

Gates of the Arctic Recreation Visitor Study

Phase I

Results of the Study and Draft Implementation Plan for Phase II

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*USDA - Forest Service and USDI - Bureau of Land Management, Fish and Wildlife Service, Geological Survey,
and National Park Service*

TO: Gates of the Arctic National & Preserve
FROM: Alan Watson, Brian Glaspell, Neal Christensen
DATE: February 15, 2002
RE: Draft report on Phase I visitor study, study plan for Phase II

The enclosed report is intended to provide an overview of findings from the Phase One visitor experience research conducted at Gates of the Arctic National Park & Preserve by Brian Glaspell for the Leopold Institute during the summer of 2001. The methodology used and a more extensive problem analysis is presented in the approved study plan, "Providing scientific input to indicators and standards: A focus on wilderness experience stewardship at Gates of the Arctic National Park and Preserve," by Glaspell and Watson (2001), and available upon request. This report, in conjunction with the Leopold Institute report on sport hunters along the Kobuk River (Christensen and Watson, 2002) provides the basis for planning for a general visitor survey scheduled for the summer use season of 2002.

The report is presented in three volumes. Volume one (29 pages) provides a simple summary of purpose, methodology, results, implications and an implementation plan (Appendix A) for the second phase of the research. Volume two is labeled Appendix B (75 pages) and contains summaries of individual interviews, and Volume three (Appendix C, 149 pages) provides a full set of reconstructed interviews, which represents the data analyzed for this report.

Discussions surrounding this report will enable the Leopold Institute to implement the second phase of the research and will provide managers with in-depth knowledge of the range of experiences currently sought and found at the park. A final copy of this report will be issued when the second phase study plan is finalized.

A doctoral dissertation (Glaspell) based upon this data collection activity will be published in 2002 and provided to the park, also. Any subsequent scientific publications proposed from this information collection activity will be provided to Gates staff for comment and potential contributions as authors.

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INTRODUCTION

Gates of the Arctic National Park and Preserve (GAAR) represents the culmination of a long history of advocacy for wilderness in northern Alaska. A major value of GAAR, described in both the Park's founding legislation and the current General Management Plan, is its potential to facilitate meaningful wilderness experiences. However, park stewards have had access to little information about the nature of the experiences that visitors are seeking and receiving at GAAR, and little basis for evaluating changes in visitor use or management. This report describes the results from phase one of a two-year, two-phase project designed to provide scientific input to visitor management at GAAR. The original study plan with literature review and problem analysis for this project (Glaspell and Watson 2001) is available upon request. Appendix A provides the draft implementation plan for the second phase of data collection and analysis. Specifically, the purposes of phase one were to: 1) Understand and describe the range of experiences that recreational visitors are having at GAAR; 2) identify and describe significant influences on those experiences, including the presence and behaviors of other visitors and existing and potential visitor regulations; and, 3) establish a general familiarity with visitor use and use patterns that will facilitate the development of the phase-two study plan.

In phase one, 32 separate interviews were conducted with a total of 94 visitors. Each interview was tape-recorded, transcribed, and rigorously analyzed to identify themes relevant to visitors' experiences. Results of the study are presented here and in two appendices. In this report, specific themes with broad relevance across the sampled visitor population are presented as five experiential dimensions. Specific factors (related to human use or impacts in the park or management presence and actions) that were suggested to influence visitor experiences are also identified from the interviews and linked to each of the broad experiential dimensions.

Although one goal of this study was to understand and describe the range of visitor experiences, this report focuses on common themes rather than diversity across the respondent population. In Appendix B, relevant themes in each interview are summarized in brief narratives. These interview summaries provide additional insight into the range of different visitor experiences and factors that influence them. Each interview summary is linked to a reconstructed interview in Appendix C. The reconstructed interviews are excerpts of raw interview text reorganized under thematic headings. They are the data that support the interview summaries and the across-interview analysis. There are several reasons for including the lengthy appendices: First, they provide access to supporting data so that a reader can see clearly the basis for interpretations and conclusions presented in this summary report; second, they present the data in a more readable format than raw interview texts; and third, they provide a database that may be consulted in the future as new questions or issues emerge.

STUDY PROCEDURES

This study employed qualitative-interpretive research methods. Qualitative, in this case, refers to the kind of data gathered (interview texts rather than numerical data) and interpretive refers to the

theoretical framework that guided data analysis. Procedures for selecting the respondent sample, conducting interviews, and analyzing interview texts are briefly described below.

Sampling

Two goals that guided sampling for this study were diversity (describing the *range* of different visitor experiences), and depth-of understanding. Therefore, sampling was purposeful rather than random. Interview candidates were contacted in Bettles, Coldfoot, or Anaktuvuk Pass immediately following the completion of their park wilderness trips. Candidates were selected to represent different combinations of several stratifying variables (exit location, guided/independent, activity, time of season). Most interviews were conducted with travel groups. In some cases, the self-identified travel group was a subset of a larger group. Five interviews were conducted with individuals, although only one of them actually completed a solo trip. Because a goal of this study was “quality over quantity,” no effort was made to encourage reluctant candidates to participate in interviews.

Data Collection: Interviews

All interviews were conducted in one of three gateway/exit communities (Bettles, Coldfoot, Anaktuvuk Pass) immediately following the completion of respondents’ trips. Interviews were open-ended and flexible. However, the interviewer employed an interview guide that included a series of themes to be addressed and suggested lead-in questions to assure that interviews produced relevant and comparable information. In most cases respondents carried the conversation, moving from topic to topic with little prompting from the interviewer. On two occasions, circumstances prevented tape-recording interviews, and one taped interview was corrupted by a recorder malfunction. No data from those interviews are included here. All interviews referenced in this report were tape-recorded and transcribed verbatim.

Data Analysis

After each recorded interview was professionally transcribed, the transcription was edited by simultaneously listening to the tape-recording and reading the text. The final edited transcriptions represent the data that were analyzed. Analysis of each interview was guided by an interpretive perspective. That is, rather than using a “content analysis” approach where occurrences of words or phrases were counted, an attempt was made to understand the meaning and significance of words from the speaker’s point of view. For instance, although many interview respondents referred to “remoteness,” they often used that word to mean different things. For some, remoteness was primarily a quality of the Park setting, and for others it was a psychological state or quality of experience. A software program, *QSR N Vivo*, was used to facilitate interpretive analysis of the interviews. Using the program, segments of interview text were assigned “codes” to represent the researcher’s interpretation of their meaning or significance. An iterative process of reading and coding each interview produced a list of more general codes or themes. After coding, each interview was “reconstructed” using the themes as a framework. The reconstructed interviews are excerpts of raw interview text that have been organized under thematic headings that are relevant to each interview. Some thematic headings are unique to individual interviews, but others apply to subsets of interviews or across the sample as a whole. The reconstructed interviews represent the finest stage of analysis. They contain a wealth of information that is not presented in this summary report, but they are all provided in *Appendix C: Data Excerpts*.

For the next stage of analysis, a narrative summary of each interview was developed using the reconstructed interviews as a guide. The summaries describe the most prominent themes in each interview and reference the specific data excerpts that provided the basis for the summary interpretations. Each summary provides a quick reference to the contents of individual interviews. They can be found in *Appendix B: Interview Summaries*.

After the first two stages of analysis, a team of three researchers used the interview summaries to identify a list of themes that are prominent across the interviews. The identified themes were then grouped according to their similarity or relevance to each other. Each of these groups represents a broad dimension of visitor experiences. The final result of this three-stage analysis procedure was a list of five experiential dimensions. In addition, specific factors (human use and impact or managerial presence and actions) that visitors indicated may influence their experiences were identified and linked to each of these broad experiential dimensions.

RESULTS

Table 1 contains summary information relative to the Phase I interviews conducted in 2001. A total of 94 respondents were interviewed in 32 separate group and individual interviews. The interviews ranged from 25 to 70 minutes in length, with an average length of 46 minutes. Seventy-five percent of the respondents were from outside of Alaska. Seventy-seven percent of the respondents were visiting Gates of the Arctic for the first time. Of 32 total interviews conducted, 12 were with hikers (37%), 15 were with river floaters (47%), and 5 were conducted with people who participated in both activities (16%). About one-quarter of the respondents were members of guided groups.

This results section is organized into three parts. The purpose of the first section is to describe the major themes that appear to be most relevant to visitors' experiences at Gates of the Arctic. The second section lists potential "factors of influence" that visitors indicated may affect their experiences. The third section lists specific management actions that were identified from visitor surveys and should also be considered as potential factors of influence.

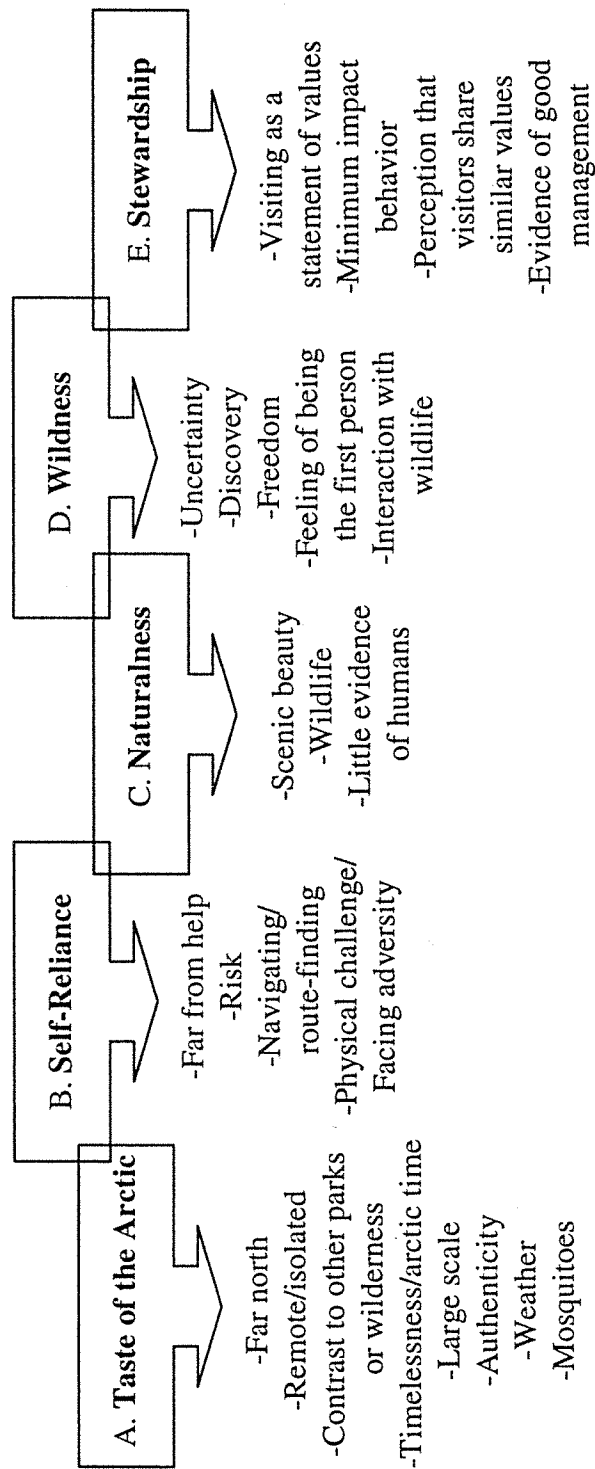
1. Major Experiential Dimensions

The preceding methods section described the process of identifying and organizing individual thematic elements within and across visitor interview texts. This section represents our best effort to meaningfully organize those elements into general categories or dimensions. Figure 1 shows the 5 dimensions of visitor experiences and the thematic elements represented by each dimension. The dimensions and themes listed in Figure 1 are generally applicable across the individual and group interviews, but not all interview responses are reflected in the 5 dimensions, and not all the related thematic elements are expressed in every interview. The development of generalized dimensions is a useful tool for organizing and discussing interview data. However, it is the individual thematic elements within each dimension that are of primary importance. Our presentation of discrete dimensions is somewhat artificial because in some cases, a theme could be associated with more than one dimension. Furthermore, individual visitor responses often reflect several different themes.

TABLE 1. SUMMARY INTERVIEW DATA

ID	Length (min)	# of Respondents	First Visit to GAAR?	Home State(s)	Travel Grp Size	Location of Visit	Hiking/Float	Guided?
1	50	2	Y,N	AK, CA	4	John River	Float	N
2	40	1	Y	CA	2	Noatak Area	Hike	N
3	33	1	N	CO	2	Arigetch	Hike	N
4	44	2	N,N	NM	2	Amiloyak Lk.	Hike	N
5	42	2	Y,Y	MI	2	Arigetch	Hike	N
6	68	3	Y,N,N	AK, CA (2)	4	AKP-N Fork	Both	Y
7	32	2	Y,Y	WI	2	Arigetch	Hike	N
8	38	3	Y,Y,N	PA, CA (2)	5	AKP-N Fork	Both	Y
9	52	2	N,Y	CA, AK	6	Killik River	Float	N
10	25	2	N,N	ME	2	Arigetch	Hike	N
11	25	3	Y,Y,Y	AZ	3	Arigetch	Hike	N
12	55	1	N	AK	6	Noatak River	Float	N
13	65	4	Y,Y,Y,Y	AK	4	N Fork	Float	N
14	35	2	Y,Y	KT	5	John River	Float	N
15	53	2	N,Y	AZ	2	N Fork	Float	N
16	50	6	Y,Y,Y,Y,Y,N	AK	13	Noatak/Nigu	Float	N
17	40	2	N,Y	MN, CA	2	N Fork	Float	N
18	44	4	Y,Y,Y,N	NY	4	John River	Float	N
19	55	2	Y,Y	CT, NY	2	Pyramid Ck- Dalton	Hike	N
20	45	5	Y,Y,Y,Y,N	AK (4), New England	6	Noatak	Float	N
21	55	5	Y,Y,Y,Y,Y	AK (2), New England (3)	10	Hammond River- Dalton	Hike	N
22	70	1	Y	MI	1	Tinyaguk Area	Hike	N
23	30	4	N,Y,Y,Y	?	7	Alatna-Arigetch	Hike	Y
24	30	2	Y,Y	AK	2	Kobuk River	Float	N
26	55	2	Y,Y	ID	2	Killik River	Float	N
27	45	1	Y	AK	10	N Fork/Gates	both	Y
28	25	2	Y,Y	AK	7	Nigu	Float	Y
29	43	3	Y,Y,N	CA	3	N Fork/Gates	both	Y
30	70	6	N,Y,Y,Y,Y,Y	CA	7	Dalton-AKP	Hike	N
31	48	4	Y,Y,Y,Y	CA	4	Killik-Urriat	float	N
32	60	7	N,Y,Y,Y,Y,Y,Y	IL	7	Alatna-Arigetch	both	N
33	35	4	Y,Y,Y,Y	MT, OH, MA	10	Noatak	float	Y
Totals	46 min (Avg)	94	33% Repeat Visitors	25% From Alaska	145		37% H, 47% F 16% Both	22% Guided

FIGURE 1. DIMENSIONS OF VISITOR EXPERIENCES AT GATES OF THE ARCTIC NATIONAL PARK AND PRESERVE



Dimension A: Taste of the Arctic

Many interview participants came to Gates of the Arctic specifically seeking a taste of the far north. Respondents had a variety of reasons for visiting the Park, but they often described their experiences and the settings they encountered as being characteristic of Alaska, the far north, or the arctic. Although some of the individual elements within this dimension may be found in other park or wilderness settings, in combination, they represent a unique and significant value of Gates of the Arctic National Park. In the paragraphs below, each thematic element related to “A Taste of the Arctic” is illustrated with interview quotations.

Far North. Many respondents listed the desire to see or say they had been north of the Arctic Circle as one of their reasons for visiting.

P: And there was just a draw to, to the fact that I was [going to be] in the Arctic Circle, because I had never been this far north before (Peter, 22: 3¹)

G: Plus also what adds to the whole lure is knowing where it is, knowing that a few hundred miles over the mountains to the north you’ve got the Arctic Ocean up there. It’s so exotic from that standpoint. R: Yeah, and you can certainly feel that, both in the...quality of the light, and the quality of the wind...(Grady and Rodney, 33: 37).

Remoteness. A dominant theme in many interviews was remoteness. Remoteness was described both as a feeling and as a setting quality. As a theme, it is also an important element of Dimension B (Self-Reliance).

T: Oh yeah, we came up here because it is the most remote, most natural, most wild place we could get to (Troy, 28: 4)

J: And just kind of that initial feeling when the plane drops you off and just the fact that you’re out there 100 or 125 miles from anything like a town is just unique, really hard to replicate anywhere else. M: Certainly not in the continental U.S...J: I think of this part of Alaska as just being, I mean in general, very remote (Jack and Mandy, 4: 46-47).

C: It wasn’t different than what I was expecting, except for the remoteness. The feeling of remoteness, you know. Once we were dropped off, we were like “wow” this is a little different than what we’ve done before. You know, I’ve done a lot of backpacking before and this is a little different now (Carl, 2: 10).

Contrast to other parks or wilderness. Many respondents described their experiences in Gates of the Arctic as wholly unique. Remoteness was most often described as the quality that sets GAAR apart from other parks or wilderness areas. Seeing no or very few other people was another

¹ The information following each interview quotation refers to the speaker(s), the interview number, and the excerpt that the selection was taken from. Excerpts are numbered sequentially for each interview and can be found in the companion document titled *Appendix C: Data Excerpts*

distinguishing characteristic of GAAR experiences. One additional feature that sets GAAR apart is the general lack of trails or other management infrastructure.

R: It's like nothing in the lower 48, that's for sure (Randy, 7: 33).

H: [It was], different from a lot of parks that I've visited. It's no less beautiful or more beautiful in terms of the scenery, but there's that element of remoteness to it that you can't find in a wilderness area...with a trail map, trail markers, defined trails...(Harvey, 27: 22).

J: But I've never been anywhere else I don't think where you'd have 6 days of not seeing other travelers. Even in the Boundary Waters (Joan, 13: 34).

M: I realized that I was watching for other people at first. I just expected somebody else to come down the river; that's always been my experience. You know, maybe you get a couple of days where you don't see anybody, but... We weren't even out that long, 9 days, but I kind of gave up and didn't expect to see anybody and that was a pretty high quality experience for me (Mandy, 15: 11)

R: We have never been on a trip where people weren't asking us a baseball score or, you know, "hey were you in Anchorage the other day?"...And the fact that we didn't see anyone for 7 days was what we really liked (Rick, 24: 18).

G: You don't feel like you're in a park. M: No interpretive signs, and no trails (Gary and Mandy, 15: 24).

E: But the difference out here from our other wilderness experiences is there isn't any evidence of...overuse or, you know, forced concentrations of impact to leave the rest of it, which you find in other wilderness areas... (Eric, 19: 43).

Timelessness/Arctic Time. Twenty-four hour sunlight afforded many respondents a feeling of timelessness. Some visitors experienced a conversion to "arctic time" during their trips.

S: But [with] endless daylight, you really can, your schedule just isn't restricted by daylight, which is nice (Sue, 21: 32).

J: You know, because your first day or two out in the woods on a trip like this, a lot of times all you want to do is just chill. Not go anywhere, not do anything...Kind of get into the rhythm of, you know, up at noon, lunch at 8, dinner at midnight. Kind of getting on the animal cycle...it didn't take us very long to make that shift to arctic time (Jeff, 12: 8-9).

Large Scale. The tremendous scale of the Park and features within it featured prominently in visitor's experiences.

J: So one of the things I really liked about this, just the magnitude, the scale of things is really different than what we normally see in our backpacking trips (Jack, 4: 43).

K: I would say it's really awesomely big. It was really cool to go as far as we did, not see anybody, and to realize we only touched a small part of the Park...That's a happy thought (Kelly, 19: 33).

C: There's something about knowing that the country goes on for literally hundreds of miles that adds to the experience (Cole, 33: 28).

Authenticity: For some visitors, encounters with evidence of past human use and current Park-area residents were proof of the authentic nature of the Park. As opposed to an artificial place set-aside or removed from reality, it was perceived as a place where real people pursue rugged wilderness lifestyles.

D: That's kind of neat to think about the history up there. How those people existed. My family mentioned the flies. How did those people deal with that? All the gear we had, what did they carry? The food we had, what did they eat?... It must have been just incredible. So, it's fun to be up there and think we're here in the year 2001, but somebody was here about 2000 years ago (Dan, 16: 22).

R: The other, another part of it for me, I really enjoyed standing in certain places and I could just feel exactly, or at least what I felt, how the first inhabitants would have felt coming up the Noatak...and so there's kind of an atavistic connection to the first peoples up here, it's probably very similar to what they saw and experienced (Rodney, 33: 41).

H: I mean to be the only two people, I think he said within 8 million acres. His closest neighbor was within 8 million acres. G: Sounds good to me. H: And they had this whole beautiful lake to themselves basically. The small, hand-built log cabin, which was just awesome, and the way they utilize the space...I thought it was simply amazing. Something I've always dreamt of doing... (Hank and Geoff, 32: 34).

Weather: Adverse, changeable weather was a significant influence on many respondent's experiences. Those that encountered bad weather often described it as typical of, or appropriate in, the arctic. For them, bad weather provided the opportunity to overcome adversity or practice self-reliance. Some visitors who enjoyed good weather suggested that they were just lucky, and that good weather could lead to dangerous misconceptions about the nature of the place.

R: ...But I think [what] struck me most about the weather was how it changed...I'd say almost within 12 hours there'd be something new coming, almost. I'd never seen weather like that that....I say well, a 40 mile trip here may be equal to a 100-mile trip down south (Randall, 26: 8-9).

K: Because the climate is what it is here, I mean, on my other trips, comparing it to this here, we were very fortunate in the weather. I mean you can have a terrible situation, the weather is very changeable here...So sometimes you have a good experience like this, you could be lulled into a false sense of security, and having been here before, I know that you need to be very careful when you're out there (Dick, 18: 11).

Mosquitoes: Even mosquitoes were an expected and significant (if not necessarily appreciated) element of many experiences. Visitors perceived them to be characteristic of the arctic, and

although they were often surprised by the quantity of mosquitoes, they were equally surprised when they did not encounter any at all.

B: Other than that, yeah, I'd say the biggest thing I was unprepared for would be the bugs. I knew they were going to be here, but I had no idea on the quantity (Brad, 5: 11).

J: The first part of the trip, we were greatly surprised that there were no mosquitoes. Absolutely none. Compared to the Kenai Peninsula and other places we've been in British Columbia. Even by California standards, there were no mosquitoes... We were carrying a mosquito net that we thought we were going to need (Joe, 30: 28).

Dimension B: Self-Reliance

Respondents almost universally described risk, safety, and challenge as significant elements of their experiences. While these elements might be found in other settings, many visitors suggested that at GAAR they differed primarily in degree. That is, a GAAR visit demanded a much greater degree of self-reliance than other settings generally require.

Far from help. Most respondents were acutely aware of their distance from help and the necessity of being responsible for their personal and group safety. Some visitors intentionally planned their trips and their equipment to magnify their physical or psychological distance from help.

T: ...If something had happened out there it would have been literally at least a week, and you would have had to hike yourself out. Like if somebody got seriously hurt, you would have walked yourself out or you'd have died, that's that (Tammy, 30: 72).

H: ...Just knowing that you're out there a long ways from anything—a road or if you should get hurt or have some kind of illness or sickness... So, you know, I think that brings an extra caution to it that you have to be aware and be sensible in your choices and your route finding and not take risks (Harvey, 27: 21).

R: So, in a way, it's kind of nice that you really are left to your own resources. And that you don't, I mean Park Service rescues are in the news all over the place, especially now with cell phones. So we really do have to come up here and know you are depending on your own resources and there are not readily available rescues here. I think that's really key to a true wilderness experience (Reba, 6: 51).

J: And we inflict a little bit of that upon ourselves because we choose not to bring means of communication. Like for some people who come up here and they bring iridium phones or whatever... We don't bring a GPS. We don't bring an iridium phone or anything like that to make it more of a wilderness experience than it can otherwise be (Jenna, 23: 16).

Risk. The perception of risk was an important element of self-reliance. Aside from being far from help in case of an accident, several interview participants perceived a more immediate threat from wildlife. Some visitors suggested that the opportunity to experience risk has been limited by modern society.

M: I think [the Park] deserves respect. It's really easy to get yourself in a bad situation up here (Mark, 3: 13).

J: And to me that is one of the fundamental characteristics of a wilderness experience...to be worried about wildlife. I mean not worried in a negative way...cautious, aware of, you know, camping in bear country is not for everybody (Jeff, 12: 18).

G: To me, it's like we gotten to be this culture of just safety obsession, where we take the zest of life out of things because we want to be guaranteed that it's not going to be too dangerous...God, don't let it happen in this park. Let people go out there and fry if they need to (Gary, 15: 27).

Navigating/Route-Finding. Traveling cross-country, without the benefit of trails or trail maps enhanced the feeling of self-reliance for many respondents. At least one group suggested that they would prefer not to have any maps at all.

K: You're on your own for navigation, and that's nice...And the absence of any points of reference other than the relief that you could spot on your map is interesting. Like in most places we go there's at least a trail system or well-known routes. Up here, there are no well-known routes. Once you get up in those hills, you're just going.... that is, to me, almost a definitive part of the experience (Keith, 29: 10-12).

F, We wanted to make maximum use out of our time. The map enabled us to do this, but I had mixed feelings about a map. I just as soon not have a map out there, but when you have contemporary pressures like....getting back [to work] Monday, it was helpful (Fred, 13: 20).

Physical Challenge/Facing Adversity. Many respondents, especially those who participated in hiking trips, described their experiences as very physically demanding. For them, facing and overcoming adversity often led to powerful feelings of satisfaction or accomplishment.

R: This trip was...extreme. M: The most physically challenging, ever. R: I felt...that we probably both pushed pretty close to our ability levels in terms of endurance and in some places, skill (Randy and Missy, 7: 22).

S: I thought the best thing about the trip was that we successfully accomplished something that pushed us all to our limits...And found our limits, I would say, and approached them and pushed ourselves a little beyond (Steve, 30: 50).

L: The virtue of these trips for us is teaching ourselves and kids to deal with adversity and how to take care of themselves in the wild...We're building attitude and character (Linda, 16: 20-21).

Dimension C: Naturalness

Most respondents described the Park as a place where natural qualities dominate. They saw very little evidence of other people or their impacts on the environment. Visitors enjoyed viewing dramatic mountain scenery and wildlife as well. Those that did not see many live animals often described the abundance of tracks, bones, and other signs of animal presence.

Little Evidence of Humans. Whereas the relative absence of other visitors strongly influenced dimensions A and B, it was the absence of visible impacts from visitors that had a greater influence on naturalness

R: ...even though we would see occasional other parties out there, I never really saw evidence of other campsites. Never saw any remains of campsites. No fire rings. No nothing (Rodney, 33: 24).

L: You step on a gravel bar, and you see footprints of wolves and moose and bear, but you don't see human footprints. I like that (Linda, 16: 34).

M: That's one of the things that drew us here was just the lack of any influence. It's just all natural and just the way it has always been, with a few humble signs of people we saw ahead of us. But just the natural aspect of the whole area (Matt, 29: 27).

C: Seeing another party usually doesn't bother me in the least. Seeing ecological impact is...I don't want to come here anymore...If this is too heavily fished, trampled on, worked over, it's not really a wilderness anymore (Curt, 31: 45-46).

Scenic Beauty. Not surprisingly, many respondents enjoyed being surrounded by beautiful scenery in the Park. Rather than describing small details or intimate settings, they tended to focus on grand vistas, wide-open terrain, and spectacular mountains.

P: It's like every foot of the way I could see just beautiful areas all around (Peter, 22: 31).

S: The peaks, you know, I haven't been that many places in the world, but of all the mountain places I've been, I've never seen anything as spectacular as that (Sue, 11: 18).

T: I think the high point was our final peak that we went up because the view was so expansive in all directions...So, for me, it was just being able to revel in the glory of all of the mountains that we could see in that one spot (Bert, 33: 32).

Wildlife. Some visitors were amazed to encounter so much wildlife, and others were disappointed that they did not see more. However, they all interpreted the abundance of tracks and bones as proof that wild animals were all around.

P: I mean, [on] all of my backpacks I've done in 3 years, I've never seen this much wildlife. I mean, big wildlife, you know. ... Grizzly bears were the first time. The wolverine was a first time. The caribou. So, yeah, the wildlife was amazing (Peter, 22: 12).

R: I was disappointed. I thought we'd see moose, maybe even bear...every place we stopped had tracks, but we never saw the animals themselves (Robert, 14: 15).

T: Found bones and plenty of signs. That was neat to find bones. B: There were definitely animals out there and a lot of it [sign] was fresh (Tim and Brad, 5: 12-13).

J: You know it was just like so cool to see evidence of the wildlife out there... We didn't get to see them as much ..., it wasn't like Marty Stouffer's "Wild America" all around us, but it was cool to see the evidence that it is like that (Joe, 30: 62).

Dimension D: Wildness

Whereas naturalness was most often described in terms of scenery and other tangible qualities, the elements of wildness were described by respondents as intangible feelings or psychological states. In general, wildness refers to the essentially uncontrolled, unpredictable nature of visitor's experiences.

Uncertainty. Some respondents described the need to be flexible when planning their trips because of uncertainties related to weather or incomplete information. This element is closely linked to the next two elements--discovery and freedom.

G: But it's not so controlled, like our daily lives in Prescott or Fairbanks or wherever. There's an unknown there's a creativity to it... (Gary, 15: 5).

B: On the Nigu float, we didn't even know our take out point until the pilot dropped us off and we just kind of said "Well, let's go here." D: Yeah, we just laid down on the gravel there... B: We didn't know until the very last second (Brad and Dan, 16: 79).

M: We were going to go to a lake called Cascade...but we got there and they were all frozen over, so the pilot took us down to Amiloyak Lake and landed there (Mandy, 4: 5).

Discovery. Some respondents struggled to find information about the Park in advance of their visits. For those people, having little information often led to feeling like "explorers" or "pioneers."

K: ...Gates of the Arctic was very hard to find information on, especially in New York, and we said, "Well, we'll just go to Fairbanks and we'll figure it out." So we got to Fairbanks and it was still kind of hard (Kelly, 19: 7).

S: It was challenging trying to find route information...J: That added though, to the adventure of the trip...we all had a smug feeling like we were exploring...D: Yeah, I definitely felt like a pioneer at some points (Steve, Joe, and Dylan, 30: 78).

J: but even once you get up there and you think, "Oh, I'll go up this valley," you have no idea what it will be like.... I mean you feel much more like you're exploring here than you ever do there [in the east] (Jaime, 21: 30).

Freedom. In addition to often needing to change their plans, visitors felt that they were free to make changes as they wished. They often contrasted their relatively unrestricted experiences in the Park to experiences in other, more highly regulated settings.

B: If it's very regulated. Just really takes away from that free, that wildness I guess (Brad, 16: 77).

S: We were able to change our plans. We didn't have to have a permit hanging off the back of our pack saying we were a registered user of this area. [It felt like] you're in a wilderness versus a very highly regulated place (Sue, 21: 70).

M: I didn't feel that I was limited at all. J: Yeah, I didn't feel at all constrained (Mandy and Jack, 4: 71).

Feeling of being the first person. Many respondents enjoyed feeling like they were the first people in an area. In most cases they explained that they understood others had likely been there before. For them, it was more important to feel like the first than to actually be the first visitor to a place.

R: The fact that we were up there essentially by ourselves made the trip. I think when we got to Crevice Creek and we saw a sign that said Crevice Creek, that was one of our first indications that there'd ever been anybody else up there (Robert 14, 19).

T: You know, it's really feeling like you're the only one there... You may be the first one that's been there; you might not have been, but it feels like it. You can't tell you're not. That's kind of what wild is (Troy, 31: 44).

J: You had the illusion, which is the most wonderful thing. That feeling that you were the first person ever there... maybe nobody had climbed that mountain before, and maybe they have. Just the illusion that perhaps they hadn't ever been there was great (Jerry, 1: 38-39).

Interaction with wildlife. The behavior of wildlife, and context for viewing wildlife, were often described as indicators of wildness.

R: All our bears seemed to act just like you'd want a bear to do... every one of them seemed to be good, wild bears (Randall, 24: 19).

R: You know you can look at bears behind bars in a zoo or something like that, but to see one in the wild chewing on a moose, that's terrific. That's the real thing (Rick, 24: 14).

R: I was critical at first about not seeing as much wildlife as I envisioned there would be, and then I'm saying to myself "this is why we call it wildlife" and they're probably here all the time but there so sensitive to seeing people... that they disappear into the brush (Ray, 18: 30).

Dimension E: Stewardship

The differences or similarities that respondents perceived between themselves and other visitors often had a strong influence on how they evaluated those visitors and their impacts. In many cases, respondents seemed to feel that other visitors shared their own values. Some respondents felt that Park managers shared or reflected their values as well.

Visiting as a Statement of Values: Numerous respondents commented on the expense and hassle of getting to the Park. For some of them, visiting required significant sacrifice. Those respondents regarded visiting the Park as a strong statement of personal values.

J: We're not rich and we're not young [but] we did it very nicely...would you rather have your cell phone and your Gucci shoes, or do you want to spend your money on something else? (Joan, 13: 63).

D: we don't own a second home and we don't have our own airplane. We don't have a motorboat; we don't have any of that. We do take our river trips (Dan, 16: 74).

Minimum Impact Behaviors. Many interview participants expressed concern about the impact of their visit to the Park. Even leaving footprints was an issue for some. Most visitors were well-versed in minimum impact practices, but some were unsure about the best practices for arctic settings.

M: Leave things the way you found them...I think that's very important...we packed out our trash, we used a stove, we never had a campfire. R: If a good rain comes along to cover our footprints, you won't know we've been there (Margaret and Robert, 14: 13-14).

G: I even hate making footprints in mudbanks and stuff...Because I've had so many experiences here where you just get the sense nobody else has ever been here. Maybe I'm just a wilderness snob where I like that feeling and it's not really a possible thing in this world anymore. But I think you can be attentive to other people's experience. I think it's important for me to try to leave them what you'd want for yourself (Gary, 15: 14).

E: This is such a different type of climate, and the sensitive tundra...we didn't know quite what to do with some of those kinds of things (Ellen, 26: 34).

Perception That Visitors Share Similar Values. In addition to limiting the absolute number of visitors, difficult Park access may also limit the kind of people who visit. Many respondents suggested that people lacking appropriate wilderness ethics would not go to the trouble of getting into the Park. In some cases, respondents did not mind encountering other visitors specifically because they shared values or other similarities. In the case of overflights, some respondents felt that planes full of "people like them" were less obtrusive than others.

S: Most folks aren't going up there just to leave their trash. You don't make all that effort to get up there to do that...so it's just something that was an oversight, fell out of a pocket, fell out of a bag, wind blowing hard and caught it...A: I have to think it was an accident. I just can't see going to the effort of getting there and still having a mind-set that you leave your trash (Sheila and Amy, 23: 12).

L: Only the people who really want to go and usually are educated to that environment are going to go there...How many times it has been proven, make it accessible and then here comes the blight. Because when people grow lazy and can get there without much effort, also they bring along with them the attitudes that don't preserve that area.

H: You might run into another backpacking party, but so what? They're doing the same thing you are...I mean we're sharing, basically. So I can't say that they're taking away from me (Harvey, 27: 19).

J: But to me, a jet flying overhead...that's much more of a connection to the industrialized world than a bush plane. A guy flying a bush plane is flying people like me around. You know, they're either hunting or fishing or watching wildlife, just hanging out and grooving on the wilderness...And a jet is tied into the whole industrial megacommercial complex of the world (Jeff, 12: 23).

Evidence of Good Management. Most interview participants reported favorable impressions of managers and management activities at the Park. Visitors generally enjoyed the "low-key" management presence, however, in a few cases, they indicated that they would like to see more evidence of active stewardship by the Park Service.

J: If I never get out in it again in my life, I [want to] know it's being well cared for by smart people that have passions (Jill, 13: 64).

R: Most of the park rangers...they're environmentalists for the most part. We're environmentalists. We'd like to keep it wild and all that kind of stuff. I think they do too. So I think they're the good guys (Rick, 24: 34).

S: They did the ranger talk, even though these guys are rangers they still did the talk, which to me had a lot of impact. I think it's pretty meaningful that they take their jobs that seriously...that leaves a pretty good impression that there's good management; that the Park Service is putting people out there that really care about the parks...(Shannon, 9: 34).

P: I don't think this was the first park that I went to that it [registering] wasn't mandatory, but I kind of think it should be. So that...you can just keep track of the use and the areas that are being used and how it's being used (Peter, 22: 36).

T: ...Most places we've ended up going I've noticed the Park Service at least keeps track of how many people go in or out as a minimum...that was not apparent here...It was unclear to me whether it was well enough watched over (Troy, 31: 50).

2. Factors of Influence

There were a variety of potential influences on visitors' experiences identified from the interviews. The purpose of this section is to list some of the influencing factors that should be investigated in the phase-two research to determine the strength and direction of their effect. Some factors may strongly influence a single experience dimension, while some may contribute to several dimensions, but at different levels or in different directions. Individually or in combination, these influences will be the basis for developing both experiential indicators and quality influence factors.

The potential factors of influence are listed here and referenced to each of the 5 major dimensions of the wilderness experience within Gates of the Arctic National Park and Preserve: A) A taste of the Arctic, B) Self-reliance, C) Naturalness, D) Wildness, and E) Evidence of good stewardship.

1. Opportunities to change decisions (choices) about trip plans (A,B,D)
2. Evidence of subsistence lifestyles, intact relationships with nature (A)
3. Competition for camping sites among visitors (A,D)

4. Sounds and lights seen or heard coming from outside wilderness (A,C)
5. Amount of energy and resources invested to get to the park and to the departure point (A)
6. Perception of probability of seeing other groups during the trip, after departure and prior to take-out (A,E)
7. Seeing aircraft overhead (separate cases: bushplanes/jets/military/flightseers) (A,B,D)
8. Perceptions of constraints to access and egress due to air taxi dependence (A,B,D)
9. Evidence of previous human use, including campsites (A,B,C,D,E)
10. Number of groups encountered per trip or per week (separate cases: campsites/while traveling (A,B)
11. Size of groups encountered in the wilderness(A,B)
12. Timing of group encounters in the wilderness(A,B)
13. Behavior of other groups encountered (display of ethics/not, commercial/not) (A,B)
14. Use of high technology (satellite phones, GPS) by themselves/other visitors (B)
15. Use of commercial guides and guidebooks by themselves/other visitors (B,E)
16. Physical development by humans (buildings, roads, airstrips) (C,E)
17. Evidence of wild animals (antlers, scat, tracks, bones, trails) (C)
18. Perceived seriousness of ecological impacts of previous visitors (C,D,E)
19. Amount and character of interaction with NPS personnel (E)
20. Visible management infrastructure (signs, buildings, bridges) (E)
21. Perceived similarity of values with other users and with managers (C,E)
22. Amount, type and location of litter seen (story or negligence?) (E)
23. Availability/accessibility of information for trip planning (D)
24. Perceptions of obtrusiveness of management actions (D,E)
25. Perceptions of sounds and behaviors of wild animals (D)

3. Specific management influences on experiences

1. Group size limits
2. Total group number limits
3. Education and information to change knowledge, attitudes and behavior
4. Interaction with management, making contact
5. Registration upon entering
6. Permits to enter
7. Naming places
8. Trails
9. Signs
10. Bear barrels
11. Camping length restriction
12. Changing access (roads/trails)
13. Counting number of people
14. Management actions that contribute to safety of groups

IMPLICATIONS

The ANILCA legislation that established Gates of the Arctic National Park and Preserve explicitly recognized the unique qualities of the Park and represented a significant departure from some of the values traditionally associated with wilderness and national parks in other parts of the United States. In addition to recognizing the unique biophysical attributes of the region, ANILCA also recognized a national value in protecting the extensive human history in arctic Alaska and traditional relationships with nature still practiced in many regions of the state. Within the strategic planning process for Gates of the Arctic, there is the intent to protect meaningful wilderness experiences that are often unique to Alaska, to the park, and to the wilderness there.

This project was aimed at developing an understanding of these meaningful wilderness experiences. Through analysis of the stories told by the recreation visitors themselves, five major dimensions of the Gates of the Arctic Wilderness experience have been identified. These dimensions have not been described as important to all visitors, but most visitors define their experiences within the descriptors attached to them.

An important aspect of Gates of the Arctic is the opportunity to “taste the Arctic” or get a feel for arctic conditions in a setting that is not dominated by the works of humans. A trip there to experience the arctic is perceived to require substantial self-reliance, both for safely finding one’s way and for physically getting to destinations within the park. As in all national parks, Gates of the Arctic allows visitors to immerse themselves in nature, but beyond beauty, abundant evidence of wildlife, and little evidence of humans, this park offers extreme opportunities to experience wildness. Visitors perceive that interactions with wildlife here are authentic, not influenced by human controls or manipulations, and there is also a true sense of discovery and exploration inherent in their experiences. Very importantly, only a few people visit the Park, and those few people are perceived by each other to hold a strong set of values that make a visit to this place important in the overall scheme of their lives. Visitors seem to tolerate each other in part because of this perceived similarity in values. Furthermore, they are hesitant to encourage management to increase control and access to information due to their self-perception as a small, unique segment of the population bent on going to remote places where they have to have the skills and strength to be self-reliant; where they are surrounded by nature that is not manipulated, as they are not manipulated; and where they are in the company of other visitors and managers who are like-minded and value the same things they do in wilderness.

The experience dimensions described in this report are proposed as unique to Gates of the Arctic National Park wilderness. The dimensions are derived from current visitor relationships with the Park; they were not predetermined by the Wilderness Act or the Park’s strategic plan. Visitors describe elements of their experiences in terms that reflect some of the central themes within the Wilderness Act and the Park plan, but the exact nature of those elements and the relationships between them are not wholly captured by either of those documents. For instance, elements of human experiences relative to “outstanding opportunities for solitude or a primitive and unconfined type of recreation” are often identified as the key issues that guide selection of indicators for setting standards and monitoring in wilderness. Among Gates of the Arctic wilderness visitors, solitude has not been described as a major experience dimension, but related feelings of isolation and remoteness certainly have. In fact, the isolation and scale of the Park are commonly used by visitors to contrast

their experiences at Gates of the Arctic with other parks and wilderness. Feelings of being the first person to be at a place and of being far from help bridge across two other experience dimensions and are also facilitated by isolation from other visitors. While encountering few other people is clearly important to visitors' experiences, encounters are sometimes mediated by perceptions of uniqueness and similarity of values.

Like solitude, the opportunity to exhibit primitive skills is not a specific major dimension of the experience at Gates of the Arctic. Instead it is subsumed within the identifiable dimensions. Visitors describe the distance from help, the psychological challenges of way-finding in the wilderness, and the physical challenges involved in wilderness travel. They also value feelings of uncertainty and discovery, which are enhanced by the need to make their own decisions and then be dependent upon their skills and strength to act on those decisions.

Similar to solitude and primitive skills, the notion of unconfined recreation is captured within more than one experience dimension. Visitors who describe the freedom they feel in wilderness and the many opportunities (sometimes necessities) to make and change choices put confinement issues into perspective at this place. Furthermore, while they are hesitant to encourage management constraints, many visitors take comfort in knowing that managers reflect their own personal values and they feel that some evidence of protection of wilderness attributes is important.

The Park's strategic plan, approved in 1986, established the general goals of encouraging activities and methods of access that emphasize solitude, self-reliance, challenge, discovery, and minimum impact. These goals are very compatible with the range of experiences described by current visitors as well as the Wilderness Act itself. The greatest benefit of the analysis of data collected in 2001 may be derived from understanding how these previously defined experience goals fit into the current experiences obtained by visitors. With such an understanding, managers can make well-informed decisions about their role in protecting unique aspects of wilderness experiences at Gates of the Arctic National Park and Preserve.

APPENDIX A

GATES OF THE ARCTIC RECREATION VISITOR STUDY

PHASE II DRAFT IMPLIMENTATION PLAN

Purpose

The Phase I final report provides the necessary understanding of the range of experiences that visitors are having at Gates of the Arctic and significant influences on those experiences, including the presence and behaviors of other visitors and existing and potential visitor regulations. Phase II will focus on collecting information from a representative sample of visitors to provide input to establishing baseline conditions on selected indicators, obtain input on acceptability of potential standards, obtain greater understanding of the potential effects of alternative management practices to protect the wilderness character of Gates of the Arctic, and provide descriptions of use and user characteristics.

Methods

Contacting Visitors: There are four identifiable visitor strata, defined by access method or place of access, that will be targeted for data collection. Contact methods will vary somewhat by strata, but the measurement instruments distributed will have similarity in purpose and response. Each of the four strata and proposed methods for contacting them are described below.

1. Visitors that fly to the park by chartered bush plane from Kotzebue

It has been estimated that about 200 people per year, or about 10% of the estimated total number of annual visitors, access the park by chartered bush plane from Kotzebue. To provide the measurement data needed to estimate use and use distribution, we propose that a card is given by the commercial operator or a Park Service employee to every person leaving Kotzebue on a chartered bush plane. This card will ask a small number of questions:

- A. Are you flying to your home community or to visit someone in their home community on this flight? ☐ Y ☐ N If yes, do not complete the rest of this card. Thank you.
- B. Are you departing from Kotzebue on a recreation trip? ☐ Y ☐ N If no, do not complete the rest of this card. Thank you.
- C. On your recreation trip will you spend any of your time in the Gates of the Arctic National Park & Preserve? ☐ Y ☐ N ☐ Uncertain If no, do not complete the rest of this card. If yes or uncertain, please continue. Thank you.
- D. What are the major destination points or stretches of rivers that you intend to visit during your trip? _____
- E. How many people are accompanying you on this recreation trip? _____
- F. How many nights do you expect to be away? _____ nights
- G. Date: _____

On a sample basis, in an effort to obtain response from a minimum of 10% of our total sample this season, a science investigator will contact every person answering No on item A, and Yes on items B, and C on the card for a full set of contact information, including asking the visitor to receive a mailback survey at his or her place of residence approximately one week after returning home. The contact sheet will be one page, printed on front and back, and keyed to connect to the information collected on the card. It will collect the following information:

- H. Experience history at Gates of the Arctic National Park and Preserve, Alaska, other wilderness and national parks.

- I. Purpose of trip: hiking, floating, hunting, fishing
- J. Guided or not guided
- K. Expectations for conditions encountered inside the park
- L. Name and address for mailing purposes

2. Visitors that fly to the park or near the park by commercial air services from Fairbanks then to their destination point by chartered bush plane

These visitors will be contacted in the same way as at Kotzebue. When each person checks in to fly on the commercial flights with Wrights and Warbelow Airlines, they will be asked to complete the visitor use-monitoring card. On a sample of days, a science investigator will then administer the contact form for Gates of the Arctic visitors to those indicating departure on a visit to the park in an effort to obtain 80% of our total sample responses.

3. Visitors that drive to hiking access points along the Haul Road or drive to Coldfoot and then fly to a departure point by chartered bush plane

The indirect indicator of use here will be a traffic counter installed at the turn-off to the Coldfoot commercial center and administrative site. On all days of the study period, a reading of beginning and ending traffic numbers will be essential (10 am and 6 pm). On a set of sample days, selected to try to obtain 10% of our sample, an interviewer will record the type of traffic that enters the commercial center and administrative site (commercial trucks, vehicles with boats, tour buses, vans, private automobiles, administrative vehicles, etc.) and make contact with every person who could conceivably be destined to access the Park from the Haul Road. A simple question related to whether the visitor is intending to enter the Park on this trip would be sufficient to determine whether he or she should receive the full contact sheet and request to receive the mailback survey. With air charter cooperation, each planeload of passengers at the airstrip will receive a monitoring card and, if appropriate, be asked to complete a visitor contact sheet and receive a mailback survey.

4. Visitors that access the park by privately owned and operated bush planes

There is very little existing information about private pilots who may freely access the Park without passing through any of the other gateways in Kotzebue, Fairbanks, or Coldfoot. Studying this segment of the visitor population presents a significant challenge that will require one or more creative approaches. The first priority will be to estimate the total number of private-pilot Park visitors and to describe their use for the 2002 season. If the survey instrument developed for the general visitor population is deemed relevant and appropriate for pilots, then it will be administered in conjunction with the use-estimation study. The matrix on the following page shows options for identifying and contacting private-pilot visitors. Read from left to right, the options represent increasing levels of focus or specificity, at the cost of increasing potential for missing some candidates. Any cell from the first row can be combined with any cell from the rows below.

	Option A	Option B	Option C
1. Identify Candidates	Obtain lists of one or more of the following: 1. Licensed pilots in Alaska 2. Members of Alaskan pilots associations 3. Alaskan bush-plane owners	Obtain list of candidates from flight plans showing intent to visit GAAR	Snowball sample (identify candidates through reference by other candidates)
2. Contact Candidates	Mail a brief card asking about visits to GAAR to a random sample	Mail a brief card asking about visits to GAAR to the population	Contact by phone, repeated monthly or at end of use season
3. Administer Survey	Send full questionnaire to a random sample	Send full questionnaire to the population	Send only to people clearly identified as visitors

Those visitors not included in this survey include the following:

1. Motor boats that come up river to access the park
2. Adjacent or internal residents, including Park employees, that access the Park from their residences, or friends and relatives accessing the Park from local residences
3. Rural residents accessing the park for subsistence activities

Sampling

The average annual population of recreation visitors to Gates of the Arctic in the months of June, July, August, and September is estimated to be between 1,600 and 2,000. To be conservative on sample estimation, a population of 2,000 is assumed. A random sample of 323 from that population will allow estimation of a dichotomous variable with maximum variation, accurate to plus or minus 5%, at the 95% confidence level.

The population of visitors is thought to be distributed between months as follows: 15% originating in June, 40% in July, 35% in August, and 10% in September. These estimates are derived from available park data. The reported visitor estimates are only available for use from the Haul Road, and only for the months of June through August. The September proportion is a best guess estimate. In the absence of better information, it is assumed that these proportions are true park-wide.

The population of visitors is estimated to be divided between three points of origin as follows: 80% from Fairbanks, 10% from Kotzebue, and 10% from the Haul Road. These proportions represent researchers' best guess of actual percentages based on observation during the Phase I study and some manager input. The amount and proportion of all recreation use accounted for by private pilots accessing the park are not included in these estimates. Private pilot recreation use of Gates of the Arctic is assessed through a separate sampling methodology.

It is estimated by researchers that there are twice as many people entering the park on an average weekend day compared to an average weekday during the study period. This estimate is derived from researcher observation during the Phase I study. There are 86 weekdays (Mon. – Fri.) and 36 weekend days during the 2002 study period of June 1st to September 22nd. It is assumed that

visitation on the July 4th and Labor Day holidays will be typical of visitation on other weekdays during the study period.

It is estimated that there will be a minimum 65% response rate to the mailback questionnaire administered to recreation users at Gates of the Arctic. This response rate is a conservative estimate of actual responses based on results from many previous recreation user studies. The questionnaire response rate for Gates of the Arctic Kobuk River hunters during the Phase I study reached 94%.

To reach the desired sample size based on the above criteria, a minimum of 497 questionnaires should be administered. To do this, Sampling needs to occur in Fairbanks on all 36 weekend days, and on a randomly chosen sample of half of the 86 weekdays. This requires a total of 80 full workdays in Fairbanks during the study period. Sampling in Kotzebue and on the Haul Road will be less intensive, mainly occurring in July and August, and including 12 July/August weekdays and 9 July/August weekend days for a total of 21 workdays at each location. This estimate does not including potential sampling in June and September at these lower-use areas. The table on the following page shows the proposed distribution of sampling effort across the 3 study sites.

		Confidence			
		0.99	0.95	0.90	0.85
		<u>Sample w/ 5% margin of error and .50 probability</u>			
Population =	1,600	470	311	232	184
		<u>Sample w/ 5% margin of error and .50 probability</u>			
Population =	2,000	499	323	239	188
		<u>Kobuk "length of stay" mean = 9.67, var. = 8.70</u>			
Population =	2,000	220	134	96	75

	June	July	August	September
Population proportion:	15%	40%	35%	10%
Total Sample Weekdays (50% of all)	Weekdays per month			
43	20	23	22	21
Total Sample Weekend days (100%)	Weekend days per month			
36	10	8	9	9

<u>Entry Location</u>		Returned sample w/ 5% margin of error, 95% confidence, and .50 probability				
		Total Returned Surveys				
Overall	100%	323	48	129	113	32
Fairbanks	80%	258	39	103	90	26
Kotzebue	10%	32	5	13	11	3
Haul Rd.	10%	32	5	13	11	3

<u>Entry Location</u>		Surveys administered per sample day - 65% response rate			
Overall	100% Weekday - half	2	6	5	2
	Weekend day - all	5	17	13	4
Fairbanks	80% Weekday - half	2	5	4	1
	Weekend day - all	4	13	10	3
Kotzebue	10% Weekday - quarter	1	2	2	1
	Weekend day - half	1	3	3	1
Haul Rd.	10% Weekday - quarter	1	2	2	1
	Weekend day - half	1	3	3	1

Data Collection (Mailback surveys)

The following topics will be the emphasis of the mailback survey that will be distributed to a sample of visitors during the 2002 use season. These data will be linked to the use-monitoring card of each individual and to an on-site trip departure contact sheet. On the contact sheet each person will be asked to voluntarily receive this mailback questionnaire. If they agree to receive it, they will be asked for a name and mailing address and the approximate date they will return to their home address. This information from the contact sheet will be coded into a data set that will drive the timing of the mailing of the first survey form to the address provided.

Each person will receive at their home address a copy of the survey booklet, a letter explaining the purpose of this information collection activity, and a pre-paid, addressed envelope to use for returning the questionnaire. All mailings will come from the Leopold Institute, where all databases will be maintained. Names and addresses of visitors will be destroyed upon completion of their returned survey. These items cannot be held indefinitely or associated with any of the respondent answers, according to the OMB clearance maintained by the Leopold Institute for this type of information collection. Following proven methods to maintain interest and obtain high response rates to mailback surveys, each person will receive a reminder and thank you card approximately one week after they receive the first mailback package. Those visitors who have not returned their completed survey within three weeks of the original mailing will receive a second copy of the questionnaire with a report on response rates at that time and a message that stresses the importance of receiving information from each member of the sample. A last effort to obtain response will occur approximately seven weeks after the initial mailing, when all those who have not responded at that time will again receive a copy of the questionnaire, be informed it is the last contact they will receive, and asked again to complete the survey. Response rates using this survey methodology commonly reach 65 to 85%. We expect a relatively high response within this range due to the face-to-face contact with the interviewer to obtain permission to send a survey, the level of investment already committed by completing the on-site departure point contact sheet, and knowledge obtained from Phase I research that suggests a strong commitment to the park and efforts to protect the resources there.

The mailback survey will be printed booklet style and it will contain the following important OMB information: the OMB clearance number clearly visible on the first page of text; a paragraph at the end of the survey that directs the respondent to provide the Office of OMB and the Department of Agriculture Clearance Officer with any relevant comments about this information collection exercise; a clear explanation that all responses are voluntary and that names and addresses will not be able to be connected to any information they provide in response to the survey.

The survey booklet will be developed once agreement is obtained on the general scope of content and after some lengthy discussion with managers and amongst the science team about the list of potential factors of influence, and the management actions that are feasible and desirable to explore with visitors.

The booklet is likely to be organized into a "funnel approach," allowing the visitor to provide answers to easy questions initially to move quickly through much of the survey and to make a commitment of time that will encourage each of them to complete the full survey. It will likely be divided into the following sections:

1. Brief description of the trip, including group size length of stay, method of travel and access and major destinations, to validate contact information.
2. Questions about the relative importance/saliency of each of the major visitor experience dimensions. Each experience dimension will be represented not by the general dimensions name attached in the Phase I report, but through multiple items representing the actual descriptors pulled from interviews.
3. Each potential factor of influence will also be explored with each visitor to obtain indications of the condition of these factors relative to the quality of wilderness experience received at the Park. It is from this set of items, with complete knowledge of how they vary with achievement of the experiences described above, that indicators of change will be extracted. Selected indicators will be chosen as indicators of larger domains of influence with knowledge of how they affect the various dimensions of the wilderness experience.
4. A list of action items that management would conceivably apply at the park and visitor responses to tradeoffs involved in applying these tactics.
5. User characteristics which are believed to be significant for planning education programs, predicting acceptance of proposed management actions, and for distribution of information to potential users will be collected within one section of the survey. These characteristics may include:
 - Socio-demographics (age, income category, disability, family structure)
 - Attitude toward the agency (perception of similarity of values with agency)
 - Commitment to public purpose (attitude toward wilderness values and recreation access)
 - Experience use history (Self-perceived level of skills, frequency of backcountry or river travel, frequency of visits to rural Alaska, frequency of visits to National Parks)

Analysis and Reporting

All analysis will be conducted at the Leopold Institute using a range of univariate and multivariate statistical techniques. Emphasis will be on testing hypotheses about the validity of the visitor experience dimensions developed in Phase I research (factor analysis of multiple scale items to identify dimensions from quantitative data), developing understanding of the relationships between individual and combinations of potential factors of influence and the major experience dimensions (regression analysis), evaluating tradeoffs involved in applying various management actions (assess obtrusiveness of each potential management action: perception of likely success of each action to accomplish the protection purposes and the likely impact to visitor experiences along other dimensions), and segmenting visitors according to knowledge gained about their relationship with the Park, other places, and the managing agency (cluster analysis with regression tree validation).

A final report will be provided to the Park for review purposes prior to any release of information, publication of results, or release of data. While a preliminary report should be available by the end of December 2002 for examination and comment, it will be mostly descriptive. Completion of detailed analysis will extend through April of 2003, when a final report will be distributed for further discussion and input to planning.

Budget (fy 2002, fy2003)	<u>Leopold</u>	<u>NPS</u>
Personnel:		
Research Team Leader (GS-14 (3 months))	\$31,350.00	
Research Assistant (GS-5 (Oct – Feb)/GS-7 (March – Sep))		\$26,542.88
Research Assistant (GS-7 (Oct – Dec 2002))		\$ 9,456.00
Social Science Analyst (GS-9 (3 months))	\$8145 (02) \$8145 (03)	
Travel and per diem:		
Research Assistant		\$3,915.16
Research Team Leader	\$2,500.00	
Social Science Analyst	\$1,750.00	\$1,750.00
Materials:		
Surveys (printing, envelopes)	\$2,500.00	
Postage	\$622.50	\$622.50
500 target mailings with 65% response		
First mailing: 500 x .57 (2)=\$570		
Post card reminder: 500 x .21=\$105		
Second mailing: 300 x .57 (2)=\$342		
Third mailing: 200 x .57 (2)=\$228		
Leopold Institute Contribution:	\$44,495 (02) \$8145 (03)	
NPS Contribution (with indirect)		\$36,605 (02)
(with indirect)		\$12,908 (03)
TOTAL:	\$52,640.00	\$49,513.00

Analysis of Labor Commitments

The proposed study plan and budget includes all necessary labor for survey design, mailing, coding, analysis and reporting. In addition, partial labor is included for data collection (one month total: Neal, 2 weeks during July; Brian, 2 weeks during June). The following labor is not accounted for:

1. Labor for pilot study. (This will involve administering a draft questionnaire to a small sample of respondents for testing and refinement).
2. Labor for formal data collection.
 - a. 2 weeks in June plus July through Sept. 20 in Fairbanks (every week-end and half of weekdays).
 - b. Half of week-end days and $\frac{1}{4}$ of weekdays in Kotzebue in July and August.
 - c. Half of week-end days and $\frac{1}{4}$ of weekdays in July; $\frac{1}{4}$ of week-end days and $\frac{1}{8}$ of weekdays in Coldfoot in August.
3. Labor for installation of equipment and daily vehicle-count readings at Coldfoot.
4. Labor to arrange for cooperation with commercial/charter airline services for distribution of monitoring card and making visitor contacts.