



United States  
Department of  
Agriculture

Forest Service

Natural Resource  
Manager

National Visitor  
Use Monitoring  
Program



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# Visitor Use Report

## Cibola NF

## USDA Forest Service

## Region 3

## National Visitor Use Monitoring Data collected FY 2006

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# 1. INTRODUCTION

## 1.1. 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 forest level. Information about the quantity and quality of recreation visits 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>).

In 1998 a team of research scientists and forest staff developed a recreation sampling system (NVUM) that provides statistical recreation use information at the forest, regional, and national level. Several Forest Service staff areas including Recreation, Wilderness, Ecosystem Management, Research and Strategic Planning and Resource Assessment were involved in developing the program. From January 2000 through September 2003 every national forest implemented this methodology and collected visitor use information. This application served to test the method over the full range of forest conditions, and to provide a rough national estimate of visitation. Implementation of the improved method began in October 2004. Once every five years, each National Forest and Grassland has a year of field data collection.

This NVUM data is useful for forest planning and decision making. The description of visitor characteristics (age, race, zip code, activity participation) can help forest staff identify their recreation niche. Satisfaction information can help management decide where best to place limited resources that would result in improved visitor satisfaction. Economic expenditure information can help forests show local communities the employment and income effects of tourism from forest visitors. In addition, the visitation estimates can be helpful in considering visitor capacity issues.

## 1.2. Methods

To define the sampling frame, staff on each forest classify all recreation sites and areas into five basic categories called "site types": Day Use Developed Sites (DUDS), Overnight Use Developed Sites (OUDS), Designated Wilderness Areas (Wilderness), General Forest Areas (GFA), and View Corridors (VC). Only the first four categories are counted as national forest recreation visits and are included in the visit estimates. The last category is used to track the volume of people who view national forests from nearby roads; since they do not get onto agency lands, they cannot be counted as visits. For the entire sampling year, each day on each site was given a rating of very high, high, medium, low, or no use according to the expected level of recreational visitors who would be

observed leaving that location for the last time (last exiting recreation use) on that day. The combination of a calendar day and a site or area is called a site day. Site days are the basic sampling unit for the NVUM protocol. Results of this forest categorization are shown in Table 1.

In essence, visitation is estimated through a combination of traffic counts and surveys of exiting visitors. Both are obtained on a random sample of locations and days distributed over an entire forest for a year. All of the surveyed recreation visitors are asked about their visit duration, activities, demographics, travel distance, and annual usage. About one-third were also asked a series of questions about satisfaction. Another one-third were asked to provide information about their income, spending while on their trip, and the next best substitute for the visit.

### 1.3. Definition of Terms

NVUM has standardized measures of visitor use to ensure that all national forest visitor measures are comparable. These definitions are basically the same as established by the Forest Service in the 1970's. Visitors must pursue a recreation activity physically located "on" Forest Service managed land in order to be counted. They cannot be passing through; viewing from non-Forest Service managed roads, or just using restroom facilities. The visitation metrics are ***national forest visits*** and ***site visits***. NVUM provides estimates of both and confidence interval statistics measuring the precision of the estimates. The NVUM methodology 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.

***National forest visit*** is the entry of one person upon a national forest to participate in recreation activities for an unspecified period of time. A national forest visit can be composed of multiple site visits. The visit ends when the person leaves the national forest to spend the night somewhere else.

***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. The site visit ends when the person leaves the site or area for the last time on that day.

A ***confidence interval*** is a range of values that is likely to include an unknown population value, where the range is calculated from a given set of sample data. Confidence intervals are always accompanied by a ***confidence level***, which tells the degree of certainty that the value lies in the interval. Used together these two terms define the reliability of the estimate, by defining the range of values that are needed to reach the given confidence level. For example, the 2008 national visitation estimate is 175.6 million visits, with a 90% confidence interval of 3.2%. In other words, given the NVUM data, our best estimate is 175.6 million visits, and given the underlying data, we are 90% certain that the true number is between 170.0 million and 181.2 million.

***Recreation trip*** is the duration of time beginning when the visitor left their home and ending when they return to their home.

***Site day*** - a day that a recreation site or area is open to the public for recreation purposes.

***Proxy*** - information collected at a recreation site or area that is directly related to the amount of

recreation visitation received. The proxy information must pertain to all users of the site and it must be one of the proxy types allowed in the NVUM pre-work directions (fee receipts, fee envelopes, mandatory permits, permanent traffic counters, group reservations, ticket sales, and daily use records).

**Nonproxy** - a recreation site or area that does not have proxy information. At these sites a 24-hour traffic count is taken to measure total use for one site day at the sample site .

**Use level** - for each day of the year for each recreation site or area, the site day was categorized as very high, high, medium or low last exiting recreation traffic, or no exiting use. No Use could mean either that the location was administratively closed, or it was open but was expected to have zero last exiting visitors. For example a picnic area may be listed as having no use during winter months (120 days), high last exiting recreation volume on all other weekends (70 days) and medium last exiting recreation use on the remaining midweek days (175 days). This accounts for all 365 days of the year. This process was repeated for every site and area on the forest.

## 1.4. Limitations of the Results

The information presented here is valid and applicable at the forest, regional, and national level. It is not designed to be accurate at the district or 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 conducted by forests to identify and consistently classify sites and access points according to the type and amount of expected exiting visitation is the key determinant of the validity and magnitude of the visitation estimate. Second, the success of the forest staff in accomplishing its assigned set of sample days, correctly filling out the interview forms, and following the field protocols influence the reliability of the results, variability of the visitation estimate, and validity of the visitation descriptions. Third, the variability of traffic counts within a sampling stratum affects the reliability of the visitation estimates. Fourth, the range of visitors sampled must be representative of the population of all visitors. Finally, the number of visitors sampled must be large enough to adequately control variability. The results and confidence intervals will reflect all these factors.

Confidence intervals indicate the reliability of the visitation estimate, given the underlying data. Large confidence intervals indicate high variability in the national forest visit (NFV), site visit (SV) and Wilderness visit estimates. Variance is caused primarily by a small sample size in number of days or having a few sampled days where the observed exiting visitation volume was very different from the normal range. For example, on a particular National Forest in the General Forest Area low stratum, there were 14 sample days. Of these 14 sample days, 13 days had visitation estimates between zero and twenty. The remaining day had a visitation estimate of 440. So the stratum mean was about 37 per day, standard error was about 116, and the 90% confidence interval width is 400% of the mean. Causes for such outlier observations are not known, but could include a misclassification of the day (a high use day incorrectly categorized as a low use day), unusual weather, malfunctioning traffic counter, or reporting errors. Eliminating the unusual observation from data analysis would reduce the variability. However, unless the NVUM team had reason to suspect the observation was incorrect they did not eliminate these unusual cases.

The descriptive information about national forest visitors is based upon only those visitors that were interviewed. Every effort was made to incorporate distinct seasonal use patterns and activities that

vary greatly by season into the sampling frame. The sampling plan took into account both the spatial and seasonal spread of visitation patterns across the forest. Even so, because of the small sample size of site-days, or because some user groups decline to participate in the survey, it is possible to under-represent certain user groups, particularly for activities that are quite limited in where or when they occur.

Note that the results of the NVUM activity analysis DO NOT identify the types of activities visitors would like to have offered on the national forests. It also does not tell us about displaced forest visitors, those who no longer visit the forest because the activities they desire are not offered.

Some forest visitors were counted and included in the total forest use estimate but were not surveyed. This included visitors to recreation special events and organization camps. Their characteristics are not included in the visit descriptions.

Caution should be used in interpreting any comparisons of these results with those obtained during the 2000 - 2003 period. Differences cannot be interpreted as a trend. Several method changes account for the differences, for both visitation estimates and visit characteristics. One key factor is that the first application of the NVUM process was largely a national beta-test of the method, and significant improvements occurred following it. The NVUM process entailed a completely new method and approach to measuring visitation on National Forest lands. Simply going through the NVUM process for the first time enabled forest staff to do a much better job thereafter in identifying sites, accurately classifying days into use level strata, and ensuring consistency across all locations on the forest. These improvements enhanced the validity of all aspects of the NVUM results. Sampling plans and quality control procedures were also improved.

## 2. VISITATION ESTIMATES

### 2.1. Forest Definition of Site Days

The population of site days for sampling was constructed from information provided by forest staff. For each site, each day of the year was given a rating of very high, high, medium, low, or none according to the expected volume of recreation visitors who would be leaving the site or area for the last time (last exiting recreation use). The stratum, a combination of site type and use level, was then used to construct the sampling frame. The results of the recreation site/area stratification and days sampled are displayed in Table 1.

Table 1. Site Days and Percentage of Days Sampled by Stratum

Stratum*		Days Sampled	Site Days# in Use Level/Proxy Population	Sampling Rate (%)&
Site Type†	Use Level‡ or Proxy Code§			
DUDS	VERY HIGH	12	40	30.0
DUDS	HIGH	19	99	19.2
DUDS	MEDIUM	25	1,116	2.2
DUDS	LOW	17	3,595	0.5
DUDS	FE4	12	223	5.4
DUDS	FR1	13	308	4.2
DUDS	FR5	8	338	2.4
DUDS	ST1	10	118	8.5
OU DS	HIGH	10	39	25.6
OU DS	MEDIUM	13	108	12.0
OU DS	LOW	9	929	1.0
OU DS	DUR5	13	579	2.2
OU DS	FE4	17	1,247	1.4
GFA	HIGH	13	235	5.5
GFA	MEDIUM	20	1,819	1.1
GFA	LOW	18	21,468	0.1
WILDERNESS	HIGH	13	438	3.0
WILDERNESS	MEDIUM	24	651	3.7
WILDERNESS	LOW	15	6,653	0.2
<b>Total</b>		<b>281</b>	<b>40,003</b>	<b>0.7</b>

\* Stratum is the combination of the site type and use level or proxy code. Sample days were independently drawn within each stratum.

† DUDS = Day Use Developed Site, OU DS = Overnight Use Developed Site, GFA = General Forest Area ("Undeveloped Areas"), WILDERNESS = Designated Wilderness

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

§ 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 and sampled independent of nonproxy sites.

# Site Days are days that a recreation site or area is open to the public for recreation purposes.

& 0.0 - This value is less than five one-hundredths.

## 2.2. Visitation Estimates

Visitation estimates are available at the national, regional, and forest level. This document provides only National Forest level data. Other documents may be obtained through the National Visitor Use Monitoring web page: [www.fs.fed.us/recreation/programs/nvum](http://www.fs.fed.us/recreation/programs/nvum).

When reviewing the results, users should discuss with forest staff if this forest experienced any unusual circumstances such as forest fires, floods, or atypical weather that may have created an unusual recreation use pattern for the year sampled. Table 2 displays the number of national forest visits and site visits by site type for this National Forest.

**Table 2. Annual Visitation Estimate**

Visit Type	Visits (1,000s)	90% Confidence Level (%)#
Total Estimated Site Visits*	1,361	±23.2
→ Day Use Developed Site Visits	1,116	±26.3
→ Overnight Use Developed Site Visits	42	±86.7
→ General Forest Area Visits	120	±87.0
→ Designated Wilderness Visits†	84	±45.1
Total Estimated National Forest Visits§	1,052	±23.3
→ Special Events and Organized Camp Use‡	9	±0.0

\* 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.

† Designated Wilderness visits are included in the Site Visits estimate.

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

§ A National Forest Visit is defined as the entry of one person upon a national forest to participate in recreation activities for an unspecified period of time. A National Forest Visit can be composed of multiple Site Visits.

# 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 visitor descriptions. Table 3 and Table 4 display the number of visitor contacts, number of completed interviews by site type and survey form type. This information may be useful to managers when assessing how representative of all visitors the information in this report may be.

**Table 3. Number of Individuals Contacted by Site Type**

Site Type	Total Individuals Contacted	Individuals Who Agreed to be Interviewed	Recreating Individuals Who Are Leaving for the Last Time That Day
Day Use Developed Sites	1,802	1,421	1,260
Overnight Use Developed Sites	186	167	58
Undeveloped Areas (GFAs)	140	120	62
Designated Wilderness	212	188	170
<b>Total</b>	<b>2,340</b>	<b>1,896</b>	<b>1,550</b>

**Table 4. Number of Complete Interviews\* by Site Type and Form Type**

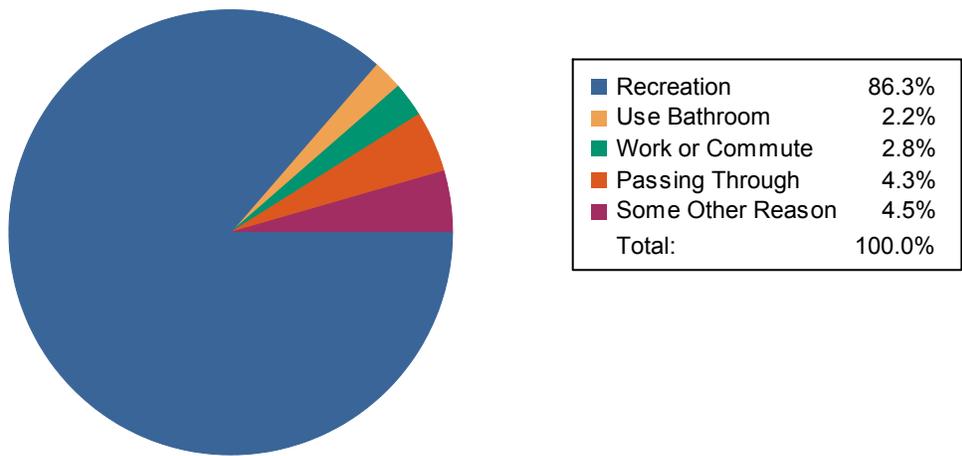
Form Type†	Developed Day Use Site	Developed Overnight	Undeveloped Areas (GFAs)	Wilderness	Total
Basic	446	22	19	54	541
Economic	400	18	18	54	490
Satisfaction	414	18	25	62	519
<b>Total</b>	<b>1,260</b>	<b>58</b>	<b>62</b>	<b>170</b>	<b>1,550</b>

\* Complete interviews are those in which the individual contacted agreed to be interviewed, was recreating on the national forest and was exiting the site or area for the last time that day.

† 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



### 3. DESCRIPTION OF THE RECREATION VISIT

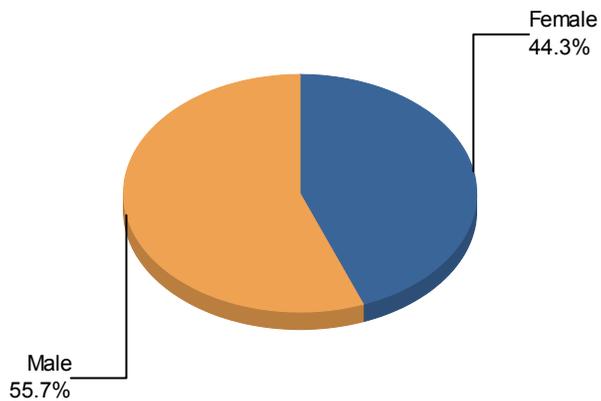
#### 3.1. Demographics

Descriptions of forest recreational visits were developed based upon the characteristics of interviewed visitors (respondents) and expanded to the national forest visitor population. Basic demographic information helps forest managers identify the profile of the visitors they serve. Management concerns such as providing recreation opportunities for underserved populations may be monitored with this information. Table 5, Table 6 and Table 7 provide basic demographic information about visitors interviewed regarding Gender, Race/Ethnicity, and Age, respectively. Table 8 shows the 15 most common reported origins for recreation visitors. A complete list of reported zip codes for respondents is found in Appendix A. Table 9 provides information about self reported travel distance from home to the interview site.

For the National Forest portion, about 55 percent of visitation are males. On the Grasslands, over 72 percent are males. For the National Forest portion, about 12% of visits are by Hispanics, and about 3.5% by Native Americans. On the Grasslands, about 11 percent of visits are by Native Americans. For the National Forest portion, about half the visits come from people living within 50 miles; however nearly one-third come from people living more than 500 miles away. About half the Grassland visits come from people living within 50 miles.

Table 5. Percent of National Forest Visits\* by Gender

Gender	Survey Respondents†	National Forest Visits (%)‡
Female	1,815	44.3
Male	1,983	55.7
<b>Total</b>	<b>3,798</b>	<b>100.0</b>



\* A National Forest Visit is defined as the entry of one person upon a national forest to participate in recreation activities for an unspecified period of time. A National Forest Visit can be composed of multiple Site Visits.

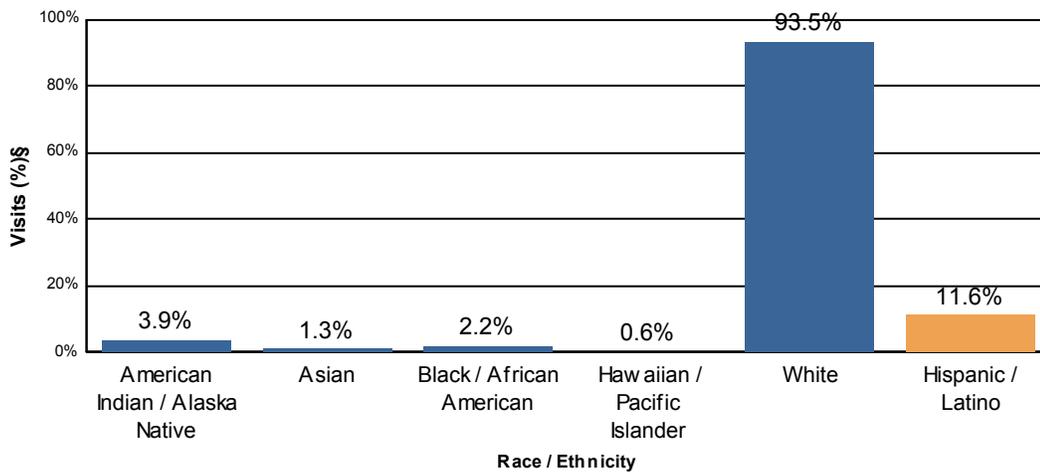
† Non-respondents to gender questions were excluded from analysis.

‡ Calculations are computed using weights that expand the sample of individuals to the population of National Forest Visits.

Table 6. Percent of National Forest Visits\* by Race/Ethnicity

Race †	Survey Respondents‡	National Forest Visits (%)§
American Indian / Alaska Native	60	3.9
Asian	25	1.3
Black / African American	24	2.2
Hawaiian / Pacific Islander	6	0.6
White	1,368	93.5
Total	1,483	101.5#

Ethnicity†	Survey Respondents‡	National Forest Visits (%)§
Hispanic / Latino	203	11.6



\* A National Forest Visit is defined as the entry of one person upon a national forest to participate in recreation activities for an unspecified period of time. A National Forest Visit can be composed of multiple Site Visits.

# Respondents could choose more than one racial group, so the total may be more than 100%.

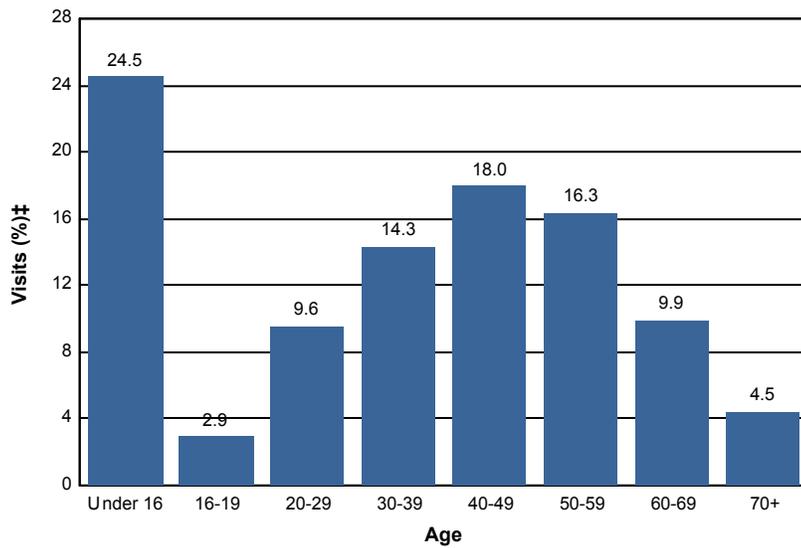
† Race and Ethnicity were asked as two separate questions.

‡ Non-respondents to race/ethnicity questions were excluded from analysis.

§ Calculations are computed using weights that expand the sample of individuals to the population of National Forest Visits.

Table 7. Percent of National Forest Visits\* by Age

Age Class	National Forest Visits (%)‡
Under 16	24.5
16-19	2.9
20-29	9.6
30-39	14.3
40-49	18.0
50-59	16.3
60-69	9.9
70+	4.5
<b>Total</b>	<b>100.0</b>



\* A National Forest Visit is defined as the entry of one person upon a national forest to participate in recreation activities for an unspecified period of time. A National Forest Visit can be composed of multiple Site Visits.

† Non-respondents to age questions were excluded from analysis.

‡ Calculations are computed using weights that expand the sample of individuals to the population of National Forest Visits.

**Table 8. Top 15 Most Commonly Reported ZIP Codes, States and Counties of National Forest Survey Respondents**

ZIP Code	State	County	Percent of Respondents	Survey Respondents (n)
87111	New Mexico	Bernalillo County	15.2	91
87112	New Mexico	Bernalillo County	9.4	56
87123	New Mexico	Bernalillo County	8.0	48
87120	New Mexico	Bernalillo County	7.5	45
87110	New Mexico	Bernalillo County	7.0	42
87106	New Mexico	Bernalillo County	6.9	41
Unknown Origin*			6.4	38
87108	New Mexico	Bernalillo County	6.2	37
87109	New Mexico	Bernalillo County	6.0	36
87122	New Mexico	Bernalillo County	5.7	34
87059	New Mexico	Bernalillo County	5.2	31
87114	New Mexico	Bernalillo County	4.8	29
87124	New Mexico	Sandoval County	4.3	26
Foreign Country			4.3	26
87015	New Mexico	Santa Fe County	3.0	18

\* Includes respondents reporting no ZIP code or an invalid ZIP code.

**Table 9. Percent of National Forest Visits\* by Distance Traveled**

Miles from Survey Respondent's Home to Interview Location†	National Forest Visits (%)
0 - 25 miles	35.0
26 - 50 miles	15.6
51 - 75 miles	2.9
76 - 100 miles	2.4
101 - 200 miles	3.1
201 - 500 miles	7.5
Over 500 miles	33.5
Total	100.0

Note: Blank cells indicate that insufficient data were collected to make inferences.

\* National Forest Visits are defined as the entry of one person upon a national forest to participate in recreation activities for an unspecified period of time. A National Forest Visit can be composed of multiple Site Visits.

† Travel distance is self-reported.

### 3.2. Visit Descriptions

Characteristics of the recreation visit such as length of visit, types of sites visited, activity participation and visitor satisfaction with forest facilities and services help managers understand recreation use patterns and use of facilities. This allows them to plan workforce and facility needs. The average national forest visit length of stay and average site visit length of stay by site type on this forest is displayed in Table 10. Since the average values displayed in Table 10 may be influenced by a few people staying a very long time, the median value is also shown.

On the National Forest portion, half of the visits last 2 hours or less. In the Grasslands, half the visits to the undeveloped areas last more than 33 hours. On the National Forest portions, over 20 percent of visits involve going to more than one location during the visit; for the Grasslands, it is less than five percent. For both portions, at least 65 percent of visits are made by people who visit at most 5 times per year. However, on the National Forest portion, a little more than eight percent of visits are made by people who visit at least 50 times per year.

**Table 10. Visit Duration**

Visit Type	Average Duration (hours)‡	Median Duration (hours)‡
Site Visit	3.6	1.3
Day Use Developed	1.6	1.1
Overnight Use Developed	36.5	6.2
Undeveloped Areas	10.8	2.0
Designated Wilderness	3.1	2.3
National Forest Visit	8.7	2.0

\* 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. Sites and areas were divided into four site types as listed here.

† A National Forest Visit is defined as the entry of one person upon a national forest to participate in recreation activities for an unspecified period of time. A National Forest Visit can be composed of multiple Site Visits.

‡ If this variable is blank not enough surveys were collected to make inferences.

Many of the respondents on this National Forest went only to the site at which they were interviewed (Table 11). Some visitors went to more than one recreation site or area during their national forest visit and the average site visits per national forest visit is shown below. Also displayed are the average people per vehicle and average axles per vehicle. This information in conjunction with traffic counts was used to expand observations from individual interviews to the full forest population of recreation visitors. This information may be useful to forest engineers and others who use vehicle counters to conduct traffic studies.

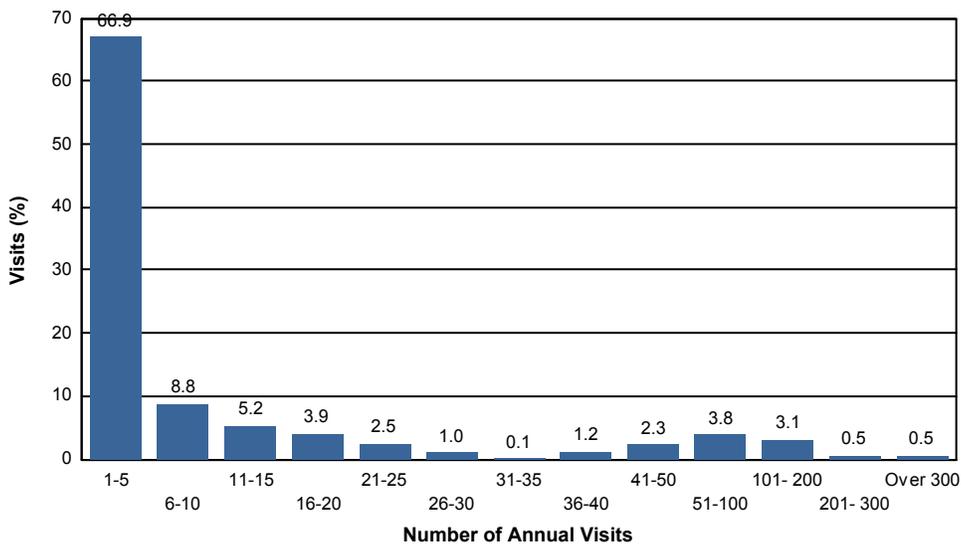
During the interview, visitors were asked how often they visit this national forest for all recreational activities, and how often for their primary activity. Table 12 summarizes the percent of visits that are made by those in each frequency category for this National Forest.

Table 11. Group Characteristics

Characteristic	Average
Percent of visits that were to just one national forest site during the National Forest Visit*	81.1
Number of national forest sites visited on National Forest Visit*	1.4
Group Size	3.0
Axles per Vehicle	2.0

Table 12. Percent of National Forest Visits\* by Annual Visit Frequency

Number of Annual Visits	Visits (%)†	Cumulative Visits (%)
1 - 5	66.9	66.9
6 - 10	8.8	75.7
11 - 15	5.2	81.0
16 - 20	3.9	84.9
21 - 25	2.5	87.4
26 - 30	1.0	88.4
31 - 35	0.1	88.5
36 - 40	1.2	89.7
41 - 50	2.3	92.0
51 - 100	3.8	95.8
101 - 200	3.1	99.0
201 - 300	0.5	99.5
Over 300	0.5	100.0



\* A National Forest Visit is defined as the entry of one person upon a national forest to participate in recreation activities for an unspecified period of time. A National Forest Visit can be composed of multiple Site Visits.

† The first row indicates the percent of National Forest Visits made by persons who visit 1 to 5 times per year. The last row indicates the percent of National Forest Visits made by persons who visit more than 300 times per year.

### 3.3. Activities

After identifying their main recreational activity, visitors were asked how many hours they spent participating in that main activity during this national forest visit. Some caution is needed when using this information. Because most national forest visitors participate in several recreation activities during each visit, it is more than likely that other visitors also participated in this activity, but did not identify it as their main activity. For example, on one national forest 63 % of visitors identified viewing wildlife as a recreational activity that they participated in during this visit, however only 3% identified that activity as their main recreational activity. The information on average hours viewing wildlife is only for the 3% who reported it as a main activity.

The most commonly selected primary activities for the Cibola are hiking / walking (about 33 percent) and viewing natural features (29 percent). Consumptive wildlife recreation accounts for less than 2 percent of recreation visits. More than three-quarters of the visits participate in viewing scenery as part of their visit. On the Grasslands, nearly half of the visits have consumptive wildlife recreation (hunting or fishing) as the primary activity. The next most popular primary activity is relaxing (11%). More than 50% of the visits participate in viewing wildlife and/or relaxing.

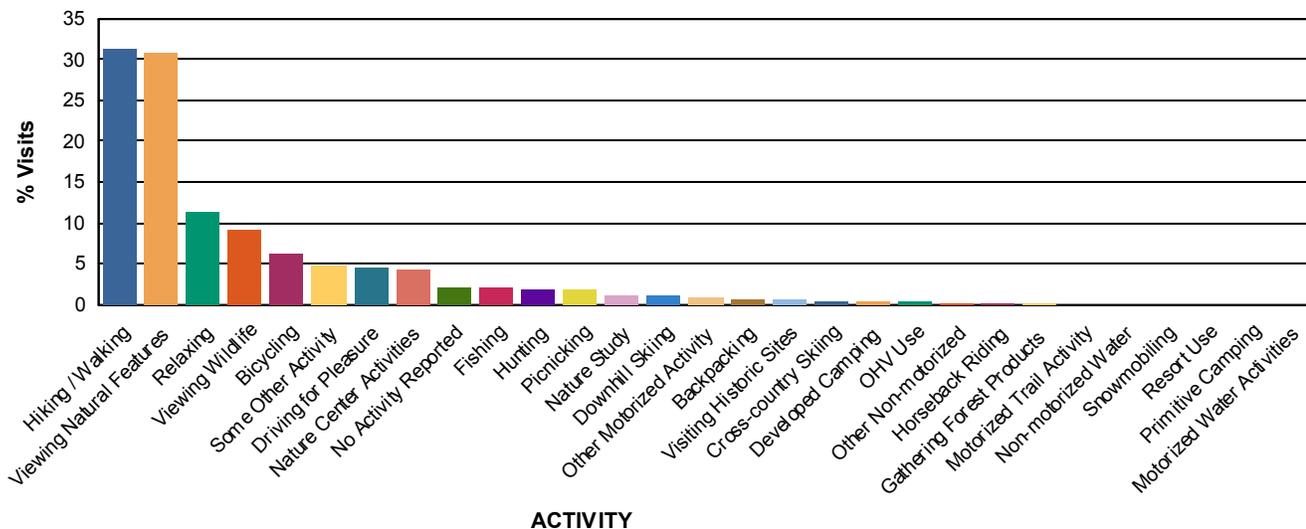
### Use of Constructed Facilities and Designated Areas

About one-third of recreation visitors interviewed were asked about whether they made use of a targeted set of facilities and special designated areas during their visit. These results are displayed in Table 14.

Table 13. Activity Participation

Activity	% Participation*	% Main Activity‡	Avg Hours Doing Main Activity
Viewing Natural Features	77.3	30.9	1.8
Hiking / Walking	60.5	31.4	2.8
Viewing Wildlife	58.6	9.2	2.0
Relaxing	54.0	11.4	2.3
Nature Center Activities	35.9	4.2	1.7
Driving for Pleasure	20.0	4.5	1.6
Nature Study	18.3	1.2	2.1
Visiting Historic Sites	13.4	0.5	1.5
Some Other Activity	10.0	4.7	2.9
Picnicking	9.7	1.8	2.1
Bicycling	6.7	6.4	2.2
Fishing	3.2	2.0	3.3
Other Motorized Activity	3.0	0.8	1.7
Hunting	2.0	1.8	28.0
Downhill Skiing	1.9	1.2	4.4
Developed Camping	1.8	0.3	22.6
OHV Use	1.4	0.3	1.0
Gathering Forest Products	1.4	0.1	2.1
Motorized Trail Activity	0.9	0.0	20.0
Other Non-motorized	0.9	0.2	3.3
Cross-country Skiing	0.8	0.4	1.4
Backpacking	0.8	0.6	2.0
No Activity Reported	0.8	2.1	
Primitive Camping	0.6	0.0	0.0
Motorized Water Activities	0.5	0.0	0.0
Horseback Riding	0.4	0.1	2.0
Non-motorized Water	0.4	0.0	7.0
Resort Use	0.3	0.0	0.0
Snowmobiling	0.0	0.0	0.0

% Main Activity



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

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

**Table 14. Percent of National Forest Visits\* Indicating Use of Special Facilities or Areas**

Special Facility or Area	% of National Forest Visits†
Developed Swimming Site	0.6
Scenic Byway	34.3
Visitor Center or Museum	42.8
Designated ORV Area	3.9
Forest Roads	5.1
Interpretive Displays	28.4
Information Sites	20.8
Developed Fishing Site	2.1
Motorized Single Track Trails	2.9
Motorized Dual Track Trails	2.6
None of these Facilities	31.1

\* A National Forest Visit is defined as the entry of one person upon a national forest to participate in recreation activities for an unspecified period of time. A National Forest Visit can be composed of multiple Site Visits.

† Survey respondents could select as many or as few special facilities or areas as appropriate.

## 4. ECONOMIC INFORMATION

Forest managers are usually very interested in the impact of National Forest 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. When considering recreation-related visitor spending managers are often interested both in identifying the average spending of individual visitors (or types of visitors) and the total spending associated with all recreation use. Spending averages for visitors or visitor parties can be estimated using data collected from a statistically valid visitor sampling program such as NVUM. To estimate the total spending associated with recreation use, three pieces of information are needed: an overall visitation estimate, the proportion of visits in the visitor types, and the average spending profiles for each of the visitor types. Multiplying the three gives a total amount of spending by a particular type of visitor. Summing over all visitor types gives total spending.

About one-third of the NVUM surveys included questions about trip-related spending within 50 miles of the site visited. Spending data collected from 2000 to 2003 were analyzed at Michigan State University by Dr. Daniel Stynes and Dr. Eric White. A description of that analysis and the results are in the report "Spending Profiles of National Forest Visitors: NVUM four-year report", available at <http://www.fs.fed.us/recreation/programs/nvum/NVUM4YrSpending.pdf>. Analysis of spending data for the 2005 - 2009 data collection periods was completed in summer of 2010.

### 4.1. Spending Segments

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 do not. In addition, visitors on overnight trips will generally have to purchase more food during their trip (in restaurants or grocery stores) than visitors on day trips. Visitors who have not traveled far from home to the recreation location usually spend less than visitors traveling longer distances, especially on items such as fuel and food. Analysis of spending patterns has shown that a good way to construct segments of the visitor market with consistent spending patterns is the following seven groupings:

1. local visitors on day trips,
2. local visitors on overnight trips staying in lodging on the national forest,
3. local visitors on overnight trips staying in lodging off the national forest, and
4. non-local visitors on day trips,
5. non-local visitors on overnight trips staying in lodging on the national forest,
6. non-local visitors on overnight trips staying in lodging off the forest,
7. non-primary visitors.

Local visitors are those who travel less than 50 road miles from home to the recreation site visited and non-local visitors are those who travel greater than 50 road miles to the recreation site visited. Non-primary visitors are those for whom the primary purpose of their trip is something other than recreating on that national forest. Table 15 shows the distribution of visits by spending segment.

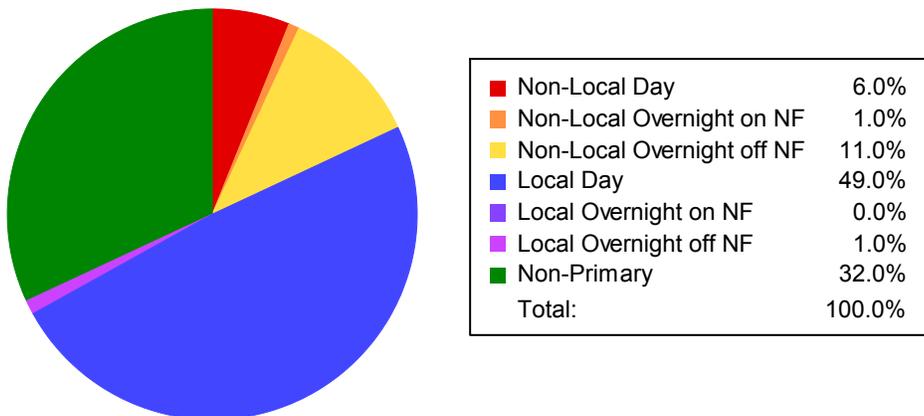
For both the Cibola NF and the Grasslands, somewhat more than half of visits are made by people

on day trips away from home. About one-third of visits to the Cibola NF are from people whose primary recreation destination is some other location, so the Cibola is a side trip. The income distributions show that about 10% of visits on the Cibola NF report earning over \$150,000, but for the Grasslands portion, less than 0.5% have that income level.

Table 15. Distribution of National Forest Visits\* by Market Segment†

	Non-Local Segments			Local Segments			Non-Primary‡	Total
	Day	Overnight on NF	Overnight off NF	Day	Overnight on NF	Overnight off NF		
Number of National Forest Visits	63,144	10,524	115,764	515,677	0	10,524	336,769	1,052,402
Percent of National Forest Visits	6	1	11	49	0	1	32	100

### Percent of National Forest Visits



\* A National Forest Visit is defined as the entry of one person upon a national forest to participate in recreation activities for an unspecified period of time. A National Forest Visit can be composed of multiple Site Visits.

† The market segments shown here relate to the type of recreation trip taken. A recreation trip is defined as the duration of time beginning when the visitor left their home and ending when they got back to their home. “Non-local” trips are those where the individual(s) traveled greater than approximately 50 miles from home to the site visited. “Day” trips do not involve an overnight stay outside the home, “overnight on-forest” trips are those with an overnight stay outside the home on National Forest System (NFS) land, and “overnight off-forest” trips are those with an overnight stay outside the home off National Forest System land.

‡ “Non-primary” trips are those where the primary recreation destination of the trip was somewhere other than the national forest under consideration.

Individuals are urged to consult an economist when interpreting the NVUM economic tables.

## 4.2. Spending Profiles

Spending profiles for each segment for this forest can be found in the Stynes and White report noted above. Appendix Table A-1 in that report identifies whether the forest has a high-spending profile (Table 7 of Stynes and White), an average profile (Table 5), or a low-spending profile (Table 8). It is essential to note that these spending profiles are in dollars spent per **party**. Obtaining per-visit spending is accomplished by dividing the spending for each segment by the average people per party for the forest and segment found in Appendix Table A-3 of that report.

## 4.3. Total Direct Spending

Total direct spending made within 50 miles of the forest and associated with national forest recreation is calculated by combining estimates of per-visit spending averages from the spending profiles with estimates of the number of national forest visits in the segment. The number of visits in the segment equals the percentage in Table 15 times the number of National Forest visits reported in Table 2.

## 4.4. Other Visit Information

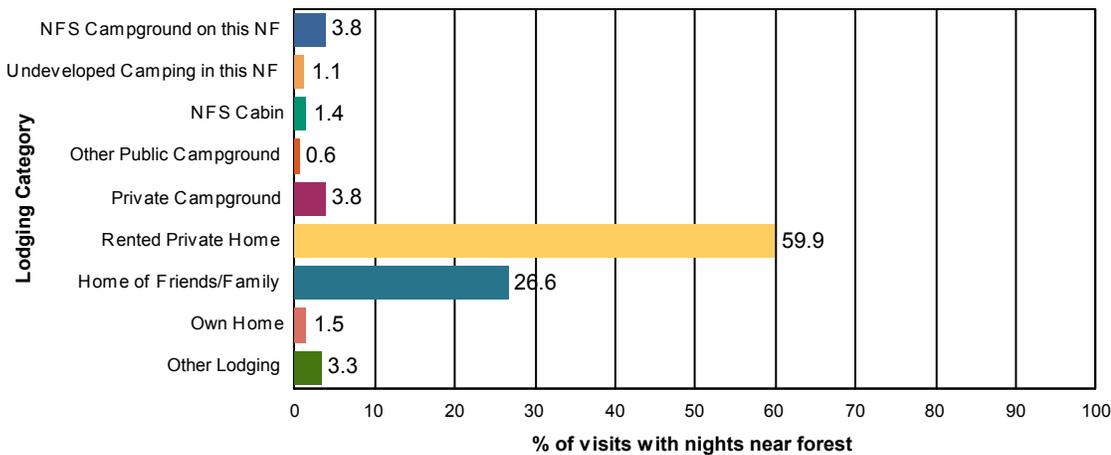
There are several other important aspects of the trips on which the recreation visits to the forest are made. These are summarized in Table 16. The first aspect relates to total amount spent by the recreating party on the trip. This includes spending not just within 50 miles of the forest, but anywhere. The table shows both the average and the median. Another set describes the overall length of the trips on which the visits are made. The table shows the percent of the visits that were made on trips where the person stayed away from home overnight (even though the forest visit may be just a day visit), and the average total nights away from home and nights spent within 50 miles of the forest. For those spending one or more nights in or near the forest, the table shows the percentage that selected each of a series of lodging options. Together, these results help show the context of overall trip length and lodging patterns for visitors to the forest.

Table 16. Trip Spending and Lodging Usage

Trip Spending	Value
Average Total Trip Spending per Party	\$520
Median Total Trip Spending per Party	\$91
% NF Visits made on trip with overnight stay away from home	43.4%
% NF Visits with overnight stay within 50 miles of NF	40.6%
Mean nights/visit within 50 miles of NF	6.1
Area Lodging Use	% Visits with Nights Near Forest
NFS Campground on this NF	3.8%
Undeveloped Camping in this NF	1.1%
NFS Cabin	1.4%
Other Public Campground	0.6%
Private Campground	3.8%
Rented Private Home	59.9%
Home of Friends/Family	26.6%
Own Home	1.5%
Other Lodging	3.3%

**Area Lodging Use**

% Visits with Nights Near Forest



## 4.5. Household Income

Visitors were asked to report a general category for their total household income. Only very general categories were used, to minimize the intrusive nature of the question. Results help indicate the overall socio-economic status of visitors to the forest, and are found in Table 17.

**Table 17. Percent of National Forest Visits\* by Annual Household Income**

Annual Household Income Category	National Forest Visits (%)
Under \$25,000	6.5
\$25,000 to \$49,999	19.9
\$50,000 to \$74,999	29.9
\$75,000 to \$99,999	21.5
\$100,000 to \$149,999	12.8
\$150,000 and up	9.4
Total	100.0

\* National Forest Visits are defined as the entry of one person upon a national forest to participate in recreation activities for an unspecified period of time. A National Forest Visit can be composed of multiple Site Visits.

## 4.6. Substitute Behavior

Visitors were asked to select one of several substitute choices, if for some reason they were unable to visit this national forest (Figure 3). Choices included going somewhere else for the same activity they did on the current trip, coming back to this forest for the same activity at some later time, going someplace else for a different activity, staying at home and not making a recreation trip, going to work instead of recreating, and a residual 'other' category. On most forests, the majority of visitors indicate that their substitute behavior choice is activity driven (going elsewhere for same activity) and a smaller percentage indicate they would come back later to this national forest for the same activity. For those visitors who said they would have gone somewhere else for recreation they were asked how far from their home this alternate destination was. These results are shown in Figure 4.

Figure 3. Substitute Behavior Choices

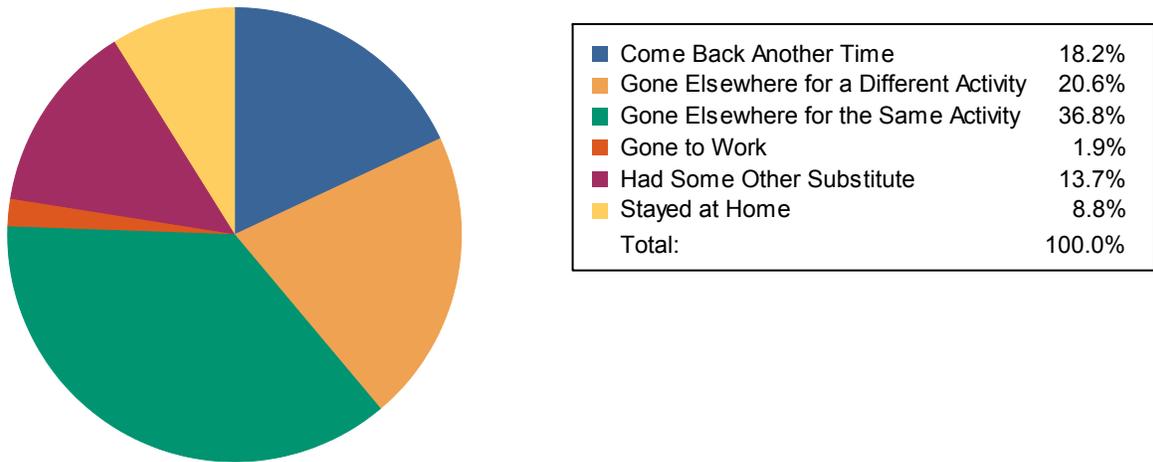
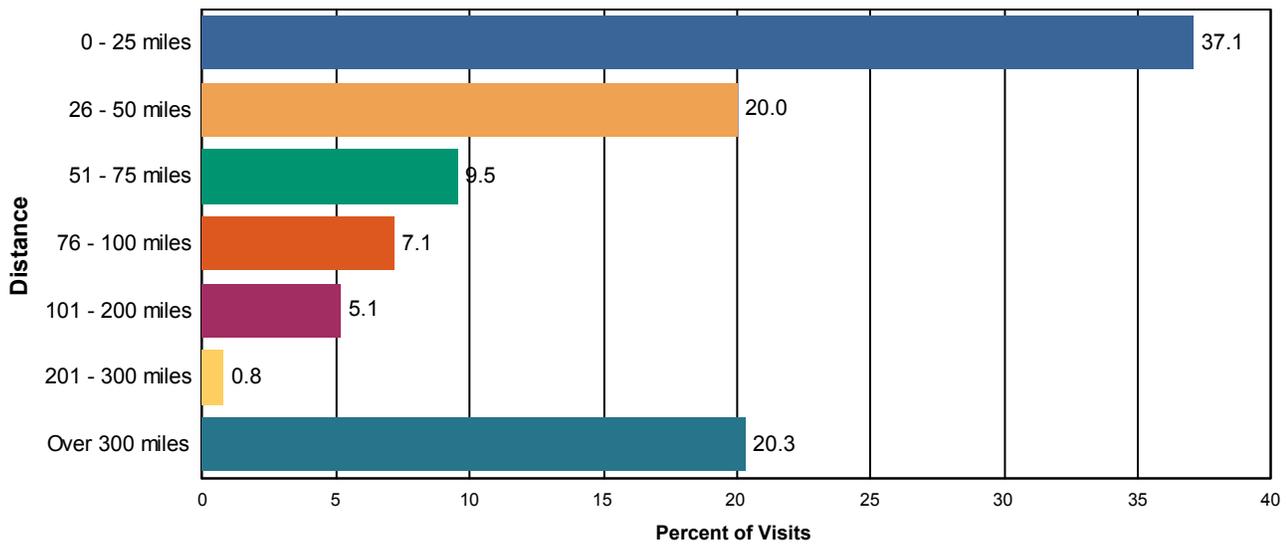


Figure 4. Reported Distance Visitors Would Travel to Alternate Location



## 5. SATISFACTION INFORMATION

An important element of outdoor recreation program delivery is evaluating customer satisfaction with the 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 forest-level performance measures. To describe customer satisfaction, several different measures are used. Recreation visitors were asked to provide an overall rating of their visit to the national forest, on a 5-point Likert scale. About one-third of visitors interviewed on the forest rated their satisfaction with fourteen elements related to recreation facilities and services, and the importance of those elements to their recreation experience. 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 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 specifically referenced the area where the visitor was interviewed, the survey design does not usually have enough responses for any individual site or area on the forest to present information at a site level. Rather, the information is generalized to overall satisfaction within the three site types: Day Use Developed (DUUDS), Overnight Use Developed (OUUDS), General Forest Areas, and on the forest as a whole.

The satisfaction responses are analyzed in several ways. First, a graph of overall satisfaction is presented in Figure 5. Next, two aggregate measures were calculated from the set of individual elements. The satisfaction elements most readily controlled by managers were aggregated into four categories: 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 designated Wilderness. The first aggregate measure is called “Percent Satisfied Index (PSI)”, which is the proportion of all ratings for the elements in the category where the satisfaction ratings had a numerical rating of 4 or 5. Conceptually, the PSI indicator shows the percent of all recreation customers who are satisfied with agency performance. The agency’s national target for this measure is 85%. It is usually difficult to consistently have a higher satisfaction score than 85% since given tradeoffs among user groups and other factors. Table 18 displays the aggregate PSI scores for this forest.

Another aggregate measure of satisfaction 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. This indicator tracks the congruence between the agency’s performance and customer evaluations of importance. The idea behind this measure is that those elements with higher importance levels must have higher performance levels. Figure 6 displays the PME scores by type of site. Lower scores indicate a gap between desires and performance.

An Importance-Performance Analysis (IPA) (Hudson, et al, Feb 2004) was calculated for the importance and satisfaction scores. A target level of importance and performance divides the possible set of score pairs into four quadrants. For this work, the target level of both was a numerical score of 4.0. Each quadrant has a title that helps in interpreting responses that fall into it, and that provides some general guidance for management. These can be described as:

1. Importance at or above 4.0, Satisfaction at or above 4.0: **Keep up the good work**. These are items that are important to visitors and ones that the forest is performing quite well;
2. Importance at or above 4.0, Satisfaction under 4.0: **Concentrate here**. These are important items to the public, but performance is not where it needs to be. Increasing effort here is likely to have the greatest payoff in overall customer satisfaction;
3. Importance below 4.0, Satisfaction above 4.0: **Possible overkill**. These are items that are not highly important to visitors, but the forest's performance is quite good. It may be possible to reduce effort here without greatly harming overall satisfaction;
4. Importance below 4.0; Satisfaction below 4.0: **Low Priority**. These are items where performance is not very good, but neither are they important to visitors. Focusing effort here is unlikely to have a great impact.

We present tables that show the I-P rating title for each satisfaction element. Each sitetype is presented in a separate table. Results are presented in Tables 19 - 22.

The numerical scores for visitor satisfaction and importance for each element by site type, and the sample sizes for each are presented in Appendix B (Tables B1 - B4). Most managers find it difficult to discern meaning from these raw tables; however they may wish to examine specific elements once they have reviewed the other satisfaction information presented in this section. Note that if an element had fewer than 10 responses no analyses are performed, as there are too few responses to provide reliable information. Finally, visitors were asked about their overall satisfaction with and the importance of road condition and the adequacy of signage. Figure 7a and Figure 7b show the results.

On the Cibola NF portion, the percentage of visits who were very or somewhat satisfied was 97%; on the Grasslands portion, it was about 88%. Results for the composite satisfaction indexes on the National Forest portion are over 85 percent for all four rating items in developed sites, and above 80 percent for all four items in Wilderness settings. On the Grasslands portion, the composite satisfaction indexes show high ratings for Access and Perception of safety, but lower ratings for other items.

Figure 5. Percent of National Forest Visits by Overall Satisfaction Rating

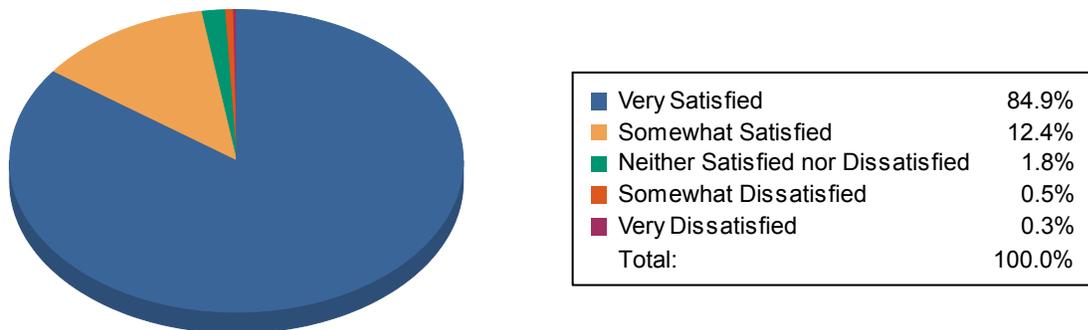


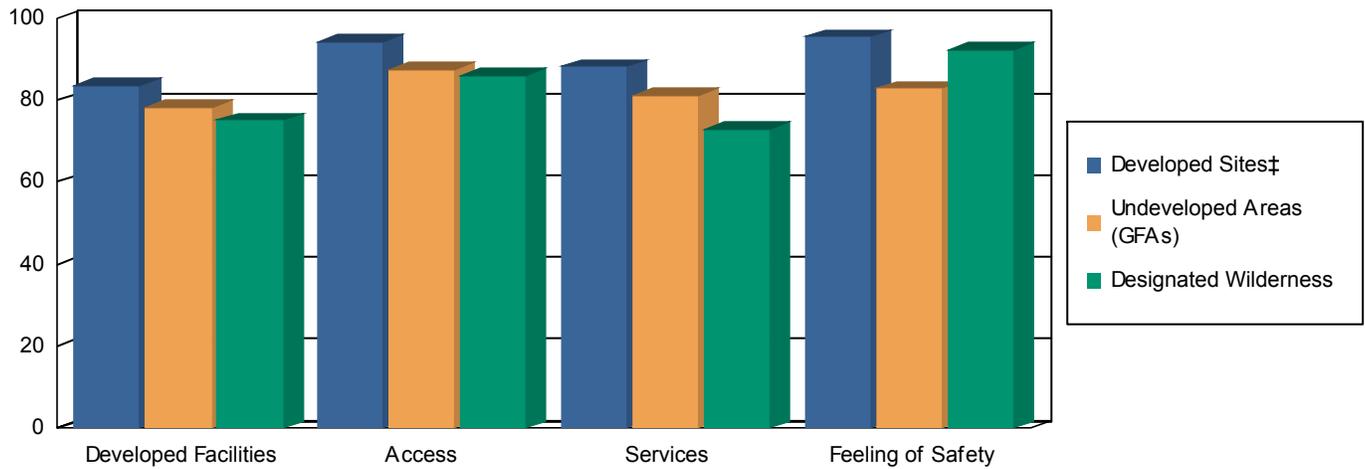
Table 18. Percent Satisfied Index† Scores for Aggregate Categories

Satisfaction Element	Satisfied Survey Respondents (%)		
	Developed Sites‡	Undeveloped Areas (GFAs)	Designated Wilderness
Developed Facilities	88.0	97.2	82.5
Access	94.6	90.8	92.3
Services	90.4	77.2	81.1
Feeling of Safety	98.8	83.0	96.5

† 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.

‡ This category includes both Day Use and Overnight Use Developed Sites .

Figure 6. Percent Meets Expectations Scores\*



\* “Percent Meet Expectations (PME)” 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. This indicator tracks the congruence between the agency’s performance and customer evaluations of importance. The idea behind this measure is that those elements with higher importance levels must have higher performance levels. Lower scores indicate a gap between desires and performance.

‡ This category includes both Day Use and Overnight Use Developed Sites.

Table 19. Importance-Performance Ratings for Day Use Developed Sites

Satisfaction Element	Importance-Performance Rating
Restroom Cleanliness	Keep up the Good Work
Developed Facilities	Keep up the Good Work
Condition of Environment	Keep up the Good Work
Employee Helpfulness	Keep up the Good Work
Interpretive Displays	Keep up the Good Work
Parking Availability	Keep up the Good Work
Parking Lot Condition	Possible Overkill
Rec. Info. Availability	Keep up the Good Work
Road Condition	Keep up the Good Work
Feeling of Safety	Keep up the Good Work
Scenery	Keep up the Good Work
Signage Adequacy	Keep up the Good Work
Trail Condition	Keep up the Good Work
Value for Fee Paid	Keep up the Good Work

Table 20. Importance-Performance Ratings for Overnight Developed Sites

Satisfaction Element	Importance-Performance Rating
Restroom Cleanliness	Keep up the Good Work
Developed Facilities	Possible Overkill
Condition of Environment	Keep up the Good Work
Employee Helpfulness	Low Priority
Interpretive Displays	Possible Overkill
Parking Availability	Keep up the Good Work
Parking Lot Condition	Possible Overkill
Rec. Info. Availability	Keep up the Good Work
Road Condition	Possible Overkill
Feeling of Satefy	Possible Overkill
Scenery	Keep up the Good Work
Signage Adequacy	Concentrate Here
Trail Condition	Low Priority
Value for Fee Paid	Keep up the Good Work

Table 21. Importance-Performance Ratings for Undeveloped Areas (GFAs)

Satisfaction Element	Importance-Performance Rating
Restroom Cleanliness	*
Developed Facilities	*
Condition of Environment	Keep up the Good Work
Employee Helpfulness	*
Interpretive Displays	Low Priority
Parking Availability	Keep up the Good Work
Parking Lot Condition	Possible Overkill
Rec. Info. Availability	Keep up the Good Work
Road Condition	Low Priority
Feeling of Satefy	Keep up the Good Work
Scenery	Keep up the Good Work
Signage Adequacy	Possible Overkill
Trail Condition	Keep up the Good Work
Value for Fee Paid	*

\* The data was not reported for items with fewer than 10 responses.

Table 22. Importance-Performance Ratings for Designated Wilderness

Satisfaction Element	Importance-Performance Rating
Restroom Cleanliness	Keep up the Good Work
Developed Facilities	Possible Overkill
Condition of Environment	Keep up the Good Work
Employee Helpfulness	Keep up the Good Work
Interpretive Displays	Possible Overkill
Parking Availability	Keep up the Good Work
Parking Lot Condition	Possible Overkill
Rec. Info. Availability	Keep up the Good Work
Road Condition	Keep up the Good Work
Feeling of Safety	Keep up the Good Work
Scenery	Keep up the Good Work
Signage Adequacy	Keep up the Good Work
Trail Condition	Keep up the Good Work
Value for Fee Paid	Keep up the Good Work

\* The data was not reported for items with fewer than 10 responses.

Figure 7a. Satisfaction with Forest-wide Road Conditions & Signage Adequacy

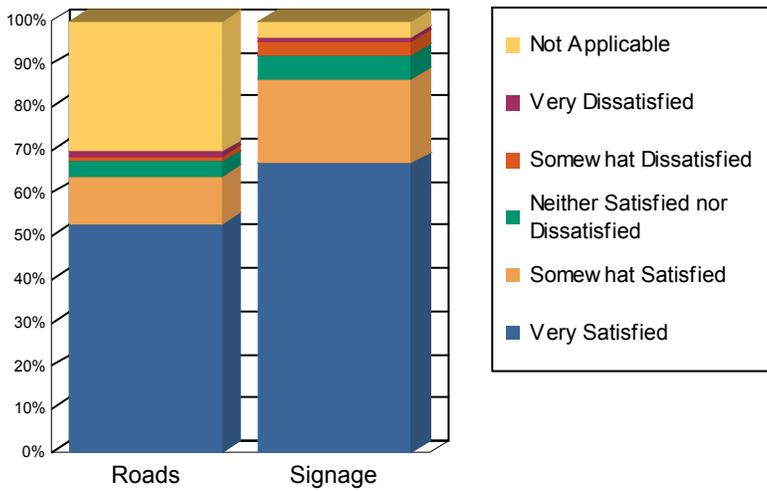
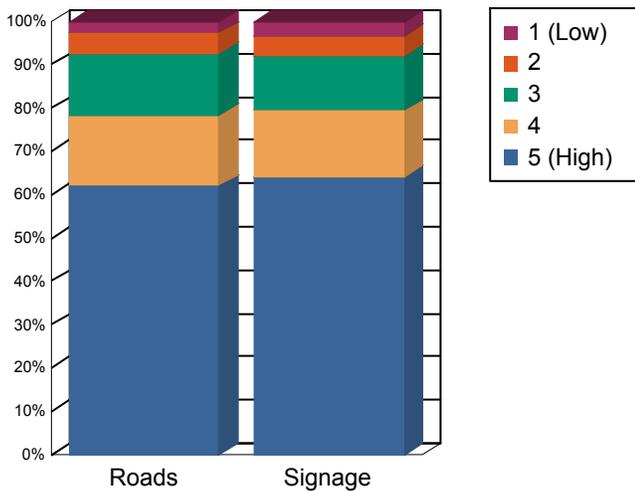


Figure 7b. Importance of Forest-wide Road Conditions & Signage Adequacy



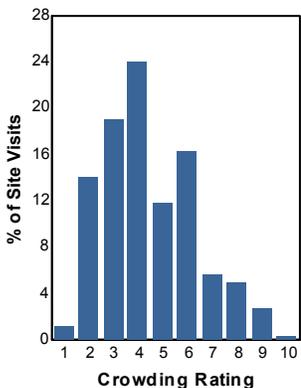
### 5.1. Crowding

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 designated Wilderness may think 5 people is too many while someone visiting a developed campground may think 200 people is about right. Table 23 shows the distribution of responses for each site type. Crowding was reported on a scale of 1 to 10 where 1 denotes hardly anyone was there, and a 10 indicates the area was perceived as overcrowded.

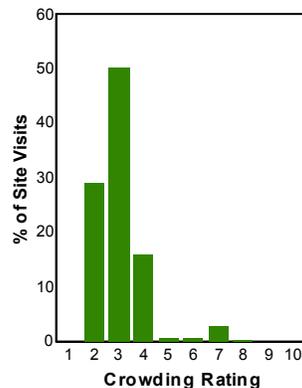
Table 23. Percent of Site Visits\* by Crowding Rating and Site Type

Crowding Rating†	Site Types (% of Site Visits)			
	Day Use Developed Sites	Overnight Use Developed Sites	Undeveloped Areas (GFAs)	Designated Wilderness
10 - Overcrowded	0.3	0.0	0.0	0.0
9	2.8	0.0	0.6	3.4
8	4.9	0.4	0.0	4.3
7	5.6	2.9	17.5	3.2
6	16.2	0.7	18.7	12.4
5	11.8	0.7	0.6	15.3
4	24.0	16.0	18.1	18.3
3	19.1	50.4	1.1	23.2
2	14.0	28.9	43.4	18.3
1 - Hardly anyone there	1.2	0.0	0.0	1.7
<b>Average Rating</b>	<b>4.5</b>	<b>3.0</b>	<b>4.1</b>	<b>4.2</b>

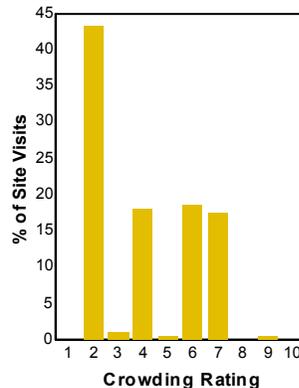
**Day Use Developed Sites**



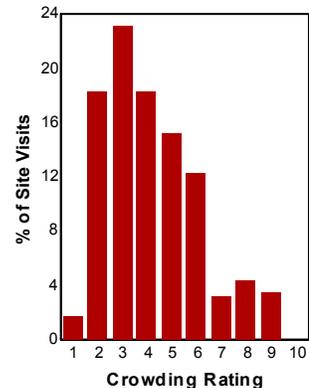
**Overnight Use Developed Sites**



**Undeveloped Areas (GFAs)**



**Designated Wilderness**



\* 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.

† Survey respondents rated how crowded the site or area they were interviewed at was using a scale of 1 to 10 where 1 meant hardly anyone was there and 10 meant the site or area was overcrowded.

## 5.2. Disabilities

Providing barrier-free facilities for recreation visitors is an important part of facility and service planning and development. One question asked if anyone in their group had a disability. If so, the visitor was then asked if the facilities at the sites they visited were accessible for this person ( Table 24).

Table 24. Accessibility of National Forest Facilities by Persons with Disabilities

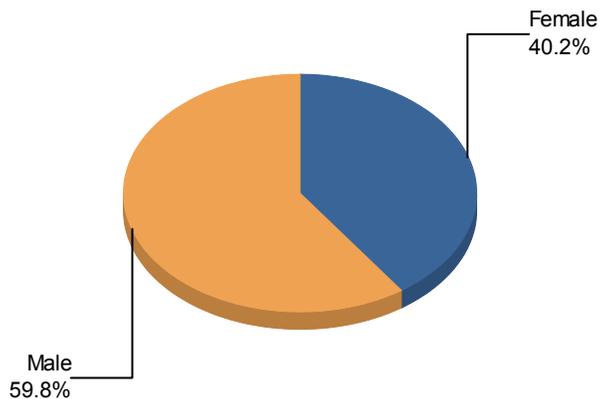
Item	Percent
% of visits that include a group member with a disability	6.1
Of this group, percent who said facilities at site visited were accessible	93.2

## 6. WILDERNESS VISIT DEMOGRAPHICS

Visits to Wilderness are sometimes made by a particular subset of the overall visitor population. In this chapter, tables are presented that describe the demographic characteristics of those who visit designated wilderness on this forest. Table 25 shows the gender breakdown, Table 26 the racial and ethnicity distribution, and the Table 27 age composition. In Table 28, a frequency analysis of Zip Codes obtained from respondents is presented, to give a rough idea of the common origins of Wilderness visitors.

**Table 25. Percent of Wilderness Site Visits\* by Gender**

Gender	Survey Respondents†	Wilderness Site Visits (%)‡
Female	143	40.2
Male	183	59.8
<b>Total</b>	<b>326</b>	<b>100.0</b>



\* 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.

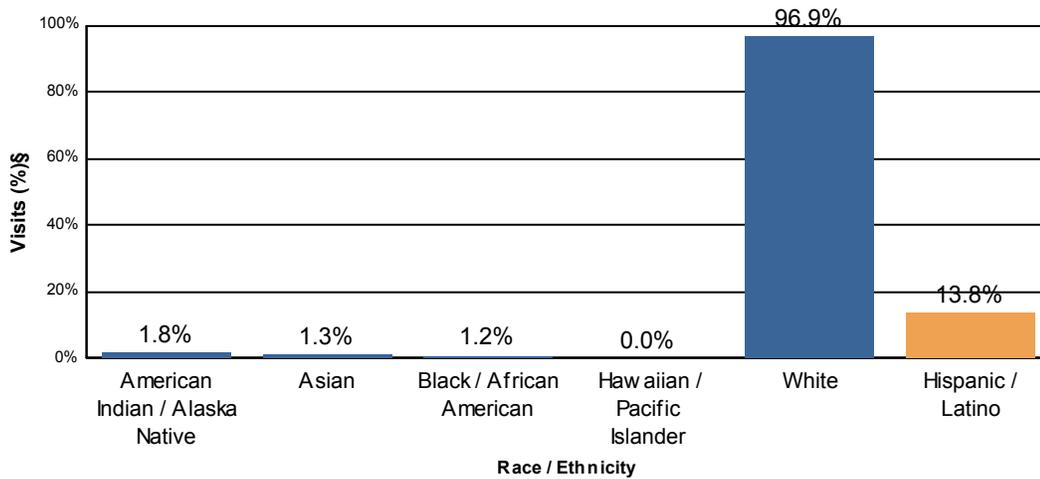
† Non-respondents to gender questions were excluded from analysis.

‡ Calculations are computed using weights that expand the sample of individuals to the population of Wilderness Site Visits.

Table 26. Percent of Wilderness Site Visits\* by Race/Ethnicity

Race †	Survey Respondents‡	Wilderness Site Visits (%)§
American Indian / Alaska Native	3	1.8
Asian	2	1.3
Black / African American	2	1.2
Hawaiian / Pacific Islander	0	0.0
White	159	96.9
Total	166	101.2#

Ethnicity†	Survey Respondents‡	Wilderness Site Visits (%)§
Hispanic / Latino	23	13.8



\* 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.

# Respondents could choose more than one racial group, so the total may be more than 100%.

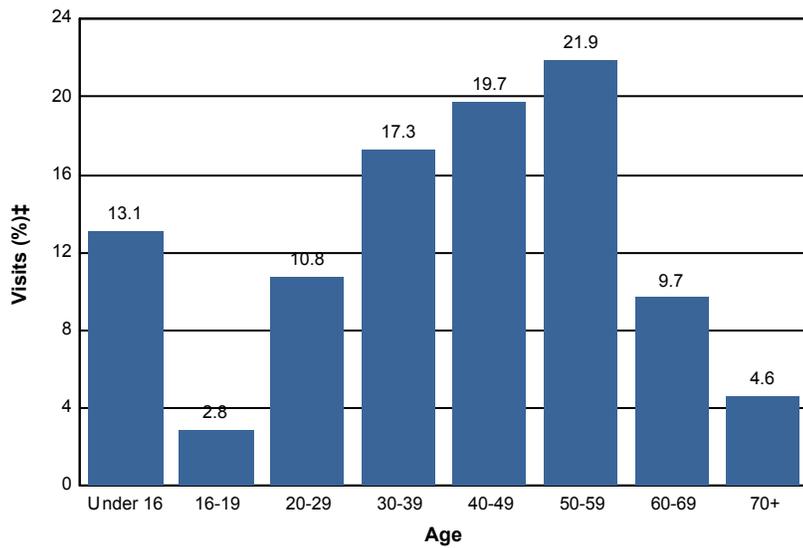
† Race and Ethnicity were asked as two separate questions.

‡ Non-respondents to race/ethnicity questions were excluded from analysis.

§ Calculations are computed using weights that expand the sample of individuals to the population of Wilderness Site Visits.

Table 27. Percent of Wilderness Site Visits\* by Age

Age Class	Wilderness Site Visits (%)‡
Under 16	13.1
16-19	2.8
20-29	10.8
30-39	17.3
40-49	19.7
50-59	21.9
60-69	9.7
70+	4.6
<b>Total</b>	<b>99.9</b>



\* 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.

† Non-respondents to age questions were excluded from analysis.

‡ Calculations are computed using weights that expand the sample of individuals to the population of Wilderness Site Visits.

Table 28. Top 15 Most Commonly Reported ZIP Codes, States and Counties of Wilderness Survey Respondents

ZIP Code	State	County	Percent of Respondents	Survey Respondents (n)
87111	New Mexico	Bernalillo County	12.6	16
87106	New Mexico	Bernalillo County	12.6	16
87112	New Mexico	Bernalillo County	10.2	13
87123	New Mexico	Bernalillo County	8.7	11
87109	New Mexico	Bernalillo County	7.1	9
87120	New Mexico	Bernalillo County	7.1	9
87114	New Mexico	Bernalillo County	6.3	8
87110	New Mexico	Bernalillo County	6.3	8
87108	New Mexico	Bernalillo County	5.5	7
87122	New Mexico	Bernalillo County	5.5	7
87124	New Mexico	Sandoval County	4.7	6
87015	New Mexico	Santa Fe County	3.9	5
87008	New Mexico	Bernalillo County	3.9	5
87107	New Mexico	Bernalillo County	3.1	4
87048	New Mexico	Sandoval County	2.4	3

\* Includes respondents reporting no ZIP code or an invalid ZIP code .

## 7. APPENDIX TABLES

## APPENDIX A - Complete List of ZIP Codes

Table A-1. ZIP Codes, States and Counties of National Forest Survey Respondents

ZIP Code	State	County	Percent of Respondents	Survey Respondents (n)
87111	New Mexico	Bernalillo County	5.9	91
87112	New Mexico	Bernalillo County	3.6	56
87123	New Mexico	Bernalillo County	3.1	48
87120	New Mexico	Bernalillo County	2.9	45
87110	New Mexico	Bernalillo County	2.7	42
87106	New Mexico	Bernalillo County	2.6	41
Unknown Origin*			2.5	38
87108	New Mexico	Bernalillo County	2.4	37
87109	New Mexico	Bernalillo County	2.3	36
87122	New Mexico	Bernalillo County	2.2	34
87059	New Mexico	Bernalillo County	2.0	31
87114	New Mexico	Bernalillo County	1.9	29
87124	New Mexico	Sandoval County	1.7	26
Foreign Country			1.7	26
87015	New Mexico	Santa Fe County	1.2	18
87104	New Mexico	Bernalillo County	1.2	18
87105	New Mexico	Bernalillo County	1.1	17
87047	New Mexico	Bernalillo County	0.9	14
87107	New Mexico	Bernalillo County	0.9	14
87121	New Mexico	Bernalillo County	0.9	14
87144	New Mexico	Sandoval County	0.9	14
79065	Texas	Gray County	0.8	13
73628	Oklahoma	Roger Mills County	0.8	13
87048	New Mexico	Sandoval County	0.8	13
79014	Texas	Hemphill County	0.8	13
87113	New Mexico	Bernalillo County	0.8	12
87031	New Mexico	Valencia County	0.8	12
87008	New Mexico	Bernalillo County	0.8	12
87102	New Mexico	Bernalillo County	0.6	10
87043	New Mexico	Sandoval County	0.6	10
87116	New Mexico	Bernalillo County	0.5	7
87002	New Mexico	Valencia County	0.4	6
87020	New Mexico	Cibola County	0.4	6
87035	New Mexico	Torrance County	0.3	5
88011	New Mexico	Dona Ana County	0.3	5
87505	New Mexico	Santa Fe County	0.3	5
87501	New Mexico	Santa Fe County	0.3	5
79108	Texas	Potter County	0.3	5
79109	Texas	Randall County	0.3	5
79096	Texas	Wheeler County	0.3	4

87507	New Mexico	Santa Fe County	0.3	4
38501	Tennessee	Putnam County	0.3	4
73644	Oklahoma	Beckham County	0.3	4
73660	Oklahoma	Roger Mills County	0.3	4
87508	New Mexico	Santa Fe County	0.3	4
73662	Oklahoma	Beckham County	0.3	4
87544	New Mexico	Los Alamos County	0.2	3
79007	Texas	Hutchinson County	0.2	3
79110	Texas	Randall County	0.2	3
87125	New Mexico	Bernalillo County	0.2	3
73521	Oklahoma	Jackson County	0.2	3
79070	Texas	Ochiltree County	0.2	3
79124	Texas	Potter County	0.2	3
79107	Texas	Potter County	0.1	2
76148	Texas	Tarrant County	0.1	2
79762	Texas	Ector County	0.1	2
79201	Texas	Childress County	0.1	2
95124	California	Santa Clara County	0.1	2
79068	Texas	Carson County	0.1	2
79059	Texas	Roberts County	0.1	2
80123	Colorado	Jefferson County	0.1	2
73654	Oklahoma	Dewey County	0.1	2
94066	California	San Mateo County	0.1	2
78559	Texas	Cameron County	0.1	2
30062	Georgia	Cobb County	0.1	2
79015	Texas	Randall County	0.1	2
85203	Arizona	Maricopa County	0.1	2
79106	Texas	Potter County	0.1	2
79045	Texas	Deaf Smith County	0.1	2
78028	Texas	Kerr County	0.1	2
87301	New Mexico	McKinley County	0.1	2
79932	Texas	El Paso County	0.1	2
79121	Texas	Randall County	0.1	2
07410	New Jersey	Bergen County	0.1	2
43230	Ohio	Franklin County	0.1	2
87305	New Mexico	McKinley County	0.1	2
15217	Pennsylvania	Allegheny County	0.1	2
87036	New Mexico	Torrance County	0.1	2
87068	New Mexico	Bernalillo County	0.1	2
73622	Oklahoma	Washita County	0.1	2
73130	Oklahoma	Oklahoma County	0.1	2
88220	New Mexico	Eddy County	0.1	2
73112	Oklahoma	Oklahoma County	0.1	2
73533	Oklahoma	Stephens County	0.1	2
32937	Florida	Brevard County	0.1	2
87026	New Mexico	Cibola County	0.1	2
79097	Texas	Carson County	0.1	2
79928	Texas	El Paso County	0.1	2
37206	Tennessee	Davidson County	0.1	2
79925	Texas	El Paso County	0.1	2
79019	Texas	Armstrong County	0.1	2

79934	Texas	El Paso County	0.1	2
73107	Oklahoma	Oklahoma County	0.1	1
63141	Missouri	St. Louis County	0.1	1
44146	Ohio	Cuyahoga County	0.1	1
17352	Pennsylvania	York County	0.1	1
73154	Oklahoma	Oklahoma County	0.1	1
84074	Utah	Tooele County	0.1	1
78228	Texas	Bexar County	0.1	1
11704	New York	Suffolk County	0.1	1
22030	Virginia	Fairfax city	0.1	1
79104	Texas	Potter County	0.1	1
74044	Oklahoma	Creek County	0.1	1
41075	Kentucky	Campbell County	0.1	1
73096	Oklahoma	Custer County	0.1	1
85713	Arizona	Pima County	0.1	1
64648	Missouri	Daviess County	0.1	1
65202	Missouri	Boone County	0.1	1
21146	Maryland	Anne Arundel County	0.1	1
76179	Texas	Tarrant County	0.1	1
99354	Washington	Benton County	0.1	1
52403	Iowa	Linn County	0.1	1
07481	New Jersey	Bergen County	0.1	1
06422	Connecticut	Middlesex County	0.1	1
53189	Wisconsin	Waukesha County	0.1	1
01801	Massachusetts	Middlesex County	0.1	1
99507	Alaska	Anchorage Borough	0.1	1
98257	Washington	Skagit County	0.1	1
79095	Texas	Collingsworth County	0.1	1
44121	Ohio	Cuyahoga County	0.1	1
90402	California	Los Angeles County	0.1	1
85087	Arizona	Maricopa County	0.1	1
43614	Ohio	Lucas County	0.1	1
20112	Virginia	Prince William County	0.1	1
67213	Kansas	Sedgwick County	0.1	1
65248	Missouri	Howard County	0.1	1
85032	Arizona	Maricopa County	0.1	1
79329	Texas	Lubbock County	0.1	1
20878	Maryland	Montgomery County	0.1	1
39530	Mississippi	Harrison County	0.1	1
23059	Virginia	Henrico County	0.1	1
85282	Arizona	Maricopa County	0.1	1
73018	Oklahoma	Grady County	0.1	1
61822	Illinois	Champaign County	0.1	1
73832	Oklahoma	Ellis County	0.1	1
27332	North Carolina	Lee County	0.1	1
87825	New Mexico	Socorro County	0.1	1
61938	Illinois	Coles County	0.1	1
88062	New Mexico	Grant County	0.1	1
88202	New Mexico	Chaves County	0.1	1
19709	Delaware	New Castle County	0.1	1
17040	Pennsylvania	Perry County	0.1	1

88007	New Mexico	Dona Ana County	0.1	1
06279	Connecticut	Tolland County	0.1	1
34690	Florida	Pasco County	0.1	1
83647	Idaho	Elmore County	0.1	1
67111	Kansas	Kingman County	0.1	1
85303	Arizona	Maricopa County	0.1	1
54313	Wisconsin	Brown County	0.1	1
87006	New Mexico	Valencia County	0.1	1
87511	New Mexico	Rio Arriba County	0.1	1
36693	Alabama	Mobile County	0.1	1
88012	New Mexico	Dona Ana County	0.1	1
98055	Washington	King County	0.1	1
90064	California	Los Angeles County	0.1	1
96815	Hawaii	Honolulu County	0.1	1
32256	Florida	Duval County	0.1	1
22182	Virginia	Fairfax County	0.1	1
60614	Illinois	Cook County	0.1	1
95222	California	Calaveras County	0.1	1
79547	Texas	Haskell County	0.1	1
91901	California	San Diego County	0.1	1
96760	Hawaii	Hawaii County	0.1	1
77057	Texas	Harris County	0.1	1
67003	Kansas	Harper County	0.1	1
02446	Massachusetts	Norfolk County	0.1	1
47401	Indiana	Monroe County	0.1	1
11740	New York	Suffolk County	0.1	1
67801	Kansas	Ford County	0.1	1
66048	Kansas	Leavenworth County	0.1	1
85218	Arizona	Pinal County	0.1	1
92543	California	Riverside County	0.1	1
07840	New Jersey	Warren County	0.1	1
86025	Arizona	Navajo County	0.1	1
17003	Pennsylvania	Lebanon County	0.1	1
06106	Connecticut	Hartford County	0.1	1
97211	Oregon	Multnomah County	0.1	1
68138	Nebraska	Sarpy County	0.1	1
34689	Florida	Pinellas County	0.1	1
35051	Alabama	Shelby County	0.1	1
02302	Massachusetts	Plymouth County	0.1	1
79414	Texas	Lubbock County	0.1	1
28117	North Carolina	Iredell County	0.1	1
33844	Florida	Polk County	0.1	1
30204	Georgia	Lamar County	0.1	1
33761	Florida	Pinellas County	0.1	1
79752	Texas	Upton County	0.1	1
87537	New Mexico	Rio Arriba County	0.1	1
86409	Arizona	Mohave County	0.1	1
47715	Indiana	Vanderburgh County	0.1	1
60440	Illinois	Will County	0.1	1
57035	South Dakota	Minnehaha County	0.1	1
70374	Louisiana	Lafourche Parish	0.1	1

98406	Washington	Pierce County	0.1	1
73049	Oklahoma	Oklahoma County	0.1	1
60156	Illinois	McHenry County	0.1	1
80302	Colorado	Boulder County	0.1	1
61704	Illinois	McLean County	0.1	1
87416	New Mexico	San Juan County	0.1	1
44646	Ohio	Stark County	0.1	1
94019	California	San Mateo County	0.1	1
71675	Arkansas	Drew County	0.1	1
61732	Illinois	McLean County	0.1	1
56586	Minnesota	Otter Tail County	0.1	1
50055	Iowa	Story County	0.1	1
61401	Illinois	Knox County	0.1	1
80127	Colorado	Jefferson County	0.1	1
94507	California	Contra Costa County	0.1	1
10510	New York	Westchester County	0.1	1
46815	Indiana	Allen County	0.1	1
34769	Florida	Osceola County	0.1	1
85215	Arizona	Maricopa County	0.1	1
29455	South Carolina	Charleston County	0.1	1
60616	Illinois	Cook County	0.1	1
74107	Oklahoma	Tulsa County	0.1	1
97117	Oregon	Washington County	0.1	1
15736	Pennsylvania	Armstrong County	0.1	1
08618	New Jersey	Mercer County	0.1	1
79052	Texas	Swisher County	0.1	1
32612	Florida	Alachua County	0.1	1
62236	Illinois	Monroe County	0.1	1
46911	Indiana	Miami County	0.1	1
79916	Texas	El Paso County	0.1	1
73526	Oklahoma	Jackson County	0.1	1
47905	Indiana	Tippecanoe County	0.1	1
08724	New Jersey	Ocean County	0.1	1
78216	Texas	Bexar County	0.1	1
33770	Florida	Pinellas County	0.1	1
55305	Minnesota	Hennepin County	0.1	1
33786	Florida	Pinellas County	0.1	1
73626	Oklahoma	Washita County	0.1	1
92020	California	San Diego County	0.1	1
22205	Virginia	Arlington County	0.1	1
84067	Utah	Weber County	0.1	1
91107	California	Los Angeles County	0.1	1
56001	Minnesota	Blue Earth County	0.1	1
59840	Montana	Ravalli County	0.1	1
22043	Virginia	Fairfax County	0.1	1
87752	New Mexico	Mora County	0.1	1
61701	Illinois	McLean County	0.1	1
66211	Kansas	Johnson County	0.1	1
04079	Maine	Cumberland County	0.1	1
78759	Texas	Travis County	0.1	1
33884	Florida	Polk County	0.1	1

75117	Texas	Van Zandt County	0.1	1
20007	District of Columbia	District of Columbia	0.1	1
29691	South Carolina	Oconee County	0.1	1
73648	Oklahoma	Beckham County	0.1	1
54935	Wisconsin	Fond du Lac County	0.1	1
89503	Nevada	Washoe County	0.1	1
76901	Texas	Tom Green County	0.1	1
22405	Virginia	Stafford County	0.1	1
78155	Texas	Guadalupe County	0.1	1
53956	Wisconsin	Dodge County	0.1	1
45424	Ohio	Montgomery County	0.1	1
20020	District of Columbia	District of Columbia	0.1	1
39402	Mississippi	Forrest County	0.1	1
87821	New Mexico	Catron County	0.1	1
23608	Virginia	Newport News city	0.1	1
78572	Texas	Hidalgo County	0.1	1
30004	Georgia	Fulton County	0.1	1
13167	New York	Oswego County	0.1	1
74365	Oklahoma	Mayes County	0.1	1
37174	Tennessee	Maury County	0.1	1
79118	Texas	Randall County	0.1	1
75785	Texas	Cherokee County	0.1	1
49101	Michigan	Berrien County	0.1	1
97470	Oregon	Douglas County	0.1	1
97862	Oregon	Umatilla County	0.1	1
88130	New Mexico	Roosevelt County	0.1	1
49287	Michigan	Lenawee County	0.1	1
99687	Alaska	Matanuska-Susitna Borough	0.1	1
53220	Wisconsin	Milwaukee County	0.1	1
61882	Illinois	De Witt County	0.1	1
79720	Texas	Howard County	0.1	1
10805	New York	Westchester County	0.1	1
88061	New Mexico	Grant County	0.1	1
29615	South Carolina	Greenville County	0.1	1
66047	Kansas	Douglas County	0.1	1
18054	Pennsylvania	Montgomery County	0.1	1
92109	California	San Diego County	0.1	1
60451	Illinois	Will County	0.1	1
31008	Georgia	Peach County	0.1	1
42164	Kentucky	Allen County	0.1	1
87701	New Mexico	San Miguel County	0.1	1
73124	Oklahoma	Oklahoma County	0.1	1
78745	Texas	Travis County	0.1	1
19018	Pennsylvania	Delaware County	0.1	1
37215	Tennessee	Davidson County	0.1	1
19116	Pennsylvania	Philadelphia County	0.1	1
77590	Texas	Galveston County	0.1	1
89178	Nevada	Clark County	0.1	1
64014	Missouri	Jackson County	0.1	1
65063	Missouri	Callaway County	0.1	1
73843	Oklahoma	Ellis County	0.1	1

86413	Arizona	Mohave County	0.1	1
57380	South Dakota	Charles Mix County	0.1	1
19380	Pennsylvania	Chester County	0.1	1
73160	Oklahoma	Cleveland County	0.1	1
34231	Florida	Sarasota County	0.1	1
23452	Virginia	Virginia Beach city	0.1	1
81007	Colorado	Pueblo County	0.1	1
88345	New Mexico	Lincoln County	0.1	1
87827	New Mexico	Catron County	0.1	1
81008	Colorado	Pueblo County	0.1	1
77035	Texas	Harris County	0.1	1
84116	Utah	Salt Lake County	0.1	1
63017	Missouri	St. Louis County	0.1	1
61801	Illinois	Champaign County	0.1	1
87042	New Mexico	Valencia County	0.1	1
95132	California	Santa Clara County	0.1	1
88005	New Mexico	Dona Ana County	0.1	1
78666	Texas	Hays County	0.1	1
93906	California	Monterey County	0.1	1
30143	Georgia	Pickens County	0.1	1
74036	Oklahoma	Rogers County	0.1	1
64064	Missouri	Jackson County	0.1	1
75126	Texas	Kaufman County	0.1	1
77006	Texas	Harris County	0.1	1
87115	New Mexico	Bernalillo County	0.1	1
75077	Texas	Denton County	0.1	1
33185	Florida	Miami-Dade County	0.1	1
33905	Florida	Lee County	0.1	1
79924	Texas	El Paso County	0.1	1
76112	Texas	Tarrant County	0.1	1
77381	Texas	Montgomery County	0.1	1
48911	Michigan	Ingham County	0.1	1
95603	California	Placer County	0.1	1
87101	New Mexico	Bernalillo County	0.1	1
97838	Oregon	Umatilla County	0.1	1
43311	Ohio	Logan County	0.1	1
66062	Kansas	Johnson County	0.1	1
20009	District of Columbia	District of Columbia	0.1	1
47720	Indiana	Vanderburgh County	0.1	1
79416	Texas	Lubbock County	0.1	1
79012	Texas	Potter County	0.1	1
81132	Colorado	Rio Grande County	0.1	1
76021	Texas	Tarrant County	0.1	1
97361	Oregon	Polk County	0.1	1
65619	Missouri	Greene County	0.1	1
75287	Texas	Collin County	0.1	1
92395	California	San Bernardino County	0.1	1
92065	California	San Diego County	0.1	1
30134	Georgia	Douglas County	0.1	1
80027	Colorado	Boulder County	0.1	1
55082	Minnesota	Washington County	0.1	1

60074	Illinois	Cook County	0.1	1
29412	South Carolina	Charleston County	0.1	1
60190	Illinois	DuPage County	0.1	1
55782	Minnesota	St. Louis County	0.1	1
07012	New Jersey	Passaic County	0.1	1
98632	Washington	Cowlitz County	0.1	1
87417	New Mexico	San Juan County	0.1	1
73065	Oklahoma	McClain County	0.1	1
37167	Tennessee	Rutherford County	0.1	1
37804	Tennessee	Blount County	0.1	1
41010	Kentucky	Grant County	0.1	1
85375	Arizona	Maricopa County	0.1	1
76088	Texas	Parker County	0.1	1
20902	Maryland	Montgomery County	0.1	1
78101	Texas	Bexar County	0.1	1
44312	Ohio	Summit County	0.1	1
32539	Florida	Okaloosa County	0.1	1
67901	Kansas	Seward County	0.1	1
73642	Oklahoma	Roger Mills County	0.1	1
77840	Texas	Brazos County	0.1	1
20002	District of Columbia	District of Columbia	0.1	1
87014	New Mexico	Cibola County	0.1	1
98230	Washington	Whatcom County	0.1	1
85704	Arizona	Pima County	0.1	1
81211	Colorado	Chaffee County	0.1	1
67212	Kansas	Sedgwick County	0.1	1
92162	California	San Diego County	0.1	1
70656	Louisiana	Vernon Parish	0.1	1
85258	Arizona	Maricopa County	0.1	1
78717	Texas	Williamson County	0.1	1
78258	Texas	Bexar County	0.1	1
34430	Florida	Marion County	0.1	1
28906	North Carolina	Cherokee County	0.1	1
27712	North Carolina	Durham County	0.1	1
94566	California	Alameda County	0.1	1
07755	New Jersey	Monmouth County	0.1	1
08620	New Jersey	Mercer County	0.1	1
30064	Georgia	Cobb County	0.1	1
87004	New Mexico	Sandoval County	0.1	1
21210	Maryland	Baltimore city	0.1	1
76248	Texas	Tarrant County	0.1	1
53719	Wisconsin	Dane County	0.1	1
75220	Texas	Dallas County	0.1	1
97305	Oregon	Marion County	0.1	1
11776	New York	Suffolk County	0.1	1
97601	Oregon	Klamath County	0.1	1
63119	Missouri	St. Louis County	0.1	1
80121	Colorado	Arapahoe County	0.1	1
71067	Louisiana	Bossier Parish	0.1	1
36530	Alabama	Baldwin County	0.1	1
22902	Virginia	Charlottesville city	0.1	1

62896	Illinois	Franklin County	0.1	1
76712	Texas	McLennan County	0.1	1
78749	Texas	Travis County	0.1	1
73858	Oklahoma	Ellis County	0.1	1
56377	Minnesota	Stearns County	0.1	1
77479	Texas	Fort Bend County	0.1	1
68134	Nebraska	Douglas County	0.1	1
88415	New Mexico	Union County	0.1	1
11935	New York	Suffolk County	0.1	1
87025	New Mexico	Sandoval County	0.1	1
81241	Colorado	Gunnison County	0.1	1
79102	Texas	Potter County	0.1	1
17601	Pennsylvania	Lancaster County	0.1	1
04038	Maine	Cumberland County	0.1	1
71328	Louisiana	Rapides Parish	0.1	1
07732	New Jersey	Monmouth County	0.1	1
60013	Illinois	McHenry County	0.1	1
22192	Virginia	Prince William County	0.1	1
07302	New Jersey	Hudson County	0.1	1
30022	Georgia	Fulton County	0.1	1
85737	Arizona	Pima County	0.1	1
62838	Illinois	Fayette County	0.1	1
30506	Georgia	Hall County	0.1	1
80918	Colorado	El Paso County	0.1	1
67456	Kansas	McPherson County	0.1	1
14216	New York	Erie County	0.1	1
95405	California	Sonoma County	0.1	1
78620	Texas	Hays County	0.1	1
67037	Kansas	Sedgwick County	0.1	1
78701	Texas	Travis County	0.1	1
95370	California	Tuolumne County	0.1	1
77327	Texas	Liberty County	0.1	1
46158	Indiana	Morgan County	0.1	1
77099	Texas	Harris County	0.1	1
15057	Pennsylvania	Washington County	0.1	1
84029	Utah	Tooele County	0.1	1
97130	Oregon	Tillamook County	0.1	1
66514	Kansas	Geary County	0.1	1
97330	Oregon	Benton County	0.1	1
60089	Illinois	Lake County	0.1	1
73110	Oklahoma	Oklahoma County	0.1	1
70433	Louisiana	St. Tammany Parish	0.1	1
73801	Oklahoma	Woodward County	0.1	1
53121	Wisconsin	Walworth County	0.1	1
95221	California	Calaveras County	0.1	1
92530	California	Riverside County	0.1	1
80241	Colorado	Adams County	0.1	1
46818	Indiana	Allen County	0.1	1
92119	California	San Diego County	0.1	1
88081	New Mexico	Dona Ana County	0.1	1
87016	New Mexico	Torrance County	0.1	1

20653	Maryland	St. Marys County	0.1	1
80128	Colorado	Jefferson County	0.1	1
46923	Indiana	Carroll County	0.1	1
94002	California	San Mateo County	0.1	1
07728	New Jersey	Monmouth County	0.1	1
15243	Pennsylvania	Allegheny County	0.1	1
06708	Connecticut	New Haven County	0.1	1
97302	Oregon	Marion County	0.1	1
55424	Minnesota	Hennepin County	0.1	1
85351	Arizona	Maricopa County	0.1	1
93226	California	Kern County	0.1	1
59102	Montana	Yellowstone County	0.1	1
60548	Illinois	DeKalb County	0.1	1
75904	Texas	Angelina County	0.1	1
66103	Kansas	Wyandotte County	0.1	1
37043	Tennessee	Montgomery County	0.1	1
67127	Kansas	Comanche County	0.1	1
44221	Ohio	Summit County	0.1	1
75056	Texas	Denton County	0.1	1
87571	New Mexico	Taos County	0.1	1
10301	New York	Richmond County	0.1	1
83713	Idaho	Ada County	0.1	1
91701	California	San Bernardino County	0.1	1
32566	Florida	Santa Rosa County	0.1	1
87801	New Mexico	Socorro County	0.1	1
16701	Pennsylvania	Mc Kean County	0.1	1
75116	Texas	Dallas County	0.1	1
39305	Mississippi	Lauderdale County	0.1	1
78148	Texas	Bexar County	0.1	1
33183	Florida	Miami-Dade County	0.1	1
30115	Georgia	Cherokee County	0.1	1
80210	Colorado	Denver County	0.1	1
70065	Louisiana	Jefferson Parish	0.1	1
47021	Indiana	Ripley County	0.1	1
74902	Oklahoma	Le Flore County	0.1	1
74873	Oklahoma	Pottawatomie County	0.1	1
70448	Louisiana	St. Tammany Parish	0.1	1
87401	New Mexico	San Juan County	0.1	1
28037	North Carolina	Lincoln County	0.1	1
46290	Indiana	Hamilton County	0.1	1
76097	Texas	Johnson County	0.1	1
75751	Texas	Henderson County	0.1	1
01568	Massachusetts	Worcester County	0.1	1
77079	Texas	Harris County	0.1	1
18102	Pennsylvania	Lehigh County	0.1	1
94025	California	San Mateo County	0.1	1
79120	Texas	Potter County	0.1	1
53589	Wisconsin	Dane County	0.1	1
89134	Nevada	Clark County	0.1	1
60177	Illinois	Kane County	0.1	1
79036	Texas	Hutchinson County	0.1	1

67005	Kansas	Cowley County	0.1	1
26033	West Virginia	Marshall County	0.1	1
73945	Oklahoma	Texas County	0.1	1
98584	Washington	Mason County	0.1	1
83716	Idaho	Ada County	0.1	1
77474	Texas	Austin County	0.1	1
33184	Florida	Miami-Dade County	0.1	1
79081	Texas	Hansford County	0.1	1
73650	Oklahoma	Roger Mills County	0.1	1
06825	Connecticut	Fairfield County	0.1	1
60067	Illinois	Cook County	0.1	1
43081	Ohio	Franklin County	0.1	1
87001	New Mexico	Sandoval County	0.1	1
60002	Illinois	Lake County	0.1	1
80120	Colorado	Arapahoe County	0.1	1
98032	Washington	King County	0.1	1
73099	Oklahoma	Canadian County	0.1	1
06840	Connecticut	Fairfield County	0.1	1
80132	Colorado	El Paso County	0.1	1
43017	Ohio	Franklin County	0.1	1
85617	Arizona	Cochise County	0.1	1
87514	New Mexico	Taos County	0.1	1
94086	California	Santa Clara County	0.1	1
17019	Pennsylvania	York County	0.1	1
51501	Iowa	Pottawattamie County	0.1	1
79011	Texas	Wheeler County	0.1	1
85364	Arizona	Yuma County	0.1	1
20723	Maryland	Howard County	0.1	1
79903	Texas	El Paso County	0.1	1
80922	Colorado	El Paso County	0.1	1
73026	Oklahoma	Cleveland County	0.1	1
73647	Oklahoma	Washita County	0.1	1
92117	California	San Diego County	0.1	1
11742	New York	Suffolk County	0.1	1
67735	Kansas	Sherman County	0.1	1
56479	Minnesota	Todd County	0.1	1
47374	Indiana	Wayne County	0.1	1
48346	Michigan	Oakland County	0.1	1
72335	Arkansas	St. Francis County	0.1	1
37138	Tennessee	Davidson County	0.1	1
16059	Pennsylvania	Butler County	0.1	1
29323	South Carolina	Spartanburg County	0.1	1
31326	Georgia	Effingham County	0.1	1
92587	California	Riverside County	0.1	1
26187	West Virginia	Wood County	0.1	1
01757	Massachusetts	Worcester County	0.1	1
98373	Washington	Pierce County	0.1	1
34235	Florida	Sarasota County	0.1	1
80534	Colorado	Weld County	0.1	1
95120	California	Santa Clara County	0.1	1
77459	Texas	Fort Bend County	0.1	1

98315	Washington	Kitsap County	0.1	1
36619	Alabama	Mobile County	0.1	1
85281	Arizona	Maricopa County	0.1	1
28270	North Carolina	Mecklenburg County	0.1	1
32837	Florida	Orange County	0.1	1
95355	California	Stanislaus County	0.1	1
32309	Florida	Leon County	0.1	1
73949	Oklahoma	Texas County	0.1	1
71112	Louisiana	Bossier Parish	0.1	1
80134	Colorado	Douglas County	0.1	1
85614	Arizona	Pima County	0.1	1
73048	Oklahoma	Caddo County	0.1	1
32801	Florida	Orange County	0.1	1
73601	Oklahoma	Custer County	0.1	1
55374	Minnesota	Hennepin County	0.1	1
92104	California	San Diego County	0.1	1
87410	New Mexico	San Juan County	0.1	1
06516	Connecticut	New Haven County	0.1	1
46077	Indiana	Boone County	0.1	1
50594	Iowa	Webster County	0.1	1
74735	Oklahoma	Choctaw County	0.1	1
95060	California	Santa Cruz County	0.1	1
79556	Texas	Nolan County	0.1	1
79103	Texas	Potter County	0.1	1
74055	Oklahoma	Tulsa County	0.1	1
17044	Pennsylvania	Mifflin County	0.1	1
62208	Illinois	St. Clair County	0.1	1
85712	Arizona	Pima County	0.1	1
32804	Florida	Orange County	0.1	1
22554	Virginia	Stafford County	0.1	1
05760	Vermont	Addison County	0.1	1
97132	Oregon	Yamhill County	0.1	1
83404	Idaho	Bonneville County	0.1	1
67133	Kansas	Butler County	0.1	1
87022	New Mexico	Bernalillo County	0.1	1
54913	Wisconsin	Outagamie County	0.1	1
84070	Utah	Salt Lake County	0.1	1
92832	California	Orange County	0.1	1
87533	New Mexico	Rio Arriba County	0.1	1
15206	Pennsylvania	Allegheny County	0.1	1
90210	California	Los Angeles County	0.1	1
55113	Minnesota	Ramsey County	0.1	1
81082	Colorado	Las Animas County	0.1	1
29801	South Carolina	Aiken County	0.1	1
89436	Nevada	Washoe County	0.1	1
64119	Missouri	Clay County	0.1	1
19014	Pennsylvania	Delaware County	0.1	1
80524	Colorado	Larimer County	0.1	1
20707	Maryland	Prince Georges County	0.1	1
87310	New Mexico	McKinley County	0.1	1
76107	Texas	Tarrant County	0.1	1

33682	Florida	Hillsborough County	0.1	1
78108	Texas	Guadalupe County	0.1	1
76048	Texas	Hood County	0.1	1
12603	New York	Dutchess County	0.1	1
81654	Colorado	Pitkin County	0.1	1
87413	New Mexico	San Juan County	0.1	1
46368	Indiana	Porter County	0.1	1
79035	Texas	Parmer County	0.1	1
87504	New Mexico	Santa Fe County	0.1	1
19320	Pennsylvania	Chester County	0.1	1
20124	Virginia	Fairfax County	0.1	1
87747	New Mexico	Colfax County	0.1	1
37076	Tennessee	Davidson County	0.1	1
87010	New Mexico	Santa Fe County	0.1	1
73627	Oklahoma	Beckham County	0.1	1
33919	Florida	Lee County	0.1	1
46260	Indiana	Marion County	0.1	1
87531	New Mexico	Rio Arriba County	0.1	1
01571	Massachusetts	Worcester County	0.1	1
03784	New Hampshire	Grafton County	0.1	1
88201	New Mexico	Chaves County	0.1	1
22939	Virginia	Augusta County	0.1	1
20815	Maryland	Montgomery County	0.1	1
25801	West Virginia	Raleigh County	0.1	1
85381	Arizona	Maricopa County	0.1	1
30736	Georgia	Catoosa County	0.1	1
92844	California	Orange County	0.1	1
79022	Texas	Dallam County	0.1	1
92122	California	San Diego County	0.1	1
48858	Michigan	Isabella County	0.1	1
55055	Minnesota	Washington County	0.1	1
65807	Missouri	Greene County	0.1	1
78612	Texas	Bastrop County	0.1	1
73666	Oklahoma	Roger Mills County	0.1	1
01001	Massachusetts	Hampden County	0.1	1
98038	Washington	King County	0.1	1
00940	Puerto Rico	San Juan Municipio	0.1	1
87018	New Mexico	Sandoval County	0.1	1
59802	Montana	Missoula County	0.1	1
85225	Arizona	Maricopa County	0.1	1
73071	Oklahoma	Cleveland County	0.1	1
34655	Florida	Pasco County	0.1	1
64030	Missouri	Jackson County	0.1	1
73772	Oklahoma	Blaine County	0.1	1
99503	Alaska	Anchorage Borough	0.1	1
67870	Kansas	Haskell County	0.1	1
44004	Ohio	Ashtabula County	0.1	1
61614	Illinois	Peoria County	0.1	1
78741	Texas	Travis County	0.1	1
87312	New Mexico	McKinley County	0.1	1
31909	Georgia	Muscogee County	0.1	1

30286	Georgia	Upson County	0.1	1
04011	Maine	Cumberland County	0.1	1
15071	Pennsylvania	Allegheny County	0.1	1
89121	Nevada	Clark County	0.1	1
85254	Arizona	Maricopa County	0.1	1
08873	New Jersey	Somerset County	0.1	1
80516	Colorado	Boulder County	0.1	1
60106	Illinois	DuPage County	0.1	1
19075	Pennsylvania	Montgomery County	0.1	1
07052	New Jersey	Essex County	0.1	1
65401	Missouri	Phelps County	0.1	1
77380	Texas	Montgomery County	0.1	1
95003	California	Santa Cruz County	0.1	1
15222	Pennsylvania	Allegheny County	0.1	1
43068	Ohio	Franklin County	0.1	1
99218	Washington	Spokane County	0.1	1
85718	Arizona	Pima County	0.1	1

\* Includes respondents reporting no ZIP code or an invalid ZIP code .

## APPENDIX B - Detailed Satisfaction Results

Table B-1. Satisfaction for Visits to Day Use Developed Sites

Satisfaction Element	Percent Rating Satisfaction as:					Mean Rating§	Mean Importance†	No. Obs‡
	Very Dissatisfied	Somewhat Dissatisfied	Neither Satisfied nor Dissatisfied	Somewhat Satisfied	Very Satisfied			
Restroom Cleanliness	4.3	0.3	14.6	16.4	64.4	4.4	4.5	272
Developed Facilities	1.3	0.2	3.1	22.1	73.3	4.7	4.3	329
Condition of Environment	1.1	2.7	1.0	14.0	81.2	4.7	4.8	396
Employee Helpfulness	0.2	0.0	0.8	7.9	91.2	4.9	4.5	304
Interpretive Displays	0.1	1.2	5.8	21.2	71.6	4.6	4.2	347
Parking Availability	1.2	0.4	4.7	4.4	89.4	4.8	4.2	367
Parking Lot Condition	1.2	0.3	3.2	10.4	84.8	4.8	3.9	365
Rec. Info. Availability	3.7	4.5	10.8	17.6	63.3	4.3	4.4	342
Road Condition	0.3	0.0	8.6	10.8	80.3	4.7	4.1	216
Feeling of Safety	0.1	0.3	0.8	8.3	90.4	4.9	4.6	385
Scenery	1.1	0.1	0.5	5.1	93.3	4.9	4.8	398
Signage Adequacy	1.1	2.0	4.4	13.3	79.1	4.7	4.5	378
Trail Condition	0.2	0.1	0.9	12.6	86.2	4.8	4.7	233
Value for Fee Paid	1.2	2.3	5.4	13.7	77.4	4.6	4.2	323

NOTE: The data was not reported for items with fewer than 10 responses. Satisfaction and Importance were asked as two separate questions so one of these may have 10 responses even though the other does not.

§ Scale: Very Dissatisfied = 1, Somewhat Dissatisfied = 2, Neither Satisfied nor Dissatisfied = 3, Somewhat Satisfied = 4, Very Satisfied = 5

† Scale: Not Important = 1, Somewhat Important = 2, Moderately Important = 3, Important = 4, Very Important = 5

‡ No. Obs is the number of survey respondents who responded to this item.

Table B-2. Satisfaction for Visits to Overnight Developed Sites

Satisfaction Element	Percent Rating Satisfaction as:					Mean Rating§	Mean Importance†	No. Obs‡
	Very Dissatisfied	Somewhat Dissatisfied	Neither Satisfied nor Dissatisfied	Somewhat Satisfied	Very Satisfied			
Restroom Cleanliness	0.0	0.0	14.4	15.3	70.3	4.6	4.0	17
Developed Facilities	0.0	0.0	29.1	30.3	40.6	4.1	3.7	15
Condition of Environment	0.0	0.0	0.0	38.9	61.1	4.6	4.6	18
Employee Helpfulness	0.0	0.0	53.7	0.5	45.8	3.9	3.6	13
Interpretive Displays	0.0	0.7	21.1	21.5	56.7	4.3	3.8	14
Parking Availability	0.0	0.4	0.4	15.2	83.9	4.8	4.3	17
Parking Lot Condition	0.0	0.0	14.8	29.6	55.5	4.4	3.7	17
Rec. Info. Availability	0.5	2.9	13.1	50.9	32.6	4.1	4.2	17
Road Condition	0.7	0.0	20.5	42.1	36.7	4.1	3.2	13
Feeling of Safety	0.0	0.0	0.0	0.7	99.3	5.0	3.8	18
Scenery	0.0	0.0	0.0	0.8	99.2	5.0	4.5	18
Signage Adequacy	0.0	16.0	12.6	38.1	33.3	3.9	4.5	18
Trail Condition	0.0	1.0	28.4	56.4	14.3	3.8	2.9	11
Value for Fee Paid	0.0	0.0	0.6	0.0	99.4	5.0	4.8	11

NOTE: The data was not reported for items with fewer than 10 responses. Satisfaction and Importance were asked as two separate questions so one of these may have 10 responses even though the other does not.

§ Scale: Very Dissatisfied = 1, Somewhat Dissatisfied = 2, Neither Satisfied nor Dissatisfied = 3, Somewhat Satisfied = 4, Very Satisfied = 5

† Scale: Not Important = 1, Somewhat Important = 2, Moderately Important = 3, Important = 4, Very Important = 5

‡ No. Obs is the number of survey respondents who responded to this item.

Table B-3. Satisfaction for Visits to Undeveloped Areas (GFAs)

Satisfaction Element	Percent Rating Satisfaction as:					Mean Rating§	Mean Importance†	No. Obs‡
	Very Dissatisfied	Somewhat Dissatisfied	Neither Satisfied nor Dissatisfied	Somewhat Satisfied	Very Satisfied			
Restroom Cleanliness								5
Developed Facilities							3.6	8
Condition of Environment	0.0	0.0	25.5	27.9	46.6	4.2	4.6	22
Employee Helpfulness							4.0	9
Interpretive Displays	0.0	38.6	1.3	20.0	40.0	3.6	3.1	10
Parking Availability	0.0	0.7	1.3	19.5	78.5	4.8	4.5	19
Parking Lot Condition	0.0	0.0	0.0	32.9	67.1	4.7	3.4	17
Rec. Info. Availability	0.0	0.8	27.1	28.1	44.0	4.2	4.1	16
Road Condition	13.4	0.0	26.7	41.8	18.0	3.5	3.6	14
Feeling of Safety	0.0	8.5	8.5	10.8	72.2	4.5	4.3	22
Scenery	0.0	0.0	17.0	18.2	64.8	4.5	4.5	22
Signage Adequacy	0.0	0.6	18.7	21.4	59.3	4.4	3.9	20
Trail Condition	0.0	0.0	1.6	38.0	60.4	4.6	4.2	17
Value for Fee Paid								2

NOTE: The data was not reported for items with fewer than 10 responses. Satisfaction and Importance were asked as two separate questions so one of these may have 10 responses even though the other does not.

§ Scale: Very Dissatisfied = 1, Somewhat Dissatisfied = 2, Neither Satisfied nor Dissatisfied = 3, Somewhat Satisfied = 4, Very Satisfied = 5

† Scale: Not Important = 1, Somewhat Important = 2, Moderately Important = 3, Important = 4, Very Important = 5

‡ No. Obs is the number of survey respondents who responded to this item.

Table B-4. Satisfaction for Visits to Designated Wilderness\*

Satisfaction Element	Percent Rating Satisfaction as:					Mean Rating§	Mean Importance†	No. Obs‡
	Very Dissatisfied	Somewhat Dissatisfied	Neither Satisfied nor Dissatisfied	Somewhat Satisfied	Very Satisfied			
Restroom Cleanliness	8.0	6.7	14.7	22.6	48.0	4.0	4.2	27
Developed Facilities	0.0	0.0	4.4	16.2	79.4	4.8	3.9	24
Condition of Environment	0.0	1.7	2.9	23.4	72.0	4.7	4.9	62
Employee Helpfulness	0.0	0.0	0.0	13.9	86.1	4.9	4.5	15
Interpretive Displays	0.0	4.9	13.8	25.6	55.7	4.3	3.7	43
Parking Availability	0.0	10.6	8.8	8.8	71.8	4.4	4.3	57
Parking Lot Condition	0.0	1.9	5.5	14.0	78.5	4.7	3.9	55
Rec. Info. Availability	3.8	5.8	18.6	19.3	52.4	4.1	4.0	55
Road Condition	0.0	0.0	2.8	24.2	73.1	4.7	4.0	38
Feeling of Safety	0.0	0.0	3.5	6.4	90.1	4.9	4.5	61
Scenery	0.0	0.0	1.4	6.3	92.2	4.9	4.8	62
Signage Adequacy	3.5	3.3	8.3	30.2	54.6	4.3	4.4	60
Trail Condition	0.0	0.0	0.0	26.7	73.3	4.7	4.5	60
Value for Fee Paid	0.0	4.7	2.1	11.5	81.8	4.7	4.3	43

NOTE: The data was not reported for items with fewer than 10 responses. Satisfaction and Importance were asked as two separate questions so one of these may have 10 responses even though the other does not.

§ Scale: Very Dissatisfied = 1, Somewhat Dissatisfied = 2, Neither Satisfied nor Dissatisfied = 3, Somewhat Satisfied = 4, Very Satisfied = 5

† Scale: Not Important = 1, Somewhat Important = 2, Moderately Important = 3, Important = 4, Very Important = 5

‡ No. Obs is the number of survey respondents who responded to this item.

\* Data supplied is for all Designated Wilderness on the forest combined. Data was not collected for satisfaction for each individual Wilderness on the forest.