

THE PACK CREEK VISITOR STUDY PRELIMINARY REPORT

DECEMBER 1981



University of Idaho

Department of Wildland Recreation Management
College of Forestry, Wildlife and Range Sciences
Moscow, Idaho 83843

SUBMITTED TO:

U. S. Forest Service,
Admiralty Island National Monument

CO-AUTHORED BY:

Edwin E. Krumpe, Ph.D.
Ken Post

THE PACK CREEK VISITOR STUDY PRELIMINARY REPORT

DECEMBER 1981

Funding for this project was provided by the U. S. Forest Service, Admiralty Island National Monument, contract no. OM-40-0114-1-484 and the University of Idaho Wilderness Research Center.

PACK CREEK VISITOR STUDY

Introduction

Data from the Pack Creek Visitor Study is a result of distribution of short on-site response cards and mail-back questionnaires. A census was employed to overcome the deficiencies common to sampling a known small population. The study period began May 28 and extended to September 1, 1981. A total of 107 people visited Pack Creek. Ten of the visitors were children under 16 years of age and were not mailed questionnaires. Four other visitors could not be contacted personally but were included in the total visitation count of 107 people. Thus, 93 out of 107 people were sent mail-back questionnaires.

Seventy-nine returned questionnaires yielded an 84 percent response rate (79 out of 93 questionnaires returned). Data analysis is based on the 79 questionnaires. Percentage comparisons revealed no systematic differences between respondents and non-respondents (Figure 1).

All data from 1979 and 1980 is based on records kept by Stan and Esther Price, residents of Pack Creek.

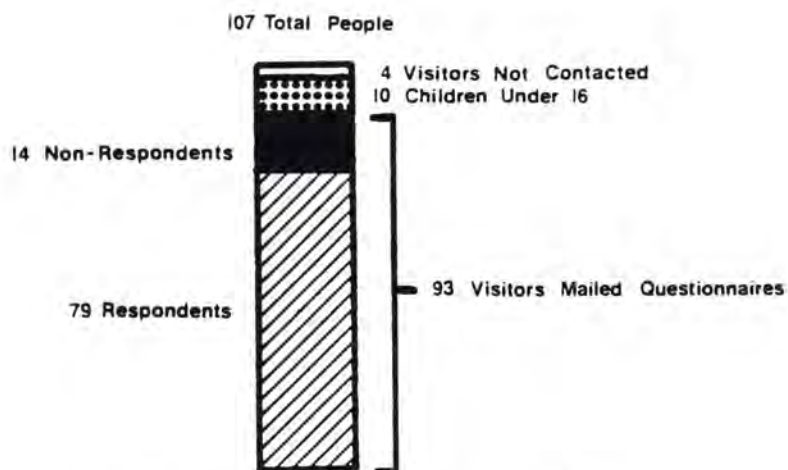


Figure 1. Pack Creek visitor census: 1981.

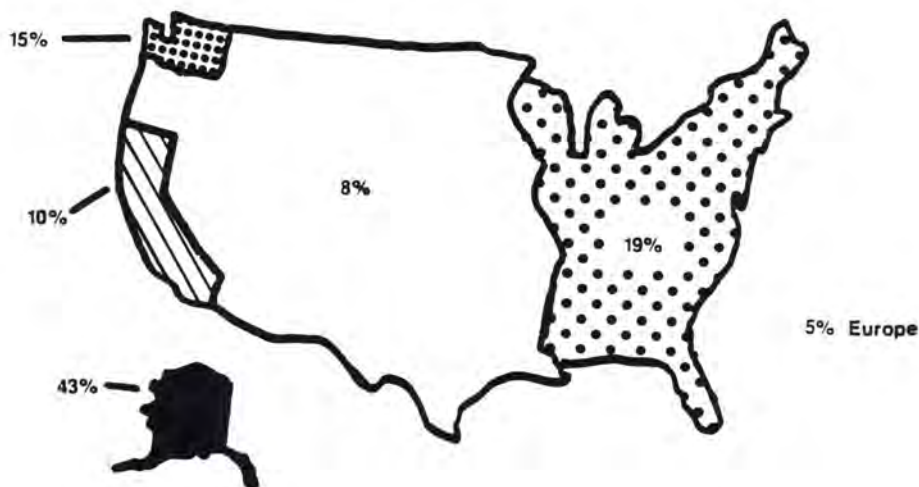


Figure 2. Residence of Pack Creek visitors: 1981.

General Description of Pack Creek Visitors

Visitors to Pack Creek came from all over the United States as well as France, Great Britain and East Germany (Figure 2). Most visitors were from Alaska (43 percent) with virtually all Alaskan visitors residing in nearby Juneau. Records for the two previous years, 1979 and 1980, also indicate that Alaskans, particularly Juneau residents, represent about half, 34 and 45 percent respectively, of all the visitors to the area. During 1981 Juneau residents represented 40 percent of the visitors. The number of Alaskan visitors has been about 43 percent for the period 1979 through 1981. The State of Washington contributed the second largest number of visitors with 15 percent and California followed with 10 percent. No other state was responsible for more than 5 percent of the visitors. Nineteen percent came from states east of the Mississippi River.

In the following discussion it is important to note that the term "visitation" is not synonymous with the term "visitor." Visitation refers to the number of total visits to the area including repeat visits. Visitor refers to the total number of individuals that visit the area. Thus, if a person made two trips to Pack Creek, that person would be counted as one visitor making two visits.

For the second consecutive year the total number of visitors to Pack Creek has increased slightly. Approximately 101 people visited in 1979, followed by an increase to 104 in 1980 and a further increase to 107 people in 1981. Repeat visitors brought total visitation up to 106, 114 and 112 in 1979, 1980 and 1981, respectively (Figure 3).

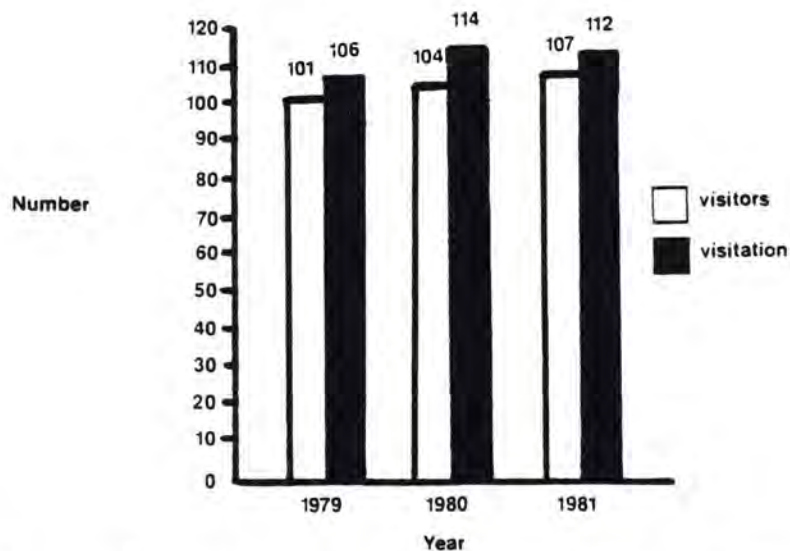
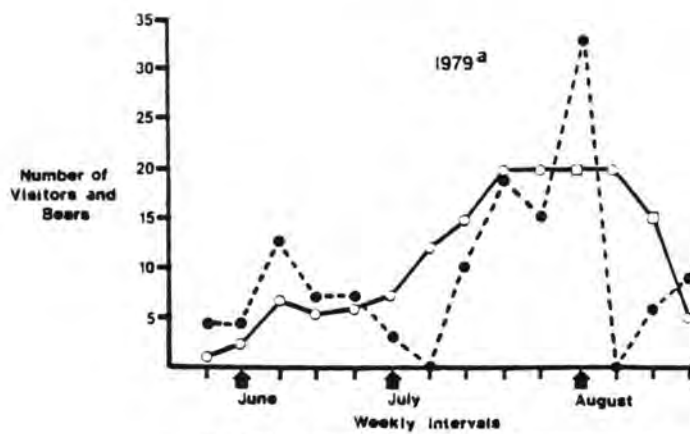
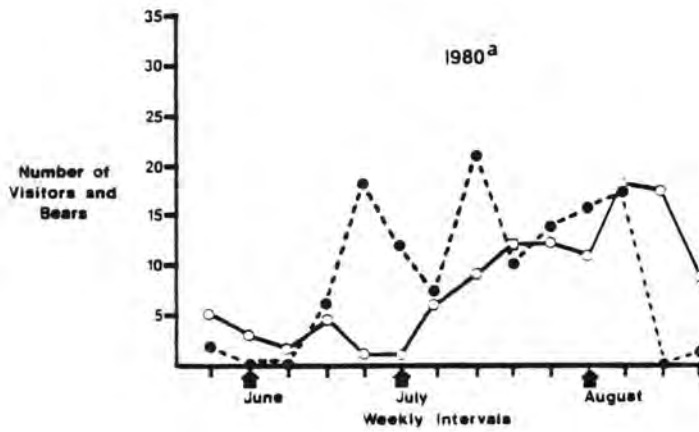
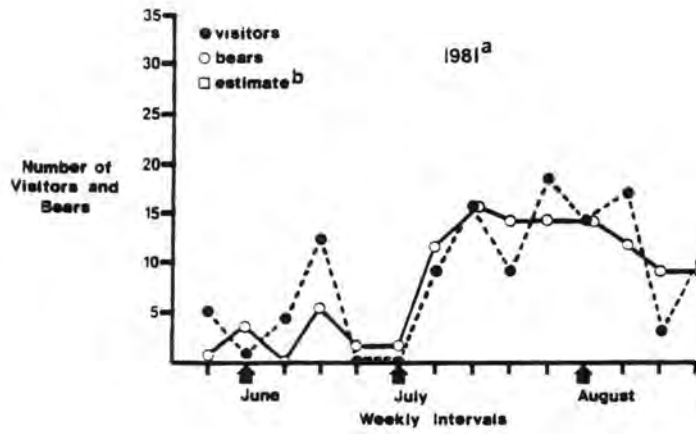


Figure 3. Total visitation and number of Pack Creek visitors.

Monthly visitation during 1981 increased with June receiving 23 percent of the visitation and July and August getting 30 and 47 percent, respectively (Figure 4). Monthly visitation for 1979 and 1980 closely paralleled 1981.



^a1979 and 1980 visitor and bear use based on records kept by Stan and Ester Price, residents of Pack Creek. 1981 data based on a census of visitors and researcher's records of bear use.

^bEstimates are based on interpretation of incomplete 1979 and 1980 data.

Figure 4. Visitor and Bear Use at Pack Creek: 1979-1981.

The typical Pack Creek visitor can best be described as relatively young, financially well-off and college-educated. Average age of the surveyed group was 36 years with the youngest being 18 and the oldest 69. Less than 20 percent of visitors were older than 50. A little over two-thirds (68 percent) of all visitors were male. Family income levels ranged from under 5,000 dollars to 70,000 dollars or more. Average income was in the 25,000 to 49,999 dollar category. Seventy percent of visitors had family incomes greater than 25,000 dollars while 17 percent reported incomes at 70,000 dollars or more. Six percent of the visitors had incomes below 10,000 dollars. Education levels for visitors showed that 99 percent had completed high school, 61 percent had finished college and another 39 percent had completed some graduate work.

Characteristics of Visitors's Trip to Pack Creek

Information Sources

Visitors learned about Pack Creek from four major sources. A little more than half (56 percent) of the visitors stated that a friend or relative informed them of the area. Two wilderness guide operations based in Juneau informed another 15 percent. Eight percent of the visitors learned about the area from two books; "Admiralty Island: Land in Contention" and "Wolves, Bears and Bighorns." Forest Service employees or brochures were reported as sources by only 7 percent of the visitors.

Reasons for Visit

A wide variety of reasons were given for visiting Pack Creek. Sixty percent of the visitors mentioned bears or bears and another reason. Bear viewing was the major reason for visiting (29 percent). The impact the Prices have on visitation can be seen by the fact that they are the second major reason for visiting (18 percent) while another 9 percent mentioned the Prices in combination with another reason. The third major reason was to specifically photograph bears (11 percent).

Transportation

Transportation to Pack Creek was primarily by float plane (36 percent) and motor boat (34 percent). Canoes and kayaks were used by another 17 percent (Figure 5).

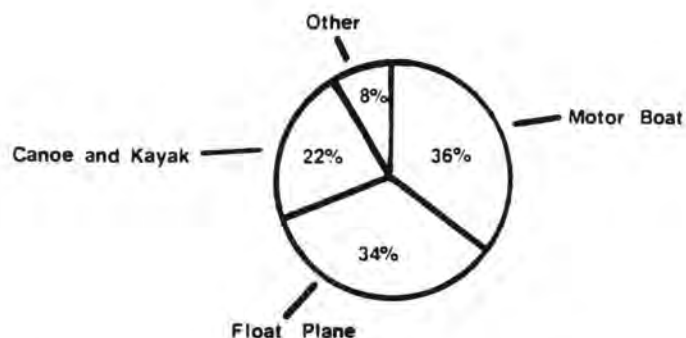


Figure 5. Transportation to Pack Creek.

Type of Stop

For most of the visitors (37 percent), Pack Creek represented one of several stops in Alaska or one of several stops on Admiralty Island (25 percent). Pack Creek was the primary destination for 24 percent of the visitors.

Number of Visits

A large proportion of people (78 percent) were visiting Pack Creek for the first time. Of the 17 people who had previously visited, 7 visitors (41 percent) had made 1 to 2 previous trips while 10 people (59 percent) had made 3 to 30 trips in preceding years. As would be expected, more Alaska residents (38 percent) than non-residents (17 percent) had made previous trips to Pack Creek.

Length of Stay

Average length of stay was 2.4 days, however the most frequent length of stay was one day (44 percent). Day visitors stayed for an average of 6 hours. Twenty-eight percent stayed two days and 21 percent stayed 3 to 6 days. Six people (8 percent) stayed longer than a week (Figure 6). Visitors arriving by motor boat stayed longer than visitors arriving by

float plane, canoeists and kayakers. Seventy-eight percent of the "motorboaters" spent the night in contrast to 44 percent of the visitors coming by float plane and 38 percent of the visitors who paddled.

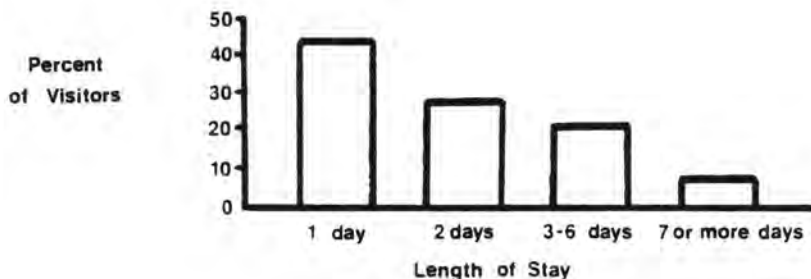


Figure 6. Length of stay of Pack Creek visitors.

Overnight Shelter

Boats offered the most common form of shelter for overnight visitors (41 percent) followed by tents (35 percent). Four people (8 percent) stayed in a private cabin on Swan Island and 8 people (16 percent) stayed in the Price's cabins; either with the Prices or the researchers (Figure 7).

Group Size

Visitors to Pack Creek came primarily as small groups of 2 (22 percent), 4 (20 percent) and 6 (20 percent) people. While 10 people (13 percent) came by themselves, 7 of the 10 (70 percent) met other people who were already at Pack Creek. Average group size was 4 people and the largest group consisted of 8 people. Eighty percent of the people came in private groups while 20 percent were led by professional guides.

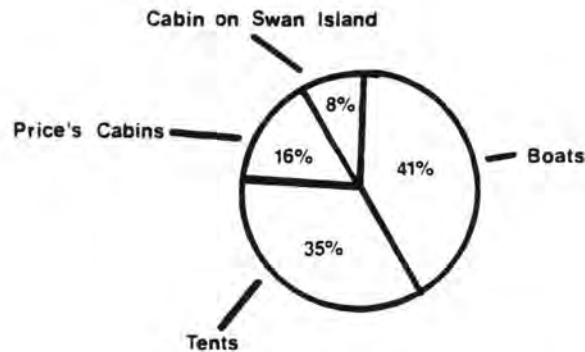


Figure 7. Type of overnight shelter used by Pack Creek visitors.

Firearms

Over half the groups (56 percent) came without a firearm for bear protection while an additional 17 percent of the groups brought a firearm as part of their equipment but chose not to carry it at Pack Creek. Twenty-eight percent had a member of the group carrying a firearm. When asked if they carried bear bells or other noisemaking equipment, 85 percent of the visitors stated they did not. At first glance it appears that most visitors did not take preventive measures to avoid meeting a bear, however most visitation occurred in an open area where a bear could readily be sighted, making noisemaking equipment unnecessary.

Visitor Attitudes Towards Hunting

In response to a "Do you hunt?" question, 34 percent of all visitors replied "yes," 46 percent did not hunt but were not opposed to hunting and 20 percent felt that hunting was an inappropriate use of wildlife. Alaskan residents felt differently about hunting than non-residents. Almost half of the Alaskans (47 percent) hunted in contrast to 23 percent of the non-residents. Only six percent of Alaskans felt hunting was an inappropriate use of wildlife while 33 percent of non-residents did.

Visitors were also asked about their attitudes towards brown-grizzly bear hunting on Admiralty Island. Forty-six percent believed bears should not be hunted at all, 32 percent thought that only "problem" bears should be hunted and 22 percent believed sport hunting bears to be a legitimate use of the wildlife resource.

Visitor-Bear Encounters

Only 11 percent of the visitors had an encounter other than just seeing a bear. Of this group, 5 people stated a bear investigated or damaged equipment, 2 people reported being charged during a previous trip to Pack Creek, 1 person was "bluff" charged and 1 person scared a sleeping bear while walking on the trail to the CCC bear observation tower. On separate occasions a bear was reported to have clawed a jacket laying on the ground, eaten several apples left out and bitten into a plastic water bottle. From the researcher's knowledge of these incidents it is believed that the same bear, "Brownie," a very tolerant sow with two cubs of the year was responsible.

Visitors were asked to describe what kind of evasive action they took, if any, in response to a bear encounter. Most visitors (58 percent) answered that no evasive action was necessary. Of the 25 visitors that took evasive action, 13 visitors (52 percent) backed away slowly from the bear, 7 visitors (34 percent) made a loud noise, 2 visitors talked to bears and 1 person froze in place. One person reported running from a bear during a previous trip to Pack Creek.

Visitors claimed that the bear's evasive action in response to encountering people was usually to ignore them (66 percent). Twenty-five percent of the time a bear walked away and six percent of the time they ran away.

Visitor Movement and Reported Bear Sightings

In an attempt to determine where visitors went at Pack Creek and the areas they saw the most bears, visitors were asked to record on a map of Pack Creek where they spent their primary and secondary amounts of time. They were also asked where they camped and the area where they saw the most bears (Figure 8).

Visitor Movement

Sixty-two percent of the visitors reported spending the most or primary proportion of their time while at Pack Creek in zone D (Figure 9). No other zone received over 10 percent of the use.

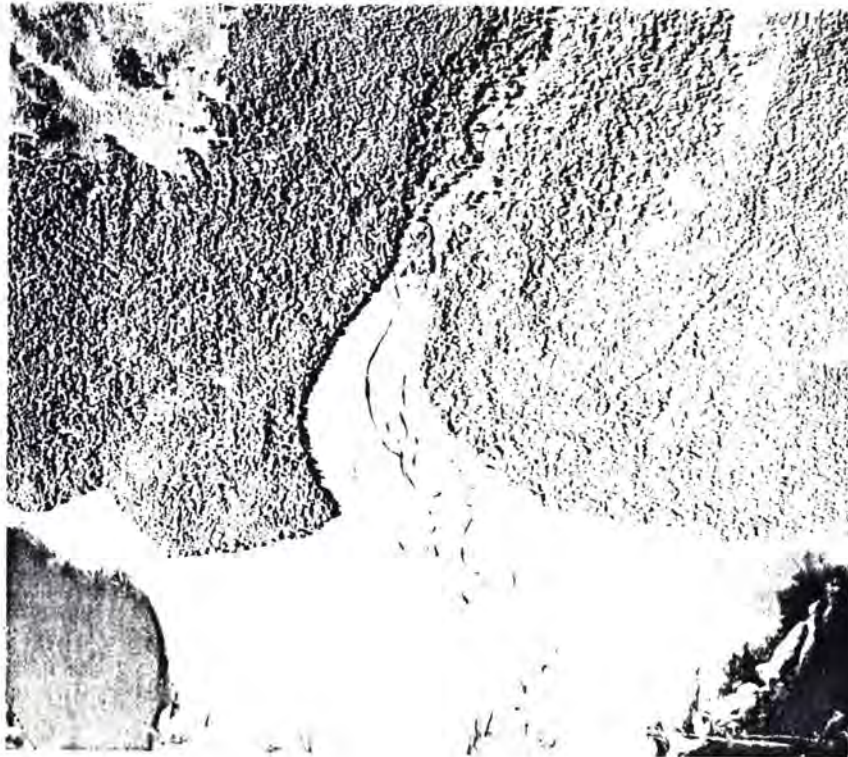
Visitors spent their secondary amount or second largest proportion of time in zone D (43 percent). Zone F followed with 15 percent of the use. Zones A, F and H each received 10 percent of the secondary use. Zone H consisted solely of the CCC bear observation tower located one-half mile up the creek. The very large amount of primary and secondary use in zone D can probably be attributed to the presence of the Price's garden, woodshed and wanigan as well as their hospitality. Stan Price also encouraged visitors to use the tip of a raised sand spit in zone D as a bear viewing location because it provided an excellent view of the entire tideflat.

Four of five parties tenting (80 percent) used zone A. This area is largely the traditional camping area and has several features that make it attractive. First, the low tide area is much less extensive than in other zones, making the carrying of equipment easier during low tide. Second, the campsites are well-sheltered from the elements and one another by vegetation. Third, a water source is available nearby that does not get fouled by a salmon run. Lastly, the researcher feels that this area is outside of the area where the bulk of bear movement and activity occurs. The one party that tented elsewhere camped about two miles away and was part of a guided Alaska Discovery trip. All seven parties that spent the night in boats anchored several hundred yards across from the tenting area. Deep water and the relative safety from the weather made this the only close location large boats could anchor. Nine of 12 parties (75 percent) arriving by float plane also landed in this area with the other 3 parties (25 percent) landing in zone B during high tide.

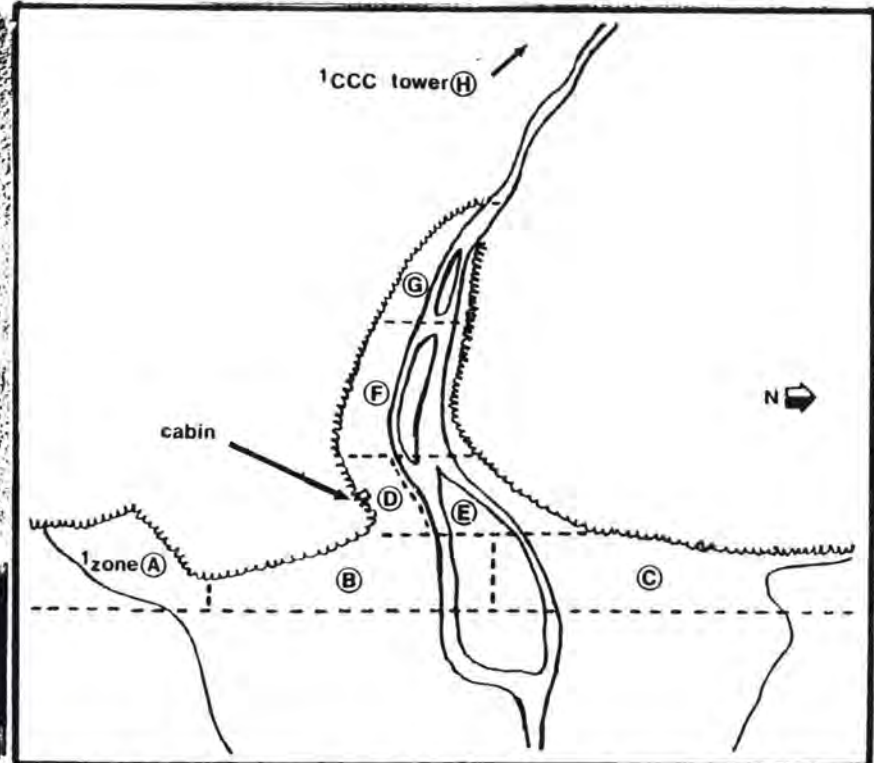
Question:

Below are an aerial photo and diagram of Pack Creek. Please place a number one (1) at the approximate spot on the diagram where you spent the most amount of time while at Pack Creek and a number two (2) where you spent the second most amount of time. Additionally, place an "X" at the location of your campsite(s) if you camped in this area. Finally, please place a "B" at the general spot where you saw the most bears.

Aerial Photo



Diagram



¹The zone boundaries and CCC tower were not included on the questionnaire.

Figure 8. Pack Creek tideflat with outlined visitor zones.

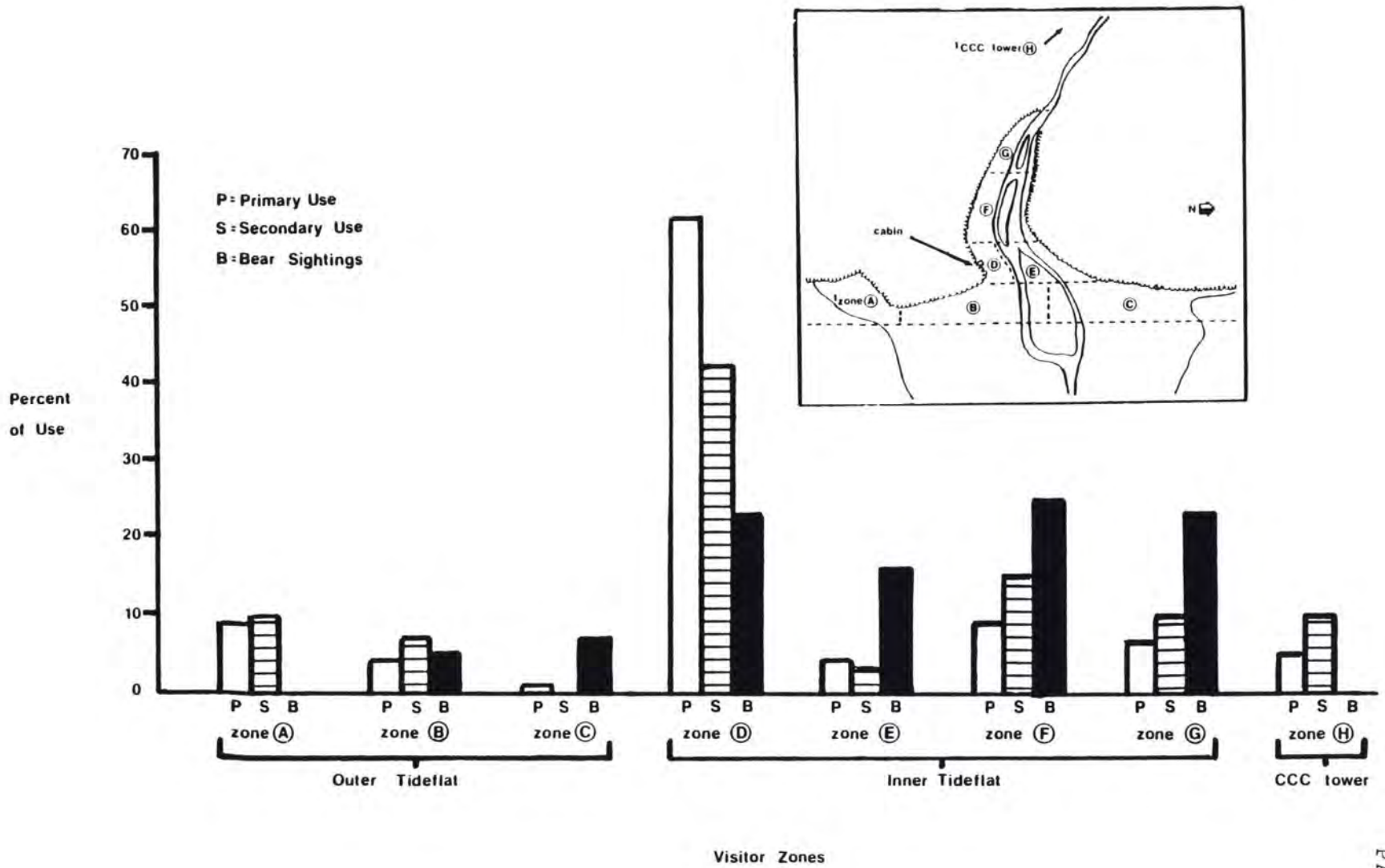


Figure 9. Visitor movement and reported bear sightings by visitor zones.

Reported Bear Sightings

Twenty-six percent of the visitors reported seeing the most bears in zone F followed by zones D and G each with 23 percent and zone E with 17 percent. The outer tidal area consisting of zones A, B and C totalled only 12 percent of the visitor's bear sightings. The high level of bear sightings in zone D, an area of high human use is most likely due to two very tolerant sows, "Brownie" and "Betty" and their cubs of the year which the researchers consistently saw in this zone.

Use of the CCC Bear Observation Tower

The CCC bear observation tower can be reached by following Pack Creek for about one-half mile or by hiking along a poorly maintained trail that originates near the area where visitors tent (zone A). No sign marks the trailhead which is now overgrown by vegetation. Management is using these subtle techniques to discourage visitor use on the trail as it is felt that travel along the trail may be hazardous because the dense vegetation could lead to close encounters with bears. In addition, the tree containing the tower is of questionable stability¹.

An informal register placed in the tower was used to collect information. A total of 34 visitors in 13 separate groups hiked to the tower with an average group size of 2.6 people. Three of the tower visitors (11 percent) made two or more trips. Ten of 13 groups hiked on the trail (77 percent) while 3 groups (23 percent) hiked along the stream. Eleven groups (86 percent) visiting the tower were either Alaskan residents or had an Alaskan resident as part of their party, possibly indicating Alaskan's better knowledge of the area and perhaps their greater willingness to hike in bear country. No group visited the tower prior to July 20, a date almost seven weeks after installation of the register. Visitors tended to arrive at the tower around noon and stay an average of three hours. Two questions were asked concerning bear sightings on the trail and from the tower. No visitors reported seeing a bear on the trail although this is in conflict with one visitor's claim in the Visitor-Bear Encounter section that he scared a sleeping bear during his hike to the tower. Once they were up in the tower, 92 percent of the visitors saw at least one bear.

¹Personal communication with Ken Mitchell, U. S. Forest Service, Admiralty Island National Monument staff, Juneau, Alaska.

The fact that 26 percent of the visitors to Pack Creek used the tower with the majority of them hiking along an unsigned and unmaintained trail demonstrates the importance of the tower. The following comments left in the tower registration book are indicative of the visitor's stay in the tower: "Great to watch bears safely," "Beautiful and exciting experience," "Excellent opportunity for safe bear observation," "Nice change from tideflat views," "We need more towers in different locations."

Visitor Attitudes Towards On-Site Conditions

Visitors were asked how they felt concerning conditions they may have encountered at Pack Creek. A range of responses from "extremely added" to their trip to "extremely detracted" from their trip were collapsed into "added," "neither added or detracted" and "detracted." In addition, a "did not happen" answer was provided for those visitors who did not encounter a particular condition. Percentages of visitor responses towards on-site conditions are presented in Table 1.

Seeing Other People

In response to the condition "seeing no other people," most visitors (73 percent) stated that this condition did not happen. In other words, almost three-quarters of the visitors saw other people at Pack Creek. This is not surprising since the Prices reside there year-round and at least one researcher was present during the entire study period.

Twenty-eight percent of the visitors felt that "seeing a few other people" did not add to or detract from their trip. Twenty-three percent felt it detracted but 34 percent believed it added, probably a result of meeting the Prices.

When asked how "seeing many other people" affected them, over two-thirds (71 percent) of the visitors said that condition did not happen. A calendar record for the summer shows that June had 8 days (27 percent) with 1 group and 2 days (7 percent) where 2 groups were present. Only 1 visitor stayed overnight in June. Nobody visited Pack Creek from June 25 through July 9. Visitors were present everyday from July 10 through August 25. Eleven days in July (35 percent) had 2 or more groups present with 3 of those days (10 percent) having 4 groups. Twenty-one days in August (68 percent) had 2 or more groups present of which 9 days (29 percent) had 4 or more groups present and 1 day (3 percent) had 6 different groups present. While 23 percent of the visitors claimed that "seeing

many other people" detracted from their trip, 71 percent did not perceive the area to be too crowded.

Seeing Bears

Not everyone who came to Pack Creek saw a bear. Thirty-one percent of the visitors did not see any bears. Only 15 percent of those visitors not seeing bears thought it detracted from their trip. The more bears that were seen the more visitors enjoyed their trip. Upon seeing "at least one bear," 60 percent of the visitors felt it added to their trip. Seventy-one percent of the visitors found "seeing lots of bears" as adding to their trip. Eighty percent of the visitors claimed that seeing other wildlife added to their trip.

Seeing and Hearing Human Influences

Visitors were asked to respond to a series of conditions concerning possible disturbances during their stay at Pack Creek. Pack Creek is located along a major bush flight path with a conservative recorded estimate of 400 to 500 planes flying by during the course of the field season.

About a third (29 percent) of the visitors did not report "seeing planes landing" as either adding or detracting while 29 percent claimed it detracted. Another third of the visitors (31 percent) reported not seeing any planes land. Forty-three percent of the visitors were unaffected by "seeing planes flying by" although 40 percent claimed it detracted. An equal amount of visitors claimed to be indifferent (43 percent) to "hearing other planes flying by" while 43 percent stated that this condition detracted from their trip. Overall visitor attitudes towards planes indicate that about half were usually ambivalent and half believed it to be an intrusion on their experience. Visitors were also largely indifferent to "seeing other boats anchored" (44 percent). Thirty-three percent did not see boats anchored.

Almost half of the visitors (45 percent) felt that "seeing buildings and structures" did not affect their experience. In fact, 37 percent felt it added to their trip. The rustic character of the structures combined with the homesteading lifestyle of the Prices obviously made the structures a major attribute of the area.

Repeat visitors were asked if they felt Pack Creek had changed at all since their first trip to the area. The majority (47 percent) did not notice any change although some (16 percent) believed there were more people present than in the past. A small group (10 percent) thought there were more people and less bears.

Table 1. Visitor attitudes towards on-site conditions.

Question: How did each of the following conditions add or detract on your recent trip to Pack Creek?

Conditions	(n)	Added %	Neither Added or Detracted %	Detracted %	Did Not Happen %
Seeing no other people	69	23	4	-	73
Seeing a few other people	72	34	28	23	15
Seeing many other people	69	2	4	23	71
Seeing no bears	66	2	14	15	69
Seeing at least one bear	64	60	-	-	40
Seeing lots of bears	72	71	-	-	29
Seeing other wildlife	74	80	5	-	15
Seeing planes landing	72	11	29	29	31
Seeing planes flying by	74	2	43	40	15
Hearing planes flying by	74	-	43	43	14
Seeing boats anchored	72	37	44	16	33
Seeing buildings and structures	76	37	45	13	5

Visitors were also permitted to comment on any other conditions they felt added or detracted during their stay. Thirteen visitors (16 percent) replied "seeing the Price's buildings" or "visiting with the Prices" added to their trip. Only 5 visitors (6 percent) mentioned that the Pack Creek Visitor Study detracted from their stay.

Visitor Preferences for Possible Management Practices

Visitors were asked about their preferences for possible management practices in relation to the potential impact on bears and visitor safety. Responses ranged from "very desirable" to "very undesirable." Once again, the responses have been collapsed into "desirable," "neither desirable or undesirable" and "undesirable." Table 2 illustrates the ranking of possible management practices based on visitor desirability.

Visitor Education

Almost three-quarters (73 percent) of all visitors would desire a brochure on bear safety and bear behavior. Eighteen percent did not feel either way about a brochure. The apparent willingness of visitors to accept information about an area's resources is an important step in the management process. Visitors that understand why certain management practices are being implemented may be more willing to accept those practices (Fazio and Gilbert 1981).

Plane and Boat Restrictions

According to the researcher's records an estimated 25 planes circled over the inner tideflat during the field season. Many of these planes circled at altitudes below 1000 feet. In addition, large numbers of planes, whether passing by or in the process of landing flew straight over the inner and outer tideflats. Despite the fact that visitors did not have an overly strong reaction to seeing and hearing planes, they did react strongly in attempting to "prohibit flights over the tideflat area" as evidenced by the 72 percent of visitors desiring some form of flight restrictions.

Two potential management practices, "designate a specific float plane and boat landing area" and "require all boats to anchor one-half mile from the Pack Creek tideflat" also were viewed as desirable.

Table 2. Ranking of possible management practices based on visitor desirability.

Question: Pack Creek has been a favorite bear viewing area for many years. However, as greater numbers of people come to Pack Creek, there is the possibility that the bears' normal behavior might change. The number of bears available for viewing may decrease. Some bears may become too accustomed to humans and create safety problems. Keeping this in mind, how desirable or undesirable would the following possible management practices be for Pack Creek?

Management Practices	(n=77)		
	Desirable %	Neither Desirable Nor Undesirable %	Undesirable %
Make brochure on bear safety and behavior available	73	18	9
Prohibit flying over the tideflat area	72	16	12
Limit group size	67	10	23
Designate plane and boat landing area	61	19	20
Require boats to anchor 1/2 mile from tideflat	61	23	16
Require all camping in designated area	56	10	34
Limit number of visitors at any one time	56	10	34
Have all visitors obtain a permit to visit the area	36	18	46
Station ranger at the area	34	13	53
Prohibit bells and other noisemaking equipment	29	34	37
Keep all visitor use to tideflat area	23	20	57

Sixty-one percent of the visitors favored these practices. The topographic nature of the area in many ways has already dictated the location of plane and boat use. Because of a very extensive tideflat area at the mouth of Pack Creek, almost all planes and boats used the deep water location about one-quarter mile away from Pack Creek previously described as zone A.

Visitor Restrictions

Visitors were also decisive in their preference to "limit group size." Sixty-seven percent saw this practice as desirable. "Requiring all camping to be in a designated area" was deemed to be desirable by 56 percent of the visitors. Thirty-four percent believed this to be an undesirable practice. In a separate question asking "How close to the Pack Creek tideflat area do you think camping should be allowed?," 39 percent of the visitors felt one-half mile was adequate. Twenty-two percent believed one mile was close enough. The idea of designating a camping area is distasteful to many visitors, however, in reality it has already informally occurred. The traditional camping area designated as zone A receives virtually all the tenting use in the immediate Pack Creek area and is about one-quarter mile away from the inner tideflat.

Visitor's reaction to "limiting the number of visitors at any one time" was viewed as desirable by 56 percent. Requesting people to "obtain a permit to visit Pack Creek" appeared to be a slightly unpopular restriction. Forty-six found this to be undesirable and thirty-six percent thought it would be desirable to obtain a permit.

The most unpopular of all possible management practices was "keep all visitor use to the tideflat area." Fifty-seven percent thought restrictions on visitor movement to be undesirable. Only 23 percent believed it to be desirable and 20 percent did not feel either way about movement restrictions.

Other Management Practices

Visitors had the second greatest negative reaction to "stationing a ranger at Pack Creek." Fifty-three percent viewed this practice as undesirable and 34 percent believed it to be desirable. It is possible that some people perceived Stan Price as a "surrogate ranger," thereby reducing any need for a Forest Service ranger. In fact, 5 visitors (6 percent) replied that management should be left to Stan Price's discretion while 1 visitor stated that a ranger should be stationed at Pack Creek after the Prices leave.

Slightly more visitors felt that "prohibiting bear bells and other noisemaking equipment" was undesirable (37 percent)

than did visitors who saw this as a desirable practice (29 percent). A large portion of visitors (34 percent) did not feel either way about this practice. At no time during the field season did the researcher observe a person carrying any form of noisemaking equipment although 15 percent did have it with them as determined in an earlier question. It is probable that those visitors who carried noisemaking equipment did so on the trail to the CCC bear observation tower; a location where the researcher would not encounter visitors but a situation where noisemaking equipment would most likely be used.

Visitor-Agency Communication

A separate question seeking to determine the best ways Pack Creek visitors and managers could exchange ideas was asked. Twenty-nine percent believed mail-back questionnaires to be the best communication technique, although some bias may be inherent in this statistic since this was the only technique to which they were exposed. Ten percent favored an on-site ranger, a technique that may be the most effective for communicating with visitors since there is the opportunity for discussion and clarification (Fazio 1979). Visitor acceptance of an on-site ranger at Pack Creek was not high; only 34 percent favored an on-site ranger. An on-site ranger in combination with a mail-back questionnaire was viewed by 7 percent as the best way to exchange ideas and another 7 percent believed an on-site suggestion box would be best. Six percent of the visitors wanted public meetings in Juneau and another 6 percent felt that talking to Stan Price was the best technique for exchanging ideas.

Visitors were asked to comment on any other aspects of Pack Creek management they thought were important. Twelve people stated that they preferred to have Pack Creek remain as it is, essentially unmanaged. Six more visitors stated that restrictions were not currently necessary but may be in the future. Advertising Pack Creek was viewed as a threat to the area and five visitors thought that any form of publicity would be harmful. Educating visitors about the area and bears without advertising was thought to be an important management consideration by four visitors. Several other pertinent comments by visitors are listed below:

- "The Pack Creek study is an excellent management tool."
- "Keep the bears and people separate."
- "Bears should be the management priority."
- "Private groups should have priority over commercial groups."
- "I do not want a McNeil River situation at Pack Creek."
- "Keep out bear researchers and environmentalists."

"Keep out the beaurocrats."

"The Pack Creek study is not cost effective."

EXAMPLE MANAGEMENT GOALS, OBJECTIVES AND OPTIONS

Because we do not presently know the specific Forest Service management goals and objectives for Pack Creek, we present two potential management goals to illustrate a procedure for reaching specific management recommendations. For each potential goal we have presented likely management objectives from which a range of management options could be considered. Two current management issues at Pack Creek, the CCC tower and trail and visitor movement, were used as examples to demonstrate how the agency's goals and objectives could best be used to select management options.

We have used this format to illustrate a process by which data collected in this study can be utilized to reach sound management recommendations. In the example that follows, the options that best achieve an objective are presented in parentheses next to the objective. Options and their likely consequences are outlined in the following pages.

Example Goals and Objectives

Example Goal I: Provide safe and outstanding bear viewing opportunities for Pack Creek visitors within the confines of the area's wilderness designation.

Example Objectives:

- A. Provide safe, primitive bear viewing facilities (Options 1, 4)
- B. Maintain unrestricted visitor movement (Options 4, 8)
- C. Maintain unrestricted visitor level

Example Goal II. Maximize use of Pack Creek by bears while providing a compatible amount of non-consumptive human use.

Example Objectives:

- A. Minimize disturbance to the bears (Options 2, 5)
- B. Provide a controlled opportunity to view and photo bears (Options 1, 5, 6)
- C. Restrict visitor movement (Options 2, 5, 6)
- D. Restrict visitor numbers

Example CCC Tower and Trail Management Options

Option 1. Facilitate Visitor Use: Management actions for this option include maintaining the tower and trail to a moderate standard. In addition, a bear warning sign would be placed 50-75 yards up the trail and no trailhead sign would be installed.

Likely Consequences:

- a. Barring a sudden influx of visitors, tower and trail use would remain at a moderate level if maintenance was carried out in such a manner that the trailhead is still screened by vegetation and no trailhead sign served to attract visitors;
- b. Visitors would be provided with easier trail travel through brushing and/or tread work;
- c. The warning sign would encourage safe visitor behavior while in bear country;
- d. The opportunity for human-bear encounters would be lessened due to increased visibility along the trail corridor;
- e. A moderate level of cost for tower and trail maintenance would be incurred.

Option 2. Discourage Visitor Use: Actions would include removing the tower and evidence of the trail.

Likely Consequences:

- a. Visitors would be prevented from viewing bears in a forest environment;
- b. This would potentially be a controversial option since 25 percent of the visitors used the tower and almost all of them saw bears and left highly favorable comments concerning the tower;
- c. The chance of human-bear encounter in the forest would be reduced to a low level;
- d. The number of visitors viewing bears on the tideflat would increase through displacement of tower visitors;
- e. A low cost level for tower and trail removal would be incurred.

Option 3. Encourage Visitor Use: The tower and trail would be featured in a Pack Creek brochure distributed on-site and a trailhead and warning sign would be erected. The tower and trail would also be maintained to high standards.

Likely Consequences:

- a. Visitors would be attracted to the trail and tower with a resultant increase in visitor use of both to a high level;
- b. Despite the trail being maintained and signed, the increase in visitor use would increase the opportunity for a human-bear encounter to a high level;
- c. A high level of maintenance costs would be incurred.

- Option 4. Maintain the current management situation: The trail leading to the tower is unsigned and unmaintained.

Likely Consequences:

- a. Barring a sudden influx of visitors, tower and trail use would remain at a moderate level for several years;
- b. The possibility of a moderate level of human-bear encounters due to poor visibility along the trail would continue to occur;
- c. A long term affect may be reduced trail and tower use as vegetation growth obscures the trail. In addition, the tower would become structurally unstable. Ultimately this would diminish disturbance to bears and also displace tower visitors to the tideflat;
- d. No management costs would be incurred.

Example Visitor Movement Options

- Option 5. Major Movement Restrictions: Visitors would only be allowed to view bears from the sand spit.

Likely Consequences:

- a. This would be a very controversial option since a restriction on visitor movement was found to be the least desirable management practice;
- b. The opportunity to view and photograph bears would be slightly decreased;
- c. The disturbance to bears would be minimized;

- d. A higher level of crowding would probably be perceived;
- e. A seasonal ranger would be necessary to enforce movement restrictions. Visitors were not receptive to an on-site ranger, however this may change when Stan Price leaves;
- f. The cost for a ranger and support would be incurred.

Option 6. Moderate Movement Restrictions: Visitors would only be permitted to view bears from zone D.

Likely Consequences:

- a. While still a controversial option, the majority of primary and secondary use occurred in zone D. Thus, this action would primarily affect only those visitors who spent large portions of their time in several zones;
- b. The opportunity to view and photograph bears would remain very high;
- c. The disturbance to bears would be at a low level;
- d. A slightly higher level of crowding may be perceived than currently exists;
- e. A seasonal ranger would be necessary to enforce movement restrictions. Visitors were not receptive to the possibility of an on-site ranger, however this may change when Stan Price leaves;
- f. The cost for a ranger and support would be incurred.

Option 7. Low Movement Restrictions: Visitors would be permitted anywhere along the tideflat but not in the forest. This would be facilitated by

removing the tower and evidence of the trail.

Likely Consequences:

- a. Visitors would be prevented from viewing bears in a forest environment;
- b. This would potentially be a controversial option since 25 percent of the visitors used the tower and almost all of them saw bears and left highly favorable comments concerning the tower;
- c. The chance of a human-bear encounter in the forest would be reduced to a low level;
- d. Bear disturbance in the forest would be minimized but disturbance to bears would probably be moderate on the tideflat;
- e. The number of visitors viewing bears on the tideflat would increase through displacement of tower visitors.
- f. A low level cost for tower and trail removal would be incurred;

Option 8. Maintain Current Management Situation: Visitor movement would remain unrestricted.

Likely Consequences:

- a. The opportunity to view and photograph bears would be unaffected;
- b. Bear disturbance would continue at what is probably a moderate level;
- c. No management costs would be incurred.

The same format would be utilized to address other Pack Creek management issues based on a given set of goals and objectives for the area.