

An assessment of significant visitor experiences and preferences in Kennecott National Historic Landmark

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Introduction

At 13 million acres (53 million ha), Wrangell-St. Elias National Park and Preserve in south-central Alaska is the largest unit in the National Park System. The park, established in 1980, contains many of North America's largest mountain peaks and is known for its vast glaciers and rugged, remote wilderness (fig. 1). The park also contains the historic copper-mining town of Kennecott, which lies near the foot of the Kennicott¹ Glacier (fig. 2). The high-grade copper ore extracted from the Kennicott Valley was in great demand in the early 20th century: copper wire was needed to develop the electrical grid, and brass was used for steam-engine components and wartime munitions. As a result, Kennecott was a booming town during this period. However, upon depletion of the copper reserves, the town was quickly abandoned. More recently legislators, land managers, and the public have recognized the historic value of the mill town; as a result, in 1978 Kennecott became a national historic landmark. In 1998 the National Park Service purchased a large portion of the Kennecott mine property and structures (Gilbert et al. 2001). The structures, which date back to the early 1900s, are in various states of disrepair (figs. 3 and 4, page 48). Following the purchase, the National Park Service initiated a management plan for Kennecott and began historic preservation of the mill town's buildings to provide future generations the benefit of experiencing Kennecott's extraordinary mining history.

Concurrent with this stabilization and rehabilitation effort, visitation in 2010 is projected to reflect a 20% increase over 2000 visitation statistics (National Park Service 2003). The expected trend is partly due to improved access to Kennecott and the Kennicott Valley. Improved access might entice a broader range of visitors. In years past, reaching Kennecott entailed driving the 60-mile (97 km), unpaved McCarthy Road, which is notorious for flat tires, and, upon reaching the end of the road,



Figure 1. Rugged wilderness terrain and vast glaciers typify Wrangell-St. Elias National Park and Preserve: Mt. Blackburn viewed from near the town of McCarthy (left), McCarthy Creek sunset (middle), and Root (foreground) and Kennicott (background) glaciers separated by Donoho Peak. COPYRIGHT STEVE TAYLOR (3)

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required crossing the Kennicott River by a suspended handcart and traversing a 5-mile (8 km) stretch of road by foot, bicycle, or shuttle. In 1997 a foot bridge spanning the Kennicott River replaced the adventurous handcart crossing. Also, the Alaska Department of Transportation and Public Facilities, which maintains the McCarthy Road, is considering upgrading the road (National Park Service 2006).

Access changes may not be the only factor contributing to future growth in visitation: a federally funded program, administered by the Alaska Travel Industry Association, designed to promote visitation to lesser visited parks such as Wrangell-St. Elias is being implemented (Ahern 2005; Bradner 2005). To better accommodate future visitors, park managers are in the process of developing an alternative transportation plan for the Kennicott Valley. The plan will include an interpretation component for historic Kennecott. Previous management documents call for stabilizing and preventing deterioration rather than fully restoring the mill town's buildings (Gilbert et al. 2001). However, park managers have yet to determine the types of supporting facilities and mechanisms for interpretation at Kennecott. While information exists regarding back-country uses of park resources (Glaspell and Watson 2003), park managers were without information regarding visitors to developed areas such as Kennecott. They felt it

¹"Kennecott" (mill town) is spelled differently than "Kennicott" valley, river, and glacier.

would be difficult to generate a viable plan without first knowing visitor preferences and expectations for Kennecott. Based on anecdotal evidence of visitor preferences with regards to development and information needs, park managers posed four questions:

- What are the significant visitor experiences?
- How can the significant visitor experiences inform us about what types of interpretation to provide (e.g., wayside exhibits, audio, or publications)?
- What does the visitor think is the significance of Kennecott?
- How do people get information about Kennecott prior to arriving?

This study responded to management needs by gathering baseline information on these questions. In this article, we focus on the first three questions. The study design assumed that visitors would differ in how they would like to see the mill town managed: some may desire restoration of the mill town with interactive interpretive facilities; others may feel

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such development detracts from the historic nature of the town and would prefer the solitude and stillness of its current “ghost town” state. The intent of the study was to identify current visitor demographics and trip characteristics and present these data in a format allowing managers the ability to predict how changes, such as improved access, might impact current visitors, and replicate the study in the future to assess whether visitor composition has changed.

Following the principles of “experience based management” (Manfredo et al. 2002), we hypothesized that discrete visitor groups or “experience types” would have differing reasons (i.e., motivations) for visiting Kennecott, preferences for facility development and management, and information needs. Experience types define the target audiences for different kinds of interpretation and the appropriate medium for providing such interpretation.

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Figure 2. Wrangell-St. Elias National Park and Preserve is known for its vast glaciers and rugged terrain. Here, visitors take a hike on the Root Glacier near the historic mill town of Kennecott. COPYRIGHT PETER FIX



Figure 3. The former train depot in Kennecott currently serves as a temporary visitor center. COPYRIGHT STEVE TAYLOR



Figure 4. The mill building stands prominently on the hillside in Kennecott. The National Park Service has deemed this building a high priority for stabilization. COPYRIGHT STEVE TAYLOR

Methods

To gather data on visitors and measure their motivations, we designed a four-page survey, which park staff administered on-site. We hypothesized eight motivations would be relevant to visitors to the Kennecott mill town and surrounding Kennicott Valley. Respondents were asked to rate the importance of 18 statements representing the eight motivations (two to three statements per motivation) (table 1) using a scale ranging from 1 (not at all important) to 5 (extremely important). The first step in analyzing the data consisted of checking the reliability of

the statements. Reliability, measured by “alpha,” is a gauge of the consistency in which respondents rate the two or three statements relating to a particular motivation.

Next, using a scale that ranged from 1 (strongly detracts from my experience) to 5 (strongly adds to my experience), with the center point (3) designating neutrality towards the management option, we gathered data regarding the impact that six hypothetical management options would have on visitor experiences. The six management options were (1) further stabilization of existing

Table 1. Hypothesized reasons and survey results of visitors to Kennecott mill town

Motivation	Statement	Mean	Reliability (alpha)
Exercise	To get exercise	3.69	0.945
	To feel good after being physically active	3.84	
Family/Companionship¹	To be with family	2.94	0.740
	To bring your family close together	2.41	
	To be with friends	2.76	
	To be with others who enjoy the same things you do	3.19	
Learning	To learn more about nature	3.47	0.827
	To learn about the ecology of the area	3.59	
Nature	To enjoy the sounds and smells of nature	4.15	0.826
	To observe wildlife	3.91	
	To be in a natural setting	4.29	
Solitude	To experience tranquility	3.82	0.860
	To be away from crowds of people	3.86	
	To experience natural quiet	4.07	
History	To be in a historical setting	3.85	0.845
	To learn about the history of the area	3.97	
Creativity²	To do something creative such as paint, sketch, or photograph	2.54	0.521
	To gain a new perspective on life	2.65	

¹Originally separate motivations—family and companionship are closely related and exhibited higher reliability when combined.

²Not included in the analysis because statements had low reliability (i.e., respondents did not answer two statements consistently).



historic structures, (2) an opportunity to explore the inside of more mill buildings, (3) an opportunity to explore the outside of more mill buildings, (4) the addition of signs and exhibits in Kennecott to explain its historical significance, (5) a headphone audio-guided tour of the mill town, and (6) a film telling the history of the Kennicott Valley. We take these statements to be indicative of preferences for management options.

In addition to motivations and preferences, we included questions regarding trip characteristics, activity participation, demographics, and the importance and quality of interpretation. Park staff conducted the survey from 11 June through 6 September 2004. During randomly selected time blocks, the survey administrator contacted every third visitor leaving the mill town who appeared to be over the age of 18 years; those over 18 were asked to complete the survey.

We grouped respondents into experience types using a K-means cluster analysis; this technique forms groups based on similar response patterns, in this case respondents' reported motivations. However, cluster analysis does not provide a definitive assessment of the correct number of groups to use for analysis, but the suitability of a cluster analysis can be judged by the F values for each input (F values are calculated as the ratio of variation between groups to the variation within groups for each input, in this case, each motivation). We ran trials of three, four, five, and six groups. We then linked experience types to preferences and investigated how, if at all, preferences among experience types differed.

Results

Of the 351 visitors contacted, 233 agreed to complete the survey, resulting in a response rate of 66.38%. We believe the lower than expected response rate (we expected approximately 75.00% to 80.00%) is due, in part, to visitors pressed for time to catch a shuttle that runs the 5 miles (8 km) between Kennecott and the Kennicott River. Non-response tests did not reveal any differences in gender, prior visitation, time of visit, number of people in their group, number of children present, and the preference towards further building stabilization. The lack of response on some of the questions resulted in a final sample size of 206 respondents. Based upon the sample design, the margin of error for this study is $\pm 7.80\%$ at the 95.00% level of confidence.

Employing a minimum alpha score of 0.7 to indicate acceptable reliability, the analysis identified seven of the eight motivations as being reliable (see table 1); creativity resulted in unreliable responses. The family and companionship motivations exhibited a higher reliability when combined leading us to conclude the two closely related motivations represented a social need. Individual statement scores within each motivation were averaged

together by respondent to obtain a score for each motivation. These scores were then used in the cluster analysis procedure.

A cluster solution with five experience types best fit the data based on the F values for each motivation (exercise F = 74.15; family/companionship F = 18.82; learning F = 32.94; nature F = 34.79; solitude F = 25.39; history F = 100.22). The following descriptions outline each of the five experience types and provide an indication of each group's significant experiences. For descriptive purposes only, we associated names with each experience type based on important motivations and activity participation.

Experience Type 1—"Outdoor enthusiast" (16.02% of respondents)

Nature, exercise, and solitude were the three dominant motivations for this group. Learning scores were also quite high. This group had the highest percentage of backpackers, hikers, mountaineers, and climbers. While the majority within each of the other four groups rated history as their primary subject of interest, only 14.81% of Type 1 visitors noted history as their primary subject of interest. Type 1 visitors had a relatively high portion who stayed in the Kennecott Valley longer than two weeks.

Experience Type 2—"Multiple experience visitor" (31.55%)

These visitors ranked at the top of all six motivations (i.e., nature, learning, exercise, family/companionship, solitude, and history), illustrating that multiple aspects of the park are quite important to them. These visitors had high participation rates in exploring the mill town (82.81%), hiking (76.56%), nature walks (57.81%), and wildlife viewing (53.13%). Similar to the Type 1 visitors, this group tended to stay in the Kennicott Valley for longer periods than Type 3, 4, and 5 visitors.

Experience Type 3—"Non-interpretive historian day visitor" (22.33%)

History was the primary motivator for this group; solitude, exercise, and learning were rated with relative lower importance. Type 3 visitors had lower participation rates in backpacking, hiking, wildlife viewing, and nature walks than the other groups. Exploring the mill town was a very popular activity for this group (82.61%). Finally, this group had the shortest length of stay in the Kennicott Valley with 42.22% staying only one day.

Experience Type 4—"Generalist" (10.19%)

Type 4 visitors generally listed moderate importance for the six motivations; no motivation stood out as highly

important. They were interested in sightseeing, wildlife viewing, fishing, camping, and nature walks. Exploring the mill town and attending interpretive programs were not high priorities. Type 4 visitors were primarily interested in the subjects of history (60.00%) and geology (25.00%).

Experience Type 5—“Interpretive-focused mill town visitor” (19.90%)

This group was highly motivated by history, nature, and solitude to visit the park. Exercise and family/companionship were of very low importance to them. They had the highest participation rates in interpretive programs (41.46%) and exploring the mill town (85.37%) of all five groups. Sightseeing, wildlife viewing, and hiking were other popular activities for this group. Backpacking was uncommon among Type 5 visitors. The historical nature of the park was very important to this group: 41.67% listed exploring the mill town as their primary activity, and 70.59% rated history as the subject of most interest.

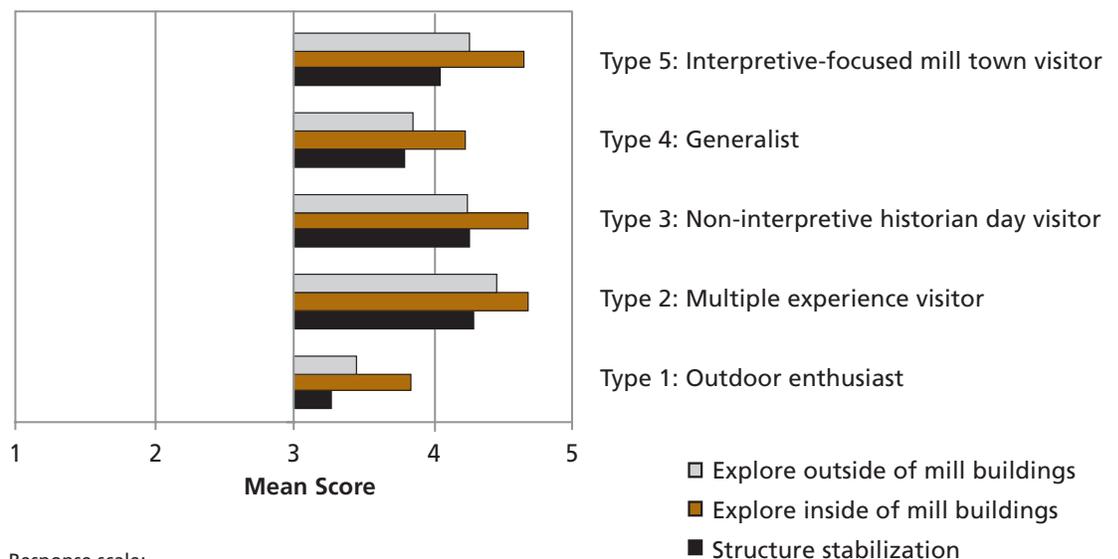
Preferences for Management Options

Of the six management options, three represented actions regarding facility development in Kennecott. All five experience types showed support for these management options (fig. 5). However there was an apparent lower rating of “further stabilization of the mill buildings” than the “opportunity to explore the inside of more mill buildings.” Taking into account the park’s current strategy to ensure visitor safety by stabilizing buildings prior to opening them for exploration, we decided to further investigate these incongruous results by comparing the means of these two management options within each group. All groups except Type 4 (“generalist”) showed, on average, lower support for building stabilization than for exploring inside buildings ($P = .088$ for Type 4 and $P < .001$ all other groups). It is likely that many visitors were strongly in favor of more opportunities to explore inside the buildings because at the time the study was conducted, the old mill building was virtually the only structure open to the public. The

old hospital, which has been partially washed away by the nearby National Creek, was also open to the public for exploration, although it is located off the main path and is well hidden by a stand of dense brush. Visitors were not able to freely explore the mill building; access was limited to a fee-based, guided walking tour. The results suggest that visitors may not have associated the dangerous state of disrepair of many of the buildings with access into the buildings. An education program illustrating how further stabilization of the mill buildings could lead to more exploration opportunities might increase visitor awareness of the necessity of the stabilization process.

The other three management options involved information services or products to increase the quality of visitor experiences. All five experience types supported the addition of signs and exhibits in Kennecott and a film about site history (fig. 6, page 52). Alternatively, no group felt strongly for or against the addition of audio guided tours. Type 1 visitors (“outdoor enthusiasts”) felt the addition of an audio guided tour of the mill town would detract, albeit slightly, from their experience. One possible explanation is that Type 1 visitors value the Kennecott Valley for its wilderness recreation opportunity over its historical aspect and might see audio guided tours as unwanted commercialization or technology that does not fit the wilderness setting. The addition of signs and exhibits at Kennecott appears to be an alternative that visitors find less intrusive to their experience (fig. 6). Hence, park managers striving to provide high quality experiences for all visitors might consider erecting signs and exhibits in the mill town rather than providing an audio guided tour.

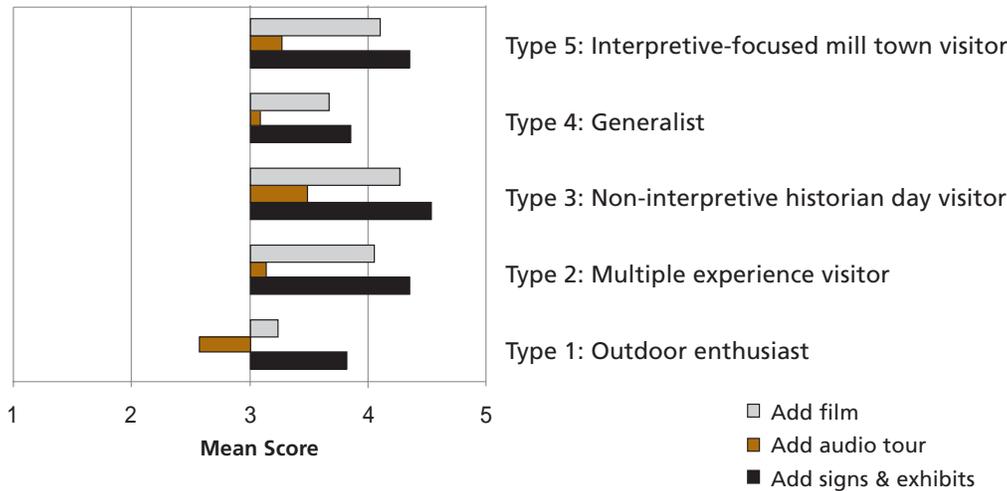
Figure 5. Preference scores for facility development options by experience type



Response scale:
1 = Strongly detracts from experience, 3 = Neutral, 5 = Strongly adds to experience



Figure 6. Preference scores for interpretation options by experience type



Response scale: 1 = Strongly detracts from experience, 3 = Neutral, 5 = Strongly adds to experience

Discussion

Identifying important reasons for visiting a park, choices of activities in which to participate, and preferences for site development and management has utility for planning decisions in several ways. First, it can provide an understanding of how different visitor types may react to potential or proposed management actions. When addressing a resource concern, park managers can analyze various options to identify which alternative will be most acceptable to all groups. Second, the technique can provide guidance for how to best match facilities to the needs of visitors. Often, the types of experiences desired by visitors can help determine the appropriate facilities to provide. For example, those seeking to learn about the history of an area may feel that an audio guided information service is an acceptable method to satisfy their desired experience. By contrast, those seeking to truly “experience” history might object to such a service, citing that it would detract from the historical setting.

The research techniques used in this study are applicable in any park setting where multiple user groups seek different significant experiences. In a given setting, experience types will likely differ in character based upon the prominent resources of the park. For example, if we conducted a similar study of visitors to Denali National Park—a park famous for its abundant wildlife—we would expect a group more strongly motivated by outcomes associated with wildlife viewing to emerge from that data. Finally, including a comprehensive set of questions to quantify motivations for visiting a particular setting provides an extremely important basis for identifying visitor groups.

References

- Ahern, J. 2005. Alaska Region annual report 2005. National Park Service. Available at <http://www.nps.gov/akso/2005AnnualReport/index.htm> (accessed 18 December 2006).
- Bradner, T. 2005. Legislature bumps up tourism spending by \$1 million. Alaska Journal of Commerce. Available at http://www.alaskajournal.com/stories/061205/loc_20050612014.shtml (accessed 8 January 2007).
- Gilbert, C., P. White, and A. Worthington. 2001. Cultural landscape report: Kennecott mill town. Wrangell-St. Elias National Park and Preserve, [Copper Center, Alaska, USA].

- Glaspell, B., and A. Watson. 2003. The 2002 Wrangell-St. Elias fall visitor study. Project report. The Aldo Leopold Wilderness Research Institute, Missoula, Montana, USA.
- Manfredo, M. J., C. L. Pierce, J. J. Vaske, and D. Whittaker. 2002. An experience based approach to planning and management for wildlife viewing recreation. Pages 70–92 in M. J. Manfredo, editor. *Wildlife viewing in North America: A planning and management handbook*. Oregon State University Press, Corvallis, Oregon, USA.
- National Park Service, United States Department of the Interior. 2003. Environmental assessment: Interim park operations support complex Kennecott district. Wrangell-St. Elias National Park and Preserve, [Copper Center, Alaska, USA].
- National Park Service, United States Department of the Interior. 2006. Environmental assessment: Kennecott mines support facility plan. Wrangell-St. Elias National Park and Preserve, [Copper Center, Alaska, USA]. Available at <http://parkplanning.nps.gov/document.cfm?parkID=21&projectId=10904&documentID=16402> (accessed 20 December 2006).

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