater crowding perceptions reported at Easter.

Other impact perceptions of campsite congestion, overdevelopment and physical impacts were also significantly higher among crowded visitors. Among those who camped, perceptions of campsite congestion were of a similar degree to perceptions of hut congestion among those who used huts. This suggests that the campsite capacity of the Tongariro Circuit may have been receiving use-level pressures relatively similar to those on the hut capacity. However there was also some suggestion from exploration of these data that much of the reported campsite crowding was related to situations of overflows from crowded huts. General perceptions of facility overdevelopment were also higher among crowded visitors, suggesting that these visitors had some link between their interpretations of use-levels, and how they perceived facility-levels. However, analyses of these results did not reveal any simple relationships. In a similar fashion, crowded visitors had higher perceptions of physical impacts from littering and track widening (e.g., trampling). While these perceptions were higher among crowded visitors, no clear explanations for this distinction were provided from these results. It is unclear whether these impact perceptions contribute to the greater crowded perceptions, or are more a consequence of them. Overall, they do not appear to be as important in explaining crowding as are the impacts based upon hut and track congestion.

These results suggest that any detrimental effects from increasing visitor numbers will be detected first among perceptions of hut congestion. These perceptions may not necessarily be dependent on the bunk capacity of huts, but also upon the wider physical and social congestion experienced in them. This may require investigations which explore the dynamics of hut use and behaviour more closely, particularly under conditions of high use. Track congestion, particularly with regard to the frequency and type of encounters with other visitors on the track each day, is an important secondary issue. There is some indication that the main focus for managing the track congestion issue

may require concentration on the track section over Mt Tongariro. Reports of crowding focal points were highest on this section, while day-use sections nearer road-ends were much less prominent. This may require further investigation of encounter types and locations, particularly under high use conditions. For both hut and track congestion, Easter represents a useful case-study opportunity for investigations under conditions of high use-levels and crowding.

7.4 ATTITUDES TOWARD MANAGEMENT OPTIONS

When considering management options for addressing future increases in visitor use-levels, most visitors were highly positive toward information management. That is, the strategic use of information to better match visitor expectations with likely experiences, and to give prospective visitors a better basis to choose visit timing and location that better suits their preferred visit experiences. This may be an important component of any general improvements undertaken in visitor information services. This may be particularly relevant among overseas visitors, whose lower satisfactions with information services suggested greater need. These results indicated clearly that such information management approaches were considered most preferable among all types of visitors. The main question this poses for managers is whether such information management approaches represent an effective tool of practical value. This is an area where additional investigation should be encouraged, as it offers the possibility of developing management approaches with much higher degrees of visitor (and public) support.

Attitudes were more evenly split toward options involving increasing the accommodation capacity of facilities, or encouraging alternative types of accommodation or visit type (e.g., camping, guided trips). Most visitors were highly negative toward regulatory options, which aimed to more directly channel or reduce visitor numbers. Booking systems for huts (and campsites), which are being actively considered as management options for visitor numbers for many of the Great Walks, were opposed by around half the walkers overall. No explanation of reasons for this negative attitude can be drawn from these analyses, but this finding suggests specific investigation is required which addresses how booking systems are perceived by visitors, and what happens to visitor patterns when such systems are imposed.¹² Overall, preference was apparent for less intrusive management interventions, and indicates perceived freedom may be an important component of the visit experience. Additional investigation of the role played by perceived freedom in recreation experiences seems appropriate.

Consideration of the role of perceived freedom appears particularly important for understanding the preferences of New Zealand visitors, who disagreed

¹² Inferences have been drawn from simple comparisons between independent studies undertaken before and after implementation of a booking system on the Routeburn Track, but these have not been part of any specifically designed assessment.

significantly more than Overseas visitors with the 'visit-control' types of use-level management options (e.g., rationing/use-limits, manipulating use conditions). Among the rationing options, New Zealanders were most negative toward the permit-based approach of use-level control, despite this being almost indistinguishable in effect to the other booking-based options. This suggests a distinction between New Zealand and overseas visitors in how they interpreted the term 'permit', compared with 'booking'. Similarly, New Zealand visitors were particularly more negative toward the promotion of smaller group sizes, despite it being the least directly intrusive of all the use-manipulation options listed. This suggests that the concept of controls, particularly relating to such basic trip freedoms such as choice of party size, are more negatively perceived by New Zealanders.

By contrast, the analyses comparing different visitor groups, and exploration of the extreme positive and negative responses, suggested the management attitudes of New Zealand visitors were more 'development-oriented' than is commonly assumed (as compared with overseas visitors). They were more positive toward management which increased the accommodation capacity on the track, particularly increasing bunk numbers in huts. Such findings may be a reflection of the types of New Zealand visitors using the Great Walks, and may differ for New Zealanders using other areas.

Some differences were also found in the attitudes of males and females toward management options, with females being more negative about the options of increasing accommodation and manipulating use conditions, while males were more negative toward options of rationing/use-limits. However, exploration of these data suggested no simple explanation for these distinctions, and additional investigation appears warranted

There was also some indication that visitor attitudes toward more direct controls changed under conditions of higher use-levels. While not established by comparative analyses between crowded and uncrowded visitors, comparisons of the extreme positive and negative attitudes suggested that under high use-level conditions (e.g., Easter) and among crowded visitors, visitor attitudes towards management options were more positive toward increasing accommodation capacity and directly manipulating use-conditions. This suggests that as use pressures become more acute, visitor attitudes toward direct management actions become more accepting. However, more specific analyses of the preferences of different visitor groups will be required before any conclusions can be confidently drawn. Such investigations should be encouraged, as these issues have considerable implications for developing future management approaches which are more acceptable to visitors.

7.5 CONCLUSIONS AND RECOMMENDATIONS

While there were no urgent needs for immediate management actions to address current problems, visitor responses indicated that there were existing effects on visit experiences from the presence and behaviour of other visitors. These effects were mainly associated with impacts associated with hut and track congestion, and general perceptions of crowding. While these effects appeared to be largely tolerated, with many visitors indicating they were not bothered by them, results from crowded visitors and during the Easter period indicated almost all of these evaluations were significantly more negative at the higher use-levels. In particular, perceptions of hut congestion were both more highly noticed and more strongly negative. Overall these results indicated that preventative actions to minimise future compromises to the quality of visit-experiences will need to be taken, particularly with regard to hut conditions. Visitors indicated a preference for such actions to be based most upon using information-based methods to guide visitor choices, rather than applying more regulatory approaches to limit or channel visitor opportunities. In summary, these actions could include:

- Specific attention to the facility capacity (e.g., washing-up/cooking/drying) and bunk capacity of huts
- Specific attention to the facility capacity of campsites, and their use patterns relative to huts
- Optimising the use of hut space for relaxation and for access to facilities within and around the huts
- Provision of general information about the features of the Tongariro Circuit, and for planning visits to it (possibly more targeted at overseas visitors and more based on direct communication by information and management personnel)
- Promotion of visitor activity patterns to minimise visitor encounters with each other on the track each day (i.e., choices of departure times, walk directions, options for alternative paths)
- Provision of information approaches which forecast visitor numbers and hut loadings in advance, indicate where and at what times on-track 'bottlenecks' during the days walk are most likely, and general suggestions on visit timing and organisation to maximise the opportunities for avoiding 'crowded' visit experiences.

Most initial gains should be made by concentrating upon the first two of these directions, as the latter options requires generating behavioural change among the visitors rather than the physical changes to hut facilities and their operation. Promoting beneficial behavioural changes through information use represents a more long term approach. It will be based largely on pre-visit information, and may require greater involvement with external agencies. Any consideration of these approaches will require additional investigations in a number of areas to assess the potential effectiveness of information use as a practical management tool. Investigations of the facility and service expectations of different visitor groups will be important, particularly emphasising hut conditions and information needs. An initial focus could be on distinctions between New

Zealand and overseas visitors, particularly regarding information needs and access paths to authoritative information sources. General investigation of visitor expectations and evaluations of visit experiences would also be important, particularly at the more 'crowded' times such as Easter.

While more regulatory management options were not highly favoured, they may still be required if urgent control is required, particularly in the short term. Additional investigations should be encouraged to explore the reasons for the largely negative visitor attitudes toward them, and the extent to which perceived freedom from external controls is an element of preferred recreation experiences. The distinction between New Zealand and overseas visitors should be a focal point, as should distinctions between visitors using Great Walks and other outdoor recreation settings. General investigations exploring the possible consequences of more regulatory approaches for visit experiences and future use patterns should also be undertaken. Exploratory results suggested visitor resistance to regulatory management options reduced in situations of high use-pressures. They also suggested New Zealand visitors to Great Walks were more 'development orientated' than might be expected. These possibilities should be investigated further as they have implications for the viability of future management choices.

Monitoring of the quality of visit experiences should not rely on overall visit satisfaction scores. Crowding scores offer a more sensitive overall measure. Any specific monitoring of visit-experience quality should concentrate first upon hut congestion conditions at key huts. For the Tongariro Circuit these could include Ketetahi Hut first, and Mangatepopo Hut second (if required). Any monitoring should address wider elements of hut congestion conditions than simply bunk occupancy. If required, monitoring of track congestion conditions represents an important secondary option. This would need to concentrate upon visitor encounters at key sections along the track. For the Tongariro Circuit, these key sections could be located first at points along the traverse of Mt Tongariro. Additional investigation will be required to identify specific sites for track congestion monitoring, and what parameters may need to be measured. Application of any monitoring approaches or related investigations should include coverage of the Easter period, as it can provide a benchmark of high use-level conditions.

Appendix 1

Summary of Tongariro Questionnaire Responses (n=1045)

ATTACHED RESPONSES FROM QUESTIONNAIRE

These responses are presented separately here because they do not fit with the questionnaire format used for the first part of this appendix.

A. Question 1. Nationality breakdown

NATIONALITY	NO'S	%
New Zealand	417	40
Germany	219	21
Great Britain	108	10
United States	76	7
Australia	44	5
Switzerland	45	4
Netherlands	32	3
Canada	23	2
Denmark	14	1
Israel	11	1
Japan	16	1
Other* Europe	24	2
Other+ Asia	6	0
Other (Mali)	1	0

* 6 Austria, 3 France, Norway, Greece, 2 Sweden, Italy, Denmark, 1 Slovenia, Russia, Ireland, Finland

+ 1 China, 4 Thailand, 1 India

B. Question 1. Nights on trip and at huts/camps

(i) Trip Duration

No. of nights on Tongariro

	1 nights	2 nights	3 nights	4 nights	5+ nights
% trips this duration	30	45	18	6	2

(ii) Nights at Huts and/or Campsites

Overnight accomodation

	Huts only	Hut and 1 camp	Multiple huts/camps	Camps and 1hut	Camps only
% trips	68	2	6	3	19

C. Question 3. Locations of Crowding Focus

Overall, (74%) of visitors (n = 746) considered some places on the visit were more crowded than others. They were asked to indicate in general terms whether this occurred in huts, at campsites, on the track or elsewhere, and then relative to these, specifically where. These specific responses are summarised here. Note that multiple responses were allowed for.

Huts — 563 specified huts as a focus of crowding (75% of 746). Of these, the specific focus responses highlighted the following main sites:

65% — Ketetahi Hut 27% — Mangatepopo Hut 8% — Waihohonou Hut

Campsites — 34 specified campsites as a focus of crowding (4% of 746). Of these, no particular sites stand out, because of the low frequency of the responses.

On the track — 314 specified areas along the track as a focus of crowding (42% of 746). Of these, the specific focus responses highlighted the following main sites:

24% — Emerald Lakes area 18% — Red Crater/Tongariro Summit area
15% — Ketetahi Hut area 11% — Mangatepopo Hut area
11% — Mangatepopo Saddle area 10% — South Crater area

Other — 31 specified 'other' areas as a focus of crowding (4% of 746). Of these, no particular areas were prominent.

Appendix 2

Details of Tongariro Principal Components Analysis

Principal Component Analysis (PCA) was carried out upon selected subsets of response-list items from 1044 respondents to the Tongariro Crossing sample from the Great Walks survey. These subsets related to response lists for visitor perceptions of impacts (Q. 5), visitor satisfactions (Q. 7), and visitor preferences for possible management responses (Q. 8) to increasing visitor numbers. The PCA defined a reduced number of summary scales which could then be used for more complex analytical procedures. The following material describes the summary scales, and demonstrates the degree to which they are representative of their component variables. Items were included in the scale if their removal reduced the value of the scale reliability co-efficient (Kronbachs alpha).

SATISFACTION SCALES (from Question 7)

SCALE NAME	RELIABILITY (Kronbachs Alpha)	COMPONENT LIST VARIABLES (from original questionnaire Q. 7 lists)	LOADINGS (from PCA)
Hut conditions	0.8550	Hut washing up space/facilities	0.815
		Hut cooking space/facilities	0.801
		Hut drying space/facilities	0.735
		Space to relax in huts	0.714
		Number of bunks in huts	0.634
		Hut heating facilities	0.594
		Hut lighting facilities	0.489
		Water supply at huts	0.455
		Toilets at huts	0.423
Track standards	0.8074	Smooth/easy surfaces	0.757
		Gentle slopes/not steep	0.768
		Boardwalks over wet/fragile areas	0.619
		Steps	0.662
		Drainage of water	0.636
		Bridges over rivers	0.467
Track marking/ signs	0.7266	Track marking	0.687
		Distance/time signs	0.759
		Information signs by the track	0.579
Information services	0.7774	Material from visitor centres	0.846
		Advice from visitor centres	0.809
		Quality of maps/brochures	0.682
		Advice from wardens	0.577
		Maps/brochures in the huts	0.413
Campsite conditions	0.7819	Toilets at campsites	0.769
		Water supply at campsites	0.775
		Camp cooking space/facilities	0.837
		Camp washing up space/facilities	0.788
		Rain shelters at campsites	0.500
No Extras *			

IMPACT PERCEPTION SCALES (from Question 5)

SCALE NAME	RELIABILITY (Kronbachs Alpha)	COMPONENT LIST VARIABLES (from original questionnaire lists)	LOADINGS (from PCA)
Physical impacts	0.7412	Litter on track Litter around hut Litter around campsites Seeing human waste/toilet paper Seeing where wood cut for fires Seeing shortcuts off tracks Seeing trampling around wet areas	0.634 0.644 0.528 0.595 0.490 0.617 0.587
Hut congestion	0.7023	Insufficient bunk space in huts Too many people in hut Having to rush for bunk in huts Noisy people in huts at night	0.835 0.698 0.750 0.464
Track congestion	0.6638	Seeing people on guided trips of track Seeing too many on the track each day Seeing too many big groups of people Plane noise	0.639 0.707 0.736 0.528
Over-development	0.7832	Too much development of tracks Too much development of huts Too much development of signs Too much development of campsites	0.765 0.780 0.723 0.723
Campsite congestion	0.5671	Too many others at campsites Noisy people at campsites Having to rush for campsite space Seeing where campsites have formed	0.610 0.674 0.620 0.344
Water/toilet/hygiene	0.5465	Inadequate water supply Inadequate toilet facilities Uncertainty in water hygiene	0.757 0.757 0.563

MANAGEMENT PREFERENCE SCALES (from Question 8)

SCALE NAME	RELIABILITY (Kronbachs Alpha)	COMPONENT LIST VARIABLES (from original questionnaire lists)	LOADINGS (from PCA)
Rationing/ use-limits	0.8531	Bookings for spaces at campsites Bookings for bunks in huts Require permits, and limit these	0.909 0.890 0.735
Information management	0.7651	Provide info on physical impacts Provide info on social impacts Provide info on crowding conditions Provide info on different track options	0.813 0.803 0.738 0.666
Increase accom- modation	0.6578	Build more huts Provide more campsite/camping facilities Allow more guided trips/facilities Provide more bunks in huts Provide more alternative tracks Increase freedom for camping by tracks	0.713 0.962 0.688 0.484 0.510 0.464
Manipulate use conditions	0.5372	Make other track options cheaper Remove some facilities to discourage use Make peak use times more expensive Encourage small groups/discourage large Make track one-way only	0.591 0.578 0.547 0.525 0.519

Appendix 3

Details of Tongariro Crowding Scores

Crowding was assessed using a widely used nine-point crowding scale (Question 2), and Table A3.1 presents the responses from Tongariro Crossing visitors.

Shelby *et al.* (1989) summarised and evaluated the accumulated results from this method, and developed an interpretation method to highlight the management significance of these responses. These interpretations, which can be considered carrying capacity judgements related to the quality of visitor experiences, apply to the “crowded” respondents (e.g., those scoring 3 or more). Table A3.1 shows that the proportion of “crowded” visitors on the Tongariro Crossing was 68% in summer, and 86% at easter.

TABLE A3.1 TONGARIRO CROSSING CROWDING SCORES.

DEGREE OF CROWDING	(scores)	TOTAL % (n = 1045)	SUMMER (n = 861)	EASTER (n = 184)
NOT CROWDED	(1)	16	16	7
	(2)	16	17	7
CROWDED — slightly	(3)	20	22	9
	(4)	11	11	10
	(5)	9	10	5
CROWDED — moderately	(6)	13	11	20
	(7)	10	8	19
CROWDED — extremely	(8)	3	2	10
	(9)	4	2	13

Table A3.2 presents a range of results from the other Great Walks and from studies summarised by Shelby *et al.* (1989). Accompanying these results are the interpretations applied to different crowding scores. The interpretation of 68% crowding on the Tongariro Crossing in Summer is that use is at “more than capacity”, while 86% crowding at Easter is “much more than capacity”. Accepting that Easter currently represents an extreme situation, the interpretation of this Summer crowding is that management actions are necessary to preserve visit experiences, particularly if low density impacts are important components of desired visitor experiences. These interpretations represent informed but subjective guidelines based upon extensive accumulated knowledge.

Comparing the Great Walk crowding scores in Table A3.2 and Figure A3.1 indicates that crowding is relatively high on the Tongariro Crossing, and preventative management to minimise effects from increasing use will be required there before most other tracks.

FIGURE A3.1. DIFFERENT LEVELS OF 'CROWDED' RESPONSES ON GREAT WALKS

TABLE A3.2 DIFFERENT LEVELS OF 'CROWDED' RESPONSES. (AFTER SHELBY *ET AL.* 1989)

CROWD (%)	POPULATION	RESOURCE	STATE OR COUNTRY	RESOURCE CONDITIONS	CARRYING CAPACITY JUDGEMENT
100 94 91 89 88 87 86 85	Boaters Anglers Boaters Pheasant hunters Boaters Riparian landowners Goose hunters Pheasant hunters	Deschutes River Colorado River Raystown Lake Bong Hunting Area Deschutes River Lake Delavan Grand River Marsh Public Hunting Area	Oregon Arizona Pennsylvania Wisconsin Oregon Wisconsin Wisconsin Wisconsin	Weekends section 1 Thanksgiving weekend On the lake Opening day Weekdays section 1 Overall rating Firing line Opening day	Much more than capacity (80 - 100%) Manage for high density recreation experiences, or treat as a 'sacrifice area', allowing quantity of activity to compromise quality of experiences. Could be a localised compromise to reduce pressure on other areas.
* 76 * 76 75 75 74 73 72 70 70 * 69 * 69 * 68 * 68 68 66	Walkers (GW) Trout anglers Salmon anglers Boaters Salmon anglers Canoers and boaters Rafters Anglers Climbers Walkers (GW) Boaters Walkers (GW) Rafters Rock climbers Boaters	Routeburn Track Gun Powder River Waimakariri River Raystown Lake Rakaia River Boundary Waters C.A. Grand Canyon Klamath River Mt. McKinley Abel Tasman Track Door Country Tongariro Crossing Rogue River Seneca Rocks Raystown Lake	New Zealand Maryland New Zealand Pennsylvania New Zealand Minnesota Arizona California Alaska New Zealand Wisconsin New Zealand Oregon West Virginia Pennsylvania	Summer Opening day At river mouth At attraction sites At river mouth Moose Lake 1985 Summer Summer Summer (Easter 86%) At put-in location	More than capacity (65 - 80%) Studies and management are necessary to preserve recreation experiences, especially if low visitor impacts (social/physical) are important components. Immediate management to control use-levels at around 65% level of crowding conditions may be considered as an option. Research may be needed to establish more long-term solutions.
* 63 * 63 * 62 * 62 61 61 59 * 58 *	Walkers (GW) Boaters Walkers (GW) Deer hunters Goose hunters Floaters Salmon anglers Sea Kayakers (GW)	Kepler Track Raystown Lake Milford Track Sandhill Fishing Bay Wolf River Rakaia River Abel Tasman Coast	New Zealand Pennsylvania New Zealand Wisconsin Maryland Wisconsin New Zealand New Zealand	Summer (Easter 86%) At take-out location Summer 1988 High-density hunt Firing line All anglers Summer	High normal conditions (50 - 65%) Should be studied if increased use is expected, allowing management to anticipate problems. Represents the best time to establish more long-term management, as once higher crowding perceptions exist, there is difficulty in managing use 'down' to levels more

* 55 *	Walkers (GW)	Heaphy Track	New Zealand	Summer (Easter 71%)	appropriate for the main recreation experiences desired.
55	Wildlife photographers	Sandhill	Wisconsin		
54	Recreationists	Lake Delavan	Wisconsin	One-day visit	
53	Anglers	Brule River	Wisconsin	1975	
53	Rafters	Grand Canyon	Arizona	1985 Winter	
53	Rafters	Snake River	Oregon	In Hell's Canyon	
53	Backpackers	Mt. Jefferson	Oregon		
52	Canoers	Brule River	Wisconsin	High-use period	
50	Deer hunters	Sandhill	Wisconsin	1982 High-density hunt	Low Normal Conditions (35 - 50%) A problem situation does not exist at this time. As with the above category, these may offer unique low-density recreation experiences. These are likely to change with any increase in social or physical impacts resulting from increasing numbers of users, or from changes in activity types.
49	Backpackers	Eagle Cap Wilderness	Oregon		
48	Pheasant hunters	Bong Hunting Area	Wisconsin	Late season	
46	Deer hunters	Statewide	Wisconsin	No specific resource	
45	Salmon anglers	Rakaia River	New Zealand	Upstream	
44	Turkey hunters	Statewide	Maryland	No specific resource	
43	Tubers	Brule River	Wisconsin		
* 43 *	Walkers (GW)	Travers-Sabine Track	New Zealand	Summer	
* 42 *	Canoeists (GW)	Wanganui River	New Zealand	Summer	
* 42 *	Walkers (GW)	Waikaremoana Track	New Zealand	Summer	
42	Sailboaters	Apostle Islands	Wisconsin	Summer 1985	
41	Tourists and drivers	Stockings Park	Michigan	Presidential Range	
39	Backpackers	White Mt. Nat.Forest	New Hampshire		
38	Floaters	Klamath River	California	1985 Low-use period	
37	Canoers	Brule River	Wisconsin		
* 35 *	Walkers (GW)	Rakiura Track	New Zealand	Summer	Suppressed Crowding (0 - 35%) Crowding here is limited by certain management or situational factors, which allow particular low-density recreational experiences. These are likely to be unique, and managers should be concerned with maintaining them. Changes likely to increase visitor numbers/impacts should be considered carefully.
32	Anglers	Colorado River	Arizona	Midweek	
31	Hikers	Dolly Sods Wilderness	West Virginia	Low-use period	
27	Goose hunters	Tuckahoe State Park	Maryland	Low-density hunt	
26	Rafters	Illinois River	Oregon		
25	Trout anglers	Savage River	Maryland	Low use period	
24	Backpackers	Great Gulf Wilderness	New Hampshire	Low use period	
24	Deer hunters	Sandhill	Wisconsin	1982 Low-density hunt	
23	Trout anglers	Gundpowder River	Maryland	Late season	
20	Canoeists	Whanganui River	New Zealand	Summer (Easter 68%)	
17	Goose hunters	Grand River	Wisconsin	Managed hunt	
12	Deer hunters	Sandhill	Wisconsin	1988 Low-density hunt	

* * and bold type identify the crowding responses for the tracks included in New Zealand's Great Walks.