

National Visitor Use Monitoring Results
For
MOAB FIELD OFFICE

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Data collected FY 2006
Bureau of Land Management

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CHAPTER 1: INTRODUCTION

Scope and purpose of the National Visitor Use Monitoring program

The National Visitor Use Monitoring (NVUM) program provides reliable information about recreation visitors to national forest system managed lands at the national, regional, and field office level. BLM currently manages a visitor satisfaction survey to gather data on visitor use and satisfaction for decision making and Government Performance and Results Act (GPRA) reporting. However, NVUM can provide additional data, such as visitation numbers, economic information and demographics that will help enhance land management to better serve the public. Therefore, BLM pilot tested this methodology in an effort to establish a consistent, standardized, Bureau-wide approach for collecting accurate, scientifically-defensible visitor monitoring information that supports resource planning needs and management decisions, and can be utilized for mandatory Congressional reporting for the GPRA. The NVUM methodology is a well-recognized, tested, and proven visitor monitoring system capable of dealing with the inherent difficulties associated with measuring dispersed recreation use. The intent of the study is to determine the viability and applicability of this visitor use methodology for Bureau-wide implementation in its current, or an adjusted form.

The Forest Service developed the NVUM system to provide information about the quantity and quality of recreation visits which is required for national forest plans, Executive Order 12862 (Setting Customer Service Standards), and implementation of the National Recreation Agenda. To improve public service, the agency's Strategic and Annual Performance Plans require measuring trends in user satisfaction and use levels. NVUM information assists Congress, Forest Service leaders, and program managers in making sound decisions that best serve the public and protect valuable natural resources by providing science based, reliable information about the type, quantity, quality and location of recreation use on public lands. The information collected is also important to external customers including state agencies and private industry. NVUM methodology and analysis is explained in detail in the research paper entitled: Forest Service National Visitor Use Monitoring Process: Research Method Documentation; English, Kocis, Zarnoch, and Arnold; Southern Research Station; May 2002 (<http://www.fs.fed.us/recreation/programs/nvum>).

Before the surveys began, each BLM pilot test unit grouped all recreation sites and areas into four categories called "site types": Day Use Developed Sites (DUDS), Overnight Use Developed Sites (OUDS), Wilderness and Wilderness Study Areas (Wilderness), and General Public Lands (GPL). Each site was given a rating of very high, high, medium, low, or no recreation visitors leaving a site or area for the last time (last exiting recreation visitation) for each day of the year. Each day on which a site or area is open is called a site day. Site day is the basic sampling unit for the survey. Results of this categorization are shown in Table 1.

A map showing all General Public Lands Exit locations are archived with the NVUM data for use in future sample years. The Forest Service also provided training materials, equipment, survey forms, funding, and the protocol necessary for the Field Office to gather visitor use information.

NVUM has standardized measures of visitation to ensure that all BLM visit measures are comparable. These definitions are basically the same as established by the Forest Service in the 1970's, however the application of the definition is stricter. Visitors must pursue a recreation activity physically located "on" lands managed by the BLM in order to be counted as "recreation visits". Visitors who are just passing through; site-seeing from roads that are not managed by the BLM, or just using restroom facilities are also not included as "recreation visits". The NVUM basic use measurements are *BLM visits* and *BLM site visits*. NVUM provides estimates of both types of these visits and statistics measuring the precision of the estimates. These statistics include the standard error of the estimate, expressed as the width of the 90 percent confidence interval. The methodology used by NVUM categorizes recreation facilities and areas into specific site types and use levels in order to develop the sampling frame. Understanding the definitions of the variables used in the sample design and

statistical analysis is important in order to interpret the results. Appendix B contains definitions of the important terms used in this report.

Limitations of the Results

The Bureau of Land Management is transitioning to a three tier organization – State Office, District Office, and Field Office are the jurisdictional boundaries. During the pilot test, the survey occurred on lands managed under the Moab Field Office. The information presented here is valid and applicable at the Field Office level. It is not designed to be accurate at the site level. The quality of the visitation estimate is dependent on the sample design development, sampling unit selection, sample size and variability, and survey implementation. First, preliminary work was conducted by BLM to develop a complete list of sites and areas where recreation visitation occurs, and to correctly classify sites/areas consistently according to the type and amount of visitation. Site classification influences the quality of the estimate and accuracy of visit characteristics. Second, visits sampled must be representative of the population of all visits – if portions of the area or times of the year are not adequately sampled, then the visit characteristics may not be completely accurate. Third, the number of visits sampled must be large enough to adequately control variability. Finally, the success of the BLM unit in accomplishing its assigned sample days, correctly filling out the interview forms, and following the sample protocol influence the variability and confidence interval width. The final confidence interval width will reflect all these factors. The smaller that the interval width is, the better is the estimate.

Wide confidence intervals (i.e. high variability) in the BLM visit (BLMV), site visit (SV) and Wilderness visit estimates are primarily caused by a small sample size in a given stratum (for example General Public Lands low use days) where the use observed was beyond that stratum's normal range. For example, on the Clearwater National Forest in the General Forest Lands low stratum, there were 14 sample days. Of these 14 sample days, 13 days had visitation estimates between 0-20. One observation had a visitation estimate of 440. Therefore, the stratum mean was about 37 with a standard error of 116. The 90% confidence interval width is then over 400% of the mean, a very high level of variability. Whether these types of odd observations are due to unusual weather, malfunctioning traffic counters, or a misclassification of the day (a sampled low use day that should have been categorized as a high use day) is unknown. Eliminating the unusual observation from data analysis could greatly reduce the variability. However, unless the NVUM team had reason to suspect the data was incorrect they did not eliminate these unusual cases.

The descriptive information about BLM visitors is based upon only those visitors that were interviewed. If an area has distinct seasonal use patterns and activities that vary greatly by season, these patterns may or may not be adequately captured in this study. This study was designed to estimate total number of people during a year. Sample days were distributed based upon high, medium, and low exiting use days, not seasons. When applying these results in analysis, items such as activity participation should be carefully scrutinized. For example, although the Routt National Forest had over 1 million skier visits, no sample days occurred during the main ski season; they occurred at the ski area but during their high use summer season. Therefore, activity participation based upon interviews did not adequately capture downhill skiers. This particular issue was adjusted. Note that the results of the NVUM activity analysis DO NOT identify the types of activities visitors would like to have offered on the BLM Field Office. It also does not tell us about displaced BLM visitors, those who no longer visit the Field Office because the activities they desire are not offered. Some BLM visitors were counted and included in the total Field Office use estimate but were not surveyed. This included visitors to recreation special events and organization camps.

CHAPTER 2: THE SAMPLE POPULATION

The population of available site days for sampling was constructed from information provided by Moab Field Office personnel. Each site was given a rating of very high, high, medium, low, or no recreation visitors leaving a site or area for the last time (last exiting recreation use) for each day of the year. The stratum, a combination of site type and use level, was then used to construct the sampling frame. The project methods paper (English et al 2002) describes the sampling process and sample allocation formulas in detail. Basically, at least eight days per stratum are randomly selected for sampling. More days are added if the stratum is very large. The results of the recreation site/area stratification and days sampled by the Moab Field Office are displayed in Table 1. Also displayed is the percentage of days per stratum that were sampled. For example, in the Day Use Developed, Low Use stratum, 674 days were listed and 10 of them were sampled resulting in a 1.48% sampling rate for that stratum. In total the Moab Field Office sampled 189 of the 16,014 open site days.

Table 1. Population of Available Site Days and Percentage of Days Sampled by Stratum in the Moab Field Office (NVUM FY2006 data)

Site Type ^a	Proxy Code ^b	Use Level ^c	Number of site days in population	Number of days sampled	Sampling Rate (%)
DUDS		LOW	674	10	1.48
DUDS		MEDIUM	407	10	2.46
DUDS		HIGH	199	15	7.54
GPL		LOW	4005	20	0.50
GPL		MEDIUM	1085	18	1.66
GPL		HIGH	417	17	4.08
GPL		VERY HIGH	12	7	58.33
GPL	PTC1		410	10	2.44
GPL	PTC3		2407	10	0.42
OUDS	DUR4		268	12	4.48
OUDS	FE4		3778	10	0.26
OUDS	PTC1		840	10	1.19
WILDERNESS		LOW	875	10	1.14
WILDERNESS		MEDIUM	151	10	6.62
WILDERNESS		HIGH	34	10	29.41
WILDERNESS	PTC1		452	10	2.21
TOTAL			16014	189	1.18

^a Site Type - DUDS = Day Use Developed Site, GPL = General Public Lands (“Undeveloped Areas”), OUDS = Overnight Use Developed Site, WILD = both Designated Wilderness and wilderness study areas

^b Proxy Code - If the site or area already had counts of use (such as fee envelopes or ski lift tickets) the site was called a proxy site; sampling strata were defined by site type and type of proxy information. See Appendix B for explanation of proxy codes.

^c Use level was defined independently by each Field Office by defining the expected number of recreation visitors that would be last-existing a site or area on a given day. The BLM unit developed the range for very high, high, medium, and low and then assigned each day of the year to one of the use levels.

CHAPTER 3: BUREAU OF LAND MANAGEMENT VISIT ESTIMATES

The Moab Field Office participated in the National Visitor Use Monitoring (NVUM) pilot project from October 2005 through September 2006. The project coordinators were Russ Von Koch, Marilyn Peterson, and Bill Stevens. According to Russ Von Koch, there were no unusual or extenuating circumstances that would have affected recreation use.

There were approximately 1,179,500 BLM visits (Table 2) to Moab Field Office lands during fiscal year 2006. There were about 1,493,700 site visits. Included in the site visit estimate are 47,000 wilderness study area site visits. Table 2 displays the average visitor use estimate for in total and by site type at the 90 percent confidence interval width. It is important to consider the confidence interval width especially when comparing use on one field unit to another. Some field units have a larger confidence interval width therefore their use estimate is not as precise as other field units.

Table 2. Moab Field Office Visit Estimate (NVUM FY2006 data)

Visit Type	Visits (thousands)	90% confidence level (%) ^c
Day Use Developed site visits	49.9	11.2
General Public Lands (dispersed) site visits	1310.5	15.5
Overnight Developed site visits	73.1	12.1
Wilderness & WSA Visits ^a	47.0	7.9
Special Events and Organizational Camp Use ^b	13.0	NA
Total BLM Site Visits	1493.5	13.6
Total BLM Visits	1179.3	13.9

^a Wilderness visits include both wilderness study areas and designated Wilderness and are included in the Site Visits estimate.

^b Special events and organizational camp use are not included in the Site Visit estimate, only in the BLM Visits estimate. BLM reported the total number of participants and observers so this number is not estimated; it is treated as 100% accurate.

^c This value defines the upper and lower bounds of the visitation estimate at the 90% confidence level, for example if the visitation estimate is 100 +/-5%, one would say "at the 90% confidence level visitation is between 95 and 105 visits."

The quality of the use estimate is based in part on how many individuals were contacted during the sample day and how many complete interviews were obtained from which to estimate NVUM numbers and visit descriptions. Table 3 displays the number and types of visitor contacts. Of those visitors who agreed to be interviewed the interviewer then determined if the visitor's purpose was recreation, and if it was recreation, whether they were leaving the recreation site for the last time on their current visit sometime that day. This information may be useful to managers when assessing how representative of all visits the information in this report may be.

Table 3 shows that a total of 1,553 visitors were contacted on the BLM unit during the sample year. Of these, 1,268 agreed to be interviewed. Of those who agreed to be interviewed, 1,038 were recreating and 761 of them were leaving the recreation site sometime that day.

Table 3. Number of Visitors Contacted by Site Type in the Moab Field Office (NVUM FY2006 data)

Site Type ^a	Total Contacts	Agreed To Interview (Q1)	Visit Purpose Is Recreation (Q3)	Recreating Visitors Leaving Sometime That Day (Q4)	Recreating Visitors Leaving Now (Q4)
DUDS	222	171	138	137	130
GPL	868	723	551	317	307
OUDS	224	190	173	133	133
Wilderness	239	184	176	174	173
Total	1553	1268	1038	761	743

^a Site Type - DUDS = Day Use Developed Site, GPL = General Public Lands (“Undeveloped Areas”), OUDS = Overnight Use Developed Site, WILD = wilderness study areas and designated wilderness

Visitors who were last exiting the recreation site at the time of the interview or sometime during the interview day were asked to participate in a longer series of questions. There were three different interview forms. The forms were the same on the first three pages, however page four was different. One-third of the forms were blank on the fourth page, one-third had economics questions, and one-third had satisfaction questions. Table 4 displays the number of forms by site type that were completed for the Moab Field Office. This information shows managers how many responses were obtained and used to compute the remaining information in this report. A total of 761 complete surveys were obtained, 137 were in Developed Day Use sites and 133 were in Developed Overnight Sites.

Table 4. Number of Complete Interviews in the Moab Field Office by Site Type and Form Type (NVUM FY2006 data)

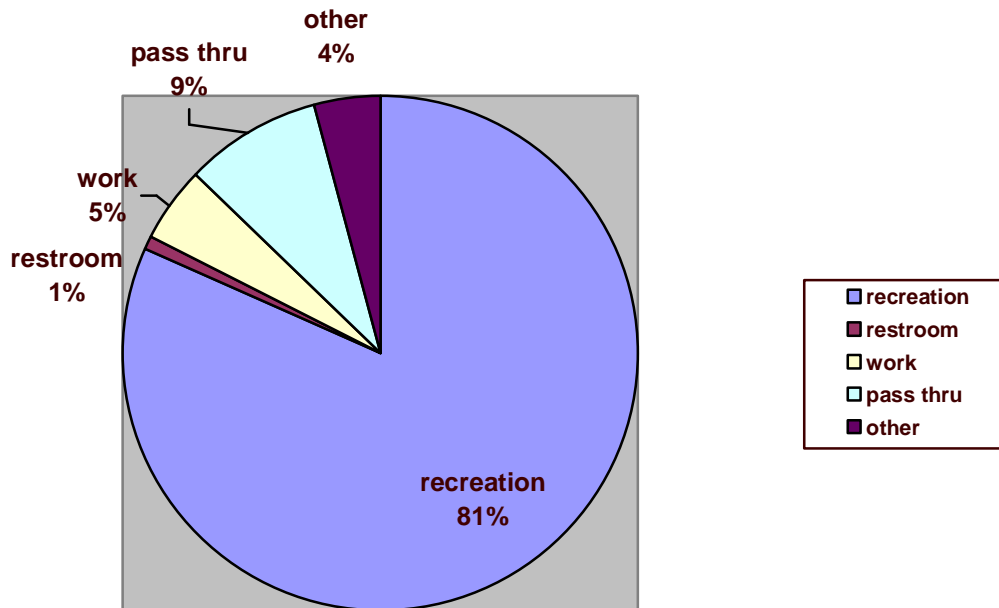
Form Type ^a	Developed Day Use Site	Developed Overnight Use Site	Undeveloped Areas (GPLs)	Wilderness	Total
Basic	55	52	121	81	309
Economics	46	38	102	48	234
Satisfaction	36	43	94	45	218
Total	137	133	317	174	761

^a Form type is the type of interview form administered to the visitor. The Basic form did not ask either economic or satisfaction questions. The Satisfaction form did not ask economic questions and the Economic form did not ask Satisfaction questions.

Visitors were interviewed regardless of whether they were recreating at the site or not, however the interview was discontinued after determining that the reason for visiting the site was not recreation. Figure 1 displays the various reasons visitors gave as their purpose for stopping at the sample site.

Figure 1. Purpose of visit by visitors who agreed to be interviewed in the Moab Field Office (NVUM FY 2006 data).

Figure 1. BLM Visit purpose in Moab Field Office.



CHAPTER 4: DEMOGRAPHICS

Descriptions of BLM visitors were developed based upon the characteristics of interviewed visitors (respondents) and expanded to the BLM visitor population. Basic demographic information helps agency managers identify the profile of the visits that occur on the Field Unit. Management concerns such as providing recreation opportunities for underserved populations may be monitored with this information. Basic demographics of gender, ethnicity, race, and age are displayed in Tables 5 thru 10. These results were calculated based on answers to Questions 25, 26, and 27 of the survey. Calculations in the tables are computed using weights that expanded the sample of individual interviews to the population of BLM visits. For more details regarding weights used contact the NVUM program manager.

The information in Tables 5 and 6 were obtained from up to four persons within the vehicle or group that was being interviewed. Race and ethnicity were asked only of the survey respondent. Data in Table 5 indicate that of those interviewed 39.2 % of BLM *visits* were made by females and 60.8 % by males. It is not correct to say 60.8% of *visitors* were males because the sample was designed to describe characteristics of BLM visits, not visitors. There were a total of 706 individuals interviewed and they provided additional information on 829 additional people in the survey parties. Of those in the survey party for which gender information was recorded 46.1% of site visits were by females and 53.9% were by males. In every site type there was a higher percentage of male BLM visits (Table 6).

Table 5. Percent of BLM Visits by Gender in the Moab Field Office (NVUM 2006 data)

Gender	Gender of person interviewed	Number of people interviewed	Gender of others in survey party	Number of others in Survey Party ^b
Female	39.2	277	46.1	382
Male	60.8	429	53.9	447
Total	100.0	706	100.0	829

^a BLM Visit is defined as the entry of one person upon a BLM management unit to participate in recreation activities for an unspecified period of time. A BLM Visit can be composed of multiple Site Visits.

^b Calculations are computed using weights that expand the sample of individuals to the population of BLM visits. For more detailed information regarding weights used contact the NVUM program manager Respondents were asked to give the gender of up to 4 people in their group. For more detailed information regarding weights used contact the NVUM program manager or consult economic reports listed in Literature cited (Stynes and White).

Table 6. Percent of BLM Visits by Gender by Site Type in the Moab Field Office (NVUM 2006 data)

Gender	DUDS		GPL		OUDS		Wild	
	% site visits	# respondents	% site visits	# respondents	% site visits	# respondents	% site visits	# respondents
Female	41.2	135	42.7	248	34.9	98	47.0	178
Male	58.8	160	57.3	333	65.1	177	53.0	209
Total	100.0	295	100.0	581	100.0	275	100.0	384

Table 7 displays the percent of BLM visits by age. The data for this Field Unit show that the highest BLM *visit* percentage (22.6%) occurred in the 40-49 age category and the lowest percentages were in the 16-19 and the 70 and over age categories. It is not correct to say 22.6% of *visitors* to the Moab Field Office were between the ages of 40 and 49 because the sample was designed to describe characteristics of BLM visits, not visitors. Note that 696 visitors were interviewed and they provided information about themselves and 826 additional people in the survey party. Almost thirty percent (29.8%) of BLM visits to Developed Day Use (DUDS) sites were by people between 50 and 59 years of age (Table 8). Table 6 provides additional information by site type.

Table 7. Percent of BLM Visits by Age in the Moab Field Office (NVUM FY2006 data)

Age Group	BLM Visits (%) ^a	# of Total Responses	% of those interviewed	# of those interviewed	Age of others in Survey Party ^b	# of others in Survey Party
Under 16	12.5	133	0.0	0	16.1	133
16-19	2.0	61	2.7	19	5.1	42
20-29	13.6	276	17.4	123	18.5	153
30-39	15.6	216	16.2	114	12.3	102
40-49	22.6	306	23.5	166	16.9	140
50-59	17.6	320	23.5	166	18.6	154
60-69	12.9	177	13.9	89	9.6	79
70 +	3.3	42	2.7	19	2.8	23
Total	100.1	1531	99.9	696	99.9	826

^a BLM Visit is defined as the entry of one person upon a BLM management unit to participate in recreation activities for an unspecified period of time. A BLM Visit can be composed of multiple Site Visits.

^b Calculations are computed using weights that expand the sample of individuals to the population of BLM visits. Respondents were asked to give the gender of up to 4 people in their group For more detailed information regarding weights used contact the NVUM program manager or consult economic reports listed in Literature cited (Stynes and White).

Table 8. Percent of BLM visits by age by site type in the Moab Field Office (NVUM FY 2006 data)

Age Group	DUDS (% site visits)	OUDS (% site visits)	GPL (% site visits)	Wild (% site visits)
Under 16	5.5	17.8	11.3	16.0
16-19	2.6	4.5	1.6	1.9
20-29	8.1	21.3	14.1	14.1
30-39	6.4	14.8	14.6	13.0
40-49	23.7	15.5	23.0	23.9
50-59	29.8	14.3	19.3	25.0
60-69	20.0	7.9	13.2	5.3
70 +	3.8	3.8	3.0	0.7
Total	99.9	99.9	100.1	99.9

Race and ethnicity information was collected to match how this information is reported in the US Census Bureau. Spanish, Hispanic, or Latino is considered an ethnicity, not a race, therefore it is asked as a separate

question. The second question in the set gave respondents a list of 5 race categories of which they could select multiple categories. Some caution is advised when using the information provided, since it is of survey respondents only. Some sample forests reported that certain racial groups tended to avoid encounters with interviewers and may be underrepresented. In addition, some interviewers did not ask visitors this question and in other cases visitors refused to answer the question.

Ten survey respondents (0.4%) were of Spanish, Hispanic, or Latino ethnicity. About 3.8% of Developed Day Use (DUDS) site visits were by people of Hispanic/Latino (Table 9). Table 10 summarizes respondent's race, showing that 98.7% of BLM visits in the Moab Field Office were Whites and 1.2% were American Indian/Alaska Native. One percent of site visits to Wilderness were by non-whites (Table 10).

Table 9. Percent of BLM Visits by Ethnicity in the Moab Field Office (NVUM FY2006 data)

Ethnicity ^a	BLM Visits (% ALL)	# Respondents Indicating This Ethnicity	DUDS (% site visits)	OU DS (% site visits)	GPL (% site visits)	Wild (% site visits)
Hispanic / Latino	0.4	10	3.8	2.3	0.8	1.0

^a Spanish, Hispanic, or Latino was asked as a separate question

Table 10. Percent of Visits by Race and site type in the Moab Field Office (NVUM FY2006 data)

Race ^a	BLM Visits (%)	# of Survey Respondents	DUDS (% site visits)	OU DS (% site visits)	GPL (% site visits)	Wild (% site visits)
American Indian/Alaska Native	1.2	4	1.4	0.4	0.9	0.8
Asian	0.7	8	2.3	2.3	0.4	0.2
Black/African American	1.1	2	1.4	0.0	0.9	0.0
Native Hawaiian or other Pacific Islander	0.0	0	0.0	0.0	0.0	0.0
White	98.7	562	96.7	99.0	99.1	99.0
Total	101.7	576	101.8	101.8	101.3	100.0

^a Respondents could choose more than one race, so race may total more than 100%.

Table 11 presents the top ten ZIP codes of survey respondents that provided a ZIP code. This information is not the entire universe of ZIP codes from all people who recreate on the forest; it is only ZIP codes or countries of those visitors who completed an interview. Since the entire list of survey respondents ZIP codes is quite lengthy, it is presented in Appendix A. Table 12 displays the percent of BLM visits by people from other countries. On lands managed by the Moab Field Office, 4.1% of BLM visits were by people from Europe.

Table 11. Top Ten ZIP Codes of Moab Field Office Survey Respondents (NVUM FY 2006 data)

Home Location	County	State	# Of Respondents	% Of Respondents
84532	Grand	UT	82	10.8
Foreign Country			51	6.7
81301	La Plata	CO	9	1.2
80424	Summit	CO	7	0.9
84105	Salt Lake	UT	7	0.9
80304	Boulder	CO	6	0.8
80305	Boulder	CO	6	0.8
84109	Salt Lake	UT	6	0.8
84124	Salt Lake	UT	6	0.8
80301	Boulder	CO	5	0.7

Table 12. Percent of Visits to the Moab Field Office by Respondents from Countries Other Than USA. (NVUM FY2006 data)

Country Of Origin (other than US)	BLM Visits (%)	Number Of Respondents
Asia	0.0	1
Canada	2.3	17
Europe	4.1	30
Mexico	0.0	1
South America	0.0	0
Another Country	0.1	2

CHAPTER 5: DESCRIPTION OF THE VISIT

Characteristics of the recreation visit such as length of visit, types of sites visited, day of arrival, activity participation and visitor satisfaction with BLM facilities and services help managers better provide desired recreation opportunities.

The average BLM visit length of stay in the Field Office was 48.3 hours. The average site visit was 29.4 hours, but time spent varied considerably by type of site (Table 13) with visitors to Day Use Developed sites spending an average of about 1.5 hours and Overnight Use Developed site visits lasting an average of about 40.3 hours. Since the average values displayed in Table 13 may be influenced by a few visits that lasted a very long time, the median value is also shown.

Table 13. Visit Duration to Moab Field Office lands (NVUM FY2006 data)

Visit Type	Average ^a Duration (hours)	Median ^b Duration (hours)
Site Visit	29.4	10.0
Day Use Developed	1.5	0.5
Overnight Use Developed	40.3	38.3
General Public Lands	29.8	10.0
WSA & Wilderness	24.9	2.8
BLM Visit	48.3	17.9

^athe average or mean is computed by summing all measurements and dividing by the total number of measurements

^b the median is the middle value when the measurements are arranged in order of magnitude.

Almost eighty-two percent of Moab Field Office respondents went only to the site at which they were interviewed (Table 14). Since some visitors went to more than one recreation site or area during their BLM visit, the overall average is 1.3 site visits per BLM visit. Remember that a BLM visit is contiguous in time, so if a person spent the night in private lodging they start another BLM visit the next day. However a trip is measured from the time the person left home until they return home. There was an average of 2.4 people per vehicle (party size) with an average of 2.1 axles per vehicle (Table 14). This information in conjunction with traffic counts was used to expand observations from individual interviews to the full population of recreation visitors. This information may be useful to engineers and others who use vehicle counters to conduct traffic studies.

Table 14. Group Characteristics for Moab Field Office (NVUM FY2006 data)

Characteristic	Average	Median
Party size (Q23)	2.4	2
number of Axles per vehicle	2.1	2
Percent of recreational visitors who visit just one BLM site during their entire BLM Visit (%) (Q10)	81.8	.
Number of BLM sites visited during each BLM Visit (Q10a-d)	1.3	1

During the interview, visitors were asked how often they visit this BLM field unit for all recreational activities. Table 15 summarizes the visitor’s reported frequency of visitation to the Moab Field Office. Due to “trap shy” behavior, visitors that have been interviewed once may not stop for a second interview the next time they come to the site. The effects of “trap shy” behavior are not known nor is the potential effect on visitor frequency information in Table 15 known. Data in Table 13 show that 75.8% of visits are made by visitors who visit 1 - 5 times per year. Almost 5% of visits are made by people who visit over 100 times per year. About eighty percent of visits for the indicated set of primary activities are made by respondents who came 1-5 times for their main activity.

Table 15. Percent of BLM Visits by Annual Visit Frequency to Moab Field Office lands (NVUM FY2006 data)

Number of Reported Annual BLM Visits	Percent of BLM Visits (%) for ALL activities (Q13)	Percent of BLM Visits (%) for MAIN activity (Q14)
1 TO 5	75.8	79.5
6 TO 10	5.7	4.4
11 TO 15	1.4	0.5
16 TO 20	2.2	2.9
21 TO 25	2.2	2.3
26 TO 30	0.1	0.7
31 TO 35	0.0	0.0
36 TO 40	0.7	1.5
41 TO 50	2.4	2.2
51 TO 100	4.5	2.8
101 TO 200	4.4	3.0
201 TO 300	0.1	0.1
OVER 300	0.4	0.0

In terms of total participation, the top five recreation activities of the visits to the Moab Field Office were viewing natural features, hiking/walking/trail running, relaxing (hanging out, escaping heat and noise), viewing wildlife and driving for pleasure (Table 16). Each visitor also indicated what activity was their main reason for coming to the BLM for that visit. The top main activities were hiking/walking/trail running, bicycling (including mnt. bikes), driving passenger cars for pleasure, viewing natural features, and non-motorized water travel. Because most BLM visitors participate in several recreation activities during each visit, participation rates usually exceed main activity rates. After identifying their main recreational activity, visitors were asked how many hours they spent participating in that main activity during this BLM visit. Table 16 only gives the hours spent when the activity was identified as the MAIN activity. Visitors who participated in this activity but not as a main activity might spend more or less time doing that activity.

Table 16. Activity Participation in Moab Field Office (NVUM FY2006 data)

Activity	Total Activity Participation (% of BLM visits) (Q11) ^a	Main Activity (% of BLM visits)(Q12) ^b	# Respondents As Main Activity ^c	Average Hours Doing Main Activity (Hours)(Q15)
Hiking / Walking/Trail run	49.3	18.3	218	5.2
Bicycling /Mtn. bikes	17.9	13.5	118	8.2
Driving a passenger vehicle for pleasure	36.3	10.4	60	5.4
Viewing Natural Features	55.8	8.8	80	6.2
Non-motorized water travel	6.5	4.0	40	20.9
Relaxing	42.4	3.8	24	15.1
Riding a dirt bike or ATV	3.8	3.2	18	10.4
Rock climbing, canyoneering	6.7	3.1	22	9.3
Driving a 4WD vehicle	7.7	2.8	41	17.8
Developed Camping	15.8	2.1	20	27.8
Visiting Historic Sites	22.7	1.4	12	2.1
Other Non-motorized	6.1	1.4	4	1.8
Gathering Forest Products	2.4	1.3	4	5.0
Fishing	1.2	1.1	2	7.4
Horseback Riding	1.2	0.9	3	4.4
Viewing Wildlife	41.1	0.9	9	6.1
Motorized Water Activities	1.0	0.8	5	23.4
Camping in undeveloped sites (motorized)	6.8	0.7	6	21.8
Picnicking	10.8	0.7	4	4.5
Camping in primitive areas (non-motorized)	4.1	0.6	2	38.3
Some Other Activity	2.8	0.5	6	10.7
Snowmobiling	0.0	0.3	1	30.0
Resort Use	0.9	0.0	0	.
Nature Center Activities	9.9	0.0	1	10.0
Nature Study	13.5	0.0	0	.
Hunting	0.0	0.0	0	.
Other Motorized Activity	0.2	0.0	0	.
Skiing, snowboarding, snowshoeing, etc.	0.1	0.0	0	.
No Activity Reported	20.0	0.0	0	.

^a Survey respondents could select multiple activities so this column may total more than 100%.

^b Survey respondents were asked to select just one of their activities as their main reason for the BLM visit. Some respondents selected more than one, so this column may total more than 100%.

^c The number in this column is the number of survey respondents who indicated this activity was their main activity.

Use of Constructed Facilities and Designated Areas

In order to address concerns about off-highway vehicle use, information about the amount of type of motorized activity was collected as well as information about popular facilities. In the Moab Field Office motorized, dual track trails were used on 22.7% of BLM visits, while scenic byways were utilized on 72.5% of BLM visits (Table 17).

Table 17. Percent of BLM Visits Indicating Use of Special Facilities and Areas on Moab Field Office lands (NVUM FY2006 data).

Facility Type (Q32 Econ)	Percent Of BLM Visits Using The Facility ^a
Developed Swimming area	8.3
Motorized Single Track Trail	13.3
Motorized Dual Track Trails	22.7
Designated ORV Area	14.2
High clearance roads	13.2
Scenic Byway	72.5
Visitor Center or Museum	17.2
Interpretive site	21.8
BLM office or Information Station	2.0
Developed Fishing Site or dock	0.6
None of these Facilities	11.7

^a Survey respondents could select multiple activities so this column may total more than 100%.

CHAPTER 6: ECONOMIC INFORMATION

Resource managers are extremely interested in understanding the impact of BLM recreation visits on the local economy. As commodity production of timber and other resources has declined, local communities look increasingly to tourism to support their communities. Some results from the NVUM survey provide a general picture of the Visit and Trip characteristics on this BLM Field Office. Annual household income as a percent of BLM visits is displayed in Table 18. Forty percent of visits to the Moab Field Office are by visitors with a household income of under \$50,000.

Table 18: Percent of BLM Visits by Household Income Categories for the Moab Field Office (NVUM FY2006 data).

Annual Household Income Categories (Q31)	BLM Visits (%)
Under \$25,000	14.7
\$25,000 – \$49,999	25.3
\$50,000 – \$74,999	16.4
\$75,000 – \$99,999	9.7
\$100,000 – \$149,999	22.6
\$150,000 And Over	11.3

This Trip Away From Home

While away from home, some people travel just to the BLM area, while others incorporate a BLM visit as part of a larger trip away from home. Respondents were asked to describe the primary purpose of their trip which included a recreation visit to this BLM area. Table 19 summarizes the results of the visitor's trip purpose. When calculating economic contribution of BLM visits, only visits wherein the primary destination was the BLM area are included. On this BLM unit, 68% (Table 19) of visits had recreating on this BLM area as their primary trip destination. Visitors were asked to select one of several substitute choices, if for some reason they were unable to visit this BLM area (Table 20). For over 62 percent of visits the substitute behavior choice was activity driven (gone elsewhere for same activity), while 4.7% would have come back later to this BLM area. Over nineteen percent of visits would have occurred elsewhere for a different activity and 7.1% would have stayed home and made no visit. Respondents who said they would have gone somewhere else for recreation were asked how far from their home this alternate destination was. These results are shown in Table 19. Over 36% would have included travel of 50 miles or less to pursue their alternate activity.

Table 19: Primary Purpose of Trip that Included a Visit to the Moab Field Office (NVUM FY2006 data)

Primary Trip Purpose (Q18)	BLM Visits (%)
Not Recreation Trip - BLM Visit Was Side Trip	4.5
Some Other Trip Purpose	2.1
Recreation Trip: This BLM area Is Destination	68.0
Recreation Trip: Destination Is Somewhere Else	25.4

Table 20. Substitute Behavior Choices of Moab Field Office Respondents (NVUM FY 2006 data).

What would you have done if you could not come to the Moab Field Office for recreation (Q28a Econ)	BLM Visits (%)
Come back at a later time	4.7
Stayed at Home	7.1
Gone elsewhere for the same activity	62.4
Go elsewhere for a different activity	19.2
Gone to Work	1.1
Had some other substitute	5.5

Table 21. Distance Visitors Would Travel to Other Location if Moab Field Office land Was Not Available for Recreation (NVUM FY2006 data)

Distance respondent would travel for substitute location (miles) (Q28b Econ)	BLM Visits (%)
0 - 25	31.1
26 - 50	5.2
51 - 75	2.0
76 - 100	18.6
101 - 200	6.3
201 - 300	3.1
OVER 300	33.8

Table 22 summarizes the distance survey respondents traveled from their home to this BLM area. The spending that occurs on a recreation trip is greatly influenced by the type of recreation trip taken. For example, visitors on overnight trips away from home typically have to pay for some form of lodging (e.g., hotel/motel rooms, fees in a developed campground, etc.) while those on day trips have no lodging expenses. In addition, visitors on overnight trips will generally have to purchase more food during their trip (e.g., spending in restaurants and grocery stores) than visitors away from home for only a day. Similarly, visitors who travel short distances from home to the recreation location likely incur less expenses than visitors traveling long distances to the recreation location. For example, recreation visitors from nearby the recreation site will likely purchase less for fuel and less food than visitors who traveled a longer distance to the recreation site. Over eighteen percent of BLM visits were by locals (those living within 50 miles of the interview site).

Table 22. Percent of BLM Visits by Distance Traveled to Moab Field Office. (NVUM FY2006 data)

Miles From Survey Respondent's Home (Q17) ^a	BLM Visits (%)	Number Of Respondents
Up To 25 Miles	18.2	74
26 - 50 Miles	0.2	4
51 - 75 Miles	0.1	2
76 - 100 Miles	2.6	19
101 - 200 Miles	10.0	85
201 - 500 Miles	32.8	253
Over 500 Miles	36.1	269
Total	100.0	706

^a Travel distance is self-reported

Visitors who spend the night away from home tend to contribute more dollars to the local economy. Table 23 shows that in the Moab Field Office 63.7% of visitors indicated their trip included at least one night away from home. Of those visitors who spent the night away from home, 57.8% stayed overnight within 50 miles of this BLM area and they averaged 3.5 nights away from home. Visitors that had spent the night within 50 miles of the interview site were asked to identify the types of lodging they used. They could choose one or more categories shown in Table 23. Almost 56% of BLM visits by visitors who spent the night were in rented cabins, lodges, or hotels not on BLM land and 25.7% were in developed BLM campgrounds.

Table 23. Visitor Trip Information for Moab Field Office Visitors (NVUM FY2006 data).

Item (Q22)	Average
% Of BLM Visits Made On A Trip With Overnight Stay Away From Home	63.7
% Of BLM Visits With Night Away From Home And Overnight Stay W/In 50 Mi	57.8
Mean Nights Per Visit Spent Within 50 Miles Of BLM	3.5
Area Lodging Use (% Visits W/In 50 Mi. Of BLM)	
Cabins, Lodges, Hotels Or Huts On BLM Land	4.0
Campgrounds On This BLM area	25.7
Private Campground Not On This BLM area	8.2
Camping In The Undeveloped Area On This BLM area	14.0
Other Public Campground (Park Service, State Parks, County, Etc.)	3.6
A Home, Cabin, Or Condo Respondent Owns	2.1
Private Home Of Friend Or Relative	2.8
Rented Home, Condo, Cabin, Lodge Or Hotel Not On BLM Land	45.8
Other	5.3

CHAPTER 7: VISITOR SATISFACTION

An important element of outdoor recreation program delivery is evaluating customer satisfaction with the outdoor recreation setting, facilities, and services provided. Satisfaction information helps managers decide where to invest in resources and to allocate resources more efficiently toward improving customer satisfaction. Satisfaction is a core piece of data for national and unit level performance measures. To obtain customer satisfaction information, about one-third of visitors interviewed on the BLM area rated their satisfaction with fourteen elements related to recreation facilities and services. Visitors were asked to rate the specific site or area at which they were interviewed. Visitors rated both the importance and performance (satisfaction with) of these elements using a 5 point Likert scale. The Likert scale for importance ranged from not important to very important. The Likert scale for performance ranged from very dissatisfied to very satisfied. Although the satisfaction ratings were intended to be site/area specific to the area where the visitor was interviewed, this information is not valid at the site-specific level. The survey design does not usually have enough responses for every individual site or area on the forest to draw these conclusions. Rather, the information is generalized to overall satisfaction within the four site types: Day Use Developed (DUDS), Overnight Use Developed (OUDS), General Public Lands, and Wilderness. A summary of satisfaction for the BLM area as a whole is presented in Table 24. Tables 24 through 27 provide satisfaction information by site type. Note that if an element had less than 10 responses the item will not appear in any of the other satisfaction analysis presented here since these few responses are considered too few to provide reliable information.

An Importance-Performance Analysis (IPA) (Hudson, et al., 2004) is presented in Figure 2 through Figure 6. A two-dimensional grid was plotted where importance values form the vertical axis and performance values the horizontal axis. The cross-hairs on the graph are set at 4.0 for each measure, since managers generally need to know about the attributes that customers felt were important or very important (value of 4 or 5 on the scale) and performance was below very satisfied or satisfied (values of 1, 2 or 3). Figure 2 uses the data presented in Table 24. Figures 3 through 6 use the data in the satisfaction table that precedes each. Using this information, managers can identify the performance items in which visitors place high importance as well as services or facilities that were rated below satisfactory. By emphasizing improvement in this quadrant managers can increase visitor satisfaction. This information is presented for each site type, which may help managers better determine specifically which sites or areas might need improvement.

Table 24. Overall Satisfaction and Importance Ratings for the Moab Field Office (NVUM 2006 data).* all site types combined

ITEM (Q32-45 Satisfaction)	Avg. Rating	Mean Importance
Restroom cleanliness	4.2	4.4
Developed facility condition	4.6	3.9
Condition of environment	4.5	4.8
Employee helpfulness	4.7	4.4
Interpretive displays	4.2	4.0
Parking availability	4.7	4.0
Parking lot condition	4.6	3.7
Rec. info. availability	4.3	3.9
Road condition	4.5	3.9
Feeling of safety	4.8	4.2
Scenery	4.9	4.8
Signage adequacy	4.2	3.9
Trail condition	4.6	4.4
Value for fee paid	4.5	4.4

Figure 2. General Importance – Performance Rating for the Moab Field Office (NVUM FY2006 data)

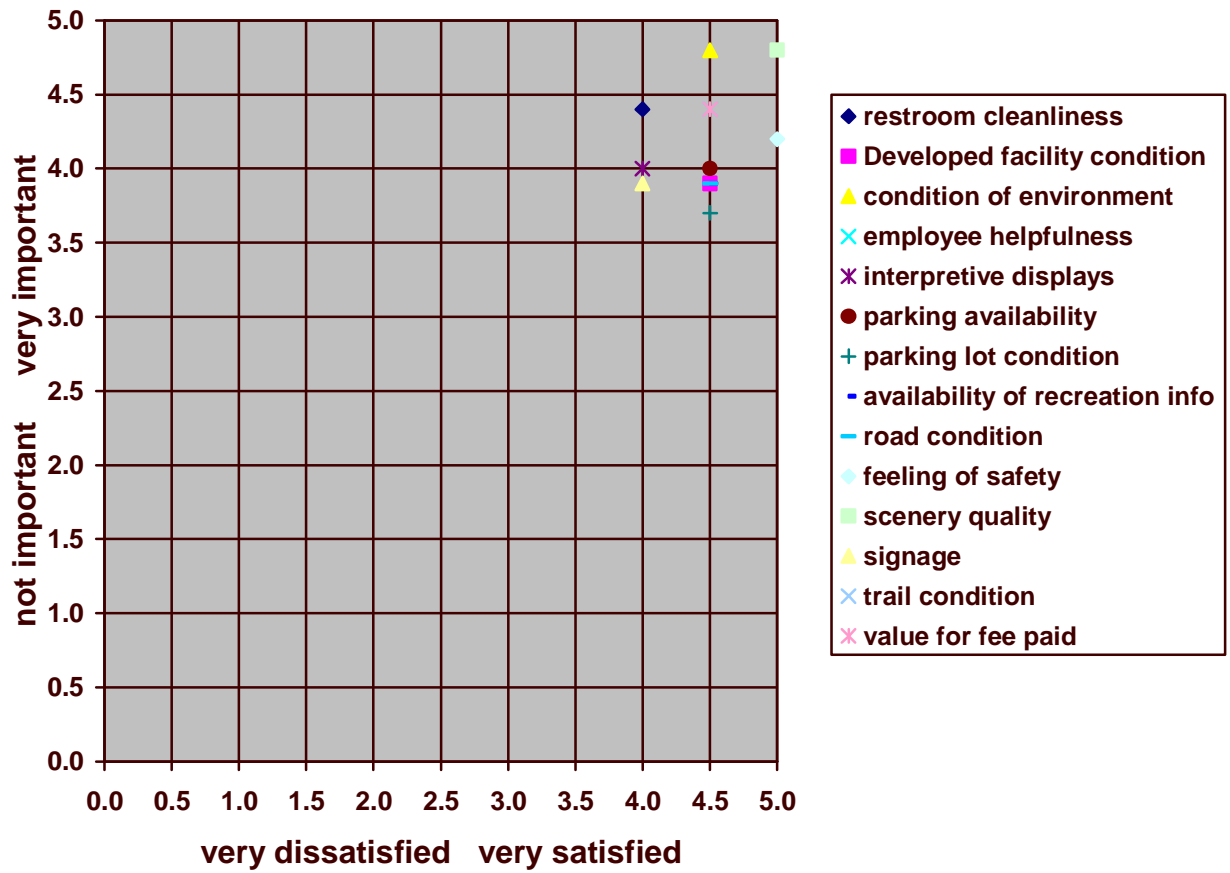


Table 25. Moab Field Office Satisfaction Ratings for Day Use Developed Sites (NVUM FY2006 data)

Satisfaction Element	Percent of visits Very Dissatisfied	Percent of visits Somewhat Dissatisfied	Percent Neither Satisfied nor Dissatisfied	Percent of visits Somewhat Satisfied	Percent of visits Very Satisfied	Average Satisfaction Rating	Number of Respondents for this Rating	Importance Average
Restroom cleanliness	0.0	0.0	10.0	25.2	64.7	4.5	22	4.5
Developed facility condition	0.0	0.0	6.9	39.0	54.1	4.5	24	4.3
Condition of environment	4.3	0.0	0.0	30.3	65.3	4.5	36	4.7
Employee helpfulness	0.0	0.0	0.0	21.2	78.8	4.8	11	4.4
Interpretive displays	0.0	4.9	4.7	29.2	61.3	4.5	32	4.4
Parking availability	0.0	4.5	1.4	31.5	62.5	4.5	35	4.1
Parking lot condition	0.0	0.0	9.2	38.3	52.6	4.4	34	4.0
Rec. info. Availability	1.7	1.7	16.0	19.4	61.2	4.4	31	4.2
Road condition	0.0	0.0	5.1	40.9	54.0	4.5	29	4.3
Feeling of safety	0.0	4.4	4.4	19.0	72.2	4.6	35	4.4
Scenery	0.0	0.0	0.0	16.5	83.5	4.8	35	4.8
Signage adequacy	0.0	4.8	14.9	18.1	62.1	4.4	33	4.4
Trail condition	0.0	0.0	0.0	13.8	86.2	4.9	29	4.6
Value for fee paid	.	.	.	.	.	.	9	4.3

*Satisfaction Scale is: Poor = 1 Fair = 2 Average = 3 Good = 4 Very good = 5

** Importance Scale is: 1= not important 2= somewhat important 3=moderately important 4= important 5 = very important

Note: For items with less than 10 responses the data was not reported.

Figure 3. Moab Field Office Visit Satisfaction in Developed Day Use Sites (NVUM FY2006 data).

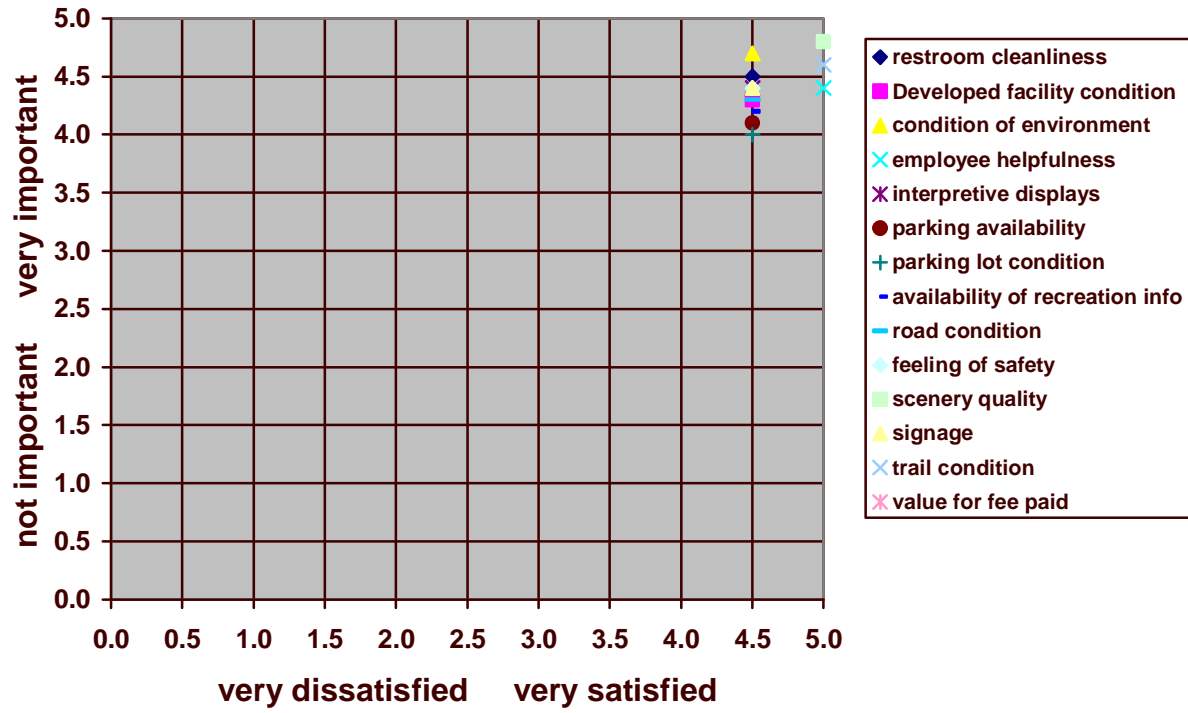


Table 26. Moab Field Office Satisfaction Ratings for Overnight Use Developed Sites (NVUM FY2006 data)

Satisfaction Element	Percent of visits Very Dissatisfied	Percent of visits Somewhat Dissatisfied	Percent Neither Satisfied nor Dissatisfied	Percent of visits Somewhat Satisfied	Percent of visits Very Satisfied	Average Satisfaction Rating	Number of Respondents for this Rating	Importance Average
Restroom cleanliness	4.6	6.1	4.6	30.3	54.4	4.2	35	4.1
Developed facility condition	3.1	3.1	0.0	30.8	62.9	4.5	36	4.1
Condition of environment	3.9	0.0	2.6	36.7	56.8	4.4	40	4.6
Employee helpfulness	2.7	0.0	2.7	22.4	72.2	4.6	24	4.5
Interpretive displays	5.9	16.4	12.2	15.7	49.8	3.9	29	4.3
Parking availability	2.7	1.3	9.8	5.3	80.9	4.6	38	4.4
Parking lot condition	2.9	0.0	2.9	12.1	82.1	4.7	34	4.0
Rec. info. availability	2.9	10.5	22.8	25.2	38.6	3.9	37	4.1
Road condition	4.0	2.0	6.1	31.4	56.5	4.3	32	4.1
Feeling of safety	1.3	0.0	7.1	19.4	72.2	4.6	38	4.4
Scenery	2.6	0.0	0.0	15.0	82.4	4.7	40	4.7
Signage adequacy	2.8	5.9	17.5	22.1	51.8	4.1	37	4.3
Trail condition	5.5	2.7	0.0	25.2	66.7	4.4	30	4.4
Value for fee paid	2.7	9.8	1.3	25.1	61.1	4.3	38	4.2

*Satisfaction Scale is: Poor = 1 Fair = 2 Average = 3 Good = 4 Very good = 5

** Importance Scale is: 1= not important 2= somewhat important 3=moderately important 4= important 5 = very important

Note: For items with less than 10 responses the data was not reported

Figure 4. Moab Field Office visit satisfaction in Overnight Use Developed Sites (NVUM FY2006 data)

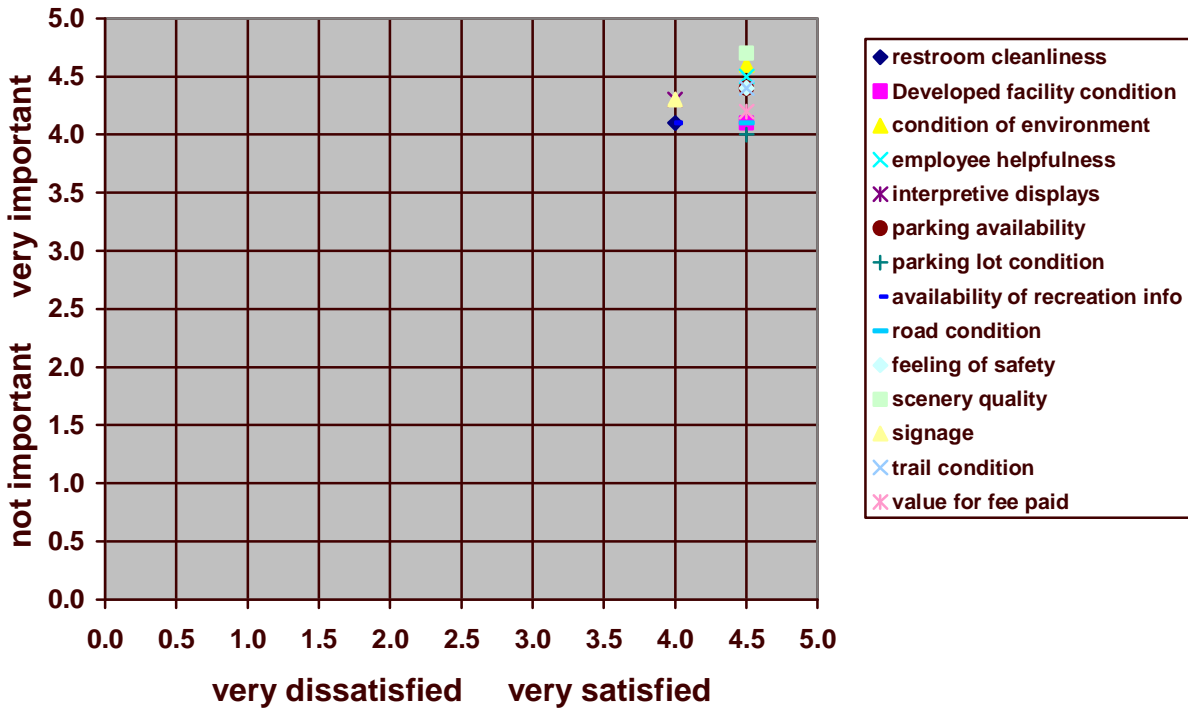


Table 27. Moab Field Office Satisfaction Ratings for Undeveloped Areas (GPL) (NVUM FY2006 data)

Satisfaction Element	Percent of visits Very Dissatisfied	Percent of visits Somewhat Dissatisfied	Percent Neither Satisfied nor Dissatisfied	Percent of visits Somewhat Satisfied	Percent of visits Very Satisfied	Average Satisfaction Rating	Number of Respondents for this Rating	Importance Average
Restroom Cleanliness	4.8	6.0	9.7	19.5	60.1	4.2	36	4.4
Developed Facility Condition	0.0	0.2	9.2	21.1	69.5	4.6	42	3.9
Condition Of Environment	0.0	2.1	10.2	19.1	68.6	4.5	76	4.9
Employee Helpfulness	0.0	0.0	7.0	14.5	78.5	4.7	24	4.3
Interpretive Displays	0.9	5.3	19.0	25.9	48.9	4.2	55	4.0
Parking Availability	0.0	2.2	6.4	12.5	78.9	4.7	66	3.9
Parking Lot Condition	0.0	0.0	10.1	15.8	74.2	4.6	66	3.7
Rec. Info. Availability	3.5	5.9	7.1	16.3	67.3	4.4	63	3.9
Road Condition	0.0	0.0	10.2	29.7	60.1	4.5	59	3.9
Feeling Of Safety	0.0	0.0	1.1	13.9	85.1	4.8	71	4.2
Scenery	0.0	0.0	4.2	2.0	93.8	4.9	77	4.8
Signage Adequacy	0.7	9.2	14.0	21.6	54.5	4.2	71	3.9
Trail Condition	0.0	0.0	6.2	19.0	74.8	4.7	46	4.4
Value For Fee Paid	0.0	4.6	0.0	33.0	62.4	4.5	31	4.5

*Satisfaction Scale is: Poor = 1 Fair = 2 Average = 3 Good = 4 Very good = 5

** Importance Scale is: 1= not important 2= somewhat important 3=moderately important 4= important 5 = very important

Note: For items with less than 10 responses the data was not reported

Figure 5. Moab Field Office Visit Satisfaction Ratings for Undeveloped Areas (General Public Lands) (NVUM FY2006 data)

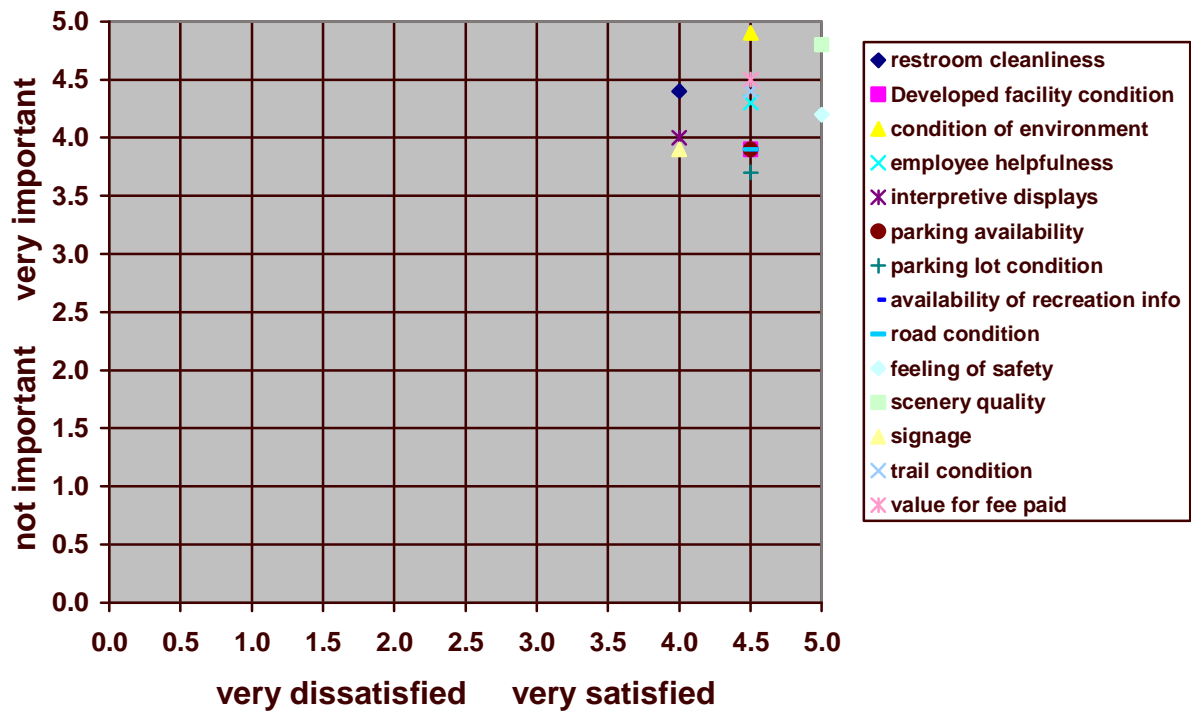


Table 28. Moab Field Office Satisfaction Ratings for Wilderness Study Areas (NVUM FY2006 data).

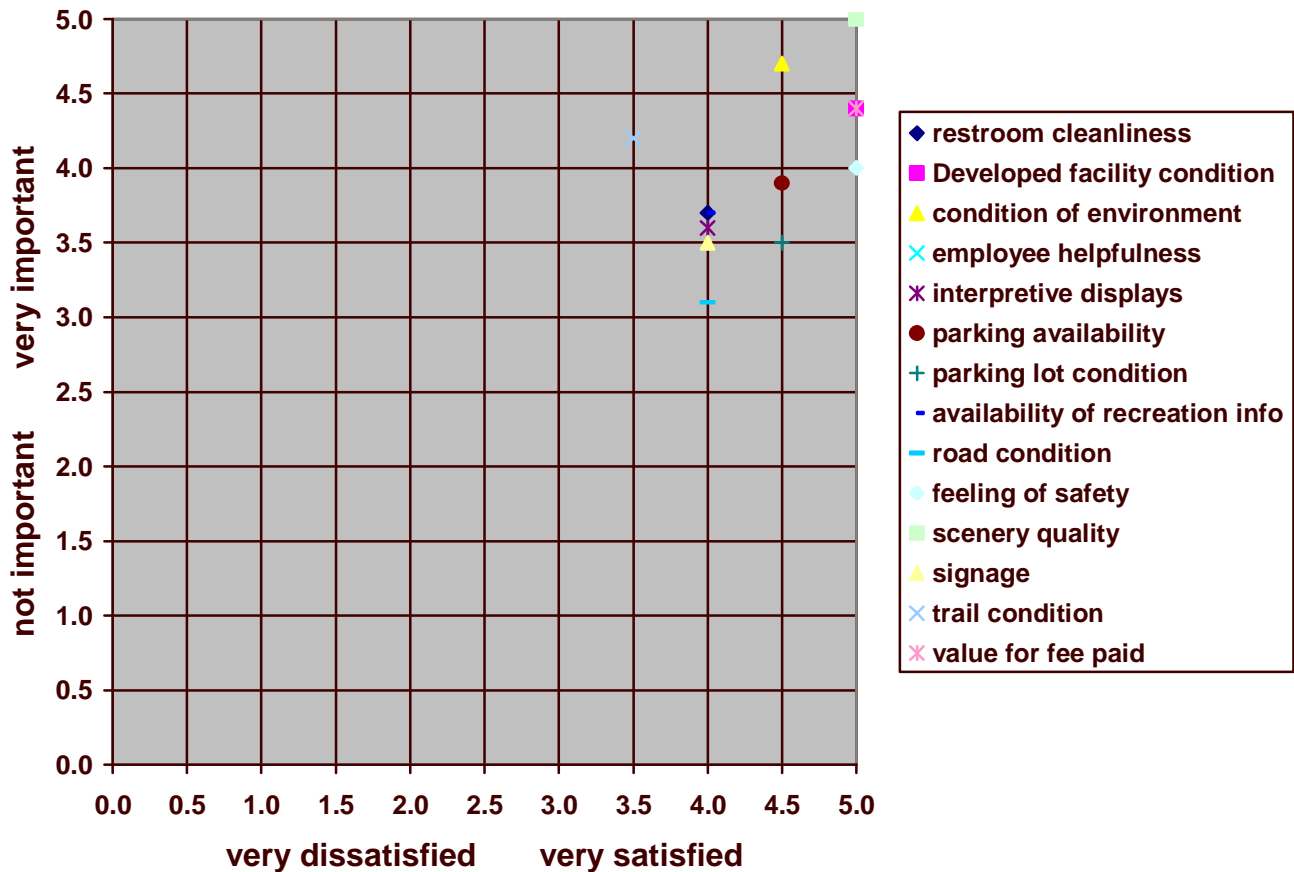
Satisfaction Element	Percent of visits Very Dissatisfied	Percent of visits Somewhat Dissatisfied	Percent Neither Satisfied nor Dissatisfied	Percent of visits Somewhat Satisfied	Percent of visits Very Satisfied	Average Satisfaction Rating	Number of Respondents for this Rating	Importance Average
Restroom Cleanliness	0.0	14.1	13.1	52.0	20.9	3.8	22	3.7
Developed Facility Condition	0.0	1.0	0.0	13.8	85.2	4.8	20	4.4
Condition Of Environment	0.5	2.7	1.1	47.8	47.9	4.4	45	4.7
Employee Helpfulness	.	.	.	.	.	.	7	4.3
Interpretive Displays	0.0	12.5	13.3	34.5	39.7	4.0	34	3.6
Parking Availability	0.6	1.1	10.3	5.0	83.1	4.7	44	3.9
Parking Lot Condition	0.6	0.6	15.6	7.8	75.4	4.6	43	3.5
Rec. Info. Availability	3.0	4.7	29.1	14.4	48.8	4.0	42	3.7
Road Condition	0.0	0.0	30.7	23.3	46.1	4.2	19	3.1
Feeling Of Safety	0.6	0.0	0.6	19.3	79.5	4.8	42	4.0
Scenery	0.5	0.0	7.8	1.6	90.0	4.8	45	5.0
Signage Adequacy	0.0	4.7	30.9	33.2	31.2	3.9	43	3.5
Trail Condition	3.2	24.2	9.1	28.3	35.3	3.7	42	4.2
Value For Fee Paid	0.0	0.0	0.0	0.0	100.0	5.0	13	4.4

*Satisfaction Scale is: Poor = 1 Fair = 2 Average = 3 Good = 4 Very good = 5

** Importance Scale is: 1= not important 2= somewhat important 3=moderately important 4= important 5 = very important

Note: For items with less than 10 responses the data was not reported

Figure 6. Moab Field Office visit satisfaction in Wilderness Study Areas(NVUM 2006 data).



*Note: For items with less than 10 responses the data was not reported

Another method was developed to report aggregate satisfaction for use in satisfaction analysis (Table 29). Since some satisfaction elements are not easily controlled by managers, such as quality of the scenery, condition of the natural environment and landscape attractiveness, these items were not included in the aggregate scores. Although managers can influence some of these items through visual resource management, at the national and regional level these elements do not reflect customer satisfaction in a meaningful way. Another satisfaction element measured, value for fee paid, does not fit within the four aggregate elements. The remaining satisfaction elements were divided into four subgroups: developed facilities, access, services, and visitor safety. The site types sampled were aggregated into three groups: developed sites (includes both day use and overnight developed sites), dispersed areas, and Wilderness. Two aggregate measures were computed. The first measure is called “Percent Satisfied Visits (PSI)”, which is the proportion of satisfaction ratings scored by visitors as satisfied (4) or very satisfied (5). Computed as the percentage of all ratings for the elements within the sub grouping that are at or above the target level, the PSI indicator shows the percent of all visits that are reasonably well satisfied with agency performance. Table 29 displays the aggregate PSI score for this BLM area.

Table 29. Percent of Site Visits^a in Which Visitors Were Satisfied with the Item They Were Asked to Rate on Moab Field Office lands (NVUM FY2006 data)

Satisfaction Element (Q30-45)	Satisfied Survey Respondents (%) ^b		
	Developed Sites ^c	Undeveloped Areas (GPLs)	Wilderness
Access (includes parking availability, parking lot condition, road condition and trail condition)	91.8	91.1	77.1
Developed Facilities (includes restroom cleanliness and facility condition)	89.9	85.7	86.1
Perception of Safety	91.4	98.9	98.8
Services (includes availability of information, signage, employee helpfulness)	77.0	79.6	68.8

^a A Site Visit is the entry of one person onto a national forest site or area to participate in recreation activities for an unspecified period of time.

^b This is a composite rating. It is the proportion of satisfaction ratings scored by visitors as good (4) or very good (5). Computed as the percentage of all ratings for the elements within the sub grouping that are at or above the target level, and indicates the percent of all visitors that are reasonably well satisfied with agency performance.

^c This category includes both Day Use and Overnight Use Developed Sites.

Another method of interpreting visitor satisfaction data is called “Percent Meet Expectations (PME)”. This is the proportion of satisfaction ratings in which the numerical satisfaction rating for a particular element is equal to or greater than the importance rating for that element. For example, for restroom cleanliness all visitors who ranked the performance (satisfaction) rating greater than or equal the importance rating (performance rated 4.5 and importance rated 4.0) would be counted in the PME. This indicator tracks the congruence between the agency’s performance and customer evaluations of importance. To meet the criteria, those elements with higher importance levels must have higher performance levels. Table 30 summarizes the PME for the Moab Field Office.

Table 30. Moab Field Office Visitor Satisfaction Ratings Using the Percent Meets Expectation Scores (FY 2006 data).

Satisfaction Element (Q30-45)	Developed Sites	Undeveloped Areas (GPL)	Designated Wilderness
Access	92.0	92.0	86.8
Developed Facilities	91.7	90.4	88.7
Feeling of safety	80.6	93.2	96.0
Services	83.9	82.2	90.7

All respondents were asked to rate their overall satisfaction with their current visit to this BLM area using the Likert scale of 1-5. The results for this BLM area are displayed in Table 31. Over ninety-five percent of BLM visits were rated as somewhat or very satisfactory. One-third of respondents were asked to rate the importance of and their satisfaction with both signing and road condition on this BLM area as a whole. Table 32 displays the percent of BLM visits by satisfaction category for roads and signs on the BLM area as a whole. Table 33 displays how important roads and signs are to the quality of the person’s recreation experience. On Moab Field Office lands, the overall importance rating was 4 for road condition and 3.6 for signage, meaning respondents felt these items were somewhat important to the quality of their recreation experience.

Table 31. Percent of BLM Visits by Satisfaction Category for the Moab Field Office (NVUM FY2006 data)

Satisfaction Rating (Q16)	BLM Visits (%)
Very dissatisfied	1.2
Somewhat dissatisfied	1.8
Neither satisfied nor dissatisfied	1.2
Somewhat satisfied	11.1
Very Satisfied	84.6

Table 32. Percent of BLM Visits by Satisfaction Category for Moab Field Office Roads and Signs (NVUM FY2006 data)

Satisfaction Rating	BLM Area-Wide Road Condition (% BLM visits) (Q31)	BLM Area-Wide Signage Adequacy (% BLM Visits) (Q30)
Very Dissatisfied	0.2	1.3
Somewhat Dissatisfied	1.5	6.0
Not Satisfied Or Dissatisfied	5.1	16.7
Somewhat Satisfied	30.5	20.0
Very Satisfied	54.4	54.5
Not Applicable	8.3	1.5

Table 33. Average Importance Score for Moab Field Office Roads and Signs (NVUM FY2006 data)

BLM area-wide Road Condition (Q31)	BLM area-wide Signage Adequacy (Q30)
4	3.6

Providing barrier-free facilities for recreation visitors is an important part of facility and service planning and development. Visitors were asked if anyone in their group had a disability. If they responded yes, the visitor was then asked if the facilities at the sites they visited were accessible for this person (Table 34). Almost three percent (2.6%) of BLM visits were by groups that had at least one member with a disability. Of these groups, 62.2% indicated facilities were accessible.

Table 34. Accessibility of Moab Field Office Facilities by Persons with Disabilities (NVUM FY2006 data)

Item (Q28 Satisfaction)	Percent
% Visits Including Group Member With A Disability	2.6
Of These, % Indicating Facilities Were Accessible	62.2

Crowding

Visitors rated their perception of how crowded the recreation site or area felt to them. This information is useful when looking at the type of site the visitor was using since someone visiting a WSA may think 5 people is too many while someone visiting a developed campground may think 200 people is about right. Table 35 summarizes mean perception of crowding by site type on a scale of 1 to 10 where 1 denotes hardly anyone was there, and a 10 indicates the area was perceived as overcrowded. Data in Table 35 indicate that 2.6% of site visits in Overnight Use Developed sites were rated as overcrowded.

Table 35. Percent of Site Visits by Crowding Rating by Site Type for Moab Field Office (NVUM 2006 data).

Crowding Rating (Q29 Satisfaction)	Day Use Developed Sites	Overnight Use Developed Sites	Undeveloped Areas (GPL)	Wilderness & WSA
10 Overcrowded	0.0	2.6	2.0	0.0
9	0.0	19.0	1.9	0.5
8	8.7	1.3	5.8	1.1
7	4.3	1.3	3.7	0.5
6	5.7	28.7	15.2	14.9
5	1.4	3.9	6.8	21.1
4	14.4	16.3	11.8	32.2
3	12.8	5.5	17.9	13.0
2	52.7	21.5	34.6	16.2
1 Hardly anyone there	0.0	0.0	0.3	0.5

CHAPTER 8: WSA VISITS

Several questions on the NVUM survey dealt directly with use of Wilderness Study Areas (WSA). Visitors to WSAs were sampled 40 days in the Moab Field Office, and 174 interviews were obtained. Tables 36 - 39 summarize demographic characteristics of WSA survey respondents. If some of the information is not shown this means there were not enough interviews from which to make inferences. On this BLM area, 50.1% of WSA visits were made by females (Table 36). The most common age group for WSA site visits were people between 50 and 59 years of age (Table 37). There were two survey respondents of Hispanic or Latino ethnicity (Table 38). The majority (99.6%) of WSA site visits were by Whites (Table 39).

Table 36. Percent of WSA Site Visits in the Moab Field Office by Gender (NVUM FY2006 data)

Gender	Percent Of Wilderness Visits	Number Of Survey Respondents
Female	50.1	178
Male	49.9	206
Total	100.0	384

Table 37. Percent of WSA Site Visits in the Moab Field Office by Age (NVUM FY2006 data)

Age Class	Percent Of Wilderness Visits	Number Of Survey Responses
Under 16	8.9	44
16-19	2.4	13
20-29	17.2	68
30-39	14.4	60
40-49	24.2	83
50-59	26.3	84
60-69	6.0	29
70+	0.6	3
Total	100.0	384

Table 38. Percent of WSA Site Visits in the Moab Field Office by Hispanic or Latino Ethnicity (NVUM FY2006 data)

Ethnicity	Percent Of Wilderness Site Visits	Number Of Respondents Of This Ethnicity
Hispanic / Latino	0.7	2

Table 39. Percent of WSA Site Visits in the Moab Field Office WSA by race (NVUM FY2006 data).

Race	Percent Of Wilderness Visits	Number Of Survey Respondents
American Indian / Alaska	0.4	1
Asian	0.1	1
Black / African American	0.0	0
Hawaiian / Pacific Islander	0.0	0
White	99.6	148
Total	100.1	150

ZIP codes of WSA survey respondents were collected. Results are shown in Table 40. This information may be useful to learn where WSA visitors come from, but it does not represent the entire universe of ZIP codes of WSA visitors on this BLM area because this is only a sample.

Table 40. ZIP codes of Moab Field Office WSA survey respondents (NVUM FY2006 data).

Home Location	County	State	Respondent Count	% Wilderness Respondents
84532	Grand	UT	33	19.0
Foreign Country			6	3.4
80301	Boulder	CO	3	1.7
80305	Boulder	CO	3	1.7
81301	La Plata	CO	3	1.7
84103	Salt Lake	UT	3	1.7
84124	Salt Lake	UT	3	1.7
08510			2	1.1
80302	Monmouth	NJ	2	1.1
80424	Boulder	CO	2	1.1
80439	Summit	CO	2	1.1
81435	Jefferson	CO	2	1.1
81501	San Miguel	CO	2	1.1
81505	Mesa	CO	2	1.1
84092	Mesa	CO	2	1.1
84095	Salt Lake	UT	2	1.1
84108	Salt Lake	UT	2	1.1
84109	Salt Lake	UT	2	1.1
84321	Salt Lake	UT	2	1.1
84663	Cache	UT	2	1.1
UNKNOWN ORIGIN	Utah	UT	2	1.1
01267	Berkshire	MA	1	0.6
01719	Middlesex	MA	1	0.6
01749	Middlesex	MA	1	0.6
02642	Barnstable	MA	1	0.6
04609	Hancock	ME	1	0.6
06024	Litchfield	CT	1	0.6
06450	New Haven	CT	1	0.6

Home Location	County	State	Respondent Count	% Wilderness Respondents
08085	Gloucester	NJ	1	0.6
10012	New York	NY	1	0.6
14450	Monroe	NY	1	0.6
14803	Allegany	NY	1	0.6
15851	Jefferson	PA	1	0.6
18015	Northampton	PA	1	0.6
20147	Loudoun	VA	1	0.6
27850	Halifax	NC	1	0.6
33710	Pinellas	FL	1	0.6
45208	Hamilton	OH	1	0.6
54020	Polk	WI	1	0.6
55414	Hennepin	MN	1	0.6
55447	Hennepin	MN	1	0.6
57106	Minnehaha	SD	1	0.6
60062	Cook	IL	1	0.6
60510	Kane	IL	1	0.6
60610	Cook	IL	1	0.6
62025	Madison	IL	1	0.6
62958	Jackson	IL	1	0.6
77399	Polk	TX	1	0.6
80015	Arapahoe	CO	1	0.6
80016	Arapahoe	CO	1	0.6
80125	Douglas	CO	1	0.6
80202	Denver	CO	1	0.6
80203	Denver	CO	1	0.6
80209	Denver	CO	1	0.6
80212	Denver	CO	1	0.6
80220	Denver	CO	1	0.6
80303	Boulder	CO	1	0.6
80304	Boulder	CO	1	0.6
80447	Grand	CO	1	0.6
80498	Summit	CO	1	0.6
80526	Larimer	CO	1	0.6

Home Location	County	State	Respondent Count	% Wilderness Respondents
80866	Teller	CO	1	0.6
81230	Gunnison	CO	1	0.6
81303	La Plata	CO	1	0.6
81328	Montezuma	CO	1	0.6
81426	San Miguel	CO	1	0.6
81428	Delta	CO	1	0.6
81502	Mesa	CO	1	0.6
81620	Eagle	CO	1	0.6
81647	Garfield	CO	1	0.6
81652	Garfield	CO	1	0.6
82633	Converse	WY	1	0.6
83333	Blaine	ID	1	0.6
84015	Davis	UT	1	0.6
84041	Davis	UT	1	0.6
84054	Davis	UT	1	0.6
84057	Utah	UT	1	0.6
84060	Summit	UT	1	0.6
84098	Summit	UT	1	0.6
84105	Salt Lake	UT	1	0.6
84107	Salt Lake	UT	1	0.6
84115	Salt Lake	UT	1	0.6
84121	Salt Lake	UT	1	0.6
84123	Salt Lake	UT	1	0.6
84310	Weber	UT	1	0.6
84317	Weber	UT	1	0.6
84401	Weber	UT	1	0.6
84501	Carbon	UT	1	0.6
84601	Utah	UT	1	0.6
85302	Maricopa	AZ	1	0.6
85338	Maricopa	AZ	1	0.6
85704	Pima	AZ	1	0.6
86303	Yavapai	AZ	1	0.6
86335	Yavapai	AZ	1	0.6

Home Location	County	State	Respondent Count	% Wilderness Respondents
87048	Sandoval	NM	1	0.6
87104	Bernalillo	NM	1	0.6
87508	Santa Fe	NM	1	0.6
89131	Clark	NV	1	0.6
90064	Los Angeles	CA	1	0.6
91307	Los Angeles	CA	1	0.6
92011			1	0.6
92705	Orange	CA	1	0.6
94960	Marin	CA	1	0.6
95972	Yuba	CA	1	0.6
96050	Siskiyou	CA	1	0.6
96130	Lassen	CA	1	0.6
96789	Honolulu	HI	1	0.6
97701	Deschutes	OR	1	0.6
98257	Skagit	WA	1	0.6
98635	Klickitat	WA	1	0.6
98862	Okanogan	WA	1	0.6
99344	Adams	WA	1	0.6
99501	Anchorage	AK	1	0.6

APPENDIX A. ZIP Codes for sampled recreation visits

ZIP Codes of Moab Field Office Survey Respondents – full list (NVUM 2006 data).

Home Location	County	State	Number Of Respondents	Percent Of Total Respondents
84532	Grand	UT	82	10.8
Foreign Country			51	6.7
81301	La Plata	CO	9	1.2
80424	Summit	CO	7	0.9
84105	Salt Lake	UT	7	0.9
80304	Boulder	CO	6	0.8
80305	Boulder	CO	6	0.8
84109	Salt Lake	UT	6	0.8
84124	Salt Lake	UT	6	0.8
80301	Boulder	CO	5	0.7
81504	Mesa	CO	5	0.7
84092	Salt Lake	UT	5	0.7
84108	Salt Lake	UT	5	0.7
80210	Denver	CO	4	0.5
80212	Denver	CO	4	0.5
80302	Boulder	CO	4	0.5
80401	Jefferson	CO	4	0.5
80403	Jefferson	CO	4	0.5
80435	Summit	CO	4	0.5
80526	Larimer	CO	4	0.5
84057	Utah	UT	4	0.5
84103	Salt Lake	UT	4	0.5
59715	Gallatin	MT	3	0.4
80020	Broomfield	CO	3	0.4
80228	Jefferson	CO	3	0.4
80303	Boulder	CO	3	0.4
80501	Boulder	CO	3	0.4
80503	Boulder	CO	3	0.4

Home Location	County	State	Number Of Respondents	Percent Of Total Respondents
80521	Larimer	CO	3	0.4
81224	Gunnison	CO	3	0.4
81230	Gunnison	CO	3	0.4
81328	Montezuma	CO	3	0.4
81501	Mesa	CO	3	0.4
81503	Mesa	CO	3	0.4
81505	Mesa	CO	3	0.4
81521	Mesa	CO	3	0.4
81620	Eagle	CO	3	0.4
81623	Garfield	CO	3	0.4
84010	Davis	UT	3	0.4
84043	Utah	UT	3	0.4
84047	Salt Lake	UT	3	0.4
84093	Salt Lake	UT	3	0.4
84102	Salt Lake	UT	3	0.4
84121	Salt Lake	UT	3	0.4
84128	Salt Lake	UT	3	0.4
84321	Cache	UT	3	0.4
84604	Utah	UT	3	0.4
84651	Utah	UT	3	0.4
UNKNOW N ORIGIN			2	0.3
08510	Monmouth	NJ	2	0.3
50201	Story	IA	2	0.3
59601	Lewis and Cla	MT	2	0.3
66212	Johnson	KS	2	0.3
77399	Polk	TX	2	0.3
80127	Jefferson	CO	2	0.3
80129	Douglas	CO	2	0.3
80220	Denver	CO	2	0.3
80231	Denver	CO	2	0.3
80439	Jefferson	CO	2	0.3

Home Location	County	State	Number Of Respondents	Percent Of Total Respondents
80443	Summit	CO	2	0.3
80447	Grand	CO	2	0.3
80488	Routt	CO	2	0.3
80863	Teller	CO	2	0.3
80906	El Paso	CO	2	0.3
80907	El Paso	CO	2	0.3
81303	La Plata	CO	2	0.3
81324	Dolores	CO	2	0.3
81401	Montrose	CO	2	0.3
81426	San Miguel	CO	2	0.3
81428	Delta	CO	2	0.3
81432	Ouray	CO	2	0.3
81435	San Miguel	CO	2	0.3
81502	Mesa	CO	2	0.3
81601	Garfield	CO	2	0.3
81631	Eagle	CO	2	0.3
81637	Eagle	CO	2	0.3
81647	Garfield	CO	2	0.3
83201	Bannock	ID	2	0.3
83638	Valley	ID	2	0.3
84041	Davis	UT	2	0.3
84058	Utah	UT	2	0.3
84088	Salt Lake	UT	2	0.3
84094	Salt Lake	UT	2	0.3
84095	Salt Lake	UT	2	0.3
84098	Summit	UT	2	0.3
84106	Salt Lake	UT	2	0.3
84111	Salt Lake	UT	2	0.3
84123	Salt Lake	UT	2	0.3
84501	Carbon	UT	2	0.3
84530	San Juan	UT	2	0.3
84663	Utah	UT	2	0.3
85338	Maricopa	AZ	2	0.3

Home Location	County	State	Number Of Respondents	Percent Of Total Respondents
86335	Yavapai	AZ	2	0.3
87508	Santa Fe	NM	2	0.3
92887	Orange	CA	2	0.3
96130	Lassen	CA	2	0.3
98512	Thurston	WA	2	0.3
01267	Berkshire	MA	1	0.1
01719	Middlesex	MA	1	0.1
01749	Middlesex	MA	1	0.1
01950	Essex	MA	1	0.1
02642	Barnstable	MA	1	0.1
04011	Cumberland	ME	1	0.1
04487	Penobscot	ME	1	0.1
04609	Hancock	ME	1	0.1
04915	Waldo	ME	1	0.1
05055	Windsor	VT	1	0.1
05454	Chittenden	VT	1	0.1
05482	Chittenden	VT	1	0.1
06024	Litchfield	CT	1	0.1
06031	Litchfield	CT	1	0.1
06258	Windham	CT	1	0.1
06450	New Haven	CT	1	0.1
06520	New Haven	CT	1	0.1
07834	Morris	NJ	1	0.1
07882	Warren	NJ	1	0.1
07945	Morris	NJ	1	0.1
08085	Gloucester	NJ	1	0.1
08611	Mercer	NJ	1	0.1
08869	Somerset	NJ	1	0.1
10012	New York	NY	1	0.1
10906			1	0.1
11238	Kings	NY	1	0.1
11803	Nassau	NY	1	0.1
12065	Saratoga	NY	1	0.1

Home Location	County	State	Number Of Respondents	Percent Of Total Respondents
12306	Schenectady	NY	1	0.1
12983	Franklin	NY	1	0.1
14219	Erie	NY	1	0.1
14450	Monroe	NY	1	0.1
14803	Allegany	NY	1	0.1
15146	Allegheny	PA	1	0.1
15212	Allegheny	PA	1	0.1
15851	Jefferson	PA	1	0.1
16323	Venango	PA	1	0.1
17069	Perry	PA	1	0.1
17402	York	PA	1	0.1
18015	Northampton	PA	1	0.1
18343	Northampton	PA	1	0.1
19362	Chester	PA	1	0.1
19460	Chester	PA	1	0.1
20008	District of C	DC	1	0.1
20147	Loudoun	VA	1	0.1
20158	Loudoun	VA	1	0.1
21703	Frederick	MD	1	0.1
22209	Arlington	VA	1	0.1
22553	Spotsylvania	VA	1	0.1
23236	Chesterfield	VA	1	0.1
24090	Botetourt	VA	1	0.1
27606	Wake	NC	1	0.1
27850	Halifax	NC	1	0.1
27858	Pitt	NC	1	0.1
27932	Chowan	NC	1	0.1
28105	Mecklenburg	NC	1	0.1
28383	Robeson	NC	1	0.1
28806	Buncombe	NC	1	0.1
29678	Oconee	SC	1	0.1

Home Location	County	State	Number Of Respondents	Percent Of Total Respondents
29681	Greenville	SC	1	0.1
30062	Cobb	GA	1	0.1
30458	Bulloch	GA	1	0.1
31721	Dougherty	GA	1	0.1
32055	Columbia	FL	1	0.1
32244	Duval	FL	1	0.1
32696	Levy	FL	1	0.1
32720	Volusia	FL	1	0.1
32902	Brevard	FL	1	0.1
32903	Brevard	FL	1	0.1
32948	Indian River	FL	1	0.1
33407	Palm Beach	FL	1	0.1
33428	Palm Beach	FL	1	0.1
33437	Palm Beach	FL	1	0.1
33710	Pinellas	FL	1	0.1
33860	Polk	FL	1	0.1
33913	Lee	FL	1	0.1
33931	Lee	FL	1	0.1
34202	Manatee	FL	1	0.1
37748	Roane	TN	1	0.1
38109	Shelby	TN	1	0.1
40015			1	0.1
40047	Bullitt	KY	1	0.1
43220	Franklin	OH	1	0.1
43502	Fulton	OH	1	0.1
44094	Lake	OH	1	0.1
45208	Hamilton	OH	1	0.1
45209	Hamilton	OH	1	0.1
46012	Madison	IN	1	0.1
46151	Morgan	IN	1	0.1
47150	Floyd	IN	1	0.1
47331	Fayette	IN	1	0.1
47802	Vigo	IN	1	0.1

Home Location	County	State	Number Of Respondents	Percent Of Total Respondents
47882	Sullivan	IN	1	0.1
48023	St. Clair	MI	1	0.1
48306	Oakland	MI	1	0.1
48348	Oakland	MI	1	0.1
48446	Lapeer	MI	1	0.1
49738	Crawford	MI	1	0.1
50579	Calhoun	IA	1	0.1
52544	Appanoose	IA	1	0.1
52726	Scott	IA	1	0.1
53090	Washington	WI	1	0.1
53558	Dane	WI	1	0.1
54009	Polk	WI	1	0.1
54020	Polk	WI	1	0.1
54913	Outagamie	WI	1	0.1
54952	Winnebago	WI	1	0.1
55104	Ramsey	MN	1	0.1
55122	Dakota	MN	1	0.1
55364	Hennepin	MN	1	0.1
55414	Hennepin	MN	1	0.1
55416	Hennepin	MN	1	0.1
55447	Hennepin	MN	1	0.1
57104	Minnehaha	SD	1	0.1
57106	Minnehaha	SD	1	0.1
59047	Park	MT	1	0.1
59401	Cascade	MT	1	0.1
59759	Jefferson	MT	1	0.1
59802	Missoula	MT	1	0.1
59808	Missoula	MT	1	0.1
59847	Missoula	MT	1	0.1
59901	Flathead	MT	1	0.1
60062	Cook	IL	1	0.1
60126	DuPage	IL	1	0.1
60181	DuPage	IL	1	0.1

Home Location	County	State	Number Of Respondents	Percent Of Total Respondents
60462	Cook	IL	1	0.1
60510	Kane	IL	1	0.1
60610	Cook	IL	1	0.1
60626	Cook	IL	1	0.1
61070	Stephenson	IL	1	0.1
61265	Rock Island	IL	1	0.1
61270	Whiteside	IL	1	0.1
61856	Piatt	IL	1	0.1
62025	Madison	IL	1	0.1
62278	Randolph	IL	1	0.1
62501	Macon	IL	1	0.1
62958	Jackson	IL	1	0.1
64110	Jackson	MO	1	0.1
65201	Boone	MO	1	0.1
65563			1	0.1
66030	Johnson	KS	1	0.1
66062	Johnson	KS	1	0.1
66801	Lyon	KS	1	0.1
68822	Custer	NE	1	0.1
72205	Pulaski	AR	1	0.1
73160	Cleveland	OK	1	0.1
73521	Jackson	OK	1	0.1
74343	Ottawa	OK	1	0.1
75061	Dallas	TX	1	0.1
75082	Dallas	TX	1	0.1
75569	Bowie	TX	1	0.1
76013	Tarrant	TX	1	0.1
76226	Denton	TX	1	0.1
76262	Denton	TX	1	0.1
77024	Harris	TX	1	0.1
77030	Harris	TX	1	0.1
77521	Harris	TX	1	0.1
78613	Williamson	TX	1	0.1

Home Location	County	State	Number Of Respondents	Percent Of Total Respondents
78676	Hays	TX	1	0.1
78758	Travis	TX	1	0.1
79707	Midland	TX	1	0.1
79928	El Paso	TX	1	0.1
80002	Jefferson	CO	1	0.1
80004	Jefferson	CO	1	0.1
80005	Jefferson	CO	1	0.1
80015	Arapahoe	CO	1	0.1
80016	Arapahoe	CO	1	0.1
80026	Boulder	CO	1	0.1
80027	Boulder	CO	1	0.1
80032			1	0.1
80113	Arapahoe	CO	1	0.1
80114			1	0.1
80125	Douglas	CO	1	0.1
80128	Jefferson	CO	1	0.1
80132	El Paso	CO	1	0.1
80202	Denver	CO	1	0.1
80203	Denver	CO	1	0.1
80209	Denver	CO	1	0.1
80232	Jefferson	CO	1	0.1
80234	Adams	CO	1	0.1
80241	Adams	CO	1	0.1
80420	Park	CO	1	0.1
80433	Jefferson	CO	1	0.1
80442	Grand	CO	1	0.1
80452	Clear Creek	CO	1	0.1
80474	Gilpin	CO	1	0.1
80477	Routt	CO	1	0.1
80482	Grand	CO	1	0.1
80487	Routt	CO	1	0.1
80498	Summit	CO	1	0.1
80504	Weld	CO	1	0.1

Home Location	County	State	Number Of Respondents	Percent Of Total Respondents
80513	Larimer	CO	1	0.1
80517	Larimer	CO	1	0.1
80522	Larimer	CO	1	0.1
80634	Weld	CO	1	0.1
80751	Logan	CO	1	0.1
80866	Teller	CO	1	0.1
80908	El Paso	CO	1	0.1
80909	El Paso	CO	1	0.1
80917	El Paso	CO	1	0.1
80918	El Paso	CO	1	0.1
80920	El Paso	CO	1	0.1
81122	La Plata	CO	1	0.1
81137	La Plata	CO	1	0.1
81223	Fremont	CO	1	0.1
81302	La Plata	CO	1	0.1
81424	Montrose	CO	1	0.1
81506	Mesa	CO	1	0.1
81520	Mesa	CO	1	0.1
81527	Mesa	CO	1	0.1
81612	Pitkin	CO	1	0.1
81625	Moffat	CO	1	0.1
81632	Eagle	CO	1	0.1
81643	Mesa	CO	1	0.1
81650	Garfield	CO	1	0.1
81652	Garfield	CO	1	0.1
81653	Moffat	CO	1	0.1
81656	Pitkin	CO	1	0.1
82070	Albany	WY	1	0.1
82190	Park	WY	1	0.1
82426	Big Horn	WY	1	0.1
82572			1	0.1
82633	Converse	WY	1	0.1
82812			1	0.1

Home Location	County	State	Number Of Respondents	Percent Of Total Respondents
82930	Uinta	WY	1	0.1
83011	Teton	WY	1	0.1
83101	Lincoln	WY	1	0.1
83204	Bannock	ID	1	0.1
83252	Oneida	ID	1	0.1
83333	Blaine	ID	1	0.1
83347	Minidoka	ID	1	0.1
83642	Ada	ID	1	0.1
83704	Ada	ID	1	0.1
83706	Ada	ID	1	0.1
84003	Utah	UT	1	0.1
84014	Davis	UT	1	0.1
84015	Davis	UT	1	0.1
84020	Salt Lake	UT	1	0.1
84044	Salt Lake	UT	1	0.1
84054	Davis	UT	1	0.1
84060	Summit	UT	1	0.1
84062	Utah	UT	1	0.1
84067	Weber	UT	1	0.1
84084	Salt Lake	UT	1	0.1
84104	Salt Lake	UT	1	0.1
84107	Salt Lake	UT	1	0.1
84115	Salt Lake	UT	1	0.1
84117	Salt Lake	UT	1	0.1
84120	Salt Lake	UT	1	0.1
84199	Salt Lake	UT	1	0.1
84302	Box Elder	UT	1	0.1
84310	Weber	UT	1	0.1
84317	Weber	UT	1	0.1
84318	Cache	UT	1	0.1
84332	Cache	UT	1	0.1
84335	Cache	UT	1	0.1
84401	Weber	UT	1	0.1

Home Location	County	State	Number Of Respondents	Percent Of Total Respondents
84403	Weber	UT	1	0.1
84404	Weber	UT	1	0.1
84414	Weber	UT	1	0.1
84513	Emery	UT	1	0.1
84525	Emery	UT	1	0.1
84535	San Juan	UT	1	0.1
84539	Carbon	UT	1	0.1
84601	Utah	UT	1	0.1
84606	Utah	UT	1	0.1
84660	Utah	UT	1	0.1
85016	Maricopa	AZ	1	0.1
85032	Maricopa	AZ	1	0.1
85210	Maricopa	AZ	1	0.1
85225	Maricopa	AZ	1	0.1
85257	Maricopa	AZ	1	0.1
85302	Maricopa	AZ	1	0.1
85358	Maricopa	AZ	1	0.1
85534	Greenlee	AZ	1	0.1
85614	Pima	AZ	1	0.1
85704	Pima	AZ	1	0.1
85749	Pima	AZ	1	0.1
85750	Pima	AZ	1	0.1
86001	Coconino	AZ	1	0.1
86303	Yavapai	AZ	1	0.1
86305	Yavapai	AZ	1	0.1
86355			1	0.1
86426	Mohave	AZ	1	0.1
87048	Sandoval	NM	1	0.1
87104	Bernalillo	NM	1	0.1
87109	Bernalillo	NM	1	0.1
87110	Bernalillo	NM	1	0.1
87111	Bernalillo	NM	1	0.1
87154	Bernalillo	NM	1	0.1

Home Location	County	State	Number Of Respondents	Percent Of Total Respondents
87401	San Juan	NM	1	0.1
87410	San Juan	NM	1	0.1
87413	San Juan	NM	1	0.1
87507	Santa Fe	NM	1	0.1
88061	Grant	NM	1	0.1
88203	Chaves	NM	1	0.1
89131	Clark	NV	1	0.1
89701	Carson City	NV	1	0.1
89801	Elko	NV	1	0.1
90064	Los Angeles	CA	1	0.1
90605	Los Angeles	CA	1	0.1
91307	Los Angeles	CA	1	0.1
91321	Los Angeles	CA	1	0.1
91720			1	0.1
92007	San Diego	CA	1	0.1
92011			1	0.1
92109	San Diego	CA	1	0.1
92111	San Diego	CA	1	0.1
92382	San Bernardino	CA	1	0.1
92612	Orange	CA	1	0.1
92705	Orange	CA	1	0.1
92835	Orange	CA	1	0.1
93010	Ventura	CA	1	0.1
93063	Ventura	CA	1	0.1
94062	San Mateo	CA	1	0.1
94611	Alameda	CA	1	0.1
94960	Marin	CA	1	0.1
95060	Santa Cruz	CA	1	0.1
95139	Santa Clara	CA	1	0.1
95630	Sacramento	CA	1	0.1
95667	El Dorado	CA	1	0.1
95677	Placer	CA	1	0.1

Home Location	County	State	Number Of Respondents	Percent Of Total Respondents
95949	Nevada	CA	1	0.1
95972	Yuba	CA	1	0.1
96001	Shasta	CA	1	0.1
96003	Shasta	CA	1	0.1
96050	Siskiyou	CA	1	0.1
96789	Honolulu	HI	1	0.1
97213	Multnomah	OR	1	0.1
97239	Multnomah	OR	1	0.1
97306	Marion	OR	1	0.1
97321	Linn	OR	1	0.1
97361	Polk	OR	1	0.1
97701	Deschutes	OR	1	0.1
97759	Deschutes	OR	1	0.1
98001	King	WA	1	0.1
98223	Snohomish	WA	1	0.1
98257	Skagit	WA	1	0.1
98304	Pierce	WA	1	0.1
98367	Kitsap	WA	1	0.1
98422	Pierce	WA	1	0.1
98501	Thurston	WA	1	0.1
98503	Thurston	WA	1	0.1
98635	Klickitat	WA	1	0.1
98862	Okanogan	WA	1	0.1
99003	Spokane	WA	1	0.1
99344	Adams	WA	1	0.1
99352	Benton	WA	1	0.1
99501	Anchorage	AK	1	0.1

^k Includes respondents reporting no ZIP Code or invalid ZIP Codes.

APPENDIX B: NVUM Measurement Definitions

NAME	Abbreviation	DEFINITION
UNITS OF MEASURE		
BLM Visit	BLMV	The entry of one person upon a BLM management unit to participate in recreation activities for an unspecified period of time. A BLM visit can be composed of multiple site visits.
Site Visit	SV	the entry of one person onto a BLM site or area to participate in recreation activities for an unspecified period of time
Site Day		A day that a recreation site or area is open to the public for recreation purposes
Recreation trip		The duration of time beginning when the visitor left their home and ending when they got back to their home
Visits/ Visitors		This term refers to the set of individuals who make the site visits or national forest visits. Typically, the NVUM data and descriptions of visits do not include descriptions of the set of visitors. The following example illustrates the difference between describing visits and describing visitors. George and Martha are the only people who visit Area 51. George visits 8 times in a year, and Martha visits twice. Eighty percent of the <u>visits</u> to Area 51 are made by males. Half of the <u>visitors</u> are males.
Variance		The mean of the squares of the variations from the mean of a frequency distribution; a set of n measurements $y_1, y_2, y_3 \dots y_n$, with a mean y is the sum of the squared deviations divided by $n-1$.
Standard deviation or standard error		The square root of the variance; a statistic used as a measure of dispersion in a distribution, the square root of the arithmetic average of the squares of the deviations from the mean
Coefficient of variation		The standard error divided by the mean
Confidence interval		A statistical range with a specified probability that a given parameter lies within the range
Error rate		The coefficient of variation multiplied by the specified confidence interval width
Confidence interval & error rate		Used together these two terms define the reliability of the estimated visits. The confidence interval defines the range of values around the estimated visits with a specified level of certainty. The error rate is the upper and lower bounds of the confidence interval. The lower the error rate and the higher the confidence level the better the estimate. An 80 percent confidence interval is very acceptable at a broad national or forest scale. The two terms are used to statistically describe the estimate. For example: at the 80 percent confidence level there are 209 million BLM visits plus or minus 17 percent. In other words we are 80 percent confident that the estimated number of BLM visits lies between 173.5 and 244.5 million.
SITE TYPES		
Day Use Developed Site	DUDS	Sites that meet the RMIS definition development scale for Moderate, Heavily, or High degree of modification. These are sites that provide for visitor comfort, convenience and/or educational opportunities. Sites with facilities that provide for health and safety only are <u>not</u> considered developed sites. DUDS may include the following; picnic sites (family and group),

		fishing sites (sometimes), fish viewing sites (sometimes), information sites (sometimes), interpretive sites (sometimes), playgrounds, downhill ski areas, wildlife viewing sites (sometimes), developed caves, winter play sites, and any other sites opened only for day use. Group proxy sites (15 or more people) have different proxy codes than family proxy sites. <i>Some developed sites listed in RMIS do not count as DUDS in NVUM. This includes trailheads, boat launches, parking lots, OHV staging areas, Scenic</i>
Overnight Developed Site	OUDS	<p>Sites with facilities that meet the RMIS definition for development scales of Moderate, Heavily, or High degree of modification. These sites include campgrounds (family and group), fire lookouts and cabins available for overnight lodging (including all those outside designated Wilderness in Alaska), resorts, lodges, hotels, horse camps, and any other overnight developed sites on BLM lands whether managed by the BLM or private business (concession or special use permit). Proxy group campgrounds (sites that hold 15 or more people) have different proxy codes than family proxy campgrounds.</p> <p>Following are things that may be considered as overnight developed sites that <u>do not count</u> under the NVUM OUDS strata:</p> <ul style="list-style-type: none"> • Recreation residences - they are counted as part of GPL use at the time of the interview. • Organization Camps (church, scout, etc) - use will be counted at the end of the year through the SUP use reports and added to the total use on the unit. • Lesser-developed campgrounds such as small hunters camps (with limited facilities) - the use will be captured under GPL strata. If the facilities are rustic and are not designed for the comfort and convenience of the visitor the sites are not developed sites for the purpose of the NVUM project. • Do not include any facilities located on private property, even when located within the BLM boundary – however if there are trails or access points where people go from the private property to the Unit to recreate they should be included as a GFA exit point. • Recreation events will not be listed on the spreadsheet - Units will track this use separately using a special events form, reporting the total number of visitors on a quarterly basis. This use will be added to the totals at the end of the year. • Cabins outside WSA should be listed as OUDS
WSA	W	Areas in the BLM that are Wilderness Study Areas. List all trailheads and other access points such as boat take-outs. Proxy counts would include mandatory wilderness permits required of ALL users (day and overnight).
General Public Lands	GPL	Include all dispersed recreation use other than WSAs (hiking, fishing, water sports, etc.). For the NVUM project the entire dispersed area of the BLM Field Unit is considered one big GPL and is not broken down by county. Roads included in the GPL category are almost always agency managed or maintained roads. In some instances non-agency service roads are entered

		ONLY because they are the most logical place to stop visitors who have actually recreated ON the general public lands accessed by the road. <u>Outfitter Guide use reports as proxy for GPL use:</u> Outfitter and Guide reports are not usually permitted as proxy for GPL because of the possibility of double counting the same visitors. An exception can be made in special cases where the agency has a very remote area only used by O&G and can provide an accurate count for that area only.
USE LEVELS- all but the No Use strata are defined by the BLM unit		
No use (or C)	N	A site or area is administratively closed, inaccessible, or expect to see less than one last exiting person from dawn to dusk. Formerly labeled "closed".
Low	L	At least 1 last exiting recreation person is expected from dawn to dusk
Medium	M	Defined by BLM Field unit
High	H	Defined by BLM Field unit
Very High	V	use for sites that have high use AND the visitor characteristics are very different from other sites within the stratum
PROXY CODES		
Daily Use Record of sites occupied	DUR4	Daily use record of sites with PAOT of 14 or less, use for OUDS campgrounds where either BLM or concessionaire records occupied campsites on a daily bases, can also use for DUDS picnic sites
Daily Use Record of group sites occupied	DUR5	Daily use record of sites with PAOT of 15 or more, use for OUDS campgrounds where either BLM or concessionaire records occupied campsites on a daily bases, can also use for DUDS picnic sites
Fee Envelopes issued per vehicle	FE3	Fee envelopes issued per vehicle, use in OUDS and DUDS
Fee Envelopes issued per site	FE4	Fee envelopes issued per family site with a PAOT of 14 or less, use in OUDS and DUDS. For PAOT of 15 or more use FR5.
Fee Receipts issued per person	FR1	Fee receipts or tickets sold to individual people only. Do not use for ski area winter use. Use in DUDS where a daily pass is sold or individual ticket sales indicate use. Do not use for OUDS.
Fee Receipts issued per small group	FR2	Fee receipts or tickets sold per group of 14 or less people
Fee Receipts issued per vehicle	FR3	Fee receipts or tickets sold per vehicle.
Fee Receipts issued per large group	FR5	Envelopes, permits, or tickets sold per large group of 15 or more people.
Mandatory Permit issued per person	MA1	Use in Wilderness only. Mandatory permit issued per person for day AND overnight use of entire area
Mandatory permit issued per small group	MA2	Use in Wilderness only. Mandatory permit issued per small group for day AND overnight use of entire area
Permanent Traffic Counter that counts people	PTC1	Use in any stratum where every person using the site is counted by the counter, count must be one-way

Permanent Traffic Counter that counts vehicles	PTC3	Use in any stratum where every vehicle using the site is counted by the counter, count must be one-way and adjusted for axles
Registration forms by individual	RE1	Use in OUDS lodges, cabins, resorts, where managers report total number of person nights sold from registers
Registration forms by small group	RE2	Use in any stratum where 14 or fewer people register as one small group. One registration = one group
Registration forms by room	RE4	Registration forms for room nights sold use for OUDS lodges, resorts, etc where owner can report total number of room nights sold. Do not use for DUDS, campgrounds, huts or dorms that hold more than one group in one room at a time.
Special use permit per site or cabin	SUP4	Use for OUDS cabins, resorts where one permit is issued per group of 14 or fewer people per visit (not for entire season); also FS cabins rented under G-T permits. For larger groups use FR5
Toll booth person count	TB1	Use when GPL is close to agency boundary and there are no non toll booth entries into the area, use for DUDS and OUDS only if every person that enters has to pay (no season passes)
Toll booth car count	TB3	Use when GPL is close to agency boundary and there are no non toll booth entries into the area, use for DUDS and OUDS only if every vehicle that enters has to pay (no season passes)

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