United States Department of Agriculture

Forest Service

Natural Resource Manager

National Visitor Use Monitoring Program

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Visitor Use Report

Newberry Crater (NVM) Deschutes NF

USDA Forest Service
Region 6

National Visitor Use Monitoring
Data collected FY 2018

CONTENTS

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 means 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 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	HIGH	9	97	9.3
DUDS	MEDIUM	8	352	2.3
DUDS	LOW	2	453	0.4
DUDS	PTC1	6	291	2.1
OUDS	DUR4	6	329	1.8
OUDS	DUR5	6	131	4.6
OUDS	RE4	2	160	1.3
OUDS	SUP4	4	281	1.4
GFA	HIGH	1	43	2.3
GFA	MEDIUM	4	116	3.4
GFA	LOW	8	125	6.4
Total		**56**	**2,378**	**2.4**

* 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, OUDS = 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 Subunit level data. Other documents may be obtained through the National Visitor Use Monitoring web page: 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*	436	±14.8
→ Day Use Developed Site Visits	365	±17.4
→ Overnight Use Developed Site Visits	24	±13.4
→ General Forest Area Visits	46	±22.4
Total Estimated National Forest Visits§	225	±17.9
→ Special Events and Organized Camp Use‡	0	±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	639	447	354
Overnight Use Developed Sites	358	247	96
Undeveloped Areas (GFAs)	152	108	74
Total	**1,149**	**802**	**524**

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

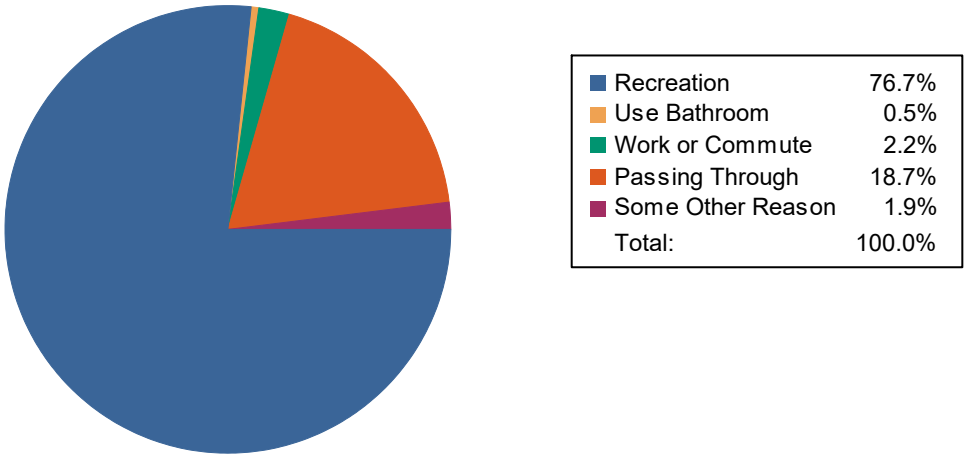
Form Type†	Developed Day Use Site	Developed Overnight	Undeveloped Areas (GFAs)	Wilderness	Total
Basic	133	38	33	0	204
Economic	110	32	21	0	163
Satisfaction	111	26	20	0	157
Total	**354**	**96**	**74**	**0**	**524**

* 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

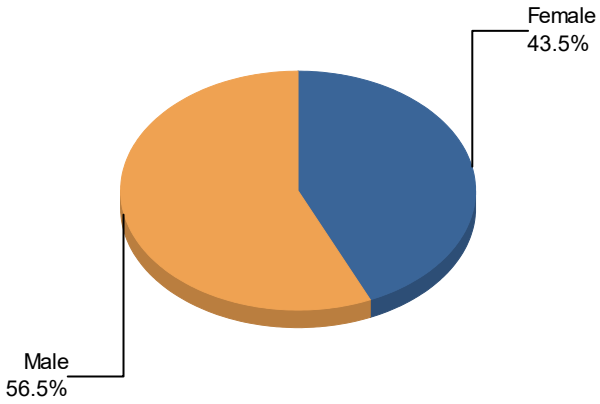
3.1. Demographics

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.

Demographic results show that about 44 percent of visits to the Newberry Crater Volcanic Monument on the Deschutes NF are made by females. Among racial and ethnic minorities, the most commonly encountered are Hispanic/Latinos (3%). The age distribution shows that about 14% of visits are children under age 16. People over the age of 60 account for about one-third of visits. Only about 25 percent of visits are from those living within 50 miles of the forest.

Table 5. Percent of National Forest Visits* by Gender

Gender	Survey Respondents†	National Forest Visits (%)‡
Female	425	43.5
Male	467	56.5
Total	**892**	**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.

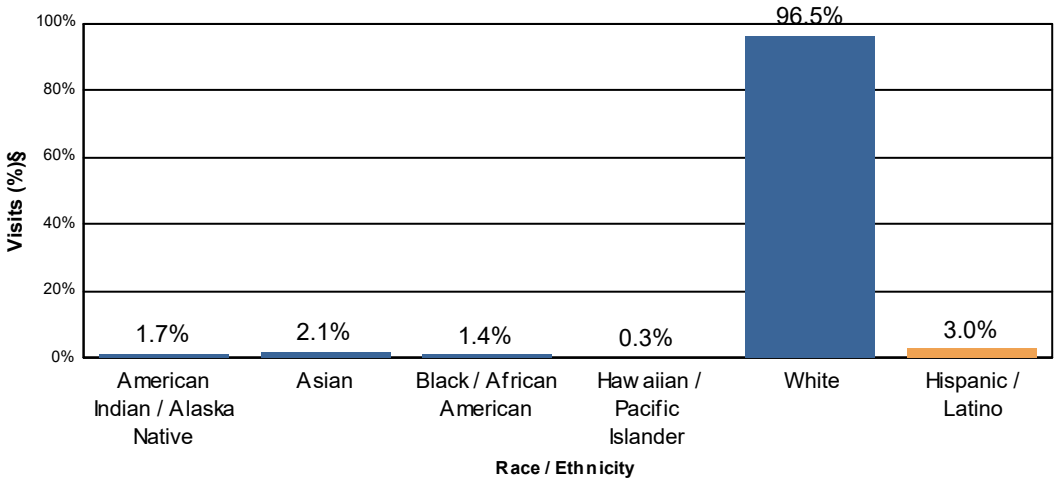
† Non-respondents to gender questions were excluded from analysis.

‡ 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	11	1.7
Asian	13	2.1
Black / African American	4	1.4
Hawaiian / Pacific Islander	2	0.3
White	454	96.5
Total	484	102.0

Ethnicity†	Survey Respondents‡	National Forest Visits (%)§
Hispanic / Latino	13	3.0



* 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.

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

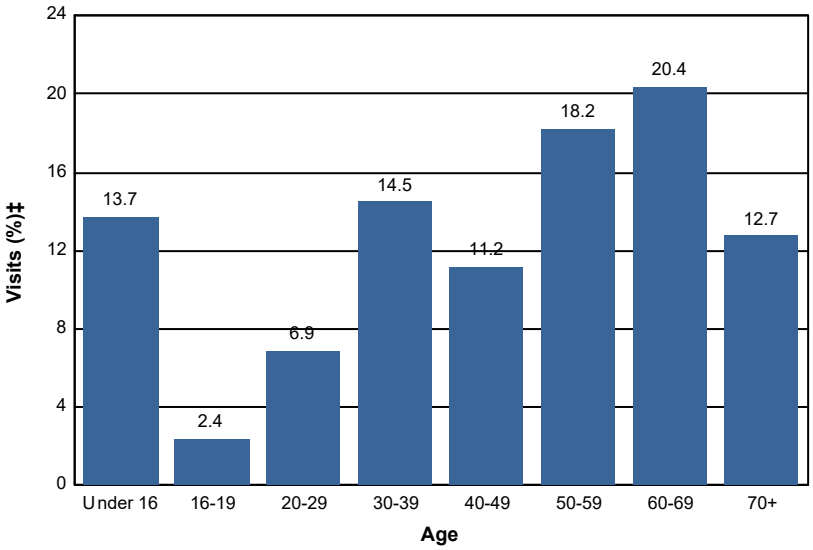
† Race and Ethnicity were asked as two separate questions.

‡ 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	13.7
16-19	2.4
20-29	6.9
30-39	14.5
40-49	11.2
50-59	18.2
60-69	20.4
70+	12.7
Total	**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.

† 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)
97702	Oregon	Deschutes County	25.7	52
97701	Oregon	Deschutes County	12.9	26
Unknown Origin*			11.9	24
Foreign Country			11.4	23
97707	Oregon	Deschutes County	8.4	17
97756	Oregon	Deschutes County	6.9	14
97739	Oregon	Deschutes County	5.0	10
97405	Oregon	Lane County	3.5	7
97217	Oregon	Multnomah County	2.5	5
97401	Oregon	Lane County	2.0	4
97402	Oregon	Lane County	2.0	4
97759	Oregon	Deschutes County	2.0	4
97038	Oregon	Clackamas County	2.0	4
97045	Oregon	Clackamas County	2.0	4
97381	Oregon	Marion County	2.0	4

* 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	12.4
26 - 50 miles	12.1
51 - 75 miles	2.1
76 - 100 miles	0.7
101 - 200 miles	22.9
201 - 500 miles	18.1
Over 500 miles	31.6
Total	99.9

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.

Half of visits to this portion of the forest last at most 3.5 hours, although the average duration is about 13 hours because of longer stays of those using overnight sites. About 73 percent of visits come from people who visit at most 5 times per year. Very frequent visitors are quite rare; under 10 percent of visits are made by people who visit more than 50 times per year.

Table 10. Visit Duration

Visit Type	Average Duration (hours)‡	Median Duration (hours)‡
Site Visit	4.1	1.3
Day Use Developed	1.6	1.2
Overnight Use Developed	44.5	41.7
Undeveloped Areas	3.3	2.0
Designated Wilderness		
National Forest Visit	12.5	3.0

* 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 Subunit 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.

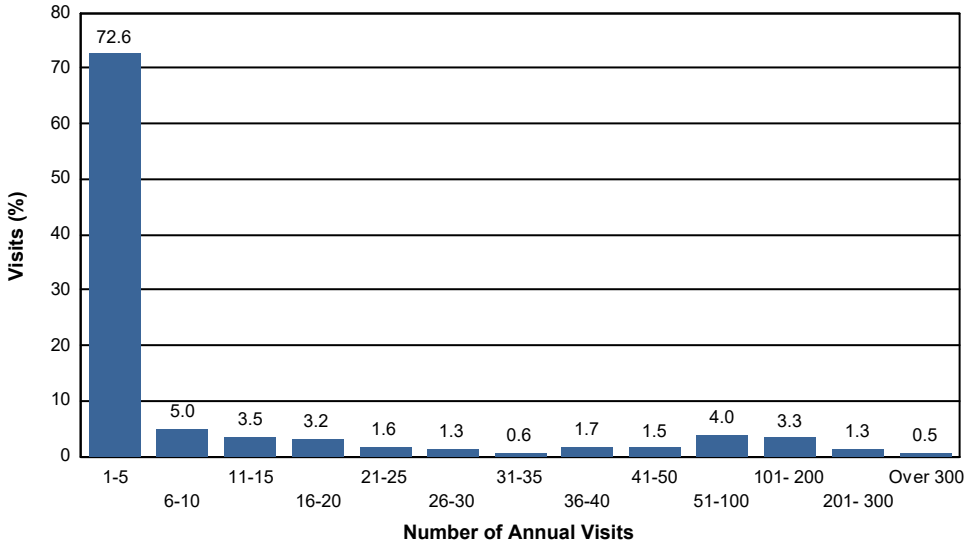
During the interview, visitors were asked how often they visit this national forest for all recreational activities, and how often for their primary activity. Table 12 summarizes the percent of visits that are made by those in each frequency category for this Subunit.

Table 11. Group Characteristics

Characteristic	Average
Percent of visits that were to just one national forest site during the National Forest Visit*	83.7
Number of national forest sites visited on National Forest Visit*	1.3
Group size	2.8
Axles per vehicle	2.1

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

Number of Annual Visits	Visits (%)†	Cumulative Visits (%)
1 - 5	72.6	72.6
6 - 10	5.0	77.5
11 - 15	3.5	81.1
16 - 20	3.2	84.3
21 - 25	1.6	85.8
26 - 30	1.3	87.1
31 - 35	0.6	87.7
36 - 40	1.7	89.4
41 - 50	1.5	90.9
51 - 100	4.0	94.9
101 - 200	3.3	98.2
201 - 300	1.3	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.

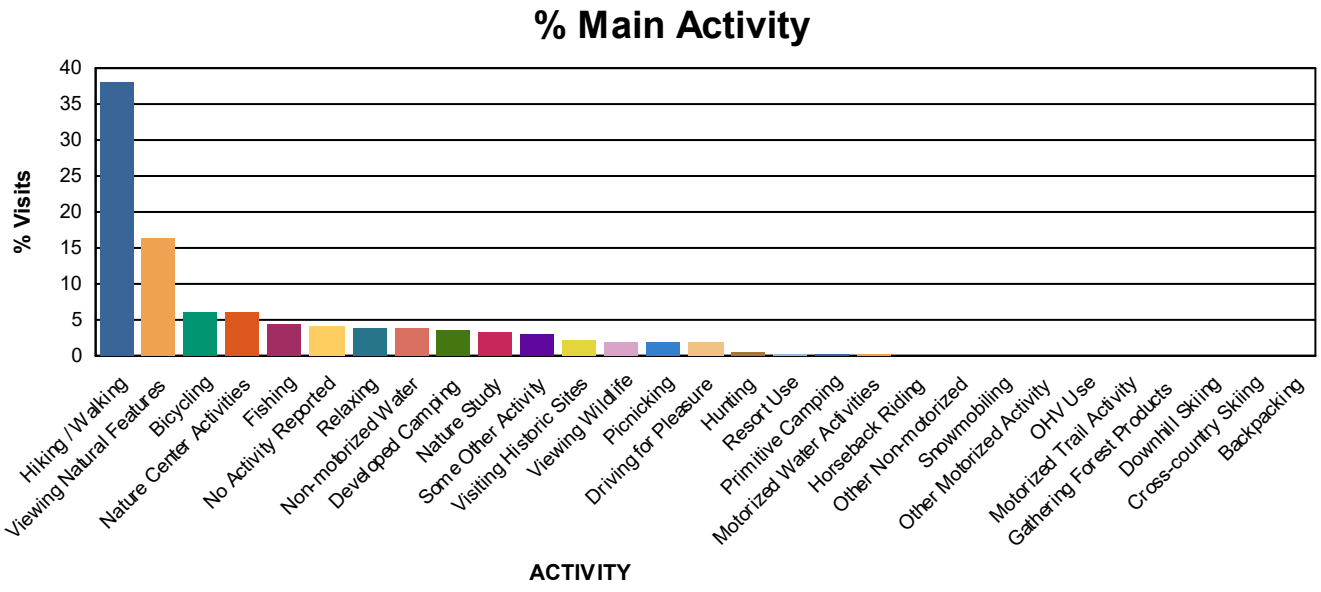
The most frequently reported primary activities are hiking/walking (38%), and viewing natural features (16%).

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
Hiking / Walking	80.4	38.0	2.6
Viewing Natural Features	68.7	16.4	2.5
Viewing Wildlife	59.2	1.9	3.4
Relaxing	48.4	3.9	14.3
Nature Center Activities	41.3	5.9	3.1
Driving for Pleasure	40.2	1.8	2.6
Visiting Historic Sites	30.4	2.1	2.0
Nature Study	23.0	3.4	3.2
Picnicking	18.8	1.8	6.5
Bicycling	10.9	6.1	2.8
Developed Camping	10.0	3.6	47.6
Non-motorized Water	8.0	3.8	2.9
Fishing	7.6	4.5	10.9
Other Non-motorized	4.7	0.0	2.0
Some Other Activity	4.3	3.1	2.7
Resort Use	2.8	0.3	36.9
No Activity Reported	2.6	4.0	
Motorized Water Activities	2.5	0.1	10.0
Primitive Camping	1.0	0.1	26.4
Horseback Riding	0.8	0.0	6.0
Gathering Forest Products	0.8	0.0	0.0
OHV Use	0.7	0.0	0.0
Hunting	0.4	0.4	5.0
Motorized Trail Activity	0.3	0.0	0.0
Other Motorized Activity	0.2	0.0	0.0
Backpacking	0.2	0.0	0.0
Downhill Skiing	0.1	0.0	0.0
Snowmobiling	0.0	0.0	0.0
Cross-country Skiing	0.0	0.0	0.0



* 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%.

Special Facility Use

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	12.3
Scenic Byway	51.3
Visitor Center or Museum	51.9
Designated ORV Area	1.2
Forest Roads	6.9
Interpretive Displays	44.9
Information Sites	27.6
Developed Fishing Site	12.8
Motorized Single Track Trails	0.1
Motorized Dual Track Trails	2.6
None of these Facilities	21.6

* 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.

† 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. Analysis of spending data included identification of the primary visitor segments that have distinct spending profiles as well as estimation of the average spending per party per visit. Results from the FY2005 through FY2009 period are available in a report: https://www.treesearch.fs.fed.us/pubs/43869. Results from the FY2010 through FY2014 period are in the publication process.

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. The distribution of visits by spending segment is not displayed in this report. See the appendix tables in the spending analysis report cited above for spending segment distributions.

For about 27 percent of all visits, the trip to this portion of the Deschutes NF is a day trip from home rather than a trip that includes an overnight stay. Over 50 percent of visits are from people for whom this forest is a side trip rather than the main destination for the trip. The income distribution results show a concentration in the upper range. Over 60 percent of visits are from households making over $100,000 per year.

Table 15 is no longer displayed here

4.2. Spending Profiles

Spending profiles for each segment are contained in the spending analysis report, as are tables that identify whether visitors to a particular forest are in a higher or lower than average range. It is essential to note that the spending profiles are in dollars per party per visit. Obtaining per visit spending is accomplished by dividing the spending for each segment bythe average people per party for the forest and spending segment. These data are in the appendix of the report.

4.3. Total Direct Spending

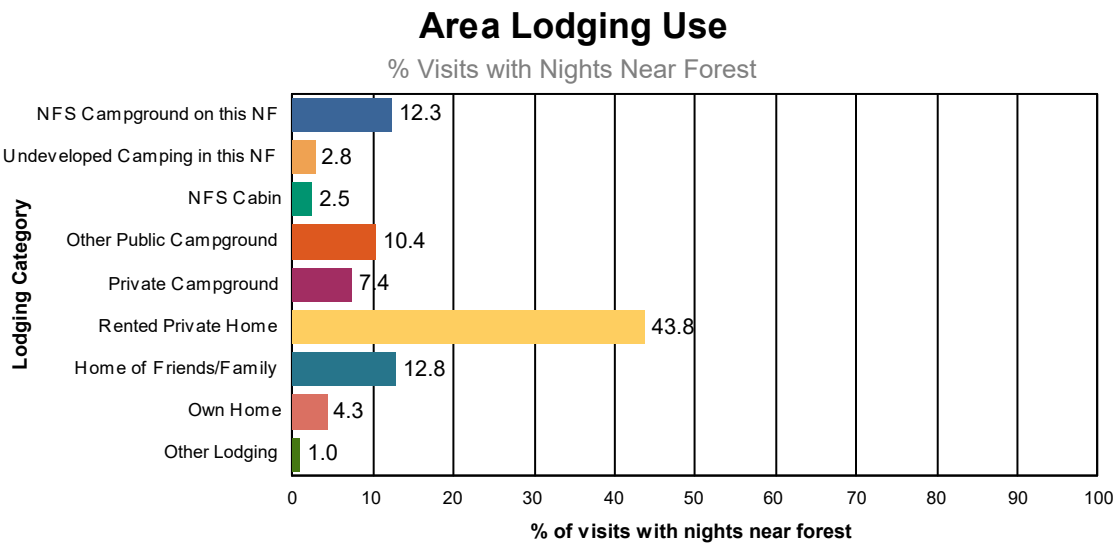
Total direct spending made within 50 miles of the forest and associated with national forest recreation is calculated by combining estimates of per party spending averages with the number of party trips in the segment. The number of party-trips in the segment equals the number of National Forest visits reported in table 2, times the percentage of visits in each spending segment, and divided by the average people per party.

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	$849
Median Total Trip Spending per Party	$300
% NF Visits made on trip with overnight stay away from home	71.7%
% NF Visits with overnight stay within 50 miles of NF	68.0%
Mean nights/visit within 50 miles of NF	4.9
Area Lodging Use	**% Visits with Nights Near Forest**
NFS Campground on this NF	12.3%
Undeveloped Camping in this NF	2.8%
NFS Cabin	2.5%
Other Public Campground	10.4%
Private Campground	7.4%
Rented Private Home	43.8%
Home of Friends/Family	12.8%
Own Home	4.3%
Other Lodging	1.0%



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	0.0
$25,000 to $49,999	6.2
$50,000 to $74,999	18.3
$75,000 to $99,999	13.9
$100,000 to $149,999	27.6
$150,000 and up	34.0
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

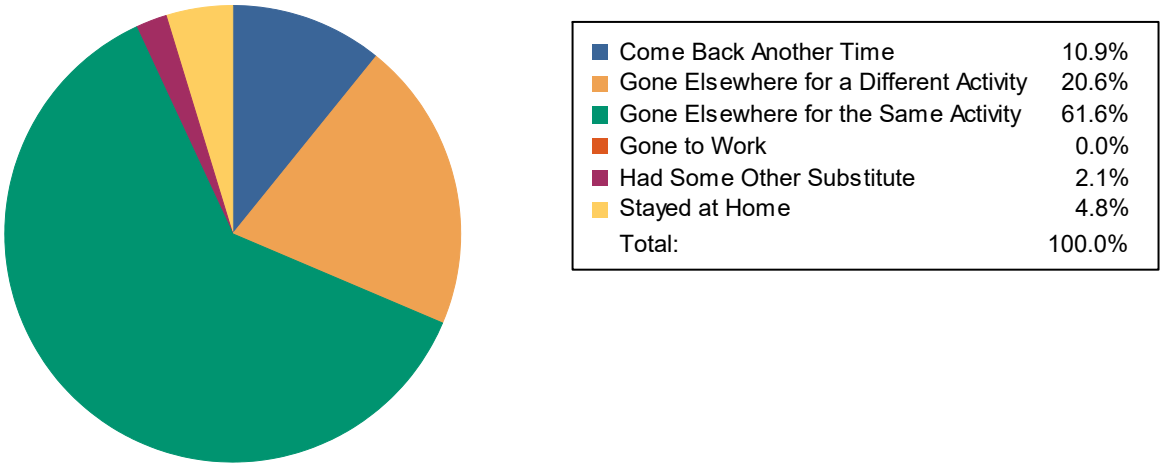
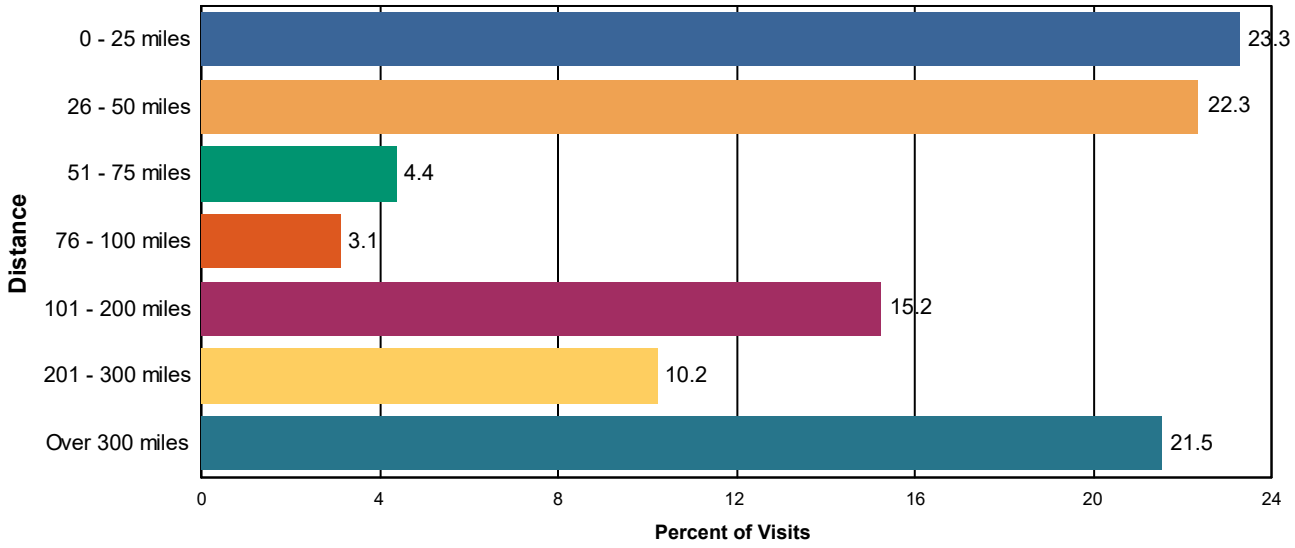


Figure 4. Reported Distance Visitors Would Travel to Alternate Location



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 (DUDS), Overnight Use Developed (OUDS), 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.

The overall satisfaction results are quite good. About 85% of people visiting indicated they were very satisfied with their overall recreation experience, and 13 percent were somewhat satisfied. The results for the composite indices were very high. Satisfaction ratings for perception of safety were over 98% for all types of sites. Ratings for all other indices were at or above 85%.

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

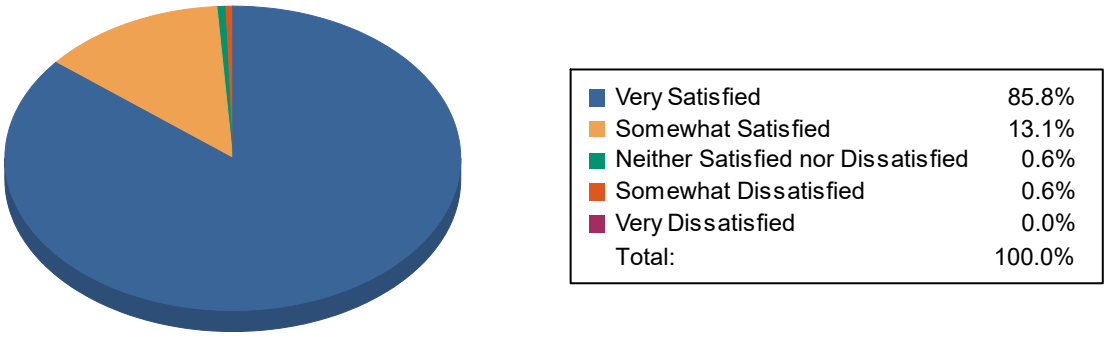


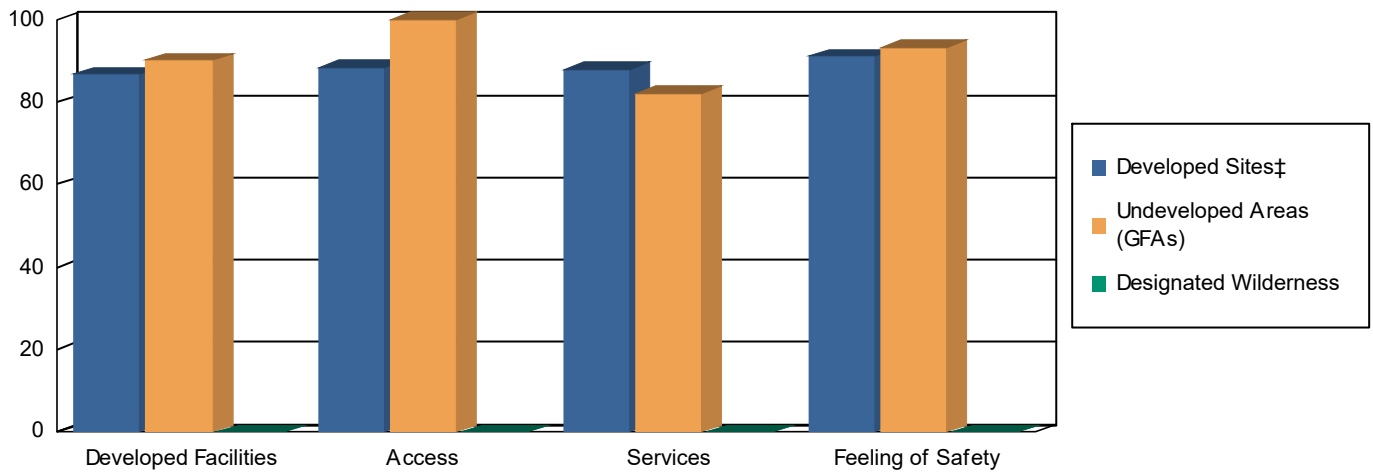
Table 18. Percent Satisfied Index† Scores for Aggregate Categories

Satisfaction Element	Satisfied Survey Respondents (%)		
	Developed Sites‡	Undeveloped Areas (GFAs)	Designated Wilderness
Developed Facilities	86.0	90.2	0.0
Access	93.8	100.0	0.0
Services	90.2	84.6	0.0
Feeling of Safety	96.4	100.0	0.0

† 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	Keep up the Good Work
Rec. Info. Availability	Keep up the Good Work
Road Condition	Keep up the Good Work
Feeling of Satefy	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	*
Condition of Environment	Keep up the Good Work
Employee Helpfulness	*
Interpretive Displays	Keep up the Good Work
Parking Availability	Keep up the Good Work
Parking Lot Condition	Keep up the Good Work
Rec. Info. Availability	Keep up the Good Work
Road Condition	Keep up the Good Work
Feeling of Satefy	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.

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	Keep up the Good Work
Parking Availability	Keep up the Good Work
Parking Lot Condition	Possible Overkill
Rec. Info. Availability	Concentrate Here
Road Condition	Keep up the Good Work
Feeling of Satefy	Keep up the Good Work
Scenery	Keep up the Good Work
Signage Adequacy	Keep up the Good Work
Trail Condition	*
Value for Fee Paid	Keep up the Good Work

* 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
	*

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

Road Conditions & Signage

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

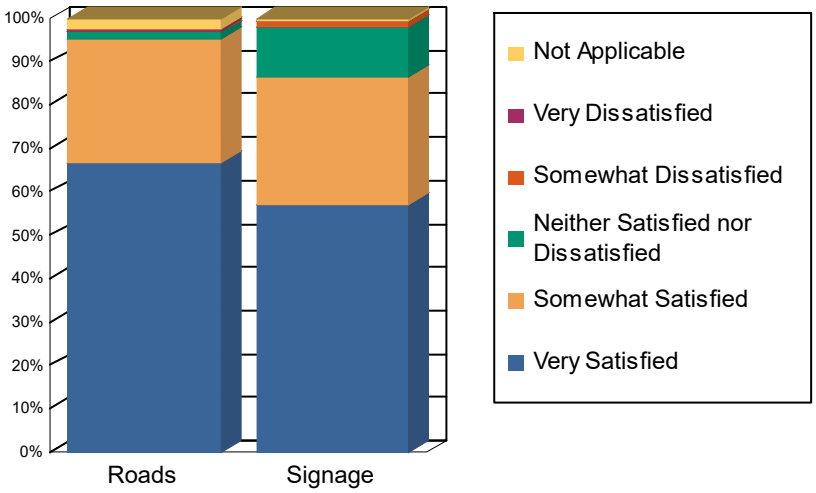
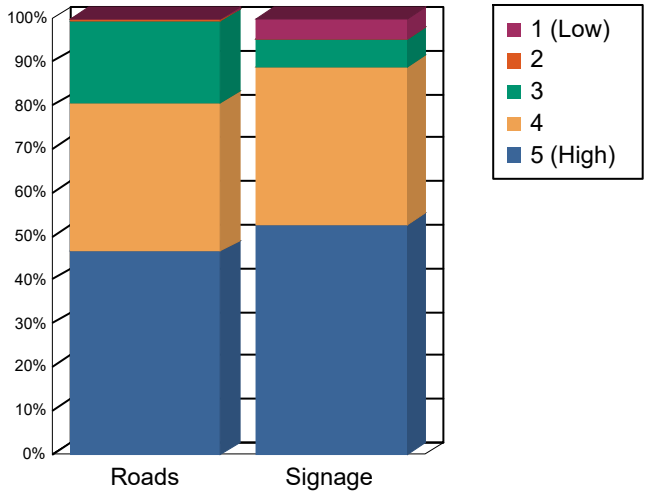


Figure 7b. Importance of Forest-wide Road Conditions & Signage Adequacy

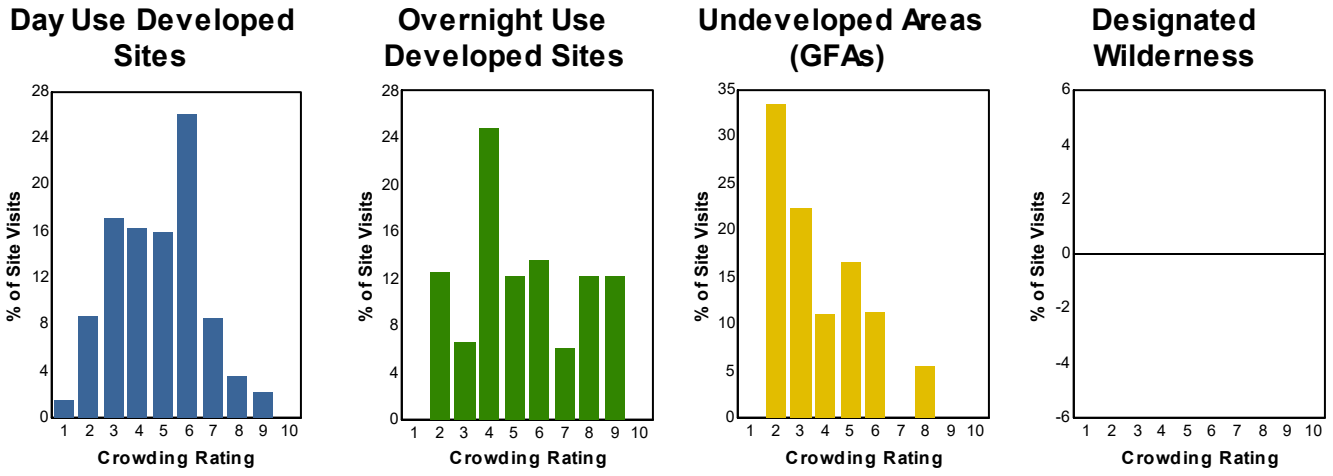


5.1. Crowding

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	0.0	0.0	0.0	0.0
9	2.2	12.2	0.0	0.0
8	3.6	12.2	5.4	0.0
7	8.6	6.1	0.0	0.0
6	26.0	13.5	11.2	0.0
5	15.9	12.2	16.7	0.0
4	16.3	24.8	11.1	0.0
3	17.1	6.5	22.3	0.0
2	8.7	12.6	33.3	0.0
1 - Hardly anyone there	1.5	0.0	0.0	0.0
Average Rating	**4.8**	**5.4**	**3.7**	



* 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	12.8
Of this group, percent who said facilities at site visited were accessible	84.0

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 subunit. 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 (%)‡
Total		**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.

† 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 (%)§#
Total		

Ethnicity†	Survey Respondents‡	Wilderness Site Visits (%)§

NOTE: The data was not reported for items with fewer than 16 responses.

* 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 (%)‡
Total	**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.

† 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)

* 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)
97702	Oregon	Deschutes County	9.9	52
97701	Oregon	Deschutes County	5.0	26
Unknown Origin*			4.6	24
Foreign Country			4.4	23
97707	Oregon	Deschutes County	3.2	17
97756	Oregon	Deschutes County	2.7	14
97739	Oregon	Deschutes County	1.9	10
97405	Oregon	Lane County	1.3	7
97217	Oregon	Multnomah County	1.0	5
97401	Oregon	Lane County	0.8	4
97402	Oregon	Lane County	0.8	4
97759	Oregon	Deschutes County	0.8	4
97038	Oregon	Clackamas County	0.8	4
97045	Oregon	Clackamas County	0.8	4
97381	Oregon	Marion County	0.8	4
97306	Oregon	Marion County	0.6	3
97239	Oregon	Multnomah County	0.6	3
97030	Oregon	Multnomah County	0.6	3
97215	Oregon	Multnomah County	0.6	3
97209	Oregon	Multnomah County	0.6	3
97128	Oregon	Yamhill County	0.6	3
97123	Oregon	Washington County	0.6	3
97232	Oregon	Multnomah County	0.6	3
97302	Oregon	Marion County	0.6	3
97330	Oregon	Benton County	0.6	3
97225	Oregon	Washington County	0.6	3
97086	Oregon	Clackamas County	0.6	3
98506	Washington	Thurston County	0.4	2
98199	Washington	King County	0.4	2
97408	Oregon	Lane County	0.4	2
97437	Oregon	Lane County	0.4	2
98382	Washington	Clallam County	0.4	2
97471	Oregon	Douglas County	0.4	2
98686	Washington	Clark County	0.4	2
97737	Oregon	Klamath County	0.4	2
97301	Oregon	Marion County	0.4	2
97214	Oregon	Multnomah County	0.4	2
97213	Oregon	Multnomah County	0.4	2
97333	Oregon	Benton County	0.4	2
97317	Oregon	Marion County	0.4	2

97080	Oregon	Multnomah County	0.4	2
97477	Oregon	Lane County	0.4	2
98502	Washington	Thurston County	0.4	2
97222	Oregon	Clackamas County	0.4	2
97223	Oregon	Washington County	0.4	2
20817	Maryland	Montgomery County	0.4	2
97754	Oregon	Crook County	0.4	2
97132	Oregon	Yamhill County	0.4	2
98501	Washington	Thurston County	0.4	2
97229	Oregon	Washington County	0.4	2
97007	Oregon	Washington County	0.2	1
89413	Nevada	Douglas County	0.2	1
90041	California	Los Angeles County	0.2	1
99587	Alaska	Anchorage Borough	0.2	1
98155	Washington	King County	0.2	1
03060	New Hampshire	Hillsborough County	0.2	1
97218	Oregon	Multnomah County	0.2	1
92126	California	San Diego County	0.2	1
98125	Washington	King County	0.2	1
52402	Iowa	Linn County	0.2	1
94403	California	San Mateo County	0.2	1
19087	Pennsylvania	Delaware County	0.2	1
98144	Washington	King County	0.2	1
98290	Washington	Snohomish County	0.2	1
29575	South Carolina	Horry County	0.2	1
48864	Michigan	Ingham County	0.2	1
97267	Oregon	Clackamas County	0.2	1
91911	California	San Diego County	0.2	1
89122	Nevada	Clark County	0.2	1
97024	Oregon	Multnomah County	0.2	1
99362	Washington	Walla Walla County	0.2	1
98031	Washington	King County	0.2	1
98377	Washington	Lewis County	0.2	1
54914	Wisconsin	Outagamie County	0.2	1
20002	District of Columbia	District of Columbia	0.2	1
98101	Washington	King County	0.2	1
98528	Washington	Mason County	0.2	1
97201	Oregon	Multnomah County	0.2	1
98374	Washington	Pierce County	0.2	1
97002	Oregon	Marion County	0.2	1
27705	North Carolina	Durham County	0.2	1
83501	Idaho	Nez Perce County	0.2	1
94534	California	Solano County	0.2	1
97338	Oregon	Polk County	0.2	1
97375	Oregon	Marion County	0.2	1
11106	New York	Queens County	0.2	1
97376	Oregon	Lincoln County	0.2	1
93291	California	Tulare County	0.2	1
97530	Oregon	Jackson County	0.2	1
12188	New York	Saratoga County	0.2	1
92128	California	San Diego County	0.2	1

80446	Colorado	Grand County	0.2	1
98223	Washington	Snohomish County	0.2	1
97439	Oregon	Lane County	0.2	1
97478	Oregon	Lane County	0.2	1
30066	Georgia	Cobb County	0.2	1
97411	Oregon	Coos County	0.2	1
97348	Oregon	Linn County	0.2	1
97015	Oregon	Clackamas County	0.2	1
98422	Washington	Pierce County	0.2	1
99353	Washington	Benton County	0.2	1
97386	Oregon	Linn County	0.2	1
08501	New Jersey	Monmouth County	0.2	1
97006	Oregon	Washington County	0.2	1
98023	Washington	King County	0.2	1
97461	Oregon	Lane County	0.2	1
55797	Minnesota	Carlton County	0.2	1
97424	Oregon	Lane County	0.2	1
80403	Colorado	Jefferson County	0.2	1
92683	California	Orange County	0.2	1
97459	Oregon	Coos County	0.2	1
97008	Oregon	Washington County	0.2	1
53207	Wisconsin	Milwaukee County	0.2	1
97420	Oregon	Coos County	0.2	1
97023	Oregon	Clackamas County	0.2	1
97351	Oregon	Polk County	0.2	1
97116	Oregon	Washington County	0.2	1
45761	Ohio	Athens County	0.2	1
99217	Washington	Spokane County	0.2	1
05701	Vermont	Rutland County	0.2	1
98118	Washington	King County	0.2	1
01902	Massachusetts	Essex County	0.2	1
93514	California	Inyo County	0.2	1
85344	Arizona	La Paz County	0.2	1
94901	California	Marin County	0.2	1
11542	New York	Nassau County	0.2	1
06812	Connecticut	Fairfield County	0.2	1
98661	Washington	Clark County	0.2	1
46254	Indiana	Marion County	0.2	1
83530	Idaho	Idaho County	0.2	1
33704	Florida	Pinellas County	0.2	1
95945	California	Nevada County	0.2	1
98226	Washington	Whatcom County	0.2	1
95470	California	Mendocino County	0.2	1
98829	Washington	Okanogan County	0.2	1
77043	Texas	Harris County	0.2	1
85204	Arizona	Maricopa County	0.2	1
53704	Wisconsin	Dane County	0.2	1
83702	Idaho	Ada County	0.2	1
20818	Maryland	Montgomery County	0.2	1
97448	Oregon	Lane County	0.2	1
98225	Washington	Whatcom County	0.2	1

07043	New Jersey	Essex County	0.2	1
32931	Florida	Brevard County	0.2	1
07840	New Jersey	Warren County	0.2	1
48446	Michigan	Lapeer County	0.2	1
84119	Utah	Salt Lake County	0.2	1
97230	Oregon	Multnomah County	0.2	1
98572	Washington	Lewis County	0.2	1
83646	Idaho	Ada County	0.2	1
98177	Washington	King County	0.2	1
34239	Florida	Sarasota County	0.2	1
85737	Arizona	Pima County	0.2	1
97018	Oregon	Columbia County	0.2	1
94549	California	Contra Costa County	0.2	1
97103	Oregon	Clatsop County	0.2	1
95818	California	Sacramento County	0.2	1
70668	Louisiana	Calcasieu Parish	0.2	1
77008	Texas	Harris County	0.2	1
97540	Oregon	Jackson County	0.2	1
98003	Washington	King County	0.2	1
28117	North Carolina	Iredell County	0.2	1
83814	Idaho	Kootenai County	0.2	1
98433	Washington	Pierce County	0.2	1
94040	California	Santa Clara County	0.2	1
24015	Virginia	Roanoke city	0.2	1
37849	Tennessee	Knox County	0.2	1
97503	Oregon	Jackson County	0.2	1
98512	Washington	Thurston County	0.2	1
84015	Utah	Davis County	0.2	1
34736	Florida	Lake County	0.2	1
97404	Oregon	Lane County	0.2	1
97417	Oregon	Douglas County	0.2	1
97535	Oregon	Jackson County	0.2	1
90210	California	Los Angeles County	0.2	1
85233	Arizona	Maricopa County	0.2	1
97760	Oregon	Jefferson County	0.2	1
97205	Oregon	Multnomah County	0.2	1
88310	New Mexico	Otero County	0.2	1
22314	Virginia	Alexandria city	0.2	1
84003	Utah	Utah County	0.2	1
95949	California	Nevada County	0.2	1
22209	Virginia	Arlington County	0.2	1
91101	California	Los Angeles County	0.2	1
98632	Washington	Cowlitz County	0.2	1
98660	Washington	Clark County	0.2	1
94118	California	San Francisco County	0.2	1
98103	Washington	King County	0.2	1
97070	Oregon	Clackamas County	0.2	1
85213	Arizona	Maricopa County	0.2	1
01752	Massachusetts	Middlesex County	0.2	1
91320	California	Ventura County	0.2	1
98409	Washington	Pierce County	0.2	1

97004	Oregon	Clackamas County	0.2	1
46915	Indiana	Carroll County	0.2	1
80487	Colorado	Routt County	0.2	1
95695	California	Yolo County	0.2	1
94551	California	Alameda County	0.2	1
75219	Texas	Dallas County	0.2	1
78721	Texas	Travis County	0.2	1
55337	Minnesota	Dakota County	0.2	1
93238	California	Kern County	0.2	1
98607	Washington	Clark County	0.2	1
97305	Oregon	Marion County	0.2	1
98056	Washington	King County	0.2	1
38901	Mississippi	Grenada County	0.2	1
92345	California	San Bernardino County	0.2	1
96094	California	Siskiyou County	0.2	1
94596	California	Contra Costa County	0.2	1
97304	Oregon	Polk County	0.2	1
89431	Nevada	Washoe County	0.2	1
83714	Idaho	Ada County	0.2	1
48335	Michigan	Oakland County	0.2	1
77554	Texas	Galveston County	0.2	1
95694	California	Yolo County	0.2	1
21914	Maryland	Cecil County	0.2	1
98036	Washington	Snohomish County	0.2	1
97101	Oregon	Yamhill County	0.2	1
83703	Idaho	Ada County	0.2	1
97443	Oregon	Douglas County	0.2	1
97221	Oregon	Multnomah County	0.2	1
97378	Oregon	Yamhill County	0.2	1
97501	Oregon	Jackson County	0.2	1
63017	Missouri	St. Louis County	0.2	1
85749	Arizona	Pima County	0.2	1
53593	Wisconsin	Dane County	0.2	1
97068	Oregon	Clackamas County	0.2	1
98642	Washington	Clark County	0.2	1
95452	California	Sonoma County	0.2	1
14047	New York	Erie County	0.2	1
89519	Nevada	Washoe County	0.2	1
92831	California	Orange County	0.2	1
97470	Oregon	Douglas County	0.2	1
92317	California	San Bernardino County	0.2	1
94618	California	Alameda County	0.2	1
97601	Oregon	Klamath County	0.2	1
98116	Washington	King County	0.2	1
64856	Missouri	McDonald County	0.2	1
53190	Wisconsin	Walworth County	0.2	1
98014	Washington	King County	0.2	1
97203	Oregon	Multnomah County	0.2	1
97031	Oregon	Hood River County	0.2	1
99301	Washington	Franklin County	0.2	1
97272	Oregon	Multnomah County	0.2	1

59917	Montana	Lincoln County	0.2	1
92620	California	Orange County	0.2	1
98264	Washington	Whatcom County	0.2	1
92596	California	Riverside County	0.2	1
97469	Oregon	Douglas County	0.2	1
73127	Oklahoma	Oklahoma County	0.2	1
97536	Oregon	Jackson County	0.2	1
94025	California	San Mateo County	0.2	1
93902	California	Monterey County	0.2	1
97322	Oregon	Linn County	0.2	1
34996	Florida	Martin County	0.2	1
55108	Minnesota	Ramsey County	0.2	1
95213	California	San Joaquin County	0.2	1
98107	Washington	King County	0.2	1
98406	Washington	Pierce County	0.2	1
98591	Washington	Lewis County	0.2	1
80516	Colorado	Boulder County	0.2	1
97211	Oregon	Multnomah County	0.2	1
91362	California	Ventura County	0.2	1
11104	New York	Queens County	0.2	1
46637	Indiana	St. Joseph County	0.2	1
61822	Illinois	Champaign County	0.2	1
98272	Washington	Snohomish County	0.2	1
98052	Washington	King County	0.2	1
96753	Hawaii	Maui County	0.2	1
96150	California	El Dorado County	0.2	1
08505	New Jersey	Burlington County	0.2	1
97219	Oregon	Multnomah County	0.2	1
95521	California	Humboldt County	0.2	1
55398	Minnesota	Sherburne County	0.2	1
98664	Washington	Clark County	0.2	1
97049	Oregon	Clackamas County	0.2	1
53575	Wisconsin	Dane County	0.2	1
85374	Arizona	Maricopa County	0.2	1
96001	California	Shasta County	0.2	1
75961	Texas	Nacogdoches County	0.2	1
97060	Oregon	Multnomah County	0.2	1
85395	Arizona	Maricopa County	0.2	1
85260	Arizona	Maricopa County	0.2	1
92123	California	San Diego County	0.2	1
06457	Connecticut	Middlesex County	0.2	1
97870	Oregon	Baker County	0.2	1
98403	Washington	Pierce County	0.2	1
98682	Washington	Clark County	0.2	1
85346	Arizona	La Paz County	0.2	1
97140	Oregon	Washington County	0.2	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	5.4	11.6	12.1	24.5	46.5	4.0	4.2	45
Developed Facilities	0.0	2.0	0.0	27.9	70.1	4.7	4.3	68
Condition of Environment	0.0	1.5	2.4	17.9	78.2	4.7	4.9	90
Employee Helpfulness	0.0	0.0	0.0	4.2	95.8	5.0	4.7	51
Interpretive Displays	1.8	3.7	9.7	18.8	65.9	4.4	4.3	83
Parking Availability	0.0	2.0	6.7	23.2	68.2	4.6	4.4	87
Parking Lot Condition	0.0	0.0	5.2	19.6	75.2	4.7	4.0	90
Rec. Info. Availability	0.2	5.0	7.6	17.9	69.3	4.5	4.6	63
Road Condition	0.4	0.0	4.7	13.0	81.9	4.8	4.4	73
Feeling of Satefy	0.0	0.0	3.8	7.5	88.7	4.8	4.7	91
Scenery	0.0	0.0	0.2	8.6	91.2	4.9	4.8	92
Signage Adequacy	0.0	3.9	3.7	18.3	74.2	4.6	4.6	88
Trail Condition	0.0	2.3	3.5	18.4	75.8	4.7	4.7	74
Value for Fee Paid	0.0	1.8	1.8	5.3	91.2	4.9	4.6	75

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	10.9	0.0	10.9	32.8	45.3	4.0	4.3	11
Developed Facilities								7
Condition of Environment	0.0	0.0	6.9	0.0	93.1	4.9	4.9	20
Employee Helpfulness								9
Interpretive Displays	0.0	0.0	24.3	26.1	49.6	4.3	4.5	11
Parking Availability	0.0	7.0	7.0	22.1	63.8	4.4	4.6	17
Parking Lot Condition	0.0	0.0	0.0	21.6	78.4	4.8	4.4	17
Rec. Info. Availability	0.0	0.0	1.9	9.4	88.7	4.9	4.9	17
Road Condition	0.0	0.0	0.5	0.0	99.5	5.0	4.7	20
Feeling of Satefy	0.0	0.0	0.0	0.0	100.0	5.0	4.9	21
Scenery	0.0	0.0	0.0	13.0	87.0	4.9	4.8	21
Signage Adequacy	0.0	0.0	14.9	23.9	61.2	4.5	4.6	19
Trail Condition	13.6	0.0	1.0	27.2	58.3	4.2	4.9	12
Value for Fee Paid	0.0	0.0	0.0	0.0	100.0	5.0	4.6	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								4
Developed Facilities								6
Condition of Environment	0.0	5.8	0.0	23.4	70.9	4.6	4.7	17
Employee Helpfulness								7
Interpretive Displays	0.0	0.0	0.0	12.4	87.6	4.9	4.4	16
Parking Availability	0.0	0.0	0.0	0.0	100.0	5.0	4.4	17
Parking Lot Condition	0.0	0.0	0.0	11.9	88.1	4.9	3.8	17
Rec. Info. Availability	8.4	8.4	24.8	8.4	50.0	3.8	4.5	12
Road Condition	0.0	0.0	0.0	25.0	75.0	4.8	4.5	12
Feeling of Satefy	0.0	0.0	0.0	6.7	93.3	4.9	4.7	15
Scenery	0.0	5.9	0.0	5.8	88.3	4.8	4.8	17
Signage Adequacy	5.9	0.0	11.9	11.9	70.3	4.4	4.5	17
Trail Condition								5
Value for Fee Paid	0.0	0.0	0.0	15.3	84.7	4.8	4.8	13

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			
								0

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.