

**Demand and Revenue Forecasts for Shuttle Service to Exit Glacier,
Kenai Fjords National Park**

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Executive Summary

Data were collected from visitors at Exit Glacier in Kenai Fjords National Park, Alaska, in 2001 through a combination of on-site and mail surveys that included transportation questions. Follow up questions were asked of Seward visitors and residents in the summer of 2002 through focus group sessions. Questions regarding four transportation options were posed to visitors. These options varied in shuttle bus waiting time, shuttle cost, and availability of on-site parking.

Depending on the option chosen, frequency of the service and associated fees, a shuttle service provider could expect to see anywhere from 17,857 to 119,046 passengers per summer based on the opinions expressed by the current visitors and projections based on similar tourist destinations. Revenues from such a service would range from \$0 if the shuttle were free to \$398,805 if a \$5 fee was charged (and no on-site parking was available). Summer revenues could be as high as \$839,276 if \$15 per passenger were charged and the shuttle ran every 15 minutes.

Individuals were asked to state how much they favored (or didn't favor) each scenario. Survey respondents were not sensitive to the probability of the parking lot being full. They were somewhat more sensitive to the amount of time they have to wait for a shuttle, but only slightly. The drop-off in ridership is not significant for a visitor waiting 5 minutes to one waiting 30 minutes for a shuttle. The single most important characteristic in making the decision to take a shuttle is the cost. Most focus group participants expressed feelings that \$10-\$15 shuttle fee in addition to the current user fees, was fair. At \$20-\$24, half of the potential shuttle riders would choose not to take a shuttle.

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I. Introductory Section

This research was initiated for the purpose of quantifying the demand for shuttle bus system to Exit Glacier in Kenai Fjords National Park, Alaska, and analyzing the economic feasibility of establishing such a transportation system.

Exit Glacier is part of Kenai Fjords National Park, which is located just outside of Seward, Alaska. Exit Glacier is one of the easiest glaciers to reach in Alaska and is a frequent stop for Alaskans and tourists, with about 262,000 visits in 2002 (Unruh, 2003). This area is one of the few spots in Alaska where one can easily walk up to the edge of a glacier. Exit Glacier contains a campground with 12 camping sites and three country cabins. There is also a ranger station and visitor center that offers exhibits, programs, and information about the site. The current fee to gain entrance into Exit Glacier is \$5 per car for one week and \$15 per car annually. Individual hikers or bikers pay a fee of \$2 (National Park Service, 2003).

One of the reasons that Exit Glacier is such a popular tourist attraction is that it is the only part of Kenai Fjords easily reachable by road. The Exit Glacier Bridge provides vehicle access to within one-half mile of the glacier. Currently, there is a free parking lot located at the trailhead to the glacier, however recent increase in visitation show that there are not enough parking spaces available during peak visiting hours. Frequently, people park illegally on the roadside. Another common issue is the many Seward area visitors who cannot access the glacier because they arrived by ship, air, bus, or train,

and have no car. Some of these people pay \$45 to take a taxi, but many others forgo a visit to Exit Glacier altogether.

The National Park Service (NPS) is preparing an environmental impact statement (EIS) for the Exit Glacier Area Plan at Kenai Fjords National Park. The General Management Plan for Kenai Fjords National Park completed in 1984 established broad goals for management of the Exit Glacier area. Specific area developments were approved in the 1996 Frontcountry Development Concept Plan (DCP). The purpose of Glacier Area Plan and EIS is to provide comprehensive management direction over the next 15 to 20 years. The DCP called for further study before implementing a proposed alternative transportation system (shuttle bus) and visitor use limits. Preliminary alternatives will be developed based on the issues identified and comments gathered. The public will be provided the opportunity to comment on preliminary alternatives before they are incorporated in the draft EIS.

1. a. Background

This study estimates the demand and revenue streams of shuttle service to Exit Glacier in the Kenai Fjords National Park. Data were collected from visitors at Exit Glacier in 2001 through a mail survey that included transportation questions. These transportation questions were developed by Dr. Kelly Giraud and personnel from the Institute of Social and Economic Research at the University of Alaska, Anchorage. Using these data, it was hoped that the preferences for a range of attributes associated with a bus system could be mapped in order to find the optimal mix of parking facilities, fees and waiting

time associated with an operational shuttle bus system. The questionnaire data were processed and an SPSS Save File created. The work of this project involved the analysis of all data collected in the 2001 survey pertinent to the shuttle bus question and the collection of limited new data pertinent in making informed judgments about relevance of these analyses for groups not included in the 2001 survey. Shuttle bus ridership was estimated using responses from the survey, plus conjoint analysis.

Methodology: The Contingent Valuation and Conjoint Analysis

The Contingent Valuation Method (CVM) is a standardized and widely used method for obtaining willingness to pay for recreation, option, existence and bequest values (Mitchell and Carson, 1989). CVM uses a questionnaire or survey to create a hypothetical market or referendum and then allows the respondent to use the hypothetical market to state their willingness to pay and/or willingness to participate.

The first part of a CVM survey describes the current and proposed quantity or quality of the resource in words and graphics. Next, the respondent is informed of how they will pay for the proposed quantity. The appropriate payment mechanism is the one that has a realistic link to provision of the good and is perceived as fair by the respondent.

This method is recommended for use by Federal agencies for performing benefit-cost analysis (U.S. Water Resources Council, 1983), for valuing natural resource damages (U.S. Department of Interior, 1986) and upheld by the Federal courts (U.S. District Court of Appeals, 1989). Recently, the National Oceanic and Atmospheric Administration

(NOAA) constructed a "blue ribbon panel" including two Nobel laureate economists, an environmental economist and a survey research specialist concluded that CVM can produce estimates reliable enough to be the starting point for administrative and judicial determinations (NOAA, 1993).

Since the printed dollar amount varies across the sample of respondents, the hypothetical market format requires the analyst to statistically trace out a demand like relationship between probability of a 'yes' response and the dollar amount (Hanemann 1984). Hanemann (1989) provides a formula to calculate the expected value of willingness to pay.

Five different bid amounts ranging from \$2 to \$15 were randomly assigned to survey respondents. The range was picked such that at the low end, the average visitor to the site would very likely indicate they would pay \$2-3, while almost no one was expected to pay \$15. These initial or starting dollar amounts were based on responses to other Alaskan recreation area research (Giraud, 2001).

Conjoint Analysis is an extension of Contingent Valuation. It includes the basic premise of stating preferences in a hypothetical market, and adds a number of other options. Mackenzie (1993) suggests that Conjoint Analysis may be more appropriate than traditional CVM because respondents are familiar with making market decisions when faced with a number of choices. This also allows for a variety of different attributes at different levels to be introduced. The result is an analysis that can describe the trade-

offs between attributes. For example, a respondent may be willing to wait an extra 10 minutes to take a shuttle bus if it saves him or her \$2 in fees.

The conjoint question can be framed in a few ways. The respondent may be asked to rate, rank or choose between options. This study used a rating system so that respondent could choose to approve or disapprove of all the options. As in a real market, they can purchase more than one choice, or purchase none at all.

1.b. Limitation of the Analyses of the 2001 Transportation Survey and Strategies for Dealing with it.

While the 2001 survey data may give an excellent analysis of the choices and preferences of current Exit Glacier visitors, it misses a key group of potential consumers; the people who would visit the glacier if a shuttle system existed. In order to get a full picture, a follow-up study was conducted off-site in order to estimate the additional demand that may result from the increased access to the site.

In addition, the sampling plan was intended to produce a random sample, however nonresponse biases were found for age and residence. Respondents were older than non-respondents and local and foreign respondents were more likely to return their questionnaires than non-local AK or non-AK respondents. Obtaining representative samples is a recurring issue in survey research, and therefore results should be viewed as estimates.

Focus Groups

Estimates obtained from the survey data collected in 2001 were coupled with data collected through a number of focus group sessions conducted in Seward, Alaska, in August of 2002. Focus group sessions took place in a number of locations included the Kenai Fjords National Park Visitor Center, the Seward shopping district, outside of the Alaska Sealife Center and in local restaurants. The focus groups were comprised of a total of 50 people and conducted by researchers from the University of New Hampshire (Dr. Kelly Giraud and Mary Robertson). The focus groups consisted of randomly selected individuals in the Seward area, with no preference given to tourists, residents or seasonal employees. The focus groups began with a brief discussion regarding the proposed shuttle bus system. The participants were asked if they would utilize such a system under a variety of price and frequency options, and given the opportunity to add general comments. Focus Group comments are in Appendix III.

I.c. Economic Feasibility

Estimates of the demand and revenue streams were calculated from actual visitors and confirmed by individuals in the Seward area. These estimates may now be given to concessionaires in order to see if a shuttle system is economically feasible. A matrix of options, based on the waiting times, number of stops, price incentives and parking regulations are shown in Table 1. From this information, the potential concessionaires can determine if the shuttle system is economically feasible for them.

II. Description of Study Objectives

The objective of this study is to fulfill the need for more information as described by the Frontcountry Development Concept Plan (DOI, 1996) and the Environmental Impact Statement for the Exit Glacier Area Plan (DOI, 2001). More specifically, the managers of the area would like information in order to plan for the next 15 to 20 years of visitor use. This study estimated the number of users, based on current visitation, which would likely use a shuttle system under different transportation options with different associated attributes. The different transportation options vary in terms of availability of a shuttle bus system, availability of on-site parking and possible user-fee discounts. The different attributes include different shuttle bus fees, waiting times and probability that the on-site parking lot will be full, if available.

III. Description of the Survey Data

Data was collected in the summer of 2001 by survey personnel from the College of Forest Resources, University of Washington. An on-site researcher contacted adult (over 17 years old) visitors from July 1 through August 31, between the hours of 9AM and 9PM. In total, 1594 visitors were contacted on-site, with 1484 agreeing to participate in the study. Basic information on visitor group members was collected on-site and a mailed questionnaire was sent to a sub-sample of the on-site respondents. 1216 surveys were mailed to valid addresses and 913 of those were completed and

returned. The overall response rate was 74.9%. For more information on sampling and summary statistics of this survey, see Vande Kamp, et al (2002).

Part of the mailed questionnaire asked respondent about their opinions on alternative transportation options to Exit Glacier. From this information, projected demand for the alternative options was estimated over a range of scenarios that vary in terms of cost, ability to find on-site parking and expected time spent waiting for a shuttle bus.

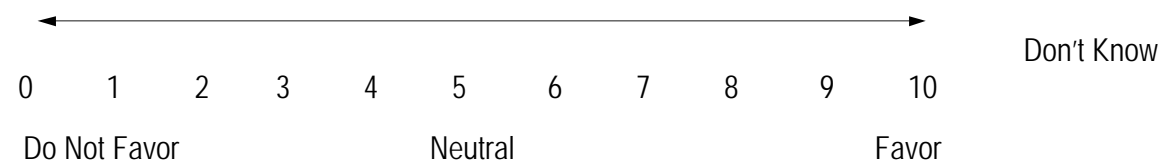
Respondents indicated that there are strong trade-offs to be made in their decision to utilize a shuttle bus. From this information, economic feasibility of such alternate transportation systems can be described.

Because the Exit Glacier parking lot is sometimes full, parking can be difficult for visitors. The parking lot is expected to be full more often in the future, so managers of Kenai Fjords National Park are considering providing a new shuttle bus service to transport visitors from Seward to the glacier and back.

- The shuttle would operate *during* peak hours, from 9:00 AM to 8:00 PM, June 15–Aug 15.
- If the parking lot at Exit Glacier is full, overflow parking *would not* be permitted along Exit Glacier Rd
- The shuttle bus would make stops at
 - the Downtown Park Visitor Center,
 - the Sealife Center,
 - the Seward Alaska Railroad terminal, and
 - a free parking lot near the intersection of the Seward highway and Exit Glacier Road.
- Any fees for the shuttle service below would be *in addition* to the Exit Glacier Entrance Fees (currently \$5 per vehicle or \$2 per person).

The model used economics techniques, based around a 0 – 10 rating Conjoint Analyses. Each one of the four options was rated by the survey respondents:

Please Rate **Option X** on the following scale (circle a number, or circle "Don't Know"):



Each option is rated on a Likert scale of 0 to 10 (Do Not Favor to Favor). This enables the respondent to either approve or disapprove of all the options. A description of the options is below, with the econometric results following directly afterward.

IV. Results of the Study

IV.a. Specific Alternative Demands

Option A: Fee for Shuttle Bus with Limited Parking at Exit Glacier

In this option, all factors of existing transportation would remain the same, except a fee-based shuttle system would be added. Compared to the other options, 10% of the respondents preferred this over the others, making it the least favorite option. However, under certain conditions, this option was given a favorable rating. Overall, it was viewed as a slightly unfavorable option, earning a 4.03 on a 10 point scale, where 0 was “Do not Favor”, 5 was “Neutral” and 10 was “Favor”.

In order for this option to be favored (get a rating of 6 or above), the time spent waiting for a shuttle would have to be less than 13.1 minutes, and the cost of a shuttle would have to be \$6.21 or less. The probability that the parking lot would be full had no effect on respondent’s preferences. If these conditions held, 37% of the respondents would have picked Option A as their favorite, and 88% of the respondents would consider taking the shuttle at least once during the summer.

If the cost of the shuttle went up to \$8.32, this option would fall out of favor and only about half of the respondents would consider taking the shuttle (51%).

Option B: Fee for Shuttle Bus with No Parking at Exit Glacier

Option B eliminates the ability to park on-site and replaces it with a shuttle system. Overall, 12% of the respondents liked this option over the others, and its approval rating was also low, 4.23 on the 10 point likert scale (closer to “Neutral”, but on the “Do Not Favor” side). Across the wide range of conditions, a total of 59% would take the shuttle system. It is assumed that the 41% that would not take the shuttle would either bicycle in, get dropped off, or refuse to go to the glacier.

In order for Option B to be favored (to have a rating of at least 6 on the 10 point scale), the time spent waiting for a shuttle would have to be 3.43 minutes or less and the cost would have to be \$8.71 or less. If this were the case, 95% of the respondents would take the shuttle under this option.

Option C: Free Shuttle with Reduced Entrance Fee and Limited Parking at the Glacier

Option C earned the highest approval rating, which is not surprising because it keeps the availability of the current on-site parking lot and adds a discounted user fee if visitors wish to take a free shuttle bus. 42% of the survey respondents favored this option over all others, making it the most popular choice. The overall approval rating

was 6.5 on a 10 point scale. In addition, 84% of the respondents would consider taking the shuttle if this option were available.

In order for Option C to earn an approval rating of 6 or greater by all those taking the various conditions into consideration, the waiting time for the shuttle bus would have to be less than 22 minutes and be free of charge. If this were true, 95% of the respondents would consider taking the shuttle bus.

Option D: Maintain Current Parking and Transportation Policy

This option is the status quo. The current transportation policy would remain in place and visitors would have to arrange their own way to get to Exit Glacier. This option was favored by 22% of the respondents and received an overall approval rating of 5.34 on a 10 point scale – just slightly more favored than “Neutral”.

IV.b. Putting it all together: The Optimal Transportation Policy

Overall, Option C (a free shuttle with reduced entrance fee and limited parking) was the favorite, with 42% of the respondents preferring this option above all others. Only ten percent of respondents preferred the first option, 12% preferred the second, and 22% preferred the status quo. However, decision makers may choose to evaluate these raw numbers on a deeper level because there were 50 different combinations of fees, waiting times for the shuttle, and probability that the on-site parking lot would be full.

There are distinct trade-offs to be made with respect to time spent waiting, fee amounts and probability that the parking lot will be full.

Combining all options and variations, the average willingness to pay for a shuttle service, in addition to the user fee, is \$23.08. This is that point at which half of the respondents would take the shuttle and half would not. It should be noted, however, that this amount does increase as the time spent waiting for the shuttle decreases. Survey respondents seemed indifferent to the probability of finding a full parking lot, which may be due to the fact that many visitors spend less than one hour at the site, so cars don't have to wait long for a space to become open. Survey respondents were mostly first-time visitors (over 92%). Given the high proportion of first-time visitors, it seems logical that the probability that the parking lot would be full would be insignificant (they would be unaware of the issue).

In addition to the survey, researchers asked visitors and residents of Seward about reasonable shuttle fees. The average acceptable fee ranged from \$10 to \$15. Many people indicated they would prefer to take a shuttle, rather than drive, and many others were not able to visit the site because they had no available transportation and were unwilling to pay \$45 for a taxi.

If survey respondents are given a choice about what option they like best, the favored option may be improved or diminished based on what alternatives are present when making the choice. However, if only one choice were available, the visitor simply has

the choice to visit or not visit (and in some cases take a shuttle or drive themselves).

According to this analysis, once a transportation policy is chosen, visitors will behave in the following predicted ways:

Table 1 gives the estimated LOWER BOUND participation in a shuttle system under a variety of situations. Note that these estimates are based on current visitors only, not potential visitors who were unable to get to Exit Glacier because of transportation constraints. While it is unknown exactly how many visitors to the Seward area would visit Exit Glacier if a shuttle service were available, but were unable in the absence of a shuttle system, the people who participated in the focus groups indicated strong approval for a shuttle system with an expressed willingness to pay of \$10 - \$15 per person *in addition* to current entrance fees, except in Option C, which gives a reduced fee of \$2 per vehicle and \$1 per person (fees were \$5 per vehicle or \$2 per person at the time of this study).

In total, there were 50 different situations/treatments of the survey. The situations varied in the option (A-D as listed above – they varied in the availability of on-site parking and the existence of a shuttle system) and three attributes if a shuttle system existed: percentage of the time that the parking lot is full, waiting time for the shuttle, and cost of the shuttle (the shuttle fee would be in addition to a user fee). Twenty-four of those options are shown in Table 1, with the expected ridership and revenues for each.

Table 1

Estimated *Lower Bound* Use of a Shuttle System: Raw Data

Situation	On-Site Parking Available?	Shuttle Available?	% Time Parking Lot is Full	Frequency of Shuttle (Minutes)	Cost or discount of Shuttle (\$)	# Visitors Per Summer Taking Shuttle	Expected Shuttle Revenue Per Summer
1	NO	YES	N/A	10	3	79,761	\$239,283.06
2	NO	YES	N/A	10	5	63,095	\$315,472.70
3	NO	YES	N/A	10	10	29,762	\$297,615.75
4	NO	YES	N/A	10	15	19,047	\$285,711.12
5	NO	YES	N/A	15	2	78,571	\$235,711.67
6	NO	YES	N/A	15	3	82,142	\$246,425.84
7	NO	YES	N/A	15	5	79,761	\$398,805.11
8	NO	YES	N/A	15	10	20,238	\$202,378.71
9	YES	YES	50	10	Free with discounted user fee	119,046	\$0.00
10	YES	YES	50	10	10	61,904	\$619,040.76
11	YES	YES	50	10	15	38,095	\$571,422.24
12	YES	YES	50	15	Free with discounted user fee	88,094	\$0.00
13	YES	YES	50	15	3	74,999	\$224,997.51
14	YES	YES	50	15	10	52,380	\$523,803.72
15	YES	YES	50	15	15	55,952	\$839,276.42
16	YES	YES	50	30	Free with discounted user fee	85,713	\$0.00
17	YES	YES	30	10	Free with discounted user fee	84,523	\$0.00
18	YES	YES	30	10	5	39,285	\$196,426.40
19	YES	YES	30	10	15	17,857	\$267,854.18
20	YES	YES	30	15	Free with discounted user fee	97,618	\$0.00
21	YES	YES	30	15	3	74,999	\$224,997.51
22	YES	YES	30	15	15	34,523	\$517,851.41
23	YES	YES	30	30	Free with discounted user fee	35,714	\$0.00
24	YES	NO	Current Situation	N/A	N/A	0	\$0.00

In addition to the information contained in Table 1, it is useful to gauge the sensitivity to the attributes by looking at a statistical regression that measures the significance and willingness to pay for each attribute, such as a conjoint analysis.

IV.c. Conjoint Analysis Results

Table 2 contains the results from a basic conjoint analysis that contains the following variables: **Perc**, the percentage of time that the parking lot is full; **Min**, the average number of minutes between shuttles; **Price** is the fee charged for the shuttle; **Age** is the age of the respondent, **Educ** represents the respondent's education level in years; **EGtrips** is the number of trips the respondent has taken to Exit Glacier in the last 12 months; and **LiveAK** is a dummy variable that is 1 if the respondent is an Alaskan resident and 0 otherwise.

Table 2				
Statistical Regression Results				
Dependent Variable: OPTPAY				
Method: ML - Censored Normal (TOBIT) (Quadratic hill climbing)				
	Coefficient	Std. Error	z-Statistic	Prob.
C	0.415147	0.116614	3.560027	0.0004
PERC	-0.000183	0.000482	-0.380126	0.7039
MIN	-0.002835	0.002058	-1.377670	0.1683
PRICE	-0.062547	0.002983	-20.96656	0.0000
AGE	0.001660	0.001155	1.437330	0.1506
EDUC	0.013100	0.005043	2.597545	0.0094
EGTRIPS	-0.019579	0.026809	-0.730316	0.4652
LIVEAK	-0.261699	0.047141	-5.551422	0.0000
R-squared	0.326943	Mean dependent var	0.442151	
Adjusted R-squared	0.325373	S.D. dependent var	0.496714	
S.E. of regression	0.407980	Akaike info criterion	1.523999	
Sum squared resid	571.0811	Schwarz criterion	1.540072	
Log likelihood	-2612.279	Hannan-Quinn criter.	1.529740	
Avg. log likelihood	-0.759383			

According to the results in Table 2, respondents are not sensitive to the probability that the on-site parking lot will be full, the z-statistic indicates that the variable is not significant – even at the 75% level. Frequency of the shuttle has marginal influence on the respondent’s decision to take the shuttle, barely significant at the 90% level. Price has a great deal of explanatory power, with statistical significance above the 99% level. In other words, these people don’t mind waiting a little longer for the shuttle, they don’t care how often the on-site parking lot is full. Their main criterion for deciding to take a shuttle bus to Exit Glacier is the price.

It should be noted that residents of Alaska are less likely to take the shuttle than out of state visitors, as can be seen by the negative coefficient on LiveAK. This variable is significant at the 99% level. Also of interest in the regression is that respondents who are older and more educated are more likely to take the shuttle.

Based on results of further analysis, average willingness to pay can be calculated for each option (Pinkerton, 2003). In the following table, the average willingness to pay estimates is presented. Note that this is the amount at which half the people would choose to take the shuttle and half would not (they would drive or not visit).

Table 3
Willingness to Pay for a Shuttle Ride

Option	Willingness to Pay
A	\$24.45
B	\$20.33
C	\$24.19

These estimates have been estimated using a 15 minute waiting period and assuming that the parking lot would be full 50% of the time (if available).

V. Non-technical Summary, Interpretation and Conclusions

Depending on the option chosen, frequency of the service and associated fees, a shuttle service provider could expect to see anywhere from 17,857 to 119,046 passengers per summer based on the opinions expressed by the current visitors and projections based on similar tourist destinations. Revenues from such a service would range from \$0 if the shuttle were free, to \$196,426 if a \$5 fee were charged but the parking lot was not frequently full, to \$839,276 if \$15 per passenger were charged and the shuttle ran every 15 minutes.

Survey respondents were presented with a variety of alternatives and asked if they would take a shuttle (if available) under each scenario. In general, respondents were not very sensitive to the probability that the parking lot was to be full. Perhaps they don't mind waiting for a space, or are not aware of the parking congestion due to the fact that most visitors are going to the glacier for the first time. Respondents were a little more sensitive to the amount of time they have to wait for a shuttle, but only slightly. The single most important characteristic in making the decision whether or not to take a shuttle is the cost, however, gross revenues increase as the shuttle fee increases despite a decrease in the quantity of shuttle rides demanded.

In more detailed narrative data collected from focus group participants, a \$10-\$15 shuttle fee was considered fair. At \$20-\$24, half of the potential shuttle riders would choose not to take a shuttle.

In short, there is a significant demand for a shuttle system. The next questions to address are those of shuttle cost vs. volume of ridership. Keeping costs down may make visitors to Exit Glacier happy in one respect, but may make the Glacier viewing area congested if methods of visitor dispersal are not integrated. According to Vande Kamp, et. al. (2003), thirty people at the Exit Glacier viewing area is the social carrying capacity. It is therefore suggested that a fee and schedule be made such that visitors are not concentrated at certain times. Perhaps a small shuttle bus that runs more frequently and charges a fee between \$10 and \$15 is the optimal solution.

Finally, shuttle system operators and park managers should continue to monitor shuttle system attributes and visitors' sense of congestion. Conditions may change dramatically if for example, passengers on major cruise ship lines are free to visit Exit Glacier.

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18. Exit Glacier Shuttle Bus Service

*The shuttle would operate *during* peak hours, from 9:00 AM to 8:00 PM, June 15–Aug 15.

*The shuttle bus would make stops at the Downtown Park Visitor Center, the Sealife Center, the Seward Alaska Railroad terminal, and a free parking lot near the intersection of the Seward highway and Exit Glacier Road.

*Any fees for the shuttle service below would be *in addition* to the Exit Glacier Entrance Fees (currently \$5 per vehicle or \$2 per person).

*Between 9:00 AM to 8:00 PM, June 15–Aug 15, the parking lot at Exit Glacier is expected to be full ____% of the time.

*The shuttle bus would cost \$___ per person for a round trip pass in addition to the entrance fee.

i Yes \rightarrow

☐ No

_____ time(s)

Yes →

☐ No

_____ time(s)

A horizontal number line with arrows at both ends. It is marked with integers from 0 to 10. The numbers are placed below the line, and there are tick marks corresponding to each integer.

Favor

Don't Know

*The shuttle bus would cost \$____per person for a round trip pass in addition to the entrance fee.

Yes \rightarrow

☐ No

time(s)

A horizontal number line with arrows at both ends. It is marked with integers from 0 to 10. The numbers are placed below the line, and there are tick marks corresponding to each integer.

Favor

Don't Know

23

*For visitors using the shuttle, the entrance fee would be reduced to \$ 2 per vehicle or \$1 per person collected at the shuttle parking lot.

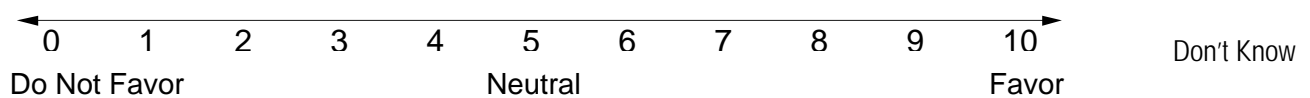
*The Exit Glacier parking lot is expected to be full ____% of the time.

*A *free* shuttle bus would leave every ____minutes.

C1) If this were the only option this summer, would you have *used the shuttle bus* at least once? ☐ Yes → How many times this summer (total)?
☐ No _____ time(s)

C2) If this were the only option this summer, would you have tried to *park at the Glacier* at least once? ☐ Yes → How many times this summer (total)?
☐ No _____ time(s)

C3) Please Rate **Option C** on the following scale (circle a number, or circle "Don't Know"):



Option D: Maintain Current Parking and Transportation Policy

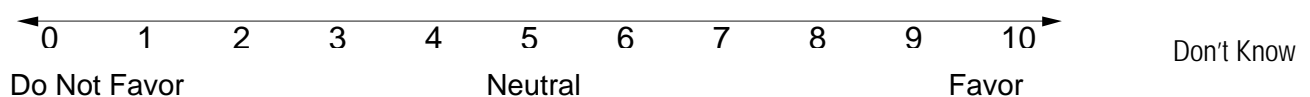
*Parking would remain free at Exit Glacier, but the parking lot is expected to be full most of the time during peak hours.

*As in the other options, overflow parking would not be permitted to overflow onto Exit Glacier Road.

*There would be no shuttle bus.

D1) If this were the only option this summer, would you have tried to *park at the Glacier* at least once? ☐ Yes → How many times this summer (total)?
☐ No _____ time(s)

D2) Please Rate **Option D** on the following scale (circle a number, or circle "Don't Know"):



4) Which option do you like best? Option _____

Appendix II: List of Attributes Used in the Survey

Treatment	Option A			Option B		Option C	
	Lot Full (%)	Wait Time	Bid	Wait Time	Bid	Lot Full (%)	Wait Time
1	10	5	5	10	3	30	30
2	10	5	15	5	3	20	30
3	10	10	3	5	3	30	15
4	10	10	5	5	3	30	15
5	10	10	5	5	10	30	10
6	10	15	2	10	15	20	15
7	10	15	3	5	15	30	30
8	10	15	3	10	10	30	30
9	10	15	5	10	10	20	30
10	10	15	10	5	15	30	15
11	10	30	2	15	3	30	30
12	10	30	3	5	10	30	10
13	10	30	10	5	2	30	15
14	10	30	10	10	5	30	30
15	20	5	5	5	2	20	15
16	20	5	5	5	3	30	10
17	20	5	10	5	3	10	15
18	20	5	10	5	5	10	15
19	20	5	10	5	5	50	10
20	20	5	15	10	3	30	30
21	20	5	15	10	5	50	15
22	20	10	10	5	2	50	30
23	20	10	10	15	2	10	30
24	20	10	15	5	3	30	30
25	20	10	15	15	3	30	30
26	20	15	2	10	10	10	30
27	20	15	3	10	15	50	15
28	20	15	15	15	5	10	30
29	20	30	2	15	10	30	30
30	20	30	15	10	3	50	15
31	30	5	3	15	2	50	30
32	30	5	5	5	2	10	10
33	30	5	15	5	2	10	10
34	30	10	5	5	5	50	30
35	30	10	10	10	3	30	15
36	30	10	15	10	3	50	30
37	30	15	3	5	15	30	30
38	30	15	3	10	3	50	15
39	30	15	3	10	15	50	30
40	30	15	15	5	10	10	30
41	30	15	15	15	5	50	30
42	50	5	3	10	2	30	15
43	50	5	5	10	3	20	15
44	50	10	10	5	3	30	30
45	50	10	10	5	10	10	15
46	50	10	15	5	5	10	30
47	50	10	15	15	2	30	30
48	50	15	3	10	5	10	30
49	50	15	10	5	3	50	30
50	50	15	15	5	2	20	30

Appendix III: Focus Group Comments

A shuttle system won't be cost effective.

Seward is growing too much

People camp to save money – some people might like to rent bikes to ride into the area.

A shuttle would be good to take people to camp sights near the glacier.

Let people park in the North lot to take the pressure off the small boat harbor lot.

Camping will take pressure off campgrounds in town.

Every hotel, B&B and campsite is taken frequently

The cost of shuttle service to Exit Glacier is outrageous, "It burns my hide."

People spend so much money to get here and then to pay for services out there, especially what they are being charged, \$25 to \$45!

The National Park Service should offer that service.

Shuttle service is imperative to come back

Can't afford to have the shuttle run every 5 minutes so what times?

"We are heading out after this so we have to take our vehicle"

Shuttle should be city-run rather than NPS-run

Residents might not want tax \$ to for to shuttle service

Shuttle sounds like good idea

Have more shuttles during peak times

Shuttle and admission in one price rather than being "hit" when you get there.

Might be nice not to have to move your car around (when we get a parking space, we don't want to move the car)

Shuttle drive as interpreter, part of the experience

Don't want someone just driving it; I want it part of the tour

Being on time is the biggest for me

Entrance fee and shuttle should cost \$10 - \$20

\$20 seems to high - \$12 to \$15 seems fair

What if someone gets left behind?

Other park has last bus out

Phone service or radio at site in case someone misses the last shuttle

Family fare to make it affordable for whole families

Joint ticketing with the Alaska Sealife Center. A price that covers different sites

Maybe the trolley could be extended.

Advertising/Marketing

- Alaska Marine Highway

- Websites (NPS, Lonely Planet)

- Milepost

- AAA/CAA books

Family of 4 (2 children – 2 & 1 yr.) Came in on ferry overnight so looking for something to do. Don't want to go back on the water.

Exit Glacier 12 miles away, "we have to rent a car or something."

"They aren't starting the shuttle today, by any chance, are they?"

With four people they don't want to pay so car rental may have to happen although they were not looking forward to having to deal with a car.

Car rental was \$40 – they rented a car for the day.

A shuttle for \$10 would have been better.

Didn't want a car, but had no choice w/4 people.

It is usually not easy to get a rental car in the same day!

People are lucky if they can rent one.

\$5 if that – not fair to spend \$45!

Have narration on the bus.

Should have interpretive talks: History: Natural, Cultural, Geology

Native cultural history, gold mining

2 different trips – short shuttle

- long interpretive

- many people don't have the \$\$

- maybe add some bigger parking lots north of town with shuttle

1 person

- cruise or train passengers preferred to stay in town to walk

- hours aren't convenient on shuttle taxis too much!

- Money is more important than time

- allow enough time to view everything, don't rush

- keep rate down

- just stop here at the visitor center, not everywhere else - it would help out shuttle service

- a little cost involved

would be nice to be free, but \$3?

provide a service

- 2 guided hikes w/ranger

have it there 15 minutes before guided tours

- a little interpretation along the way, but don't stop along the way

- there are companies that give a ride to the park /play & dog sled displays

- no conflict w/existing companies

many people not on cruise ships would benefit

Just use lonelyplanet.com to advertise

- We plan to hitchhike out to the glacier
- we would use it!
- we don't let transportation effect our decision, we figure a way if we want to go
- money is more important than time
- prefer a shuttle to go right there, not w/a whole bunch of people
would be nice if we could leave the group
- would be nice to have a little talk along the way, but not a guided tour when they got there

Shuttle service to Exit Glacier

"That would be perfect."

"That would be helpful – great."

This is the destination (Seward, boat trips, SLC)

Exit Glacier is an exit trip (done as an afterthought on the way out).

Schedule a time so people don't have to wait

15 people on but scheduling/time is more important

Have a schedule

interpretive stuff on the bus

PA systems aren't good. Too many hearing problems.

A tape of a familiar voice (Tom Brokaw – someone that we know).

On paper interprets (self guide book).

30 minute schedule is fine for shuttle

bus stop wait area – something to read, like interpretive signs

For cost do comparable study – fit cost into this especially if it offers other services
extra fee for tour trip. Shuttle

Most visitors to national parks are used to shuttle services.

Female lives in Anchorage has brother visiting from Hawaii.

She always brings her guests here and to Exit.

Always drives, never has had a problem with parking.

She would never use a shuttle.

Her brother (visiting) said that other people probably would, people w/out a car.

She said they spent 15-20 minutes there (Exit) yesterday.

That was enough, the kids wanted to go.

When asked about how often shuttle should run they said "maybe every 30 minutes"
because you don't want to be stuck there.

"It is nice but there is only so much to see, and signs to read."

Not planning to go to Glacier – been there before, don't want to go again.

Shuttle great for people w/motor homes. They want to park them and leave them.
Hard to get in and out of small places.
No idea on cost – go 5 times a day.

- Great shuttle
 - Yes, would take it.
- Interpretive better
- \$15-\$20
- Should run every 1 ½ - 2 hours
- Just stop at park office.
- Time more important than \$\$