



FIGURE 10. ATTITUDE TO MANAGEMENT RESPONSES IN SUMMARY SCALE STRUCTURE.

kayakers with these extreme attitudes indicated higher levels of extreme agreement with manipulating use conditions (74% *vs* 34%). Female kayakers with these extreme attitudes indicated higher levels of extreme agreement with increasing accommodation options (60% *vs* 40%).

Overall, these exploratory results indicate that crowded kayakers appeared to agree more often with most types of management options. New Zealand kayakers appeared to agree more with facility development options while overseas kayakers appeared to agree more with manipulating use conditions. While only exploratory findings, these results suggest the areas where differences between different visitor groupings are most likely to occur.

6.2 RELATING MANAGEMENT PREFERENCE SCALES TO OVERALL TRIP EVALUATIONS

There were no significant links between the overall visit evaluations (e.g., satisfaction and crowding), and any scales of the attitudes towards management options. These results suggest that preferences for different management options were unaffected by any experiences on the track visit.

7. Summary and discussion

7.1 OVERALL VISIT EVALUATIONS

Overall levels of dissatisfaction were negligible, and most kayakers considered the experience exceeded their expectations. However, perceptions of crowding were high, and many kayakers indicated they saw more others than they expected. Campsites in general appeared a particular focus for such perceptions. These findings suggest that while sea-kayaking could be considered a relatively low level and dispersed activity compared with walking on a Great Walk, perceptions of crowding are similar. Such a finding indicates that assessments of visit quality based on absolute crowding levels may be deceptive if the nature of different activity-experiences and expectations are not taken into account. Clearly some definition of what those different activity experiences and expectations might be will be important in interpreting any overall visit evaluations. While the overall satisfaction and expectation findings suggest the kayakers surveyed had high quality visit experiences overall, the survey results on crowding and use-level expectations indicate there are some major issues related to visitor use-levels and patterns in the Abel Tasman National Park in general, and how these interact with kayaking visitors in particular.

Some caution is required when interpreting the overall satisfaction findings in particular, as most kayakers surveyed were on a first visit. There is a tendency for such visitors to give approval to the status-quo of social and environmental conditions they experience on a visit. They usually lack previous experience of the site and any strong expectations as to what might constitute the appropriate and acceptable conditions which occur there. In a situation of changing use conditions over time, the overall satisfactions of such visitors can remain consistently high despite considerable changes in visit experiences. Those first-time visitors with strong but inaccurate expectations of social and physical conditions, or repeat-visitors with expectations based on previous conditions, are those most likely to indicate overall dissatisfaction or greater perceptions of crowding. These visitors types are, therefore, the most likely to be displaced to different sites, times, or activities, and are also more likely to give negative feedback about their experiences to others. Other visitors may recognise that elements of the visit-experience may not be what they would prefer, but are prepared to rationalise some of their preferences and evaluations in the interests of an enjoyable overall visit.

All these considerations suggest that reliance on overall satisfaction measures such as a monitor of visit-experience quality can be misplaced. However, should considerable levels of dissatisfaction feature in such measures, it is likely that major problems are already well-established. While dissatisfaction results were not evident in the survey, relatively high crowding scores and use-level expectations suggest that for these experiences of sea kayaking, some compromises to the quality of visit experiences were occurring. Overall, evaluation approaches based upon crowding interpretations appear more sensitive to problems or differences in visit conditions than are overall satisfaction interpretations.

7.2 SATISFACTION WITH FACILITIES AND SERVICES

Survey results revealed no notable levels of dissatisfaction for any of the facilities and services used for kayaking in Abel Tasman National Park, and none of these specific satisfactions were linked to any of the overall evaluations of the visit experience. The high satisfactions across all the facility and service types indicated a lack of any specific visitor problems with management infrastructure, and suggested there were no immediate needs for management interventions beyond normal maintenance. The only concerns which may possibly require some consideration related to dissatisfactions with campsite toilets and water supplies, although these were only minor sources of dissatisfaction (around 15%). They do not appear to warrant high priority on the basis of satisfaction levels alone. Many kayakers (27%) also indicated dissatisfaction with campsite rain-shelters, although this may represent dissatisfaction that such facilities were not provided rather than indicating problems with any existing facilities. Such a conclusion is supported by the many other kayakers (41%) who were neutral in their satisfaction with rain-shelters. The contribution such facilities could make to kayaker experiences may need to be evaluated if any opportunity to make further facility and service improvements arises.

Many kayakers surveyed were neutral rather than positive in their satisfactions with the information and advice received from wardens and visitor centres. This may indicate a need to assess the role and effectiveness of staff-based information services for sea-kayak visitors, particularly as they generally do not use staffed huts, and access the knowledge and equipment required for their visit through commercial recreation providers rather than public information agencies. If resources are allocated to visitor information for sea-kayakers, specific attention to the means of providing this information will be required.

Overall, levels of satisfaction with facilities and services were high. Any dissatisfactions that did occur were generally related to campsite use. It appears that campsite use may represent the first area where compromises to the quality of visit experiences may occur if use-pressures increase. If improvements to information services for kayakers are accorded a greater management priority, the role of information services provided directly by staff in visitor centres and in the field should be addressed.

7.3 PERCEPTIONS OF IMPACTS

Many of the kayakers surveyed were bothered by social impacts, particularly those related to motorboat use, campsite congestion, and general perceptions of activity congestion during the day. Kayakers were highly aware of disturbance by motorboats on the water (74%), and most were bothered by this (53%). Disturbance by motorboats at huts and campsites was also prominent, being noticed by 55% of visitors of whom most (34%) were bothered by it. Other social impacts related to seeing too many others at campsites, seeing too many kayakers on the water, and seeing too many big groups were also noticed by

many kayakers, although tolerance for these impacts appeared higher. While 67% of kayakers indicated they were seeing too many other kayakers during the day, only 19% indicated they were bothered by it. Similarly, while 49% of kayakers indicated they were aware of over-development of campsites, only 5% were bothered by it. Understanding the distinction between simply noticing these impacts and being specifically bothered by them appears an important research issue. Taking this distinction into account, it is clear that the most strongly negative social impact perceptions related to motorboat activity.

Many kayakers were also bothered by perceptions of physical impacts, particularly related to uncertain water hygiene, water and toilet facilities, and littering. Perceptions of uncertain water hygiene were most negative, bothering 59% of kayakers, although it was not apparent that this perception represented any actual conditions experienced on the visit. Other issues related to hygiene were also apparent from perceptions of insufficient toilets and water supply. Around half the kayakers perceived these as being insufficient, although only around 25% were bothered by it. Fewer indicated they noticed toilet/paper and waste (33%), although most of those who did (28%) were bothered by it.

Litter also appeared to be an issue, with around 50% of those surveyed noticing litter at campsites and on the water/at beaches in particular, and over 40% being bothered by each. In general, kayakers appeared to have very little tolerance for particular types of impacts which very visibly represented inappropriate behaviour (e.g., seeing litter, toilet paper/waste, and wood cutting). These results suggest particular visitor sensitivity to such 'inappropriate' littering or physical damage behaviour in natural settings. Given the high incidence of littering perceptions in some situations, it appears that there is a litter management problem to address, although these perceptions were not linked in any way to trip evaluations.

While overall impact perceptions identified a variety of social and physical impact issues, variation in the impact perceptions of different groupings highlighted social impact issues relating to crowding perceptions and a gender and age-group interaction. The crowded kayakers particularly emphasised social conditions related to seeing too many others at campsites and on the water, and physical conditions related to perceived inadequacies of water supplies. Older male kayakers emphasised the more negative impacts of perceived over-development of huts and signs.

Overall, the negative perceptions of campsite/social congestion impacts were high, and were linked with greater perceptions of crowding. If crowding perceptions increase in future, it is likely that compromises to the quality of visit-experiences will be first apparent from perceptions of social impacts, particularly related to campsite congestion and disturbance by motorboat activity. Perceptions of water, toilet and hygiene impacts were also higher among crowded kayakers. However, the lack of any link between higher perceptions of these impacts and higher crowding scores suggests that these perceptions may not necessarily increase should use pressures grow. In this respect they are unlike the social congestion impacts, which are more clearly linked to higher crowding perceptions. However, perceptions of water and toilet conditions, littering and waste will be important ongoing issues for management concern. Water supply appears a particular issue where visitor

perceptions indicate further improvements could be made. The generally negative perceptions of water hygiene and the relationships of these perceptions to other water, toilet and littering impacts may require some investigation.

7.4 ATTITUDES TOWARD MANAGEMENT OPTIONS

When considering management options for addressing future increases in use-levels, most kayakers surveyed were highly positive toward information management. That is, the strategic use of information to better match kayaker expectations with likely experiences, and to give prospective kayakers a better basis upon which to choose visit timing and a location that suits their preferred visit experiences. This may be a particularly important component of any general improvements undertaken in visitor information services. These results indicated clearly that such information management approaches were considered most preferable among all types of kayakers. 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 high visitor (and public) support.

The only other management options attracting similarly high support from kayakers were those promoting alternative trip options, and those controlling motorboat access. The strongly positive response of kayakers toward controls on motorboats gives a strong signal that there are conflict issues between kayakers and motorboat users. This issue also extends to the activities of water taxis, toward which kayakers also predominantly favoured controls. These results do not identify what such conflict issues may be, and this represents an area which may require attention in any future research.

By contrast, most kayakers surveyed were highly opposed to other management options related to discouraging use through facility removal, development of huts, encouraging camping by greater freedom to camp on any beaches, having campsite booking systems, or making peak times more expensive. The strength of apparent opposition to these approaches indicates that considerable background research would be required (as would ongoing consultation with visitor-groups), before any of them could be implemented ahead of the more acceptable information-based options. This conclusion could equally apply to the other management options over which kayakers were generally split either for or against. Such options included more campsite facilities, hut booking systems, increased guided opportunities, using separate huts/campsites, permit systems, and cheaper alternative options.

While no significant differences were identified between different groupings, additional exploration of extreme positive and negative results indicated that crowded kayakers were less negative than uncrowded kayakers toward most management options, overseas kayakers were less negative than New Zealand kayakers toward manipulating use conditions, and New Zealand kayakers were less negative than overseas kayakers toward developments to increase accommodation options. These exploratory findings suggest there may be

important differences in kayaker attitudes toward different management options, between these different visitor groups. These distinctions may highlight the more 'management-resistant' sectors among the visitor-groupings, and identify some visitor-groupings where the negative attitudes towards some management options are more variable. However, no conclusive statements can be made with these data, and additional investigations will be required if it is considered important to identify these distinctions.

7.5 CONCLUSIONS AND RECOMMENDATIONS

Perceptions of physical impacts related to litter, toilets, water supply, and perceived water hygiene identified in this survey indicate there are some physical conditions which will require management action. However, these conditions did not substantially compromise visit-experiences. On the basis of maintaining the quality of visit-experiences, these conditions do not represent urgent problems which require immediate management attention beyond normal maintenance processes. Some attention to enhancing water supplies at campsites, providing information about water hygiene conditions, and investigating litter issues at beaches and campsites appeared to be the only notable issues.

While there were no urgent needs for immediate management actions to address these physical setting issues, other responses did indicate that there were social impact issues related to conflict perceptions with motorboats, campsite congestion and general perceptions of crowding. Most kayakers who perceived disturbance by motorboats were bothered by it. Most of those who perceived the other social congestion impacts were largely tolerant of them. However, the results linking crowding with perceptions of social/campsite congestion indicated some of these evaluations would be becoming more negative at higher use-levels. It appears that perceptions of seeing too many people at campsites will be the most useful condition to monitor.

Overall, these results indicate that preventative actions to minimise future compromises to the quality of visit-experiences will need to be considered, particularly with regard to conflicts with motorboats, and campsite conditions, but that these were not critical at the time of the survey. If management control is required, kayakers indicated a preference for actions to be based most upon information use to guide visitor choices, rather than any more direct regulation/manipulation approaches to limit or channel visitor opportunities. Initially, some development of long-term information approaches could be undertaken, as stringent controls did not appear essential as yet. Kayakers did indicate they would favour controls on motorboat activity.

In summary, the main management actions which could be undertaken include:

- Identifying any physical impact 'hot-spots' related to campsite or beach littering, and initiating any additional problem-solving management beyond normal maintenance processes to reduce the scale of any notable problems
- Within any ongoing maintenance programmes, review the status of water supplies at campsites, and taking any actions required to improve these

- Providing information on water hygiene, including some pre-visit information approaches
- Provision of general information about the features of sea-kayaking in Abel Tasman National Park, and for planning visits to it (maybe co-operatively with commercial recreation providers)
- Provision of information approaches which forecast kayaker and other visitor numbers and campsite loadings in advance; indicate where and at what times on-track 'bottlenecks' are most likely; outline what alternative trip patterns may be followed; indicate where motorboat activity may be concentrated; and provide general suggestions on visit timing and organisation to minimise any 'crowded' or 'conflict' visit experiences.

Most initial gains should be made by concentrating on making whatever simple improvements are possible in the use of campsites, and reducing any littering 'hot-spots'. This may involve initiating investigations of visitor preferences for the standards of campsite facilities, services and expected visit experiences. Such information options require generating behavioural change among the visitors rather than the physical changes to the visit setting. This may relate to kayakers, track users, and motorboat users, and require investigation of what issues define the conflict that kayakers perceive with motorboat users. Promoting beneficial behavioural changes through information use in this way represents a more long term approach, 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. As contact opportunities with kayakers are relatively limited, the role of visitor centre and hut-based staff in directly communicating information to kayakers may also require specific attention.

More regulatory management options were not highly favoured, and do not appear to be necessary in the short term. However, given the possibility of such options being considered in the future, additional investigations should be encouraged to explore the reasons for the largely negative attitudes toward management options, and the extent to which perceived freedom from external controls is an element of preferred recreation experiences. Because of the low levels of crowding and impact perception, such investigations need not be carried out specifically in relation to kayakers in Abel Tasman National Park, although the issues related to boat-use are clearly more unique to this park.

Monitoring of the quality of visit experiences should not rely on overall visit satisfaction scores. Crowding scores offer a more sensitive overall measure, although account must be taken of the different visit experiences represented by sea-kayaking. This distinction may also be an important topic for wider research investigation. Any specific monitoring of visit-experience quality should concentrate first upon campsite congestion conditions at key sites, and conflict perceptions with motorboats. Some additional investigation of the different kayak trip patterns around Abel Tasman National Park may be appropriate. Any monitoring should address wider elements of campsite congestion conditions, including the use of campsites by different types of groups (including walkers and boat-based groups).

Appendix 1

Summary of sea-kayak questionnaire responses (n = 210)

This presents the basic response percentages for the questions asked in the survey. These percentages are presented in the format of the original questionnaire, although some lists of responses are attached where their format is incompatible with this approach. Where appropriate, some distinction is also made between the responses of hut and campsite users (at least 1 night).

ATTACHED QUESTIONNAIRE RESPONSES

These responses are presented here as they are do not fit the questionnaire format used for this appendix.

A. Question 1. Nationality breakdown

NATIONALITY	NO'S	%
New Zealand	117	56
Germany	24	11
Great Britain	13	6
United States	22	10
Australia	9	4
Switzerland	3	1
Netherlands	4	2
Canada	12	6
Denmark	0	0
Israel	0	0
Japan	0	0
Other Europe (Sweden)	4	2
Other Asia	0	0
Other (South Africa)	2	1

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

(i) Trip Duration

No. of nights on kayaking trip

	1 nights	2 nights	3 nights	4 nights	5+ nights
% trips of this duration	9	23	13	46	9

(ii) Nights at Huts and/or Campsites

Overnight accommodation

	Huts only	Hut & 1 camp	Multiple huts/camps	Camps & 1 hut	Camps only
% trips	1	2	3	7	87

C. Question 3. Locations of crowding focus

Overall, (82%) of visitors (n = 169) 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 — 59 specified huts as a focus of crowding (35% of 169). Of these, the specific focus responses highlighted the following main sites:

54% — Anchorage Hut 18% - Bark Bay Hut

Campsites — 94 specified campsites as a focus of crowding (56% of 169). Of these, the specific focus responses highlighted the following main sites:

36% — All campsites used 20% — Anchorage Hut area campsites

13% — Te Pukatea Bay campsite 12% — Bark Bay Hut area campsites

On the water — 13 specified areas on the water as a focus of crowding (8% of 169).

Other — 27 specified 'other' areas as focus of crowding (16% of 169). Of these, no particular areas were prominent.

Appendix 2

Details of sea-kayak principal components analysis

Principal Component Analysis (PCA) was carried out upon selected subsets of response-list items from 210 respondents to the Abel Tasman Sea Kayak 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 (and description)	RELIABILITY (Kronbachs Alpha)	COMPONENT LIST VARIABLES (from original questionnaire Q. 7 lists)	LOADINGS (from PCA)
Hut conditions	0.9400	Hut cooking space/facilities Hut washing up space/facilities Hut lighting facilities Hut drying space/facilities Hut heating facilities Space to relax in huts Number of bunks in huts Water supply at huts Toilets at huts	0.842 0.828 0.816 0.812 0.768 0.757 0.743 0.602 0.565
Track conditions	0.9326	Gentle slopes/not steep Smooth/easy surfaces Steps Drainage of water Boardwalks over wet/fragile areas Bridges over rivers Track marking	0.888 0.871 0.823 0.816 0.778 0.773 0.598
Information services	0.8836	Material from visitor centres Advice from visitor centres Quality of maps/brochures Advice from wardens	0.868 0.857 0.769 0.510
Sign facilities	0.7506	Distance/time signs Information signs by the track Maps/brochures in the huts	0.684 0.626 0.427
Camp facilities	0.8251	Rain shelters at campsites Camp cooking space/facilities Camp washing up space/facilities	0.815 0.802 0.752
Camp water/toilet	0.6716	Toilets at campsites Water supply at campsites	0.780 0.729

IMPACT PERCEPTION SCALES (from Question 5)

SCALE NAME (and description)	RELIABILITY (Kronbachs Alpha)	COMPONENT LIST VARIABLES (from original questionnaire lists)	LOADINGS (from PCA)
Physical impacts	0.8445	Litter around hut Seeing shortcuts off tracks Seeing trampling around wet areas Litter on track Seeing human waste/toilet paper Litter around campsites Litter on beaches/in water Seeing where campsites have formed Seeing where wood cut for fires	0.762 0.718 0.713 0.687 0.684 0.623 0.536 0.520 0.513
Hut congestion	0.7814	Having to rush for bunk in huts Too many people in hut Insufficient bunk space in huts Noisy people in huts at night	0.805 0.801 0.738 0.727
Toilet/water/ hygiene	0.6461	Inadequate toilet facilities Inadequate water supply Uncertainty in water hygiene	0.754 0.717 0.590
Over- development	0.8432	Too much development of huts Too much development of signs Too much development of tracks Too much development of campsites	0.823 0.803 0.772 0.510
Camp/Social congestion	0.7320	Too many others at campsites Seeing too many on the water each day Having to rush for campsite space Seeing too many big groups of people Plane noise Noisy people at campsites	0.784 0.724 0.586 0.583 0.493 0.311
Boat disturbance	0.6782	Boat disturbance at beaches Boat disturbance to huts/camps Seeing people on guided trips of track	0.776 0.693 0.634

MANAGEMENT PREFERENCE SCALES (from Question 8)

SCALE NAME (and description)	RELIABILITY (Kronbachs Alpha)	COMPONENT LIST VARIABLES (from original questionnaire lists)	LOADINGS (from PCA)
Rationing/ use limits	0.8115	Bookings for spaces at campsites Bookings for bunks in huts Require permits, and limit these Make peak use times more expensive	0.847 0.813 0.730 0.432
Information management	0.9045	Provide inf. on different track options Provide inf. on crowding conditions Provide inf. on physical impacts Provide inf. on social impacts	0.890 0.872 0.869 0.856
Increase accommodation	0.7373	Provide more campsite/camping facilities Build more huts Provide more bunks in huts Provide more alternative tracks Allow more guided trips/facilities Increase freedom for camping on beaches	0.755 0.718 0.659 0.573 0.562 0.529
Manipulate use	0.5784	Limit water taxi access Encourage small groups/discourage large Limit boat access Make other track options cheaper Remove some facilities to discourage use	0.728 0.648 0.561 0.492 0.320

Appendix 3

Details of sea-kayak crowding scores

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

TABLE A3.1. KEPLER TRACK CROWDING SCORES.

DEGREE OF CROWDING (scores)	TOTAL % (n=210)
NOT CROWDED (1) (2) (3)	20 14 17
CROWDED — slightly (4) (5)	8 9
CROWDED — moderately (6) (7)	16 8
CROWDED — extremely (8) (9)	6 2

Shelby *et al.* (1989)¹ 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 Sea Kayak trips was 58%.

Table A3.2 (below) 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 58% crowding among sea-kayak visitors is that use is at high normal conditions, and that research and other investigations are needed to allow management actions to prevent future congestion problems. It is considered that now is the best time to take such actions, before conditions have deteriorated to a more serious state. Time appears available, because at 58%, crowding scores are still below the 65% level. Above 65% they could be interpreted as being more than capacity. These interpretations represent informed, but subjective, guidelines based upon extensive accumulated knowledge.

¹ Shelby, B., Vaske, J.J., Heberlein, T.A. 1989. Comparative analysis of crowding in multiple locations: Results of 15 years of research. *Leisure Sciences* 11: 269-291.

Comparing the Great Walk crowding scores in Table A3.2 and Figure A3.1 (next pages) indicates that crowding is excessively high among sea-kayak visitors, considering the dispersed nature of their activity. While preventative management to minimise effects from increasing use should be considered now before more negative effects become established, more urgent attention may be required first on some of the other tracks.

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.