Visitor Characteristics and Beliefs about Boulder Open Space and Mountain Parks

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This study began under a contract with Park Studies, Inc. The survey and preliminary data analysis are the work of Park Studies, Inc. Final data analysis, results and conclusions reported in this study are solely those of the authors. The City of Boulder owns this report and all information related to this report.

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Executive Summary

This project sought to better understand visitors to the City of Boulder Open Space and Mountain Parks (OSMP). The specific objectives were to describe OSMP visitors in terms of their:

1. Demographic characteristics (e.g., sex, age, residence) and prior visitation rates,
2. Trip characteristics (e.g., trip duration, activity participation), and
3. Evaluations of the experience (e.g., perceived conflict, satisfaction with OSMP).

Results were based on a survey of OSMP visitors (n = 2,806, response rate 78%) conducted during 2004-2005. Findings are presented for the overall sample. Comparisons are also made by season of visitation (summer, fall, winter, spring) and by sector visited (Northeast, Northwest, Southeast, Southwest, Southwest Flagstaff).

Major Findings

Visitor Characteristics

- The sample was evenly divided between females and males, with an average age of 40. Most (81%) of the respondents lived within Boulder County, of which 57% lived in Boulder, 14% lived in other Boulder County cities and 10% lived in unincorporated Boulder County. This general pattern of findings was observed across all seasons and sectors.
- On average, respondents had visited OSMP areas for 11 years. There were no seasonal differences in number of years visited, but visitors to the Southwest Flagstaff sector reported fewer years of visitation than the other sectors.
- The average number of times visited per month was 12. More visits per month were reported in fall than any other season; the lowest visitation was in the winter. The most visits per month were reported for the Southeast sector and the fewest for Southwest Flagstaff.

Trip Characteristics

- Most individuals either drove or walked to the trailheads. A similar pattern occurred by season. The mode of access, however differed by sector. Automobile use was more pronounced in the Southwest Flagstaff and Southeast sectors.
- Overall, 11 a.m., noon, and 1 p.m. were the most popular start times for a visit to OSMP. Visitors tended to arrive earlier and later in the day during the summer, whereas the mid-day arrival times were more common in the fall, winter and spring. No discernable pattern of differences in start time was evident by sector.
- The average visit lasted about one hour. Trip duration was less in the spring and fall. Trip length was longest in the Southwest and shortest in the Northeast sector.
- Most respondents visited OSMP areas alone or with one other individual. Party size was slightly higher in the fall and the Southwest Flagstaff sector.
- People visit OSMP for a variety of reasons. Over half of visitors indicated that hiking and viewing scenery were reasons for their visit. Hiking and viewing scenery were the predominant activities across all seasons. One-third of respondents were walking one or more dogs. Running and wildlife viewing were enjoyed by about a quarter of visitors. A little more than 1 in 10 biked and a little less than one in ten climbed. There were activity related differences by sector. Hiking was given more often as a

reason for visiting by individuals in the Southwest, Southwest Flagstaff and Northwest sectors than the other two sectors.

Trip Characteristics (continued)

- A third of the sample was walking at least one dog on the day they completed the survey. Of those walking a dog, two thirds were visiting with one dog and a quarter with two dogs. The average number of dogs per dog walkers was 1.44. Seasonal differences in walking dogs at OSMP were minimal. Individuals in the Southwest Flagstaff sector were least likely to be walking a dog and those in the Southeast most likely to have a dog.
- Another survey question asked individuals to identify what they considered their "primary activity" on the day the questionnaire was completed. Hiking was considered the primary activity by a third of the respondents and about a fifth listed running or walking dogs as their primary activity. No seasonal variations in primary activity were observed. Running was most popular in the Northeast and Southeast sectors. Hiking was the primary activity for over half of the visitors in the Southwest sector, but only a tenth in the Southeast sector. Walking dogs was the primary activity for nearly half of the visitors in the Southeast sector, compared to only 1% in the Southwest Flagstaff sector.

Evaluations of the Experience

- Scenery and exercise contributed most to the enjoyment of the visitors. Walking dogs contributed to the enjoyment of a visit for just over a quarter of the sample. There were no substantive differences in these factors among seasons. Exercise contributed least to the visitors' enjoyment in the Southwest Flagstaff sector. Being with a dog contributed to visitor enjoyment the most in the Southeast sector and the least in the Southwest Flagstaff sector.
- Overall, 96% of the visitors did not experience conflict during their visit that day. This general finding was observed for each of the seasons and sectors.
- Among those who did note conflict (n = 154), 60% was associated with dogs (49%) and dog feces (11%); 17% with management related concerns, and 15% with inconsiderate visitor behavior.
- Of those who reported some form of conflict with dogs, off leash dogs (n = 29), the mere presence of dogs (n = 27), aggressive dogs (n = 15) and environmental impacts from dogs (n = 4) were considered problems.
- The OSMP survey contained 10 questions with "letter grade" responses. Overall, 71% gave OSMP management a letter grade of "A." The grade point average exceeded a "B" across all respondents and evaluative criteria. With only a few exceptions, this pattern was observed across seasons and sectors. While still scoring a "B" average, items scoring lowest and needing the most attention to increase the overall visitor satisfaction grade were: fixing eroded or trampled areas, trailhead or nature education, enforcement of rules, and restroom cleanliness.

These findings provide managers with baseline information for monitoring changes in the system over time and informing management decisions.

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Introduction

Natural resource management agencies strive to provide high quality recreation experiences (Decker, Brown & Siemer, 2001). Not all visitors, however, share the same set of preferences for setting attributes, facilities, and services offered. Some individuals, for example, may desire nothing more than the opportunity to enjoy nature, hike, and watch wildlife; activities that require only a natural setting with minimal agency provided facilities or services. Others are more demanding in the services they believe should be offered (Donnelly, Vaske, DeRuiter, & King, 1996).

Recognizing this diversity of desires found among recreationists, researchers and managers have attempted to differentiate users into more homogeneous groups (Bryan, 1977). Segmentation strategies have been developed that evaluate the benefits sought by individuals in a variety of situations or occasions (Stout, Shu, Greenberg, & Dubow, 1977; Dickson, 1982; Dubow, 1992). For example, several studies (Backman, 1994; Bonn, Furr, & Uysal, 1992; Calantone & Johar, 1984) highlight the importance of segmenting visitors based on usage situations such as seasonal differences and geographic location.

This study profiled visitors to the City of Boulder Open Space and Mountain Parks (OSMP). Similarities and differences were noted for people visiting in different seasons (summer, fall, winter, spring) as well as those visiting different geographic locations managed by OSMP. Individuals enter OSMP lands from 236 access points identified by staff as receiving at least an average of 3 visits per day. These accesses are segmented into five sectors (Northeast, Northwest, Southeast, Southwest, Southwest Flagstaff). Figures in Appendix A depict these sectors.

Study Objectives

This project sought to better understand visitors to City of Boulder Open Space and Mountain Parks (OSMP). More specifically, the objectives were to describe OSMP visitors in terms of their:

1. Demographic characteristics (e.g., sex, age, place of residence) and prior visitation rates.
2. Trip characteristics (e.g., trip duration, activity participation).
3. Evaluations of the experience (e.g., perceived conflict, satisfaction with OSMP management).

Results are presented for the entire sample as well as for different seasons and geographic sectors. The intent is to (a) provide managers with baseline information against which future research results can be compared and (b) inform management decisions.

Methods

The Survey

A survey was used to identify visitor characteristics, trip characteristics, and evaluations of the experience (Appendix B). The survey was designed by OSMP staff based on current issues and previous survey questions (e.g., the Chautauqua Pilot Project). The instrument was pre-tested and revised based on visitor input. The survey was administered by trained field technicians in three-hour increments based on the sampling design.

Sampling Design

A stratified random sampling design was used for selecting survey respondents. This design was used for each season: Summer season was June through August, Fall season was September through November, Winter season was December through February, and Spring season was March through May. The stratification variables included: (1) day of week, (2) time of day, (3) geographical sector, and (4) general trail volume (Table 1).

Table 1. Stratification variables for selecting respondents

Stratification variable	Variable Categories	Number of levels
Day of week	Weekday Weekend	2
Time of day	a.m. (6, 7, 8, 9, 10) Mid-day (11, 12, 1, 2, 3) p.m. (4, 5, 6, 7, 8)	3
Geographic sector	Northeast [NE] Northwest [NW] Southeast [SE] Southwest [SW], Southwest Flagstaff [SWF]	5
Trail volume	Very high High Medium Low	4

Day of Week Stratum. All weekend days and weekdays within the study period were considered for inclusion in the study. To achieve a sufficient sample size, the winter season was selected as the baseline for allocating sampling effort because it was expected to have the fewest visitors.

Time of Day Stratum. Three "time of day" sampling periods were selected (a.m., mid-day, p.m.). Morning was defined as 6:00 a.m. to 10:00 a.m.; mid-day was defined as 11:00 a.m. to 3:00 p.m., and afternoon was defined as 4:00 p.m. to 9:00 p.m. Sampling hours provided coverage from 6:00 a.m. until 9:00 p.m. during the summer months. The three hour sampling segments were randomly selected within the time period. As the seasons shortened and lengthened, these hours were adjusted to mirror visitor use and ensure field technician safety.

Specific days and time frames for conducting surveys were randomly selected based on the sampling grid shown in Table 2. This process was repeated for each season.

Table 2. Sampling grid for selecting days and survey times

	Daily Time Frame Stratum		
	a.m.	Mid-Day	p.m.
Day of Week Stratum	6, 7, 8, 9, 10	11, 12, 1, 2, 3	4, 5, 6, 7, 9
Weekend			
Weekday			

Geographic Sector Stratum. The study area was divided into five geographic sectors (Northeast [NE], Northwest [NW], Southeast [SE], Southwest [SW], Southwest Flagstaff [SWF]) (See

Appendix A). This latter sector was broken out because it was anticipated to perform differently than the other sectors given the inclusion of Flagstaff Road and Summit facilities.

Trail Volume Stratum. Access locations vary in the amount of use they receive. For purposes of this report, access volumes were grouped into 5 general levels: (1) very high, (2) high, (3) medium, (4) low, and (5) very low usage. Access volumes were categorized based on experienced field ranger observations. Four of these volume designations (very high to low) had infrared trail monitors for counting visitors and were included in primary stratification stratum. Using a random number generator, each of the four trail volume accesses had an equal chance of selection within their stratum.

The combination of these stratification dimensions (Table 1) resulted in 120 sampling cells for the study period (2 * 3 * 4 * 5 = 120) for the very high, high, medium and low trail access volumes (Table 3). At the "very low" trail volume locations, 12 additional sampling cells were randomly selected per season without replacement (locations could only be sampled once) for inclusion in the study. This allowed almost half (48 of 98) the locations to be sampled during the year long study. Similar to the other trail volume locations, the survey was administered by field technicians in three-hour increments at these very low volume trail access points.

Table 3. Trail volume and sampling effort per season

		Sampling effort (Number of sampling cells)				
Trail Volume	Number of Access Points	Summer 2004	Fall 2004	Winter 2004-2005	Spring 2005	Total Sampling Effort
Very high	3	7	9	7	7	30
High	12	8	7	6	8	29
Medium	41	8	8	10	8	34
Low	82	7	6	7	7	27
Sub-Total	139	30	30	30	30	120
Very low	98	12	12	12	12	48
Total	236	42	42	42	42	168

Survey Data Weights

The sampling design intentionally over sampled the "very high" and "high" volume trail strata to obtain a sufficient number of survey responses for analysis purposes. Thus, the data were weighted to adjust for this over sampling (Table 4).

Table 4. Survey data weights

	Proportion of Sampling Effort [1]					
Trail Volume	Summer 2004	Fall 2004	Winter 2004-2005	Spring 2005	Average	Data [2] Weight
Very high	2.33	3.00	2.33	2.33	2.50	0.400
High	0.67	0.58	0.50	0.67	0.61	1.653
Medium	0.19	0.19	0.24	0.19	0.20	4.938
Low	0.09	0.07	0.09	0.09	0.06	11.765
Very low	0.12	0.12	0.12	0.12	0.12	8.333

1. Proportion of sampling effort = number of actual survey cells / number of access points
   For example, for the very high trail volume during the summer 2004 season, surveys were conducted during 7 time cells (Table 3); there are 3 access points for the very high volume trails (7 / 3 = 2.33).
2. Data weight = (100 / average) / 100.

Response Rates

A total of 2,806 individuals completed the survey. Surveys were provided to people who appeared to be 16 or older. Appendix C depicts the number and percent of surveys conducted at access points within each sector, as well as the number of surveys conducted by season and sector. Among the visitors who were asked to complete the survey, the response rate was 78% across all four seasons. The response rates per season were 79% for summer, 81% for fall, 82% for winter and 70% for spring. Although these response rates are acceptable (Salant & Dillman, 1994), runners and bikers were under represented due to the difficulties in stopping individuals engaged in these activities so they could fill out a survey. The field technicians, however, recorded the number of times bikers and runners "passed by" the field technicians.

Analysis Strategy

The analyses in this report summarize the weighted data in three ways:

1. Overall percentages (bar and pie charts).
2. Bivariate relationships between *season* visited and the survey questions.
3. Bivariate relationships between *sector* visited and the survey questions.

Thus, the independent variables were season and sector visited. The dependent variables were the questions from the survey. Results are grouped into the following sections:

1. Visitor characteristics
    - Demographics (e.g., sex, age, place of residence)
    - Number of years visiting OSMP
    - Number of times visiting OSMP per month
2. Trip characteristics
    - How did you get to the trailhead today
    - Reported starting time
    - Trip duration
    - Number of individuals in group
    - General reasons for visiting OSMP
    - Activity related reasons for visiting OSMP
    - Primary activity at OSMP on this visit
    - Dog walking at OSMP on this visit
3. Evaluations of the experience
    - Factors contributing to the enjoyment of this visit
    - Overall perceived conflict
    - Visitor reported grades for OSMP management

For the bivariate analyses, results include tests for statistical significance (χ^2 or *F*-values) and associated probability levels (*p*-value). A $p < .05$ implies that there is a statistical relationship between the two variables. Because *p*-values are influenced by sample size, effect size measures (Cramer's *V* or *eta*) are also provided as an indication of the strength of the relationship. An effect size of .1 suggests that the relationship between two variables is minimal; .3 indicates a typical relationship and .5 suggests a strong relationship (Vaske, Gliner, & Morgan, 2002).

Results

Visitor Characteristics

Survey respondents were approximately evenly divided between females (51%) and males (49%) (Figure 1). The average age was 40. When viewed as age categories, 23% of all respondents were between 20 and 29 years old, another 25% were 30 to 39 years old, and 23% were between 40 and 49 (Figure 2). Over half of the individuals who completed the survey (57%) reported they were from within Boulder's city limit; 10% lived within unincorporated Boulder County and 8% listed their address as metro Denver (Figure 3). Other Boulder County cities were less than 4% each, but taken together, non-Boulder, Boulder County communities comprised 14% of the sample. Thus, 81% of visitors were Boulder County residents.

Statistical differences were observed between the three demographic variables (i.e., sex, age, location of residence) and the season the respondent visited OSMP, but the general pattern of findings paralleled the overall distributions (Table 5). The effect sizes (Cramer's V = .053 to .113) suggested that any statistical differences can be attributed to sample size; in other words, the differences between demographics and season visited were "minimal" (Vaske et al., 2002). A similar conclusion was evident when the demographics were examined relative to the sector visited (Table 6).

On average, respondents had been visiting OSMP for 11 years (range = 0 to 65). About a quarter had visited 11 to 20 years and a fifth each had 3 to 5 and 6 to 10 years of prior visitation (Figure 4). There were no seasonal differences in terms of number of years of visitation (Table 7), but there were statistical differences by sector. Visitors to the Southwest Flagstaff sector reported fewer years visiting OSMP.

The average number of times per month visiting OSMP was 12 (range = 0 to 30). Over a fifth visited 4 to 7 or 15 to 21 times per month (Figure 5). Number of times visited differed by both season (Table 7) and sector (Table 8). As might be expected there was less visitation in the winter. More visits were reported in the fall than any other season. The fewest visits per month were reported in the Southwest Flagstaff sector and the most in the Southeast sector. As indicated by the effect sizes, the strength of these relationships was "minimal."

Figure 1. Respondents' sex

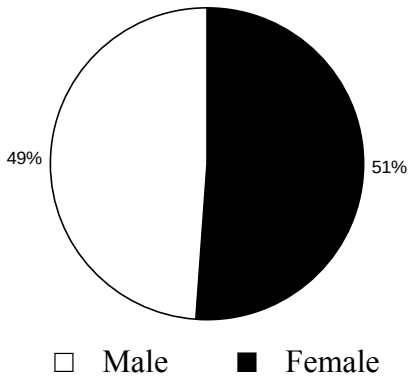


Figure 2. Respondents' age (surveys provided to people 16 and over)

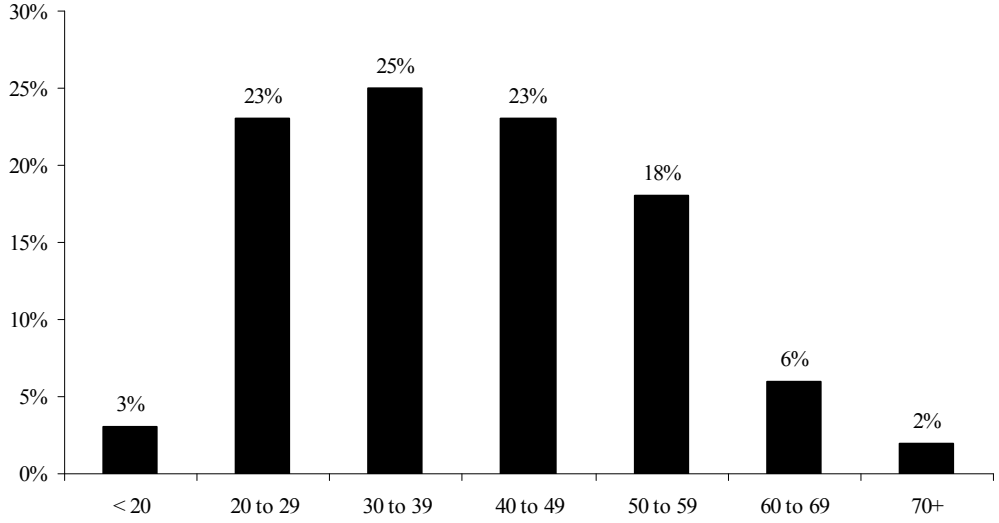


Figure 3. Respondents' residence

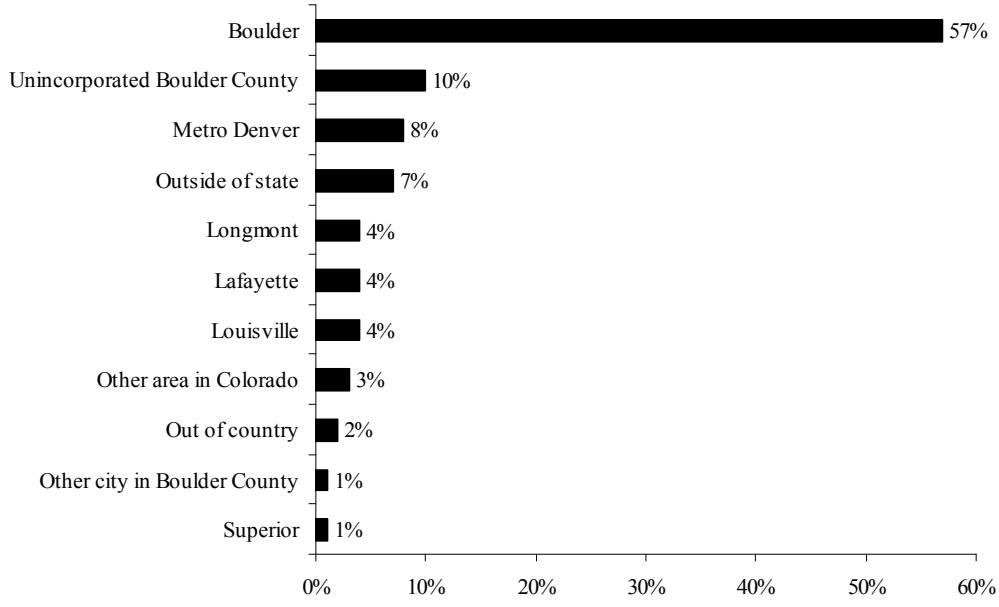


Table 5. Respondent demographics by season

	Season [1]						
	Summer 2004	Fall 2004	Winter 2004-2005	Spring 2005	χ^2	*p*-value	Cramer's *V*
Sex					7.63	.054	.053
Male	51	50	52	46			
Female	49	50	48	54			
Age					74.37	< .001	.096
< 20	5	2	3	2			
21 to 30	22	27	23	19			
31 to 40	24	22	24	27			
41 to 50	21	19	27	26			
51 to 60	21	19	18	16			
61 to 70	5	7	4	7			
> 70	2	4	0	2			
Mean age	39.67	40.65	38.92	40.81			
Location of residence					109.45	< .001	.113
Boulder (within city limits)	53	56	60	58			
Louisville	4	4	3	3			
Lafayette	5	3	3	4			
Superior	1	1	1	0			
Longmont	2	4	6	4			
Unincorporated Boulder County	12	8	6	13			
Other city in Boulder County	3	1	1	2			
Metro Denver	11	10	5	7			
Other area in Colorado	2	4	5	2			
Out of state	7	9	6	5			
Out of country	1	2	3	1			

1. Cell entries are percents

Table 6. Respondent demographics by sector

	Sector [1]							
	NE	NW	SE	SW	SWF	χ^2	*p*-value	Cramer's *V*
Sex						9.38	.052	.058
Male	50	46	50	49	57			
Female	50	54	50	51	43			
Age						204.39	< .001	.142
< 20	3	2	0	5	6			
21 to 30	17	21	18	24	48			
31 to 40	27	27	26	21	19			
41 to 50	28	26	27	20	9			
51 to 60	19	16	23	20	14			
61 to 70	6	8	4	6	4			
> 70	1	1	2	5	1			
Mean age	41.06	40.50	42.14	40.45	33.15			
Location of residence						664.16	< .001	.260
Boulder (within city limits)	56	64	35	67	42			
Unincorporated Boulder County	21	4	12	6	2			
Lafayette	5	2	13	1	1			
Longmont	4	7	1	2	5			
Metro Denver	4	6	16	8	16			
Louisville	3	2	12	3	1			
Superior	0	0	4	1	1			
Other city in Boulder County	2	2	2	1	0			
Other area in Colorado	3	2	3	4	9			
Out of state	1	9	1	8	17			
Out of country	1	1	1	1	9			

1 Cell entries are percents

Figure 4. Number of years visiting OSMP

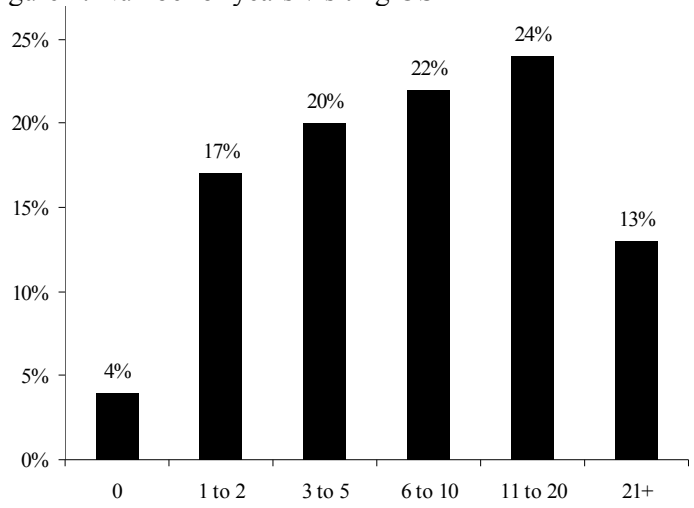


Figure 5. Number of times visiting per month

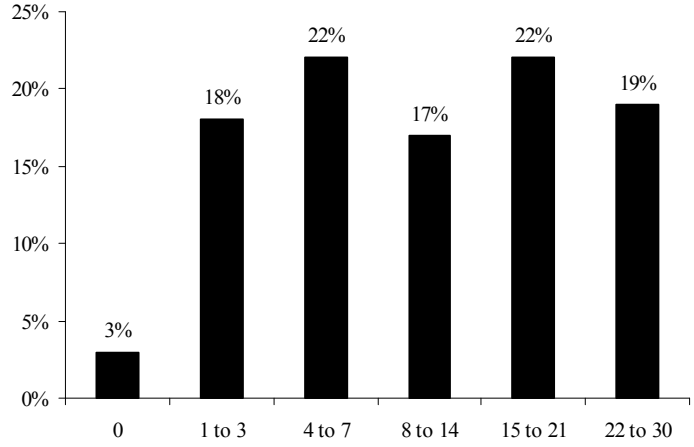


Table 7. Prior visits to OSMP by season

	Season [1]						
	Summer 2004	Fall 2004	Winter 2004-2005	Spring 2005	*F*-value	*p*-value	eta
Number of years visiting OSMP	11.13	10.86	12.08	11.08	1.91	.125	.047
Times visited per month	12.51	13.85	11.43	12.06	8.14	< .001	.095

1 Cell entries are means

Table 8. Prior visits to OSMP by sector

	Sector [1]							
	NE	NW	SE	SW	SWF	*F*-value	*p*-value	*eta*
Number of years visiting OSMP	10.92	12.09	12.02	12.03	7.13	13.03	< .001	.139
Times visited per month	14.49	11.89	15.42	11.63	6.66	42.09	< .001	.243

1 Cell entries are means

Trip Characteristics

Most individuals arrived at the trailhead via an automobile (58%), and about a third (32%) walked to the trailhead (Figure 6). A similar pattern for visitor access occurred by season with car and walking / running most predominant (Table 9). Mode of access, however, differed by sector with automobile used to access the trailhead more pronounced in the Southwest Flagstaff (86%) and Southeast (76%) sectors.

Figure 6. How did you get to the trailhead today?

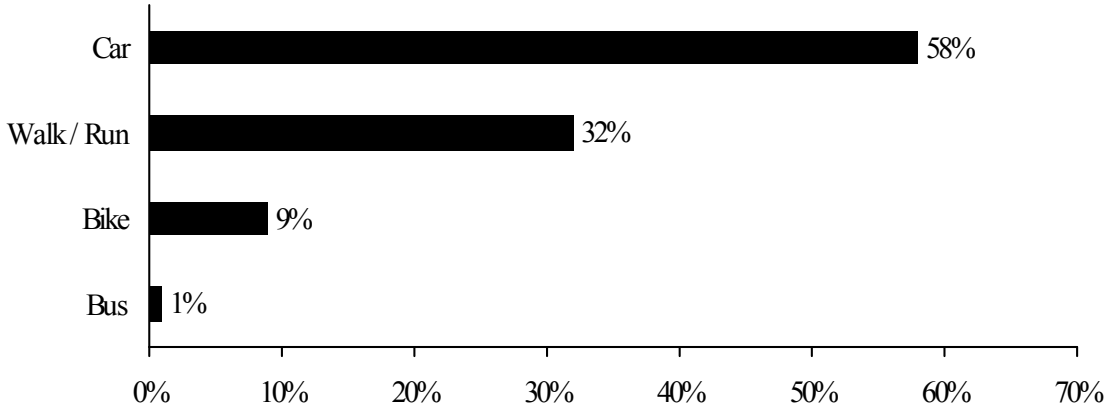


Table 9. Visitor access by season

	Season [1]			
	Summer 2004	Fall 2004	Winter 2004-2005	Spring 2005
Car	59	59	62	52
Walk / Run	30	35	29	33
Bike	11	5	9	14
Bus	< 1	1	0	1

1. Cell entries are percents. $\chi^2 = 55.43$, $p < .001$, Cramer's $V = .079$

Table 10. Visitor access by sector

	Sector [1]				
	NE	NW	SE	SW	SWF
Car	40	55	76	62	86
Walk / Run	37	40	12	33	12
Bike	23	5	12	4	0
Bus	0	0	0	1	2

1. Cell entries are percents. $\chi^2 = 445.43$, $p < .001$, Cramer's $V = .225$.

Visitors reported starting time for the visit on which they were surveyed followed a normal distribution with 11 a.m. (11%), noon (14%) and 1 p.m. (13%) the most popular (Figure 7). Visitors tended to arrive earlier and later in the day during the summer season, whereas the mid-day arrival times were more common in the fall, winter and spring (Table 11). Although there were statistical differences for visitors' arrival time by sector, there was no discernable pattern (Table 12).

Figure 7. Visitors reported starting time for visit

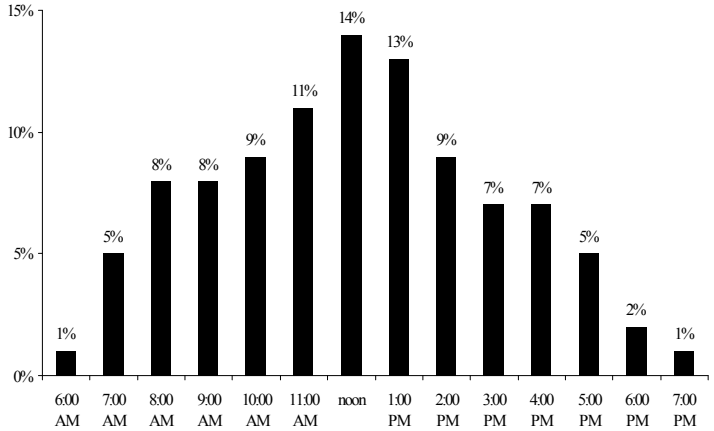


Table 11. Visitors reported start time for visit by season

	Season [1]			
	Summer 2004	Fall 2004	Winter 2004-2005	Spring 2005
6:00 to 6:59 am	3	1	0	1
7:00 to 7:59 am	10	4	2	5
8:00 to 8:59 am	8	5	4	14
9:00 to 9:59 am	4	10	8	9
10:00 to 10:59 am	12	6	10	7
11:00 to 11:59 am	4	14	19	6
noon	7	17	14	16
1:00 to 1:59 pm	6	14	12	20
2:00 to 2:59 pm	4	7	17	8
3:00 to 3:59 pm	7	6	12	3
4:00 to 4:59 pm	16	9	2	5
5:00 to 5:59 pm	9	7	0	5
6:00 to 6:59 pm	7	2	0	1
7:00 to 7:59 pm	4	0	0	0

1. Cell entries are percents. $\chi^2 = 751.03$, $p < 001$, Cramer's $V = .300$

Table 12. Visitors reported start time for visit by sector

	Sector [1]				
	NE	NW	SE	SW	SWF
6:00 to 6:59 am	1	1	1	1	1
7:00 to 7:59 am	9	3	8	3	2
8:00 to 8:59 am	3	9	14	11	4
9:00 to 9:59 am	4	7	9	8	21
10:00 to 10:59 am	5	6	5	10	29
11:00 to 11:59 am	10	19	10	9	3
noon	22	17	6	9	3
1:00 to 1:59 pm	25	9	5	10	12
2:00 to 2:59 pm	8	10	9	11	10
3:00 to 3:59 pm	2	9	4	7	14
4:00 to 4:59 pm	4	5	16	13	1
5:00 to 5:59 pm	6	4	12	5	2
6:00 to 6:59 pm	3	2	2	2	1
7:00 to 7:59 pm	0	1	0	3	0

1. Cell entries are percents. $\chi^2 = 762.69$, $p < .001$, Cramer's $V = .272$.

The average length of a visit to OSMP was about an hour (mean = 59.26 minutes). Over a third (35%) reported a trip duration of 30 to 59 minutes and almost a quarter (23%) specified 1 to 1.5 hours (Figure 8). Trip duration was less in the spring (mean = 50.45 minutes) and the fall (mean = 57.86 minutes (Table 13). Trip lengths were longer in the Southwest sector (mean = 82.18) and shortest in the Northeast sector (mean = 43.21 minutes, Table 14).

Figure 8. Trip duration

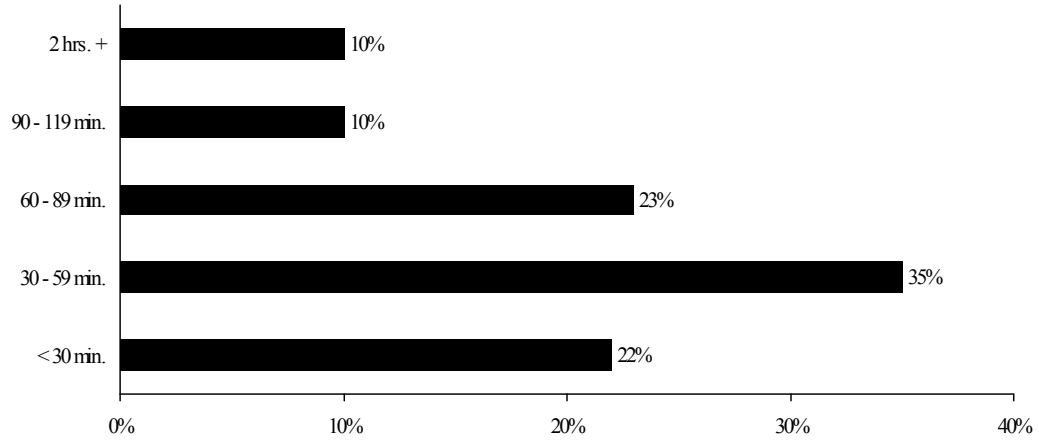


Table 13. Trip duration by season

	Season [1]			
Duration of visit	Summer 2004	Fall 2004	Winter 2004-2005	Spring 2005
< 30 minutes	17	23	12	36
30 to 59 minutes	29	35	41	33
60 to 90 minutes	24	24	28	16
90 to 119 minutes	21	8	6	6
120 minutes +	9	10	13	9
Mean (minutes) [2]	68.20	57.86	63.34	50.45

1. Cell entries are percents. $\chi^2 = 220.26$, $p < 001$, Cramer's $V = .169$.
2. $F = 15.84$, $p < .001$, *eta* = .130.

Table 14. Trip duration by sector

	Sector [1]				
Duration of visit	NE	NW	SE	SW	SWF
< 30 minutes	39	22	14	7	22
30 to 59 minutes	35	38	44	31	26
60 to 90 minutes	15	20	33	29	24
90 to 119 minutes	5	7	6	16	22
120 minutes +	6	13	2	17	6
Mean (minutes) [2]	43.21	58.25	51.39	82.18	60.29

1. Cell entries are percents. $\chi^2 = 418.58$, $p < .001$, Cramer's $V = .193$.
2. $F = 59.18$, $p < .001$, *eta* = .279.

Most individuals visited OSMP areas alone (44%) or with one other person (40%) (Figure 9). Across the entire sample, group size ranged from 1 to 40. Party size was slightly higher in the fall (mean = 3.01) than in the other seasons (Table 15). The number of individuals in a group was higher in the Southwest Flagstaff sector (mean = 4.82) than in the other sectors (Table 16).

Figure 9. Number of individuals in group

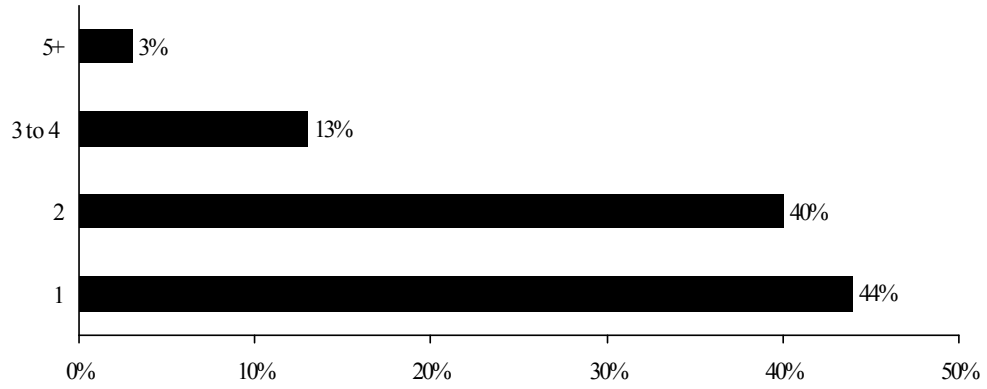


Table 15. Number of people in group by season

Number of people in group	Season [1]			
	Summer 2004	Fall 2004	Winter 2004-2005	Spring 2005
1	43	51	44	39
2	43	31	45	42
3 to 4	12	11	10	17
5 +	2	7	1	2
Mean [2]	1.86	3.01	1.73	1.96

1. Cell entries are percents. $\chi^2 = 105.80$, $p < 001$, Cramer's $V = .114$
2. $F = 23.10$, $p < .001$, *eta* = .156

Table 16. Number of people in group by sector

Number of people in group	Sector [1]				
	NE	NW	SE	SW	SWF
1	53	39	63	40	24
2	37	45	28	40	46
3 to 4	10	13	7	16	21
5 +	0	3	2	4	9
Mean	1.61	1.94	1.52	2.19	4.82

1. Cell entries are percents. $\chi^2 = 182.44$, $p < .001$, Cramer's $V = .147$.
2. $F = 59.18$, $p < .001$, *eta* = .279

About a third of OSMP visitors were walking a dog on the day they completed the survey (Figure 10). Two-thirds of the dog walkers had one dog with them, and over a quarter (27%) was visiting with two dogs; 7% were walking three or more dogs. The average number of dogs per dog walkers was 1.44. Whether or not respondents visited with a dog did not vary by season (Table 17). There was a statistical difference between season of visitation and the number of dogs on the trip, but the effect size was minimal (Cramer's $V = .121$); the average number of dogs per visitor ranged between 1 and 2. Individuals in the Southwest Flagstaff sector were least likely to be walking a dog (11%) and those in the Southeast sector most likely to have a dog with them (65%).

Figure 10. Dog walking at OSMP on this visit

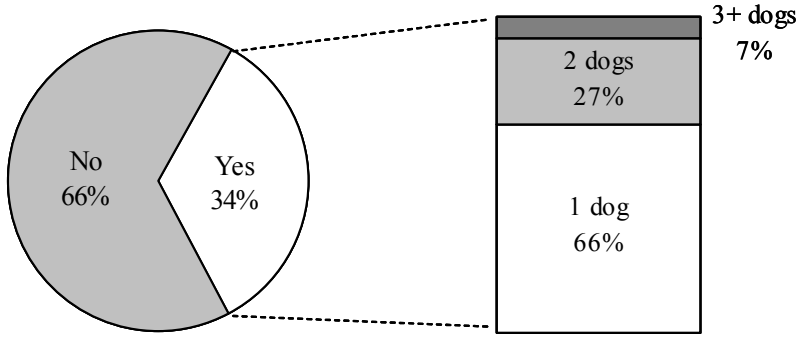


Table 17. Dog walking at OSMP on this visit by season

	Season[1]						
	Summer 2004	Fall 2004	Winter 2004-2005	Spring 2005	χ^2	*p*-value	Cramer's *V*
Did you have a dog with you?					2.16	.540	.028
No	65	67	65	68			
Yes	35	33	35	32			
If yes, number of dogs on this visit					29.63	< .001	.121
1	62	76	58	68			
2	29	17	34	29			
3 +	9	7	8	3			
Mean	1.56	1.35	1.50	1.36			

1. Cell entries are percents.

Table 18. Dog walking at OSMP on this visit by sector

	Sector [1]							
	NE	NW	SE	SW	SWF	χ^2	*p*-value	Cramer's *V*
Did you have a dog with you?						205.06	< .001	.268
No	69	70	35	64	89			
Yes	31	30	65	36	11			
If yes, number of dogs on this visit						53.15	< .001	.165
1	62	77	57	65	87			
2	34	20	37	23	3			
3 +	4	3	6	12	10			
Mean	1.48	1.28	1.49	1.54	1.23			

1. Cell entries are percents.

The most important reason people visited OSMP was to enjoy the activities (48%) and the place (44%). Social reasons for visiting were less important (Figure 11). Activities ranked slightly higher in the spring (56%) and summer (50%), although the effect size was minimal (Table 19). On a sector basis, enjoyment of the place was slightly higher in the Southwest sector (53%) and Southwest Flagstaff (58%). General activity importance was higher in the Northeast sector (64%, Table 20).

Figure 11. Most important reasons for visiting OSMP

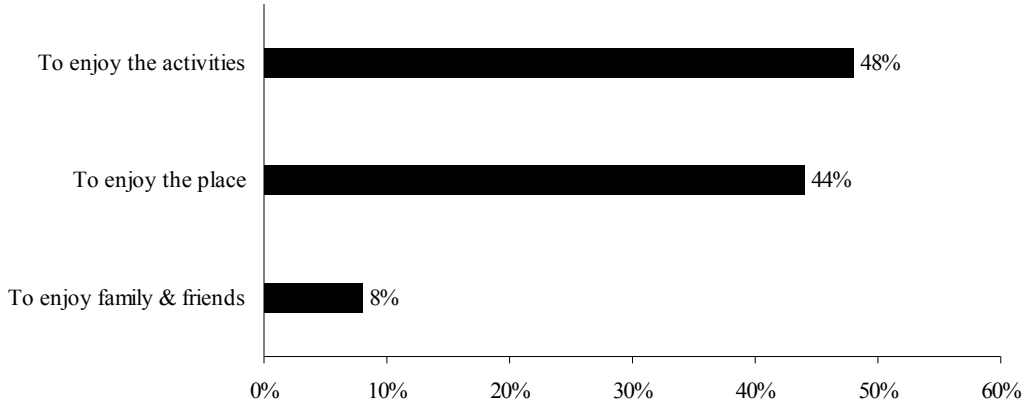


Table 19. Most important reasons for visiting OSMP by season

	Season [1]			
Reason for visiting	Summer 2004	Fall 2004	Winter 2004-2005	Spring 2005
To enjoy the place	41	49	49	35
To enjoy the activities	50	44	42	56
To enjoy with family and friends	9	7	9	9

1. Cell entries are percents. $\chi^2 = 40.52$, $p < 001$, Cramer's $V = .090$.

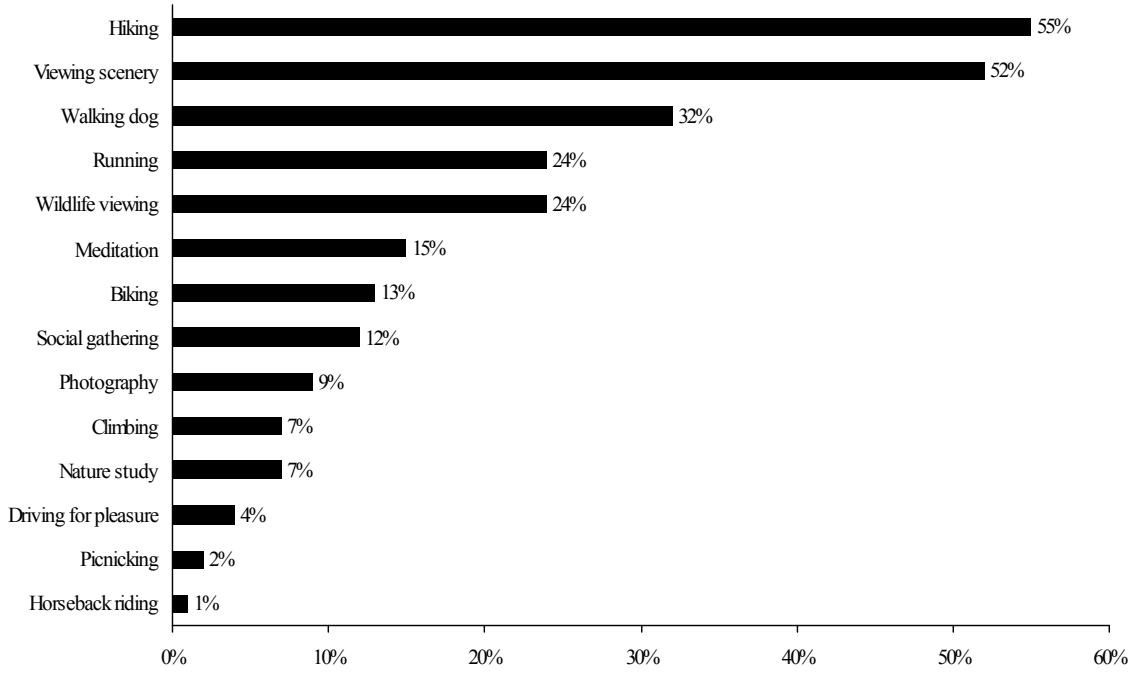
Table 20. Most important reasons for visiting OSMP by sector

	Sector [1]				
Reason for visiting	NE	NW	SE	SW	SWF
To enjoy the place	29	43	46	53	58
To enjoy the activities	64	45	48	41	33
To enjoy with family and friends	7	12	6	6	9

1. Cell entries are percents. $\chi^2 = 128.78$, $p < .001$, Cramer's $V = .161$.

Over half of the visitors indicated that hiking (55%) and viewing scenery (52%) were reasons for their visit (Figure 12). A third (32%) said walking their dog attracted them to the area. Running and wildlife viewing were listed as activity related reasons for visiting OSMP areas by about a quarter of the respondents. Biking (13%) and climbing (7%) were listed by about 1 in 10 visitors. Picnicking (2%) and horseback riding (1%) were listed by few visitors. Totals exceed 100% because respondents could check more that one activity.

Figure 12. Activity participated in during visit



Activity related reasons for visiting varied statistically by season (Table 21), but the differences were not large. Hiking and viewing scenery were the predominant activities across all seasons. Walking dogs attracted about a third in each of the seasons.

There were activity related differences by sector (Table 22). Hiking was given more often as a reason for visiting by individuals in the Southwest (75%), Southwest Flagstaff (67%) and Northwest (64%) sectors than the other two sectors. Walking dogs was an important activity for more respondents in the Southeast sector (63%) and was least important in the Southwest Flagstaff sector (10%). The Northeast sector attracted more people biking (30%) than in any of the other sectors.

Table 21. Activity participated in during this visit by season

	Season						
	Summer 2004	Fall 2004	Winter 2004-2005	Spring 2005	χ^2	*p*-value	Cramer's *V*
Hiking	54	60	60	46	41.66	< .001	.122
Viewing scenery	50	55	57	44	31.38	< .001	.106
Walking dogs	31	30	33	33	2.91	.406	.032
Running	29	26	19	25	18.15	< .001	.080
Wildlife viewing	28	24	21	26	9.28	.026	.057
Biking	12	7	16	17	38.63	< .001	.113
Contemplation	10	16	21	13	35.95	< .001	.114
Climbing / Bouldering	9	5	9	5	15.00	.002	.073
Social gathering	7	13	13	14	16.61	.001	.073
Nature study	7	9	7	4	13.21	.004	.067
Photography	5	10	15	7	37.41	< .001	.117
Picnicking	2	1	4	2	13.69	.003	.073
Pleasure driving	1	4	9	3	58.85	< .001	.147
Horseback riding	0	0	1	1	18.05	< .001	.069
Other	6	8	4	5	10.89	.012	.064

1. Cell entries are the percent of individuals who checked each activity.

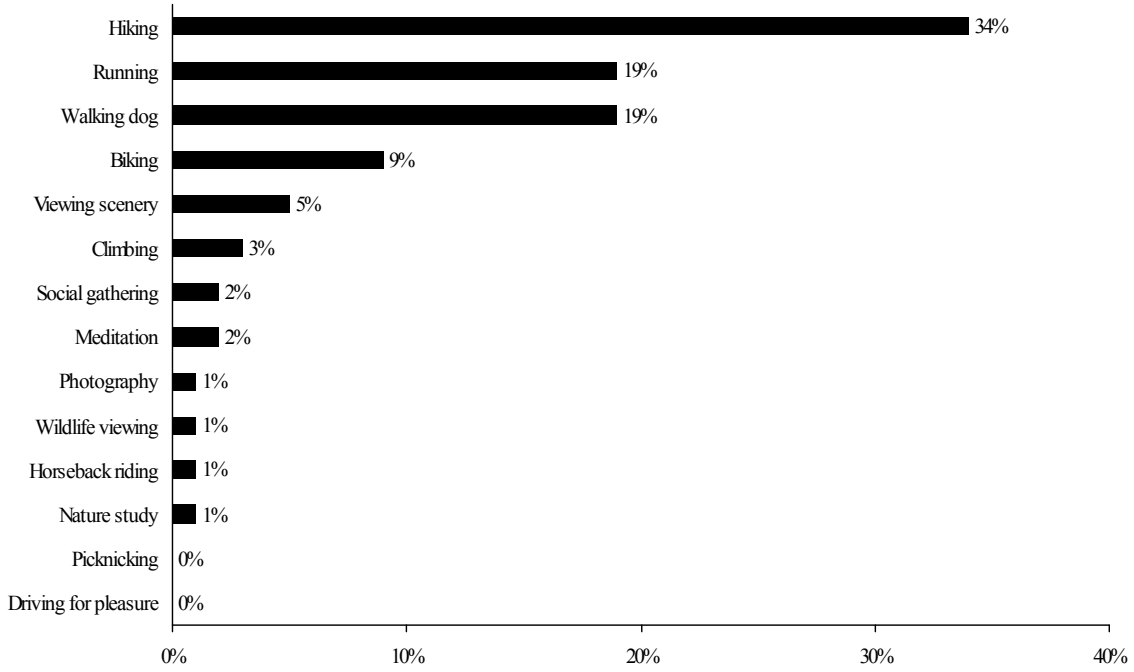
Table 22. Activity participated in this visit by sector

	Sector [1]							
	NE	NW	SE	SW	SWF	χ^2	*p*-value	Cramer's *V*
Viewing scenery	40	54	49	57	65	72.54	< .001	.160
Running	35	18	29	25	8	122.89	< .001	.202
Hiking	32	64	32	75	67	375.61	< .001	.362
Walking dogs	32	29	63	30	10	200.45	< .001	.267
Biking	30	11	12	2	2	286.56	< .001	.315
Wildlife viewing	25	24	24	25	22	0.92	.992	.018
Contemplation	13	17	15	15	20	10.55	.032	.062
Social gathering	7	14	11	12	23	54.45	< .001	.142
Nature study	5	6	6	8	11	15.82	.003	.078
Photography	4	12	2	9	25	135.08	< .001	.226
Picnicking	2	4	1	2	2	16.51	.002	.078
Climbing / Bouldering	1	8	0	9	22	174.74	< .001	.247
Pleasure driving	1	7	0	1	19	172.31	< .001	.273
Horseback riding	0	1	0	2	0	13.94	.008	.070
Other	6	7	3	4	10	20.06	< .001	.086

1. Cell entries are the percent of individuals who checked each activity.

As might be expected from Figure 12, hiking was considered the primary activity by 34% of the respondents (Figure 13). About a fifth listed running (19%) and walking dogs (19%) as their primary activity. All other activities came in under 10%.

Figure 13. Primary activity participated in this visit



Another second activity question asked respondents to list their *primary* activity. The primary activity by season (Table 23) paralleled the findings for the listing of all activities (Figure 13). Hiking, running, walking dogs and biking were ranked highest in all four seasons. As indicated by the effect size, the statistical differences were minimal.

Differences among sectors in terms of primary activity were more evident (Table 24). Running was most popular in the Northeast (31%) and Southeast (26%). Hiking was the primary activity for 55% in the Southwest sector and only 11% in the Southeast sector. Walking dogs was the primary activity for 47% of visitors in the Southeast sector, compared to only 1% in the Southwest Flagstaff sector. Biking was most popular in the Northeast (23%).

Table 23. Primary activity participated in this visit by season

	Season [1]			
	Summer 2004	Fall 2004	Winter 2004-2005	Spring 2005
Hiking	37	35	36	30
Running	21	22	12	20
Walking dogs	19	18	19	19
Biking	10	3	10	14
Viewing scenery	4	6	8	2
Climbing / Bouldering	2	2	5	2
Contemplation	2	2	3	2
Photography	1	1	1	1
Picnicking	1	0	0	0
Social gathering	0	2	2	2
Pleasure driving	0	0	0	0
Wildlife viewing	0	1	0	1
Horseback riding	0	0	0	2
Nature study	0	0	0	1
Other	3	6	2	5

1. Cell entries are percents. $\chi^2 = 233.73$, $p < 001$, Cramer's $V = .169$

Table 24. Primary activity participated in this visit by sector

	Sector [1]				
	NE	NW	SE	SW	SWF
Running	31	13	26	15	4
Biking	23	7	10	1	0
Walking dogs	21	15	47	15	1
Hiking	14	43	11	55	43
Contemplation	2	3	0	2	3
Social gathering	1	3	1	1	3
Viewing scenery	1	7	2	3	18
Wildlife viewing	1	0	0	2	0
Nature study	1	0	0	1	1
Climbing / Bouldering	0	4	0	2	10
Photography	0	1	1	1	5
Picnicking	0	1	0	0	0
Pleasure driving	0	1	0	0	2
Horseback riding	0	0	0	2	0
Other	6	3	1	2	10

1. Cell entries are percents. $\chi^2 = 1118.70$, $p < .001$, Cramer's $V = .330$.

Evaluations of the Experience

Scenery and exercise contributed to the enjoyment of 84% and 75% of the visitors respectively (Figure 14). Half of the visitors enjoyed their visit because the area was close to home (54%) and the visit gave them a chance to get away (50%). Walking dogs contributed to the enjoyment of 27% of the sample. Differences were noted between seasons, but the effect sizes were generally minimal (Table 25). Exercise contributed to the enjoyment of the experience the least in the Southwest Flagstaff sector (47%) (Table 26). Being with a dog contributed to visitor enjoyment the most in the Southeast sector (57%) and least in the Southwest Flagstaff sector (9%).

Figure 14. Factors contributing to the enjoyment of this visit

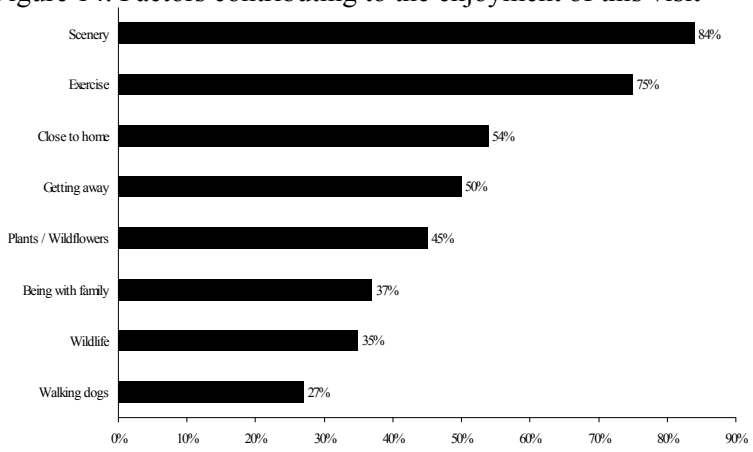


Table 25. Factors contributing to the enjoyment of this visit by season

	Season [1]						
	Summer 2004	Fall 2004	Winter 2004-2005	Spring 2005	χ^2	*p*-value	Cramer's *V*
Scenery	85	86	84	82	4.76	.190	.041
Exercise / Health	75	74	74	76	1.31	.727	.022
Plants / Wildflowers	62	52	29	42	156.30	< .001	.234
Close to home	61	52	52	54	12.43	.006	.066
Get away from daily pressures	48	53	51	48	6.16	.104	.047
Wildlife	40	35	27	41	36.44	< .001	.113
Family or friends	40	31	35	42	21.10	< .001	.087
Being with my dog(s)	26	27	29	26	2.43	.487	.030
Other	5	5	4	7	8.21	.042	.055

1. Cell entries are the percent of individuals who checked each characteristic that was enjoyable

Table 26. Factors contributing to the enjoyment of this visit by sector

	Sector [1]							
	NE	NW	SE	SW	SWF	χ^2	*p*-value	Cramer's *V*
Exercise / Health	80	79	71	79	47	126.44	< .001	.226
Scenery	78	88	78	87	88	41.65	< .001	.123
Close to home	59	55	54	55	39	34.88	< .001	.111
Get away from daily pressures	51	51	52	49	45	3.92	.418	.037
Wildlife	36	37	35	37	27	9.60	.048	.057
Plants / Wildflowers	35	47	47	55	55	60.18	< .001	.146
Family or friends	32	41	24	41	42	44.63	< .001	.124
Being with my dog(s)	24	24	57	29	9	182.38	< .001	.259
Other	8	4	8	3	3	23.39	< .001	.092

1. Cell entries are the percent of individuals who checked each characteristic that was enjoyable.

Overall, 96% of the visitors did not report experiencing conflict during their visit (Figure 15). This general finding was observed for each of the seasons (Table 27) and sectors (Table 28).

Figure 15. Overall perceived conflict

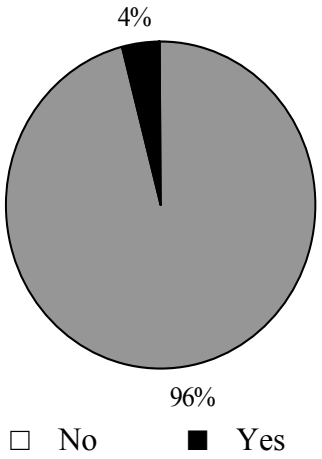


Table 27. Perceived conflict at OSMP by season

Perceived conflict or unpleasant experiences	Season [1]			
	Summer 2004	Fall 2004	Winter 2004-2005	Spring 2005
No	94	98	96	96
Yes	6	2	4	4

1. Cell entries are percents. $\chi^2 = 9.47$, $p = .024$, Cramer's $V = .057$.

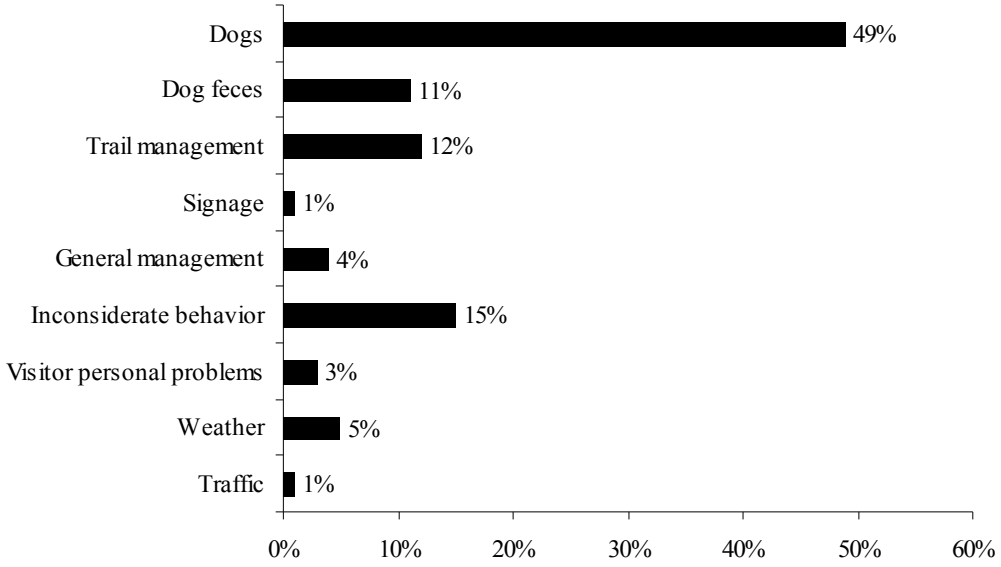
Table 28. Perceived conflict at OSMP by sector

Perceived conflict or unpleasant experiences	Sector [1]				
	NE	NW	SE	SW	SWF
No	98	95	96	96	95
Yes	2	5	4	4	5

1. Cell entries are percents. $\chi^2 = 9.67$, $p = .046$, Cramer's $V = .056$.

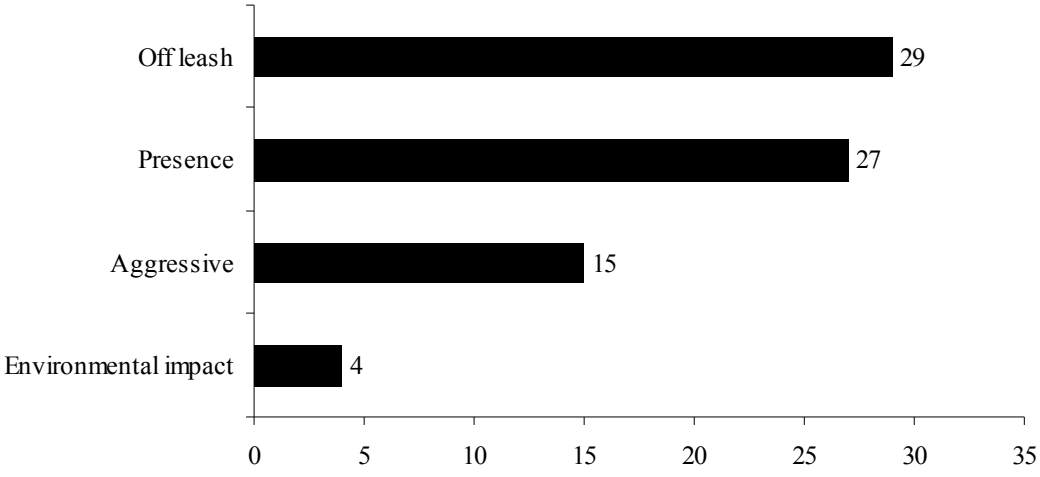
For the 154 individuals in the sample who indicated some type of conflict, 49% (n = 75) of the problems were associated with dogs (Figure 16). Another 11% (n = 16) indicated dog feces as a source of conflict. Inconsiderate visitor behavior was noted by 15% (n = 23) of the sample who reported some form of conflict. Trail management (12%, n = 18), signage (1%, n = 2) and general OSMP management (4% n = 6) were also noted as sources of conflict.

Figure 16. Specific types of conflict listed by visitors (n = 154)



Of the 75 respondents who reported some form of conflict with dogs (Figure 16), 29 individuals mentioned off leash dogs as a problem (Figure 17), 27 people felt the mere presence of dogs was an issue, 15 visitors had encountered aggressive dogs, and 4 people noted environmental impacts of dogs (i.e., creating new trails, chasing prairie dogs).

Figure 17. Specific types of dog conflict (n = 75) [1]



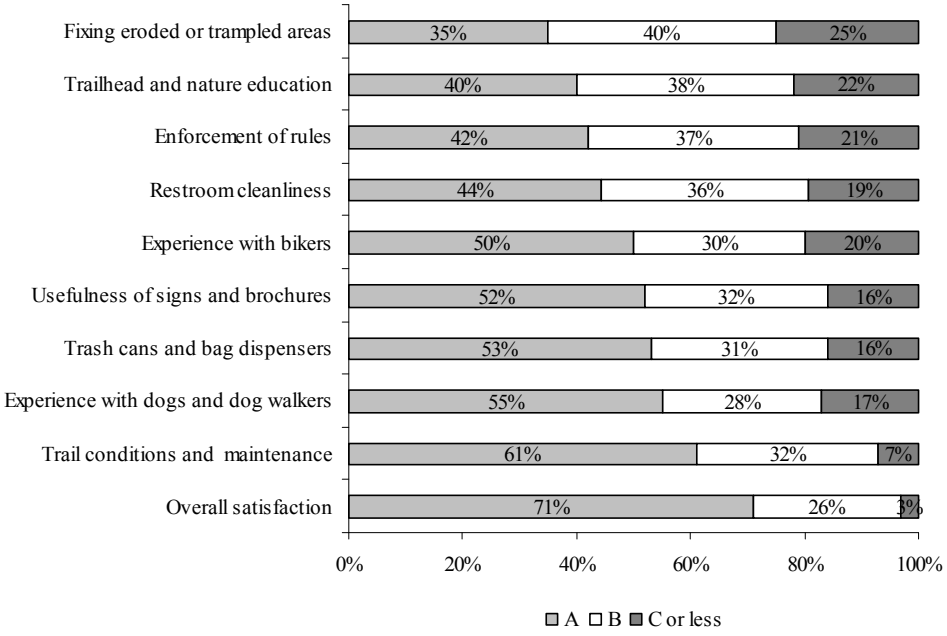
1. Bars are the number of individuals reporting each type of dog related conflict

Evaluations of OSMP Management

Satisfaction is a common indicator of benefits sought from recreation experiences (Manning, 1999). The concern is with identifying variables that affect satisfaction and that are susceptible to management or manipulation. If such variables can be identified and monitored, the potential for changing circumstances to create better recreation experiences is enhanced. To facilitate this applied focus, a report card was developed in the late 1970's for tracking visitor satisfaction (LaPage & Bevins, 1981). The instrument included items that could be influenced by management actions. Each of the variables was coded as letter grades. The letter grades have an intuitive appeal because they provide an understandable index of visitor reactions (Vaske, Donnelly, & Williamson, 1991).

The OSMP survey contained 10 questions measured with letter grades (Figure 18). The lowest percent of respondents giving a letter grade of "A" were for "fixing eroded or trampled areas" (35%), "trailhead and nature education" (40%), "enforcement of rules" (42%), and "restroom cleanliness" (44%). The highest ratings were for "trail conditions and maintenance" (61%), "experience with dogs and dog walkers" (55%), and "trash cans and bag dispensers" (53%). Overall, 71% were satisfied with OSMP management giving a letter grade of "A." There were seasonal (Table 29) and sector (Table 30) statistical differences in these percent evaluations, but the effect sizes were minimal.

Figure 18. Visitor reported grades for OSMP management



The letter grade format allows for computing a grade point average (GPA) for each of the variables (Figure 18). Across all respondents and survey questions, the GPA exceeded a "B" average. The highest GPA was for overall satisfaction (mean = 3.68); the lowest was for 'fixing eroded or trampled areas (mean = 3.05). There were some seasonal (Table 31) and sector (Table 32) statistical differences in these GPA scores. All of the GPA evaluations, however, were above 3.00 (i.e., a B), with only five exceptions. Two of these exceptions were for spring: (a) enforcement of rules (mean = 2.92) and (b) fixing eroded or trampled areas (mean = 2.95). GPA evaluations fell below a B average in the Northeast sector for three questions: (a) enforcement of rules (mean = 2.91), (b) restroom cleanliness (mean = 2.93), and (c) fixing eroded or trampled areas (mean = 2.96).

Table 29. Visitor reported grades for OSMP management by season

Letter grades	Season [1] Summer 2004	Fall 2004	Winter 2004-2005	Spring 2005	χ^2	*p*-value	Cramer's *V*
Trail conditions and maintenance					32.54	< .001	.075
A	62	64	57	61			
B	34	31	33	30			
C or less	4	5	10	9			
Trash cans and bag dispensers					15.99	.014	.057
A	50	56	51	53			
B	35	27	35	30			
C or less	15	17	14	17			
Usefulness of signs and brochures					14.20	.028	.055
A	49	52	54	54			
B	38	30	33	30			
C or less	13	18	13	16			
Experience with bikers					75.39	< .001	.151
A	65	40	55	48			
B	19	39	33	26			
C or less	16	21	12	26			
Fixing eroded or trampled areas					13.59	.035	.055
A	36	39	35	32			
B	42	38	42	39			
C or less	22	23	24	29			
Restroom cleanliness					35.47	< .001	.159
A	40	43	52	41			
B	53	32	34	33			
C or less	7	25	14	26			
Experience with dogs and dog walkers					36.06	< .001	.087
A	60	56	60	47			
B	29	26	24	33			
C or less	11	18	16	20			
Trailhead and nature education					25.80	< .001	.086
A	37	39	43	39			
B	46	42	35	33			
C or less	17	19	22	28			
Enforcement of rules					40.88	< .001	.109
A	43	41	46	38			
B	44	35	38	33			
C or less	13	24	16	29			
Overall satisfaction with OSMP					37.23	< .001	.085
A	72	72	77	64			
B	27	27	21	31			
C or less	1	1	2	5			

1. Cell entries are percents

Table 30. Visitor reported grades for OSMP management by sector

	Sector [1]							
Letter grades	NE	NW	SE	SW	SWF	χ^2	*p*-value	Cramer's *V*
Trail conditions and maintenance						45.54	< .001	.087
A	59	62	66	61	61			
B	36	29	24	31	37			
C or less	5	9	10	8	2			
Trash cans and bag dispensers						77.60	< .001	.128
A	46	56	56	50	66			
B	42	30	25	28	19			
C or less	12	14	19	22	15			
Usefulness of signs and brochures						25.05	.002	.074
A	56	52	51	49	54			
B	30	36	31	30	34			
C or less	14	12	18	21	12			
Experience with bikers						32.01	< .001	.099
A	45	49	60	63	58			
B	33	33	22	23	25			
C or less	22	18	18	14	17			
Fixing eroded or trampled areas						39.73	< .001	.092
A	27	35	45	41	38			
B	46	40	32	36	40			
C or less	27	25	23	23	22			
Restroom cleanliness						46.31	< .001	.181
A	27	55	44	45	58			
B	45	31	29	36	34			
C or less	28	14	27	19	8			
Experience with dogs and dog walkers						97.06	< .001	.144
A	45	51	71	65	55			
B	36	29	21	21	33			
C or less	19	20	8	14	12			
Trailhead and nature education						39.18	< .001	.103
A	30	39	45	46	41			
B	46	37	32	34	45			
C or less	24	24	23	20	13			
Enforcement of rules						64.33	< .001	.134
A	31	43	46	47	54			
B	44	30	40	36	36			
C or less	25	27	14	17	10			
Overall satisfaction with OSMP						56.70	< .001	.096
A	66	73	75	69	78			
B	33	23	23	27	22			
C or less	1	4	3	4	0			

1. Cell entries are percents.

Figure 19. Visitor reported average grades for OSMP management

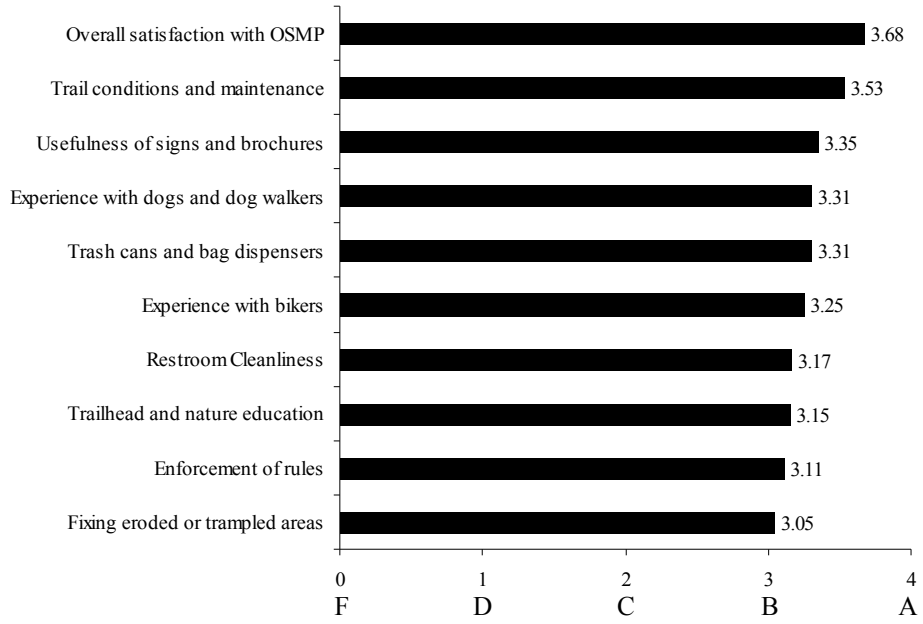


Table 31. Visitor reported average grades for OSMP management by season

	Season [1]						
	Summer 2004	Fall 2004	Winter 2004-2005	Spring 2005	*F*-value	*p*-value	*eta*
Trail conditions and maintenance	3.58	3.59	3.46	3.51	5.59	.001	.078
Trash cans and bag dispensers	3.28	3.32	3.31	3.31	0.18	.912	.015
Usefulness of signs and brochures	3.35	3.33	3.38	3.34	0.32	.812	.020
Experience with bikers	3.40	3.13	3.39	3.15	9.95	< .001	.135
Fixing eroded or trampled areas	3.08	3.09	3.10	2.95	4.12	.006	.073
Restroom cleanliness	3.32	3.08	3.34	3.03	5.09	.002	.149
Experience with dogs and dog walkers	3.45	3.29	3.35	3.19	7.36	< .001	.098
Trailhead and nature education	3.17	3.17	3.19	3.08	1.72	.161	.054
Enforcement of rules	3.21	3.07	3.28	2.92	11.44	< .001	.141
Overall satisfaction with OSMP	3.69	3.70	3.75	3.58	12.03	< .001	.116

1. Cell entries are means.

Table 32. Visitor reported average grades for OSMP management by sector

	Sector [1]							
	NE	NW	SE	SW	SWF	*F*-value	*p*-value	*eta*
Trail conditions and maintenance	3.54	3.52	3.53	3.52	3.60	0.80	.527	.034
Trash cans and bag dispensers	3.32	3.36	3.25	3.16	3.48	6.74	< .001	.105
Usefulness of signs and brochures	3.41	3.38	3.29	3.25	3.39	3.72	.005	.079
Experience with bikers	3.16	3.25	3.32	3.45	3.38	4.35	.002	.103
Fixing eroded or trampled areas	2.96	3.06	3.10	3.11	3.12	2.65	.032	.068
Restroom cleanliness	2.93	3.35	3.05	3.18	3.42	6.67	< .001	.196
Experience with dogs and dog walkers	3.16	3.22	3.59	3.42	3.40	13.79	< .001	.153
Trailhead and nature education	3.04	3.12	3.20	3.22	3.27	3.77	.005	.092
Enforcement of rules	2.91	3.07	3.24	3.21	3.42	11.11	< .001	.160
Overall satisfaction with OSMP	3.64	3.69	3.71	3.65	3.78	4.21	.002	.079

1. Cell entries are means.

Conclusion

This report profiled OSMP visitors in terms of their: (a) demographic characteristics (e.g., sex, age, place of residence) and prior visitation rates, (b) trip characteristics (e.g., trip duration, activity participation) on the day that they were surveyed, and (c) evaluations of their experience (e.g., perceived conflict, satisfaction with management of OSMP). Results were presented for the entire sample as well as for different seasons and geographic sectors. The intent was to provide managers with baseline information against which future research results can be compared and to inform management decisions.

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Appendix A

OSMP Study Sectors

Figure 1 – Visitation study sectors and access locations

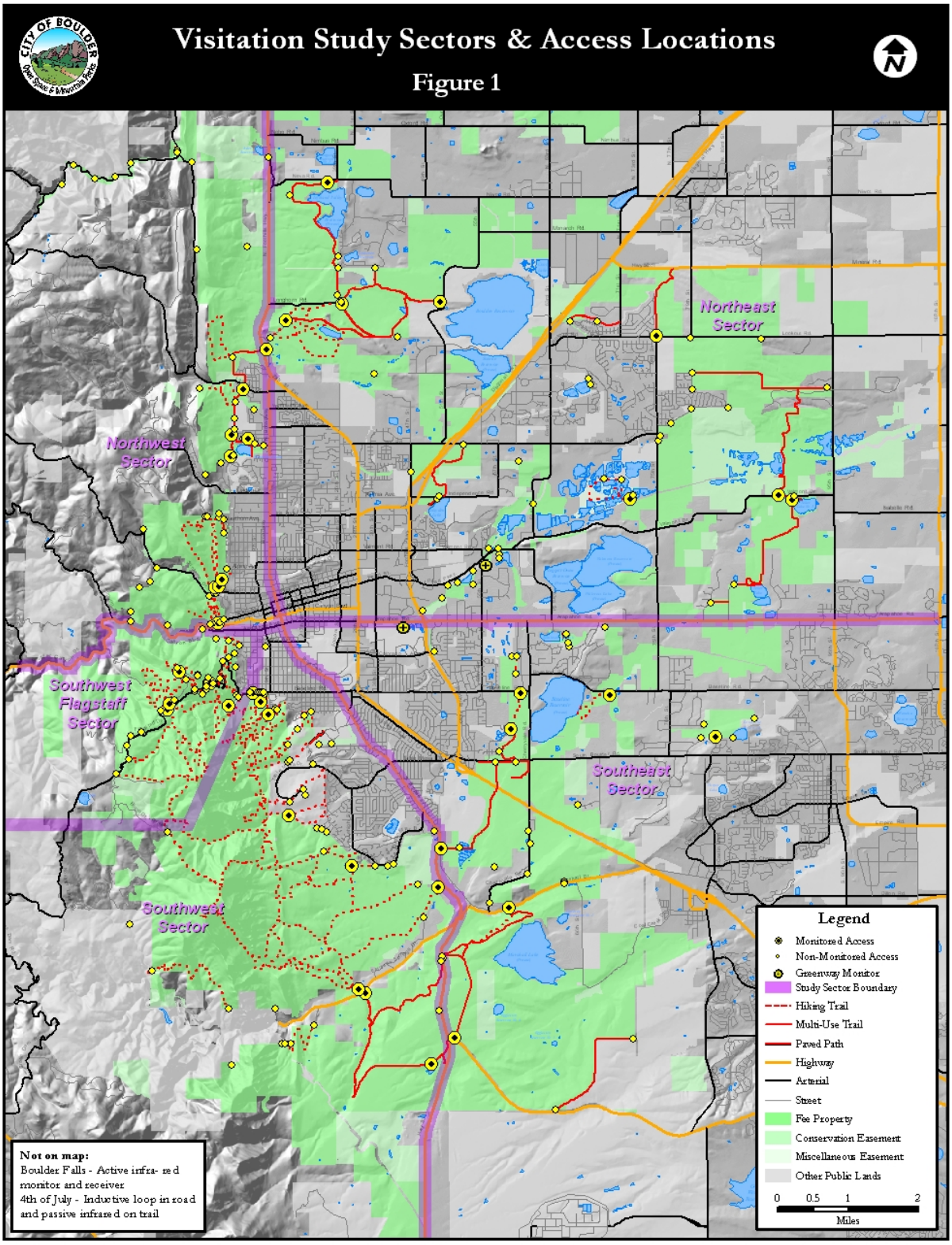


Figure 2 – Visitation study access locations – Northwest sector

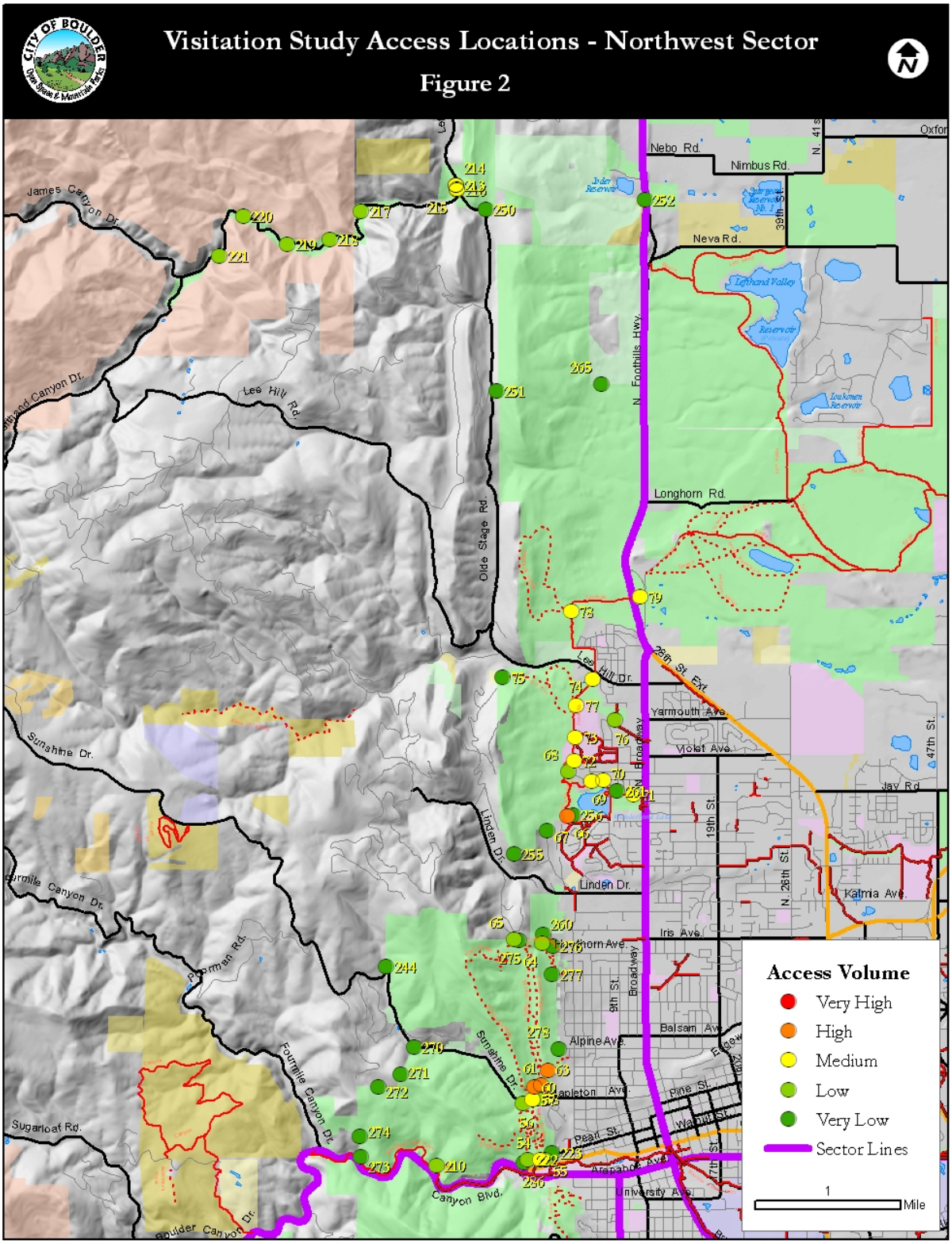


Figure 3 – Visitation study access locations – Northeast sector

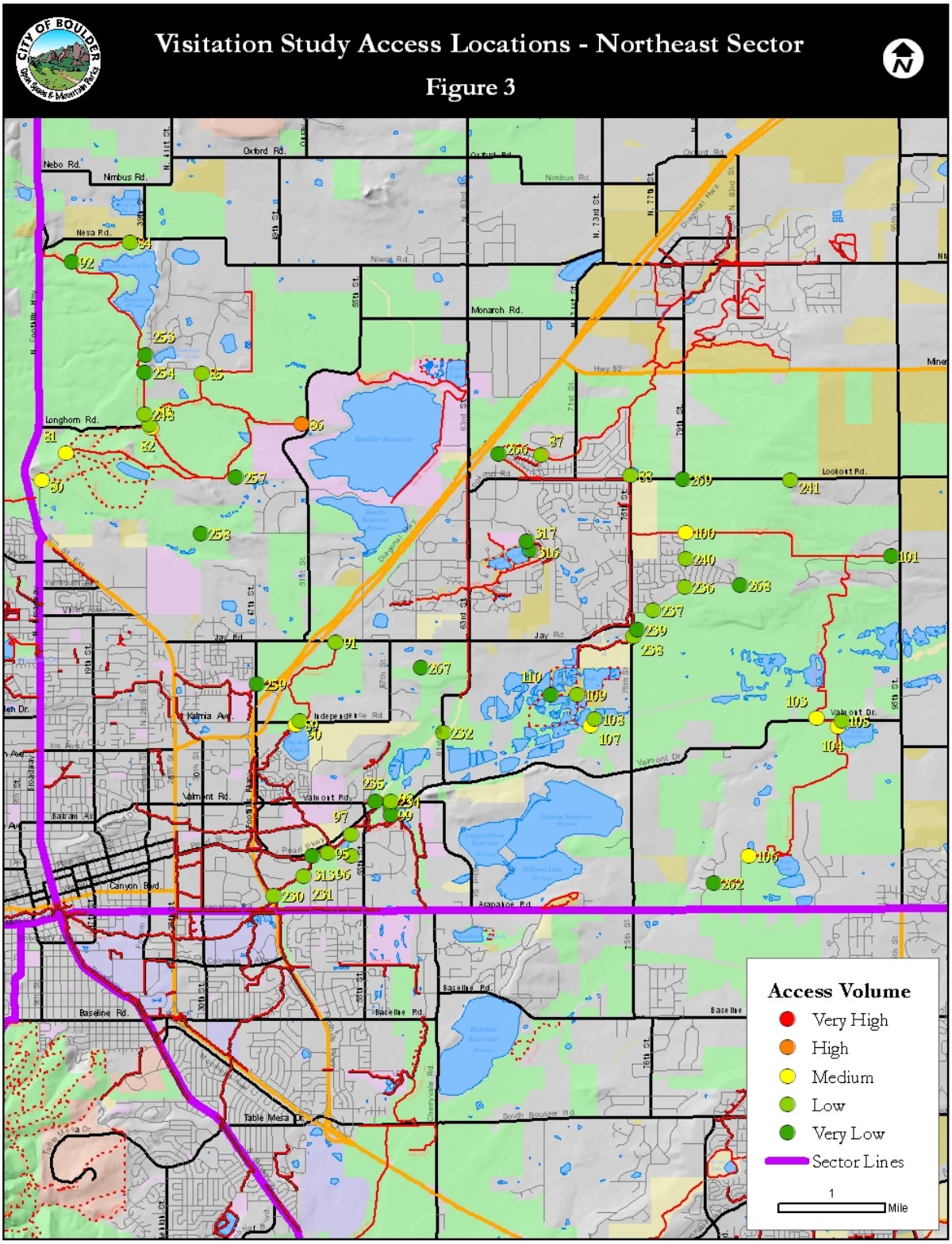


Figure 4 – Visitation study access locations – Southeast sector

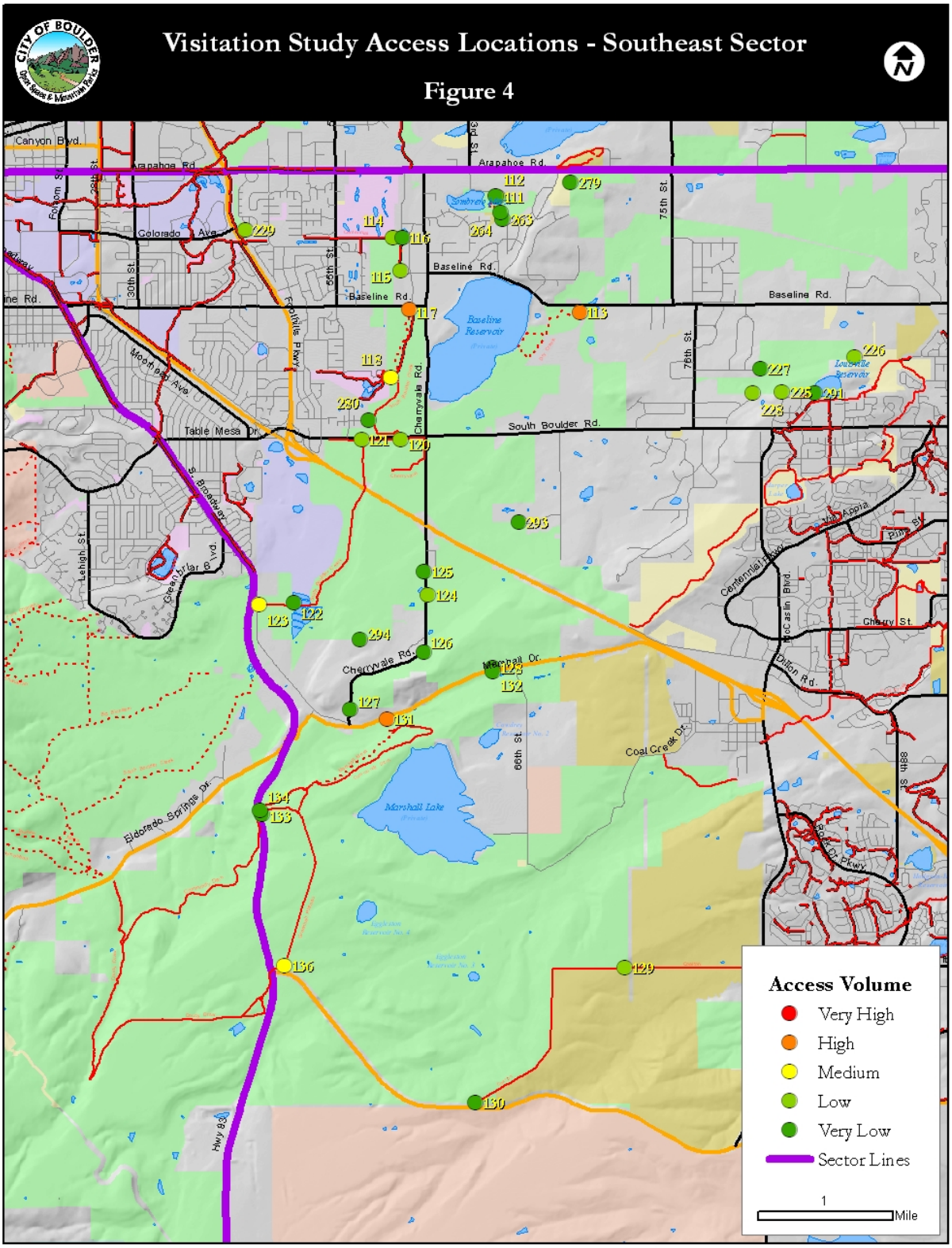


Figure 5 – Visitation study access locations – Southwest sector

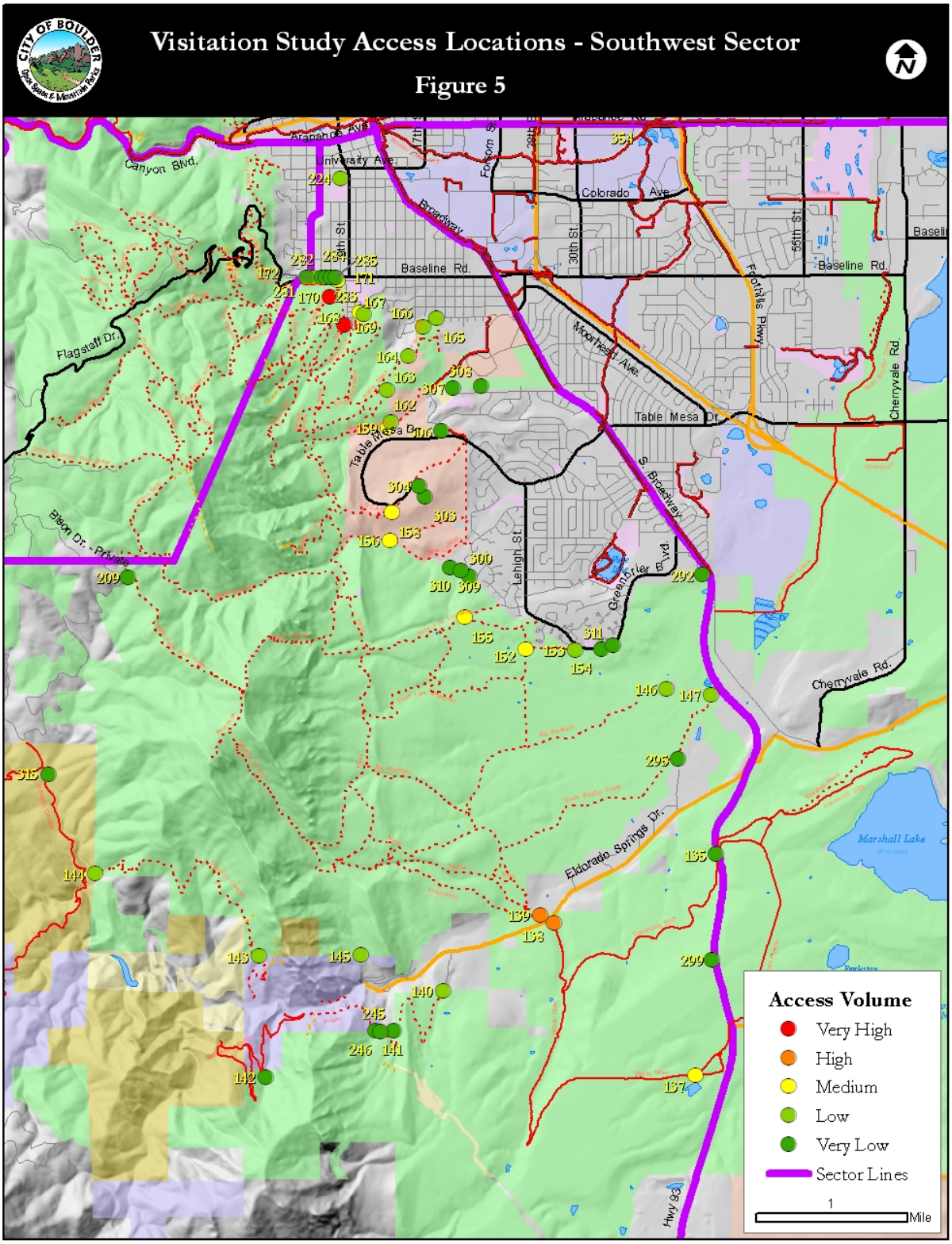
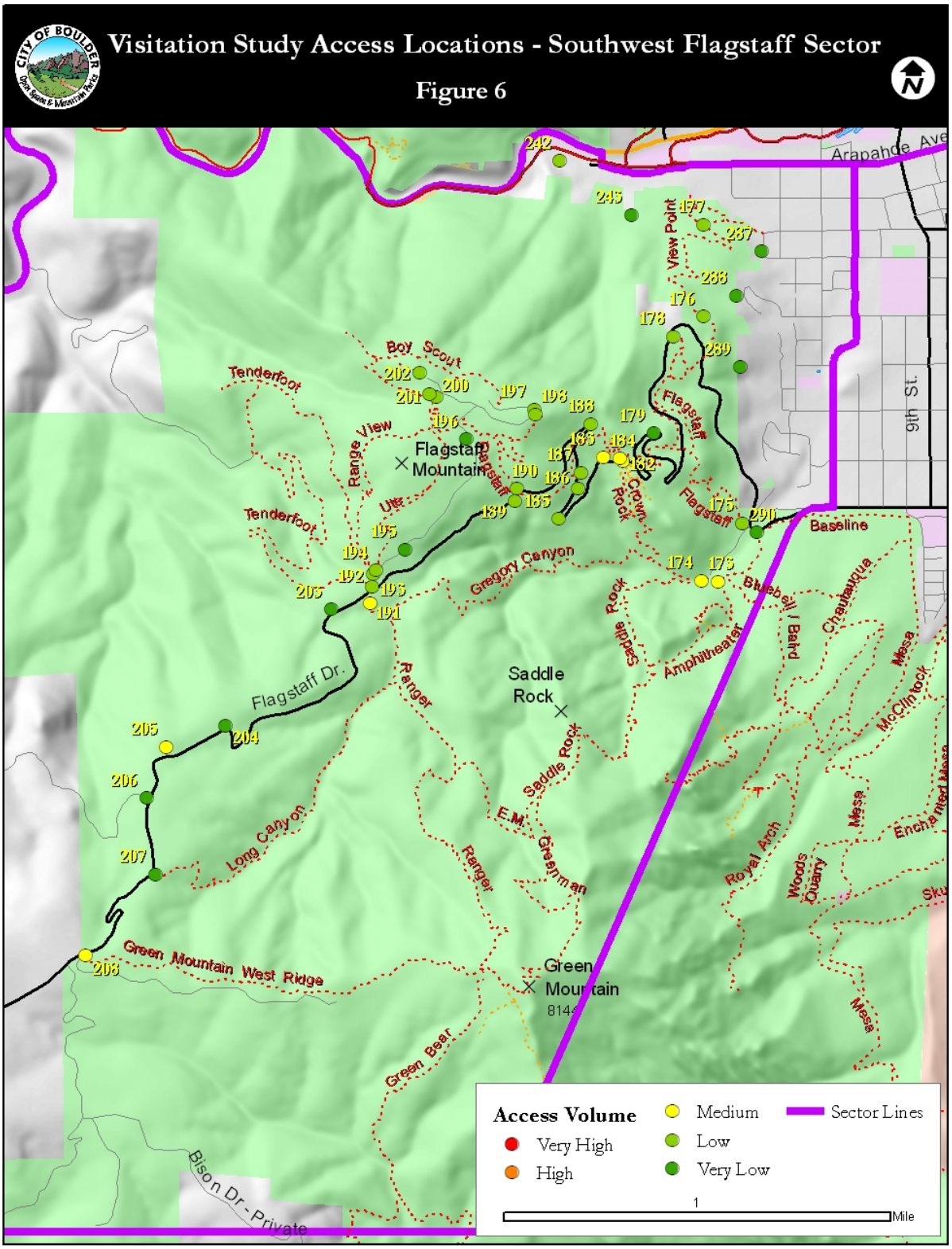


Figure 6 – Visitation study access locations – Southwest Flagstaff sector



Appendix B

Survey Instrument

Open Space and Mountain Parks Survey #_____

1. What time did you start on a trail today? _____ Start time _____ Current time

2. How did you get to the trailhead? □ Car □ Walk/Run □ Bike □ Bus

3. How many people are in your group? _____

4. Which one of the following was the most important reason for visiting Open Space & Mountain Parks?
   - □ I came here to enjoy the place itself.
   - □ I came here because it is a good place to do the activities that I enjoy.
   - □ I came here because I wanted to spend more time with family or friends.

5. What activities did you do during this visit? (PLEASE CHECK ALL THAT APPLY)

□ Climbing/Bouldering	□ Walking dog(s)	□ Viewing scenery
□ Photography	□ Picnicking	□ Viewing wildlife
□ Social gathering	□ Contemplation/Meditation	□ Horseback riding
□ Hiking	□ Biking	□ Nature study
□ Running	□ Pleasure driving	□ Other _____

6. Please **CIRCLE** the one activity from **ABOVE** that you consider your **PRIMARY ACTIVITY** today.

7. If walking dogs today, how many are with you? □ 1 □ 2 □ 3 □ 4 □ 5+ □ N/A

8. What made your trip enjoyable today? (PLEASE CHECK ALL THAT APPLY)

□ Scenery	□ Close to home	□ Get away from daily pressures
□ Wildlife	□ Family or friends	□ Exercise/Health
□ Plants/Wildflowers	□ Being with my dog(s)	□ Other _____

9. Where do you live?

□ Boulder (within city limits)	□ Longmont	□ Other area in Colorado
□ Louisville	□ Unincorporated Boulder County	□ Out of state
□ Lafayette	□ Other city in Boulder County	□ Out of country
□ Superior	□ Metro Denver	

PLEASE FLIP OVER TO SECOND PAGE

10. Please grade Open Space & Mountain Parks on the following categories based on your recent experience.

A= Excellent F=Failing

PLEASE CHECK ONE FOR EACH CATEGORY.	A	B	C	D	F	N/A
Trail conditions and maintenance	□	□	□	□	□	□
Trash cans and bag dispensers	□	□	□	□	□	□
Usefulness of signs and brochures	□	□	□	□	□	□
Experience with bikers	□	□	□	□	□	□
Fixing eroded or trampled areas	□	□	□	□	□	□
Restroom cleanliness	□	□	□	□	□	□
Experience with dogs and dog walkers	□	□	□	□	□	□
Trailhead and nature education	□	□	□	□	□	□
Enforcement of rules	□	□	□	□	□	□
Overall satisfaction with Open Space & Mountain Parks	□	□	□	□	□	

11. Did you encounter any conflicts or unpleasant experiences today? □ Yes □ No

12. If yes, could you describe them?

_____

_____

13. Please estimate how many times a month, on average;
you have visited Open Space & Mountain Parks during the last year? _____ Times per month

14. How many years have you been coming to Open Space & Mountain Parks? _____ Number of years

QUESTION # 15 AND QUESTION # 16 ARE OPTIONAL

15. How old were you on your last birthday? _____ Years old

16. What is your gender? □ Female □ Male

PLEASE REFER TO THE MAP

17. Did you enter from this access/trailhead?
□ Yes □ If No, where did you enter from? Please write access number _____
OR, I entered off the scope of this map □ (CHECK BOX)

18. Do you have any additional comments to improve the management of OSMP?

_____

_____

THANK YOU FOR YOUR TIME!

Location: _____ AM, Mid-Day, PM Interviewer initials: _____

Appendix C

Survey Responses by Sector and Season

Table C1. Survey locations within each sector

	Surveys	
	Number	Percent in Sector
Northeast		
Eagle Trailhead	132	46
Cottonwood Trail Independence	48	17
Eagle Trail West	18	6
Teller Farm South Trailhead	18	6
Boulder Creek Path Foothills	16	6
East Boulder Trail Heatherwood	15	5
East Boulder Trail Valmont	10	4
Heatherwood SE	9	3
Lefthand Trail	4	1
Cottonwood Trail Jay Rd	4	1
Boulder Creek Path Cottonwood Grove East	3	1
Cottontail Trail South	2	1
East beech – Lake Valley Pebble Beach Ln	2	1
Cottontail East Subdivision	1	0
Boulder Creek Path Valmont Industrial Park South	1	0
Boulder Creek Path RR track	1	0
Total	284	100
Northwest		
Boulder Falls	422	45
Sanitas Valley Trail	177	19
Mount Sanitas Trail	88	9
Wonderland Trail Poplar Avenue	87	9
Wonderland Trail Utica West	41	4
Sanitas Valley View Trail	35	4
Centennial Sanitas Connector	18	2
Foothills Trail NoBo Park	16	2
Elephant Buttress	13	1
Foothills Trail Locust PL	10	1
Foothills Trail Near US 36	9	1
Foothills Trail Dog Park	8	1
Foothills Trail Near Hogback Trail	5	1
Old Kiln Trail	4	0
Boulder 4 Mile Canyon S	4	0
Wonderland Spring Valley Road	3	0
Foothills Rosewood Ave	3	0
Buckingham South	3	0
Fourmile Trailhead	1	0
Total	947	100

Table C1. continued

	Surveys	
	Number	Percent in Sector
Southeast		
Dry Creek Trailhead	112	47
Marshall Mesa Trailhead	76	32
Bobolink Trailhead	22	9
South Boulder Creek Van Vleet	8	3
Greenbelt Plateau Trailhead	8	3
Centennial Northwest	4	2
Coalton Trail East	3	1
Steinbach Niland	2	1
Aweida-Merle-Smith	2	1
Sombrero SE	1	0
Sombrero SW	1	0
Total	239	100
Southwest		
Chautauqua Trail	707	58
Bluebell Road	326	27
Doudy Draw Trailhead	40	3
South Mesa Trailhead	34	3
Lower Bear Canyon Trail	26	2
Enchanted Mesa Trail	20	2
Baseline Trail	19	2
South Fork Shanahan Trail	10	1
Devils Thumb - Stony Hill Rd W	9	1
Fowler East	8	1
Big Bluestem Trail	7	1
6th Street Access	7	1
Devils Thumb - Stony Hill Rd - Riparian	4	0
NOAA W Dartmouth	3	0
Chautauqua 8 half St	2	0
NOAA Spur off Dartmouth	2	0
Chautauqua 7 half St	1	0
Total	1,225	100
Southwest Flagstaff		
Lost Gulch	54	49
Amphitheater Trail	25	23
Upper Crown Rock	14	13
Baseline Picnic Area	8	7
Gregory Canyon	6	5
Upper Crown Rock Road Pulloff	4	4
Total	111	100

Table C2. Number of survey conducted per season and sector.

Sector	Season				Total
	Summer 2004	Fall 2004	Winter 2004-2005	Spring 2005	
Northeast	48	28	94	114	284
Northwest	110	354	193	290	947
Southeast	66	54	55	64	239
Southwest	293	326	319	287	1225
Southwest Flagstaff	19	21	53	18	111
Total	536	783	714	773	2806