City of Boulder Mountain Parks: Parking Fee System Survey

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Data Collection

We administered the surveys over a two week period. Each of the five researchers participated in collecting data. In total, we completed one hundred and ninety eight surveys, sixty six from each location (Chataqua, Gregory Canyon, and Flagstaff Mountain). Interviews for each of the three locations were split evenly between weekday and weekend. Thus, we obtained six subdivisions of responses. Each subdivision accommodated thirty three responses. Since the research team consisted of five people, each team member interviewed approximately forty people. The researcher representation across all subdivisions was approximately equal. Please refer to Attachment 14 for a copy of the interview schedule that we followed.

As previously discussed, we approached the respondents on a convenience basis. We made no attempt to achieve a systematic or random sample. We informally decided to approach and gather responses from men and women on an equal basis. However, that did not work well when we discovered that men tended to respond more often than women in a group setting. As a result, we have more men than women represented in the sample. As respondents made comments outside the scope of the questions, we noted these comments on the survey form.

Preparing Data for Analysis

Record keeping is the second most important aspect of survey research after instrument construction. Fowler (1993: 123) recommends five separate phases of coding or data reduction to which we adhered in preparing our data for analysis:

1. Deciding on a format (the way the data will be organized in a file).
2. Designing the code (the rules by which a respondent's answers will be assigned values that can be processed by the machine).
3. Coding (the process of turning responses into standard categories).
4. Data entry (keying the data into the computer).
5. Data cleaning (doing a final check on the data file for accuracy, completeness, and consistency prior to the onset of analysis).

To help us in recording and entering data, one group member designed a Microsoft Excel spreadsheet to be used as a data management matrix and distributed it to all the group members (see Attachment 15). These spreadsheets were pre-numbered with their survey numbers on the rows and question number (with a short description) on the columns. Each group member was responsible for the initial data cleaning, error checking, and validation. Each group member entered his or her own data except for one person who did not have access to Excel. We distributed her surveys among the other members for entry.

All the questions had the selections pre-numbered, and we entered those numbers into the spreadsheets. For example, every yes/no question had "yes" coded

as 2 and "no" coded as 1. The questions where more than one response was allowed had spreadsheet cells allocated to each possible response. So, for example, the question about park activities (question 23) had 9 cells allocated. This enabled us to enter all applicable responses.

The survey included three questions where the respondents could answer "Other." In those cases, we entered the actual text of the response. For example, in the question about park activities, if the response was "Taking pictures," that text was entered in the cell.

After the group members completed their data entry, one group member collected disks and combined the data into one large spreadsheet. He then validated the data a second time for the proper range in each question. For example, questions with only 2 possible answers had to be coded with only a 1 or a 2. If any questions arose, he called the group member responsible for that survey to determine the correct value.

After all the data were validated, we developed a code book for the questions with "Other" responses. We assigned a number to each of the different responses as it was encountered in the spreadsheet. Most answers were consistent, but we grouped some responses by a general category. For example, we designated "taking pictures" and "photography" as "photography."

Code Book
How did you become aware of the fee system?
2. My mom
3. City Council
4. This interview
5. Board
6. Mountain
7. Warning ticket

Where do you go (to avoid the fee)?
1. Walker Ranch
2. Anywhere there's no fee
3. Chataqua
4. White Ranch
5. Estes Park
6. I'm not sure

What activities do you plan to participate in?
1. Reading
2. Letter writing
3. Studying
4. Botanizing
5. Running

4. Do you live in Colorado?	No	Yes
	14%	86%

5. Do you live in Boulder county?	No	Yes
	18%	82%

6. Did you come here in a car?	No	Yes
	20%	80%

7. Is that car registered in Boulder County?	No	Yes
	40%	60%

8. How many people were in your vehicle?	1	2	3	4	5	6
	37%	35%	14%	10%	3%	1%

9. How long will you be staying in the Mountain Parks?	½ hour	½-1 hour	1-2 hours	2+ hours
	12%	23%	28%	36%

10. Are you aware that Flagstaff Mountain has a parking fee?	No	Yes
	25%	75%

18. Is the fee system a good way to raise money to maintain the park system?	No	Yes
	13%	87%

19. Do you think the $3 daily fee for non-Boulder County residents is...	Much too much	Too much	OK	Too little	Much too little
	5%	33%	56%	5%	1%

20. Do you think the $15 annual fee for non-Boulder County residents is...	Much too much	Too much	OK	Too little	Much too little
	5%	15%	69%	11%	0%

21. Do you avoid Flagstaff or Gregory Canyon because of the fee?	No	Yes
	94%	6%

23. What activities do you plan to participate in today?	Drivng	Climbng	Hiking	Walk Dog	Picnic	Social	Bird Watchng
	22%	16%	63%	12%	6%	5%	5%

24. Are you a CU Boulder Student?	No	Yes
	78%	22%

TABLE 1

	Boulder Resident	Survey Location	Age	Income	CU / Non-CU
Did you see the signs?	Difference <.001	Difference <.001	No difference	No difference	No difference
Aware of Flagstaff fee?	Difference <.001	Difference <.001	No difference	No difference	No difference
Aware of Gregory Canyon fee?	Difference <.001	Difference <.001	No difference	No difference	No difference
Is the fee a good way to raise money?	Difference <.05	Difference <.05	Difference <.01	No difference	No difference
Is the daily fee too much or too little?	Difference <.05	Difference <.05	Difference <.05	No difference	No difference
Is the annual fee too much or too little?	No difference	No difference	No difference	No difference	No difference

Discussion

Did you see the signs?

Although the majority of respondents (65%) said that they saw the signs about the fee system, there were significantly more Boulder residents (73%) than non-Boulder residents (28%) who saw the signs. As one might expect, more survey respondents in Gregory Canyon and Flagstaff said that they saw the signs than people in Chataqua.

Aware of Flagstaff fee?

Seventy-eight percent of the total respondents were aware of the parking fee at Flagstaff Mountain. Significantly more Boulder residents (87%) than non-Boulder residents (39%) were aware of the fee. Ninety-two percent of the respondents at

appropriate; sixty-one percent of respondents who spent more than a half an hour in the parks thought that the fee was OK.

Is the annual fee too much or too little?

There were no statistical differences between the groups with regard to the $15 annual fee. Approximately 70% of all respondents thought that the fee was OK.

There were significant differences between the groups in their perceptions of appropriateness of the annual fee based on how long they spent in the park. Eighteen percent of total respondents thought that the annual fee was too much or much too much. The longer the respondent stayed in the parks the more appropriate they thought the annual fee was.

Critique

Following is a critique of the research project. It includes a discussion of strengths and weaknesses of each phase of the research from question development to data analysis as well as a review of our group processes.

Research Question

Our research objective was to gather some initial data concerning reactions to the newly-implemented fee system at Flagstaff Mountain and Gregory Canyon. This was a particularly timely topic and was relevant to our constituency (the ranger service) and to the community. Brian Peck, Director of Natural Resources and Education for the City of Boulder Mountain Parks, suggested that the information we provide to them will be forwarded to the City Council and will serve to guide management (both the ranger service's and City Council's) in future decision making with regard to the fee system.

The three facets (fee awareness, sign clarity, and fee appropriateness) of the research question were appropriate to address our research objective. We were thorough in conducting our preliminary fieldwork and were fortunate to be working with the ranger service. The help of the rangers was invaluable in directing our research. The only shortcoming may be that our research reflects the desires of only the ranger service as opposed to city council. Although Brian indicated that the results would guide management of both the ranger service and the council, our research question may be too narrowly defined to encompass issues that are salient to the council.

Survey Development and Pilot Testing

Although much care went into developing and refining the survey, it was not flawless. During data collection, we found a number of questions to be unclear or in need of refinement. Examples included the questions regarding income level (individual or family?) and the item on avoiding the mountain parks because of the fee (do you avoid coming vs. would you avoid coming?). Although we had gone

Analysis and Results

     We performed three types of data analyses: descriptive statistics, analysis of variance and crosstabs. Each were appropriate for the type of data collected and yielded valuable information regarding our three primary research concerns: fee awareness, sign impact and clarity and fee appropriateness. As previously noted, the data could be "sliced and diced" in a multitude of ways, but for the purposes of this study, limits had to be set. We met as a group to decide how to manipulate the data, and overall, we were quite judicious in our selection of analyses. Certainly, however, further analysis could be conducted. Finally, based on some of the aforementioned limitations of the research design, we will recommend that the study be considered a pilot study. The survey instrument should be refined to address its notable shortcomings and it should be administered again with particular attention paid to the sampling design.

Group Process

     Group projects inherently offer certain challenges and benefits that cannot be gleaned from individual work, and overall, the group project offered a valuable learning opportunity. It was not without its shortcomings, however. One of the major drawbacks was finding time to meet as a group to plan and implement the project. After class on Thursdays was the only free time in common, and all group members were tired and eager to work quickly at that hour. This led to often informal and unequal division of tasks. Similarly, differential access to and skills with computer technology which were crucial throughout the project, led to somewhat unequal division of tasks. Some of these problems may have been alleviated by conducting an assessment of group members' strengths and weaknesses early on in the project and by identifying areas in which each group member could make the most valuable contribution.

     On the positive side, our group was not lacking in initiative. Overall, the group process went very well, and the aforementioned drawbacks were but minor concerns that did not really inhibit progress of the project. When some group members were facing "frantic" periods because of other commitments, other group members always rose to the occasion to take the lead on various aspects of this project. The fact that group members genuinely liked each other facilitated communication and contributed to efficient execution of tasks. Finally, the project benefitted greatly from incorporating different perspectives and styles and from peer review. The end result is certainly more complete than it might have been had an individual tackled the study alone.