Missouri Department of Natural Resources: State Park Visitor Study, 2005-2006

Final Report

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by
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<u>Abstract</u>

        This report documents a survey conducted by the Missouri Department of Natural Resources (MDNR) during 2005-2006 of 3,362 visitors to 5 Missouri State Parks (Castlewood, Meramec, Roaring River, Route 66, Thousand Hills) and 1 State Historic Site (Felix Valle), and profiles visitor perceptions, preferences, satisfactions, activities, and expenditures.   In summary, large majorities of respondents at all parks indicated they were "very satisfied" with their visits. Of 9 park services evaluated by respondents, highest-ranking or second-highest-ranking was "helpful and friendly staff," described as "excellent" at all parks. Survey respondents spent a total of about $340,000 in association with their visits to these 6 parks. The estimated expenditure by each visitor per day was $31, strikingly similar to the $30/visitor/day expenditure estimate from a 2002 visitor study. Very few visitors indicated that they felt "crowded" during their park visits. The presence of children in visiting parties varied from a high of 43% at Meramec, to perhaps a surprisingly low 8% at Felix Valle. The appeal of MDNR parks to adults, children, or both, obviously will vary in relation to the type of outdoor or cultural experiences featured. But the absence of children in many visitor parties should not come as a surprise, given the age demographic—predominance of older "baby boom" citizenry—of Missouri and the nation. It is recommended that a single, "standard" park visitor questionnaire be developed for future visitor studies ("MDNR Park Visitor Profile").

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Introduction

The Missouri Department of Natural Resources (MDNR) manages 49 state parks, 34 historic sites, and Roger Pryor Backcountry, offering a wide range of recreational and educational opportunity while showcasing a similarly broad array of Missouri's natural and cultural facets.

Citizen evaluation of facilities and experiences is important input to MDNR's performance and program appraisal and planning. For example, during 1997-2000, a series of on-site surveys assessed visitor satisfaction at 25 State Parks and State Historic Sites.

During 2005-2006, data were collected from visitors at 5 State Parks and 1 State Historic Site—hereafter, "parks"—with a total response group of 3,362 (Figure 1):

- ➢ Castlewood State Park (n = 1,810),
- ➢ Meramec State Park (n = 210),
- ➢ Roaring River State Park (n = 325),
- ➢ Route 66 State Park (n = 494),
- ➢ Thousand Hills State (n = 123), and
- ➢ Felix Valle House State Historic Site (n = 400).

Questions assessed users' past visitation; recreational activities; evaluation of services, facilities, and programs; expenditures; sources of park information; and selected background characteristics.

Methods

MDNR collected and entered data for the 2005-2006 visitor study, and D.J. Case & Associates (DJCase) assisted MDNR in data analysis and report preparation. Sampling occurred from Dec. 1, 2005 to November 30, 2006, and was purposive; at Felix Valle, surveys were distributed at the end of the interpretive tour of the historic buildings. At Route 66, Meramec, Roaring River and Thousand Hills, sampling occurred via a roving route of designated use areas (e.g., day-use area, campground, visitor center), where the survey clerk would approach groups of visitors and ask them to participate in the survey. At Castlewood, two exit surveys were conducted, one in which visitors were leaving the park in their vehicles and the other in which trail users were surveyed as they left a particular trailhead.

Figure 1. State Parks & Historic Sites Surveyed During the 2005-2006 Missouri State Park Visitor Study
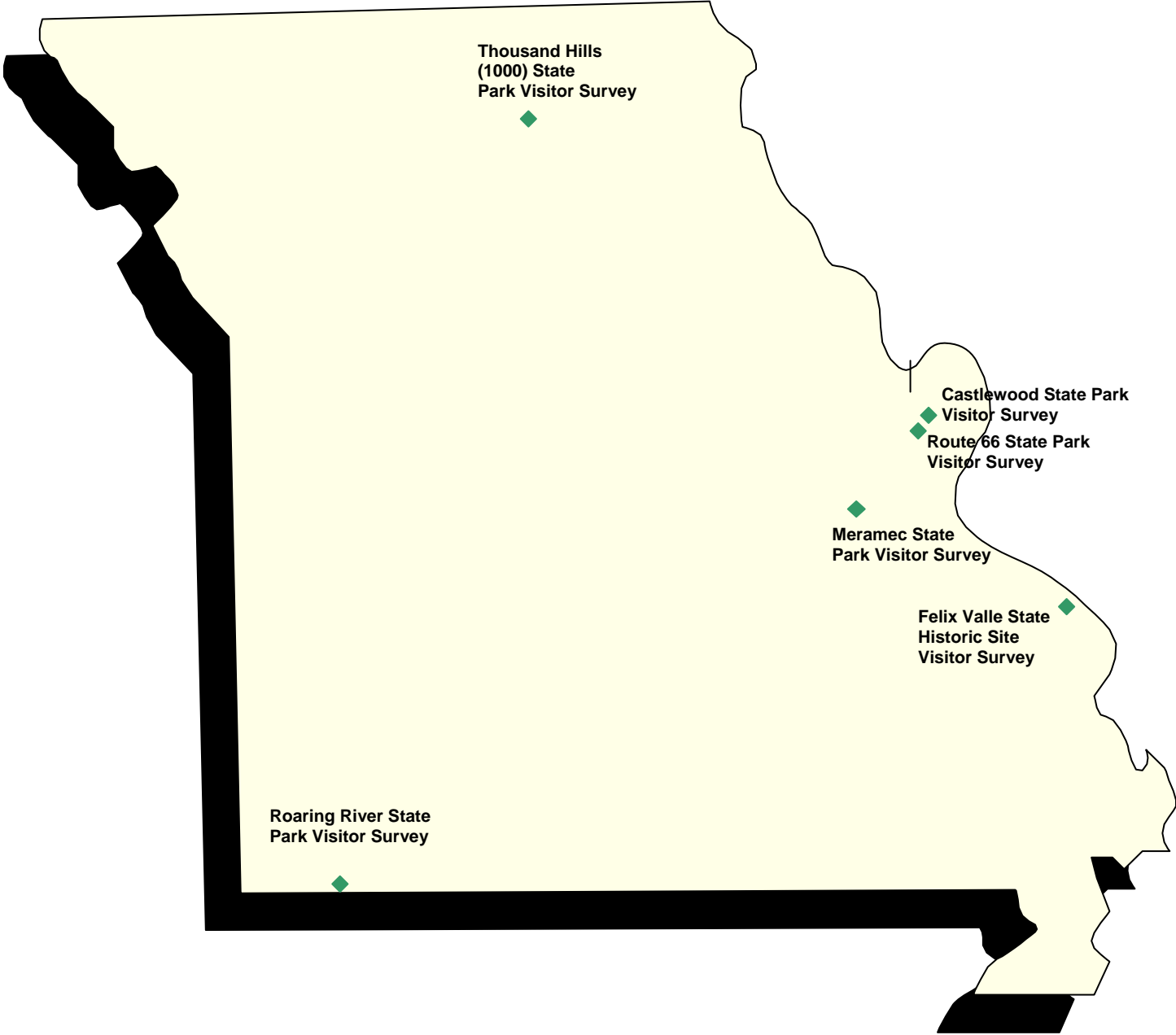
DJCase prepared SPSS 15.0 (2006) files, analyzed data, and prepared draft and final reports. Many of the survey items were the same across all 6 parks, allowing inter-park comparisons (see Appendix A, "Surveys"). Other survey items were customized to assess visitor perceptions of services/facilities/opportunities unique to the parks, thus requiring park-by-park analysis of these items. Findings are presented in approximately the same order as arranged in the questionnaires, though some liberty is taken to group findings by theme (Visitors' Experiences and Activities, Visitors' Evaluations and Expectations, Visitors' Expenditures, and Visitors' Background Characteristics. Supplemental analyses by park are presented in Appendix B. Tables presented in the following narrative include "valid" cases (that is, exclude "missing cases").

Study Site Descriptions (from http://www.mostateparks.com/places.htm)

Castlewood State Park. "A trip to Castlewood State Park gives visitors a first-hand look at the area's glorious past. At the same time, the natural beauty of the Meramec River and the surrounding open spaces offer a serene escape from urban life. Between 1915 and 1940, thousands of St. Louis residents traveled by train each weekend to the Castlewood area for water fun, dancing and clubhouse partying. Today, the 1,802-acre Castlewood State Park preserves the history of the former resort. [Acquired in 1974], the park stretches for nearly five miles, straddling both sides of the Meramec River. It incorporates much of the old resort area, including the grand staircase that once led revelers up to the large hotels and clubs. Although the hotels and clubs are gone, the staircase and the lure of the region remain."
Activities: fishing, picnicking, hiking, equestrian/mountain-biking trails.

Meramec State Park. "The beauty of the Meramec River and its surrounding bluffs, caves and forests have pleased visitors since the park opened in 1927. In 1933, the craftsmen of the Civilian Conservation Corps began blending a variety of visitor facilities into the park's rugged landscape. This popular 6,896-acre park offers year-round access to camping, picnicking and trails. Guided tours of Fisher Cave, one of more than 40 caves in the park, are provided on a seasonal basis for a nominal fee. Water enthusiasts will enjoy swimming, fishing, rafting and canoeing in the Meramec River. Weekdays offer substantially more solitude than weekends. Additional facilities include a park store that offers raft and canoe rentals, campsites (including three group sites), rental cabins, motel rooms and a conference center. Some services and facilities are only available on a seasonal basis. Meramec State Park's visitor center offers a mix of educational exhibits including large aquariums that display the amazing variety of aquatic life found in the river."
Activities: camping, canoeing, cave tours, fishing, lodging, picnicking, swimming, hiking/backpacking trails.

Roaring River State Park. "Roaring River [3,978 acres; acquired in 1928] is known for its premier trout fishing. Young and old alike will enjoy feeding and watching the fish in the spring pool or taking a tour of the trout hatchery. Other park features include a swimming pool, shaded picnic area and store.

Explore the natural wonders of the park on one of seven trails totaling over 10 miles. Ozark Chinquapin Nature Center exhibits interpretive displays and park naturalists present programs on the park's natural history. Overnight guests have a variety of options. Campers will find 187 campsites ranging from basic to electric hookup. The elegant Emory Melton Inn and Conference Center features 26 guest rooms, a restaurant, gift shop and meeting rooms. Twenty-six secluded, rustic cabins with kitchens are perfect for families. Reservations for the inn and cabins are required."
Activities: camping, dining, hiking, lodging, picnicking, swimming trout fishing.

Route 66 State Park. "Route 66 State Park [acquired in 1997] showcases the history and mystique of a highway that has been called "The Main Street of America." The historic Route 66 has come to represent American mobility, independence and spirit of adventure, and the park has captured the essence of the highway in its displays and array of recreation options.   Located along the original Route 66 corridor, the nearly 419-acre park is a boon to park visitors who want to enjoy nature and see interesting historical displays showcasing Route 66. Bridgehead Inn, a 1935 roadhouse, serves as Route 66 State Park's visitor center. It houses Route 66 memorabilia and interprets the environmental success story of the former resort community of Times Beach, which once thrived on the location of the park. Excellent opportunities to picnic, exercise, bird-watch or study nature await visitors. The park area bounds with more than 40 types of birds and a diverse set of trees, plants and animals. Picnic sites are scattered beneath the shade trees. Level walking, bicycling and equestrian trails throughout the park are perfect for beginning bicycle riders and health-conscious visitors."
Activities: fishing, picnicking, hiking/equestrian/bicycling trails.

Thousand Hills State Park. "As the population of Kirksville expanded in the 1950s, the city sought to increase its supply of fresh water. Thousand Hills State Park was created following the construction of the 573-acre Forest Lake to serve as the city's reservoir. Today, the 3,215-acre park [acquired in 1952] offers visitors a unique opportunity to explore the best of northern Missouri. The park's central feature is the lake, created by the damming of Big Creek. While the reservoir supplies water to the community, the park's natural features recall a time when woodlands and savannas covered northern Missouri. Visitors can experience some of these natural wonders by hiking the park's trails. The cool waters of Forest Lake offer a wide variety of recreational opportunities, including swimming, fishing, boating and skiing. Hiking, mountain bicycling and nature study are popular on-land activities. An interpretive shelter displays the park's petroglyphs - rock carvings left behind by the area's inhabitants more than 1,500 years ago. Visitors wanting to extend their stay can sleep in one of the cabins near the dining lodge or camp in a modern campground to experience more of what Thousand Hills State Park has to offer."
Activities: boating, camping, canoeing, dining, fishing, lodging, marina, picnicking, swimming, hiking/mountain biking/backpacking trails.

Felix Valle House State Historic Site. "Settled by French-Canadian *habitants* in the late 1740s, the village of Ste. Genevieve has been inviting visitors to enjoy the

charm of its narrow streets, shops, museums and historic homes for decades. Located amid Ste. Genevieve's National Historic Landmark District, the Felix Vallé House State Historic Site offers visitors a rare glimpse of Missouri's French colonial past. The [10-acre] site [acquired in 1970] features the Felix Vallé House built in 1818 as an American-Federal style residence and mercantile store. Restored and furnished to reflect the 1830s, the home today interprets the American influence on the French community following the Louisiana Purchase. Just across the street is the Dr. Benjamin Shaw House. The earliest portion of this white frame building was constructed in 1819 by Jean Baptiste Bossier as a storehouse for his mercantile business. Today, the house provides interpretive space for the site. Facing *le grand champ*, the agricultural fields of colonial Ste. Genevieve, is the 1792 Bauvais-Amoureux House. The walls of the house were formed from hewn logs, set upright into an earthen trench in a style known as *poteaux en terre,* making it a rare architectural treasure. An impressive diorama of Ste. Genevieve in 1832 is displayed in the house."
Activities: Tours.

Visitors' Experiences and Activities

Respondents were asked if their visits during which they were contacted to provide survey information were their first to the parks (Table 1).

Table 1. Q: "Is this your first visit to…"

	Is this your first visit to ...?		
	Yes	No	Total
Castlewood	12%	88%	1807
Meramec	32%	68%	209
Roaring River	12%	88%	325
Route 66	51%	49%	491
1000 Hills	18%	82%	121
Felix Valle	89%	11%	398
Total	28%	72%	3351

Interestingly, few Castlewood respondents were "first-timers," even though the park was acquired more recently than long-tenured parks such as Roaring River, Thousand Hills, and Meramec. Felix Valle, a SHS acquired in 1970, showed highest first-time visitation.

Respondents indicating prior visitation were asked how many times they had visited the park in the past year (Table 2).

Table 2. Q: "If no [not first visit], about how many times have you visited the park in the past year?"

	If no, how many visits in past year?						
	Valid N	Mean[a]	Median[b]	Mode[c]	Minimum	Maximum	Standard Deviation[d]
Castlewood	1234	34	12	20	1	365	52
Meramec	85	6	3	1	1	60	10
Roaring River	215	8	3	2	1	136	16
Route 66	184	19	4	2	1	250	44
1000 Hills	55	20	10	2	1	100	23
Felix Valle	19	2	2	2	1	3	1
Total	1792	27	9	2	1	365	47

[a]. Arithmetic mean

[b]. Value in a distribution with an equal number of cases on each side of it

[c]. Value which occurs most frequently in the distribution

[d]. Square root of the arithmetic mean of the squared deviations from the mean

Mean prior visitation over the past year varied widely, ranging from an average 2 visits at Felix Valle, to an individual suggesting literal daily (365) visitation to Castlewood. However, other measures of central tendency (median and mode) also warrant serious consideration (especially the median), given the relatively wide ranges and large standard deviations of the means. Median prior visitation ranged from a low of 2 days at Felix Valle to a high of 12 at Castlewood, and total median visitation across all parks was 9 visits. Total average visits (last row, Table 2) across all measures of central tendency should be viewed cautiously because of the influence of the large Castlewood sample ("N-size") on the total estimates.

Subjects were asked if, during their visits, they were "staying overnight" (or in the case of Castlewood, Route 66, and Felix Valle, "staying overnight *nearby*")—with the intent of estimating if the parks' attractions prompted an overnight stay, either within the park or nearby (Table 3)—and if so, how many nights would be involved in the stay (Table 4a).

Table 3. Q: "During this visit to [park], are you staying overnight [nearby]?"

	Are you staying overnight away from home?		
	Yes	No	Total
Castlewood	3%	97%	1796
Meramec	76%	24%	209
Roaring River	64%	36%	321
Route 66	22%	78%	490
1000 Hills	46%	54%	120
Felix Valle	59%	41%	398
Total	25%	75%	3334

Overnight stays in apparent association with park visitation varied from the high at Meramec (76%) to the low at Castlewood (3%). Interestingly, the relatively high percent of visitors to Felix Valle indicating an overnight visit (59%) suggests that this SHS has significant appeal as a site for day-visitation, and holds promise as part of a multi-day tour or vacation promotion.

Table 4a. Q: "If yes [staying over], how many nights are you staying?""

	If YES how many nights?						
	Valid N	Mean	Median	Mode	Minimum	Maximum	Standard Deviation
Castlewood	37	6	3	2	1	36	8
Meramec	149	3	2	2	1	15	2
Roaring River	184	5	4	3	1	42	5
Route 66	81	3	3	2	1	30	4
1000 Hills	45	3	3	2	1	10	2
Felix Valle	210	2	2	1	1	12	2
Total	706	4	2	2	1	42	4

Median nights of stay were quite similar across all 6 parks, ranging from 2 at Meramec and Felix Valle to 4 at Roaring River. Notably high values for "maximum number of days" across all parks (10 at Thousand Hills to 42 at Roaring River) confirm an infrequent but recurring observation by some park and campground staff; that a few visitors settle-in for extended stays—in some cases, to reasonable purpose (in the case of extended of prolonged vacations, or RV'ers in retirement), but in others, with all the appearances (and trappings and issues) of establishing semi-permanent residence in proximity to the park.

The mean length of park stay varied from park to park, with a high of 3.5 at Roaring River to a low of 1 day at Castlewood (Table 4b). Considering all parks, mean length of stay was 1.53 days, with a median of 1 (Table 4c).

Table 4b. Q: Total length of park stay, in days (including day trips), by park.

	How many days in park visit?						
	Valid N	Mean	Median	Mode	Minimum	Maximum	Sum
Castlewood	1810	1.09	1	1	1	36	1981
Meramec	210	2.33	2	1	1	15	490
Roaring River	325	3.49	2	1	1	42	1134
Route 66	494	1.39	1	1	1	30	689
1000 Hills	123	1.84	1	1	1	10	226
Felix Valle	400	1.60	1	1	1	12	639

Table 4c. Q: Total length of park stay, in days (including day trips), all parks.

How many days in park visit? (ALL PARKS)						
Valid N	Mean	Median	Mode	Minimum	Maximum	Sum
3362	1.53	1	1	1	42	5159

Respondents were asked to describe the composition of the group or party of which they were a part (Table 5).

Table 5. Q: "Who did you come with during this visit to [park]?"

	Who did you come with?						
	I came alone	Family	Family & friends	Friends	Club or group	Other	Total
Castlewood	26%	33%	13%	20%	4%	5%	1795
Meramec	4%	60%	20%	9%	2%	4%	205
Roaring River	7%	52%	27%	12%	1%	1%	320
Route 66	15%	54%	11%	14%	4%	3%	491
1000 Hills	18%	44%	23%	13%	1%	1%	117
Felix Valle	5%	66%	6%	17%	2%	4%	393
Total	18%	44%	14%	17%	3%	4%	3321

Most parties indicated visiting with "family" or "family & friends." Respondents were able to fill-in some "other" party than the categories allowed; few were offered, and most of these were some variation of "with my dog," emphasizing the importance of accommodating pets at parks (Appendix B, Table B1).

Party size was assessed, including number of adults per party (Table 6), children per party (Table 7), and total party size (Table 8).

Table 6. Q: "How many adults (18+), including yourself, are in your immediate group?"

	Number adults in group?						
	Valid N	Mean	Median	Mode	Minimum	Maximum	Standard Deviation
Castlewood	1735	2.41	2	2	1	43	3.00
Meramec	205	3.14	2	2	1	20	2.90
Roaring River	319	3.44	2	2	1	19	2.81
Route 66	485	2.57	2	2	1	50	3.51
1000 Hills	117	2.33	2	2	1	8	1.36
Felix Valle	390	2.58	2	2	1	26	2.37
Total	3251	2.60	2	2	1	50	2.96

Table 7. Q: "How many children (0-17) are in your immediate group?"

	Number children in group?						
	Valid N	Mean	Median	Mode	Minimum	Maximum	Standard Deviation
Castlewood	384	2.96	2	1	1	60	4.82
Meramec	91	4.14	2	2	1	35	6.15
Roaring River	117	2.62	2	2	1	20	2.14
Route 66	133	2.91	2	1	1	31	4.80
1000 Hills	44	2.09	2	1	1	6	1.31
Felix Valle	31	1.48	1	1	1	3	.72
Total	800	2.93	2	1	1	60	4.50

Table 8. Q : Total party size, calculated from adults and children in group.

	Total party size?						
	Valid N	Mean	Median	Mode	Minimum	Maximum	Standard Deviation
Castlewood	1735	3.01	2	2	1	70	4.26
Meramec	205	4.96	3	2	1	49	6.80
Roaring River	319	4.39	3	2	1	35	3.78
Route 66	485	3.35	2	2	1	50	4.72
1000 Hills	117	3.12	3	2	1	13	2.15
Felix Valle	390	2.70	2	2	1	26	2.39
Total	3251	3.28	2	2	1	70	4.31

The median and modal estimates of adults, children, and total group size are much more illuminating than the means, because of the effect of large groups on the arithmetic means.

Just as interesting, however, is a simple table indicating whether or not children were present in the party. One would surmise, based on the type of experiences offered at each of the parks—as well as an aging population—that the presence of children would vary across parks (Table 9).

Table 9. Presence of children (yes/no) in the group, by park.

	Were children in party?		
	No	Yes	Total
Castlewood	79%	21%	1810
Meramec	57%	43%	210
Roaring River	64%	36%	325
Route 66	73%	27%	494
1000 Hills	64%	36%	123
Felix Valle	92%	8%	400
Total	76%	24%	3362

Indeed, the presence of children in visiting parties varied from a high of 43% at Meramec, to perhaps a surprisingly low 8% at Felix Valle. Quite conceivably these data

were affected by sampling methodology, or by time of year or season the forms were distributed. Nonetheless, taken at face value, there is some indication that, for example, Felix Valle appeals much more to adults, or appeals more to adults in a life stage or circumstance that does not involve children. And clearly, the appeal of MDNR parks to adults, children, or both, will definitely vary in relation to the type of outdoor or cultural experiences featured. Too, reemphasizing, the growing absence of children in many visitor parties should not come as a surprise, given the age demographic—predominance of older "baby boom" citizenry—of Missouri and the nation.

Respondents were asked if the parks were their primary destinations (Table 10).

Table 10. Q: "Is [park] the primary destination of your trip to the area?"

	Is the park your primary destination?		
	Yes	No	Total
Castlewood	85%	15%	1762
Meramec	82%	18%	204
Roaring River	92%	8%	321
Route 66	59%	41%	480
1000 Hills	80%	20%	117
Felix Valle	14%	86%	387
Total	73%	27%	3271

Opportunistic visitation was pronounced at Route 66, and especially so at Felix Valle. In contrast, very few visitors to Roaring River simply happen upon the park and its amenities and opportunities. Other primary destinations were listed (Appendix B, Table B2).

Several questions in the Felix Valle survey were directed at a more specific understanding of how visitors learned of the park (Table 11 and Table 12).

Table 11. Q: "Did you know about Felix Valle House State Historic Site before you arrived in Ste. Genevieve for this visit?"

Did you know about FV SHS before arrival?	Yes	40%
	No	60%
	Total	392

Table 12. Q: "How did you find out about Felix Valle House State Historic Site?"

How did you find out about FV SHS?	Great River Rd Interpretive Center Office	32%
	Referred by local B&B	3%
	Referred by another house museum	3%
	Internet	10%
	Word of mouth	19%
	Other	33%
	Total	386

"Other" sources of information about Felix Valle ranged widely from road signage, to literature (e.g., Early American Life Magazine), to visitors coming upon the park while walking the area (Appendix B, Table B3).

All respondents were specifically asked if their stays were extended because of the parks (Table 13), and if so, by how many days (Table 14).

Table 13. Q: "Have you extended your stay in the area because of Castlewood State Park?"

	Have you extended your stay because of the park?		
	Yes	No	Total
Castlewood	3%	97%	1720
Meramec	15%	85%	199
Roaring River	17%	83%	313
Route 66	7%	93%	468
1000 Hills	13%	87%	116
Felix Valle	6%	94%	386
Total	6%	94%	3202

Table 14. Q: "If yes, how many days have you extended your stay?" (for respondents providing follow-up answers).

	If so by how many days?						
	Valid N	Mean	Median	Mode	Minimum	Maximum	Standard Deviation
Castlewood	10	6	3	1	1	20	6
Meramec	17	2	1	1	1	4	1
Roaring River	29	3	2	2	1	15	4
Route 66	6	1	1	1	1	3	1
1000 Hills	8	3	3	1	1	9	3
Felix Valle	11	1	1	1	1	2	0
Total	81	3	1	1	1	20	3

Generally, 9 of 10 visitors indicated that they did not extend their visits because of the parks. Of those respondents indicating they did extend their visits—and of those providing data for length of extension—an additional day was the median. Undoubtedly, however, the parks hold significant appeal for some; indeed, so much so that a few visitors volunteered that they actually reside in proximity to the parks because of the amenities the parks offer (Appendix B). And in the case of Castlewood, most respondents appear to reside within close proximity of the park, evidenced by a median drive of 8 miles to reach the facility, and a minimum of "0" miles (Table 15).

Table 15. Q: "How many miles did you drive from your home to reach Castlewood State Park during this visit?".

	Valid N	Mean	Median	Mode	Minimum	Maximum	Standard Deviation
How many miles did you drive to reach Castlewood?	1661	14	8	5	0	900	36

Respondents were asked to provide ZIP codes ("What is your 5-digit ZIP code [or country of residence, if you live outside the U.S.]?"). Although the majority (84%) of respondents indicated being from Missouri, the percentage of Missouri respondents ranged widely between parks, from a low of 50% at Roaring River to a high of 95% at Castlewood (Table 16a). Both Roaring River (50%) and Felix Valle (35%) had higher percentages of out-of-state visitors when compared to the other four facilities, not surprising considering their geographic locations and unique site characteristics. A comparison of visitor surveys conducted in 1997 (Meramec) and 2000 (Castlewood, Roaring River and Route 66) revealed similar ZIP code results to the 2006 results for those parks (Fink and Moisey, 1997; Fredrickson and Vessell, 2000; Fredrickson and Vessell, 2001; Fredrickson and Vessell, 2001), although the percentage of out-of-state visitors increased for Route 66.

Table 16a. Q: "What is your 5-digit ZIP code (or country of residence, if you live outside the U.S.)?

	Castlewood		Meramec		Roaring River		Route 66		1000 Hills	Felix Valle	Total
	2000	2006	1997	2006	2000	2006	2000	2006	(2006)	(2006)	(2006)
Missouri	97%	95%	80%	78%	47%	50%	92%	82%	88%	65%	84%
Illinois	2%	3%	11%	11%		1%	4%	5%	3%	15%	5%
Oklahoma					13%	17%				1%	2%
Kansas				1%	9%	10%			1%	1%	1%
Arkansas					18%	12%		1%	1%		1%
Texas			1%	2%	6%	5%		2%		2%	1%
Tennessee								1%		4%	1%
Iowa				1%		1%		1%	4%	2%	1%
Other states	1%	2%	7%	8%	7%	4%	2%	8%	3%	10%	4%
Total	373	1150	590	179		277	188	375	100	347	2828

The U.S. Census Bureau (http://www.census.gov) has identified 28 core based statistical areas (CBSA) within Missouri, eight of which are metropolitan statistical areas (MSA) and 20 of which are micropolitan statistical areas (MiSA). Each MSA must have at least one urbanized area of 50,000 or more inhabitants. Each MiSA must have at least one urban cluster of at least 10,000 but less than 50,000 population. For the purpose of this report, only those ZIP codes within the eight MSAs were identified. All other Missouri ZIP codes were categorized as non-metropolitan areas. Table 16b lists the counties included in the eight MSAs within Missouri and Table 16c provides the percentages of survey respondents within those MSAs by park. The vast majority (82%) of respondents indicated being from the St. Louis MSA while 11% were from non-metropolitan areas, 3% were from the Kansas City MSA, and a combined 5% were from the other six MSAs in Missouri. Not surprisingly, Castlewood (99%), Route 66 (88%)

and Meramec (76%) accounted for the high percentage of respondents from the St. Louis MSA.

Table 16b. MSAs in Missouri.

MSA	Counties	MSA	Counties
Columbia	Boone	St. Joseph, MO-KS*	Andrew
	Howard		Buchanan
Fayetteville, AR*	McDonald		DeKalb
Jefferson City	Callaway	St. Louis, MO-IL*	Franklin
	Cole		Jefferson
	Moniteau		Lincoln
	Osage		St. Charles
Joplin	Jasper		St. Louis Co.
	Newton		St. Louis City
Kansas City, MO-KS*	Bates		Warren
	Caldwell		Washington
	Cass	Springfield	Christian
	Clay		Dallas
	Clinton		Greene
	Jackson		Polk
	Lafayette		Webster
	Platte		
	Ray		

*Listed counties include only Missouri counties; out-of-state counties that fall within the individual MSAs are not included.

Table 16c. Percentage of MSAs, by park.*

	Castlewood	Meramec	Roaring River	Route 66	1000 Hills	Felix Valle	Total
Columbia	0%	2%	1%	1%	0%	1%	1%
Fayetteville, AR	0%	0%	17%	0%	0%	0%	1%
Jefferson City	0%	3%	0%	1%	1%	2%	1%
Joplin	0%	1%	17%	0%	0%	0%	1%
Kansas City, MO-KS	0%	1%	14%	3%	15%	7%	3%
St. Joseph, MO-KS	0%	3%	0%	0%	1%	0%	0%
St. Louis, MO-IL	99%	76%	2%	88%	3%	54%	82%
Springfield	0%	1%	14%	0%	0%	2%	1%
Non-metropolitan	0%	14%	35%	7%	80%	33%	11%
Total	1508	148	167	316	89	245	2473

*Total percentage includes Missouri and out-of-state counties that fall within MSA.

The average distance visitors traveled to visit the six facilities ranged from 29 miles at Castlewood to 252 miles at Felix Valle. Table 16d compares the mean, median, mode, minimum and maximum miles traveled for each facility. Figures 1a through 1f show residence of visitors by ZIP code.

Table 16d. Distance traveled in miles, by park.

	Mean	Median	Mode	Minimum	Maximum
Castlewood	29	9	2	2	1796
Meramec	140	71	37	10	1417
Roaring River	163	82	7	7	1612
Route 66	135	20	4	4	2077
1000 Hills	77	12	5	5	748
Felix Valle	252	90	62*	2	2140
Total	92	18	2	2	2140

*Multiple modes exist. The smallest value is shown.

Figure 2a. Castlewood ZIP codes
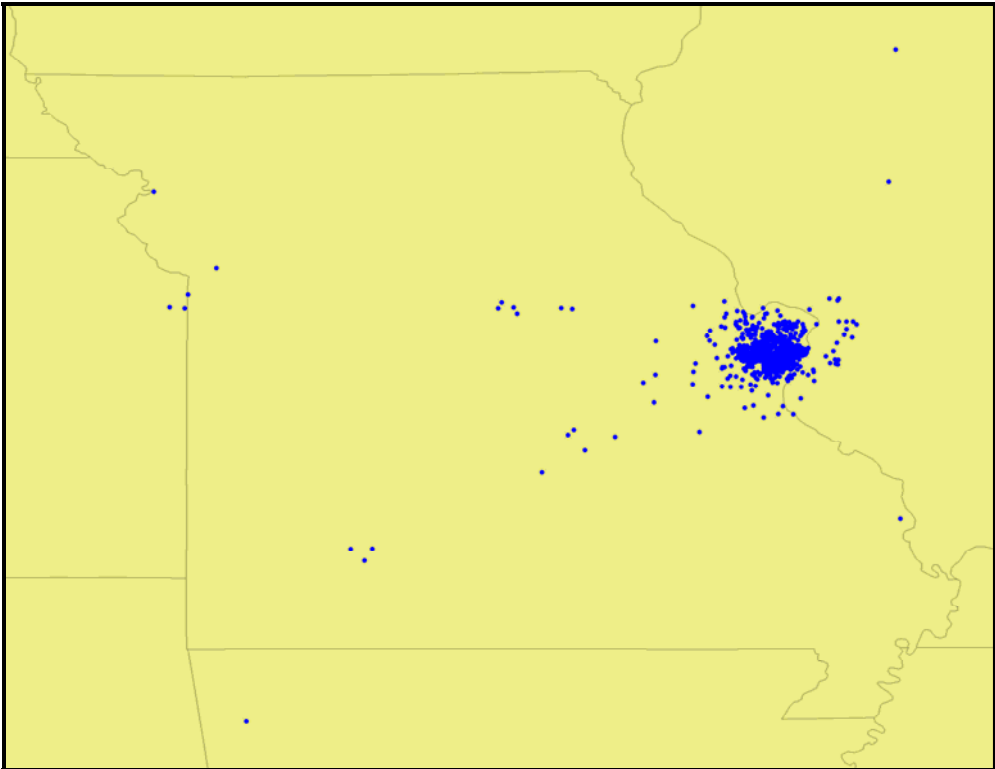
Figure 2b. Meramec ZIP codes
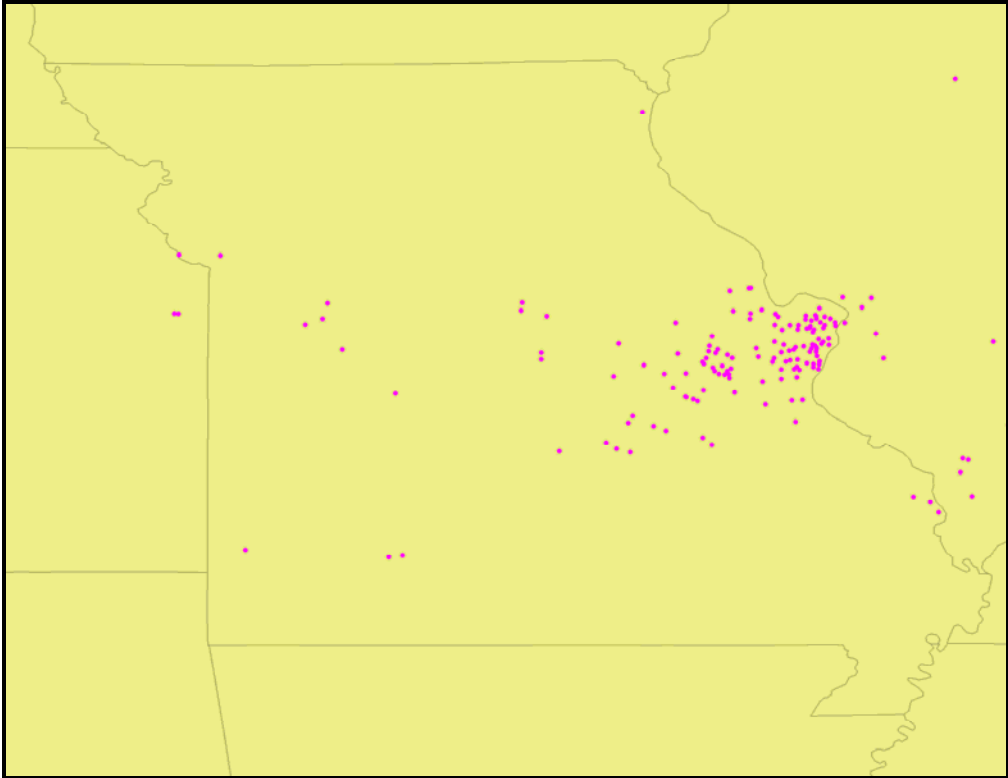
Figure 2c. Roaring River ZIP codes
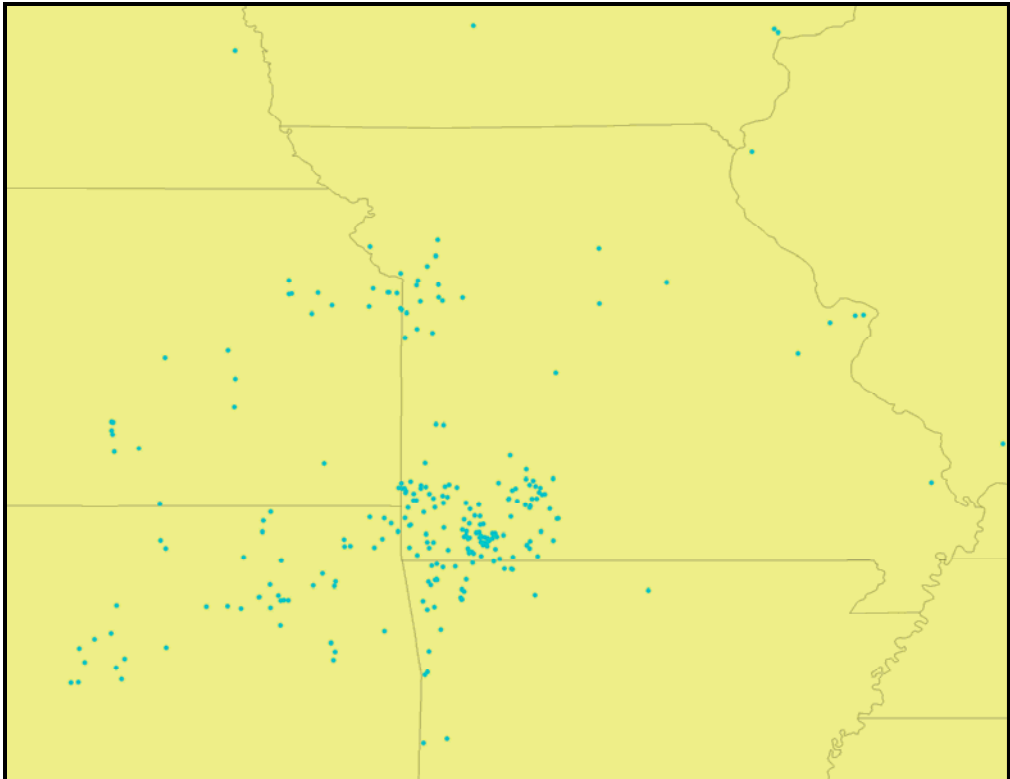
Figure 2d. Route 66 ZIP codes
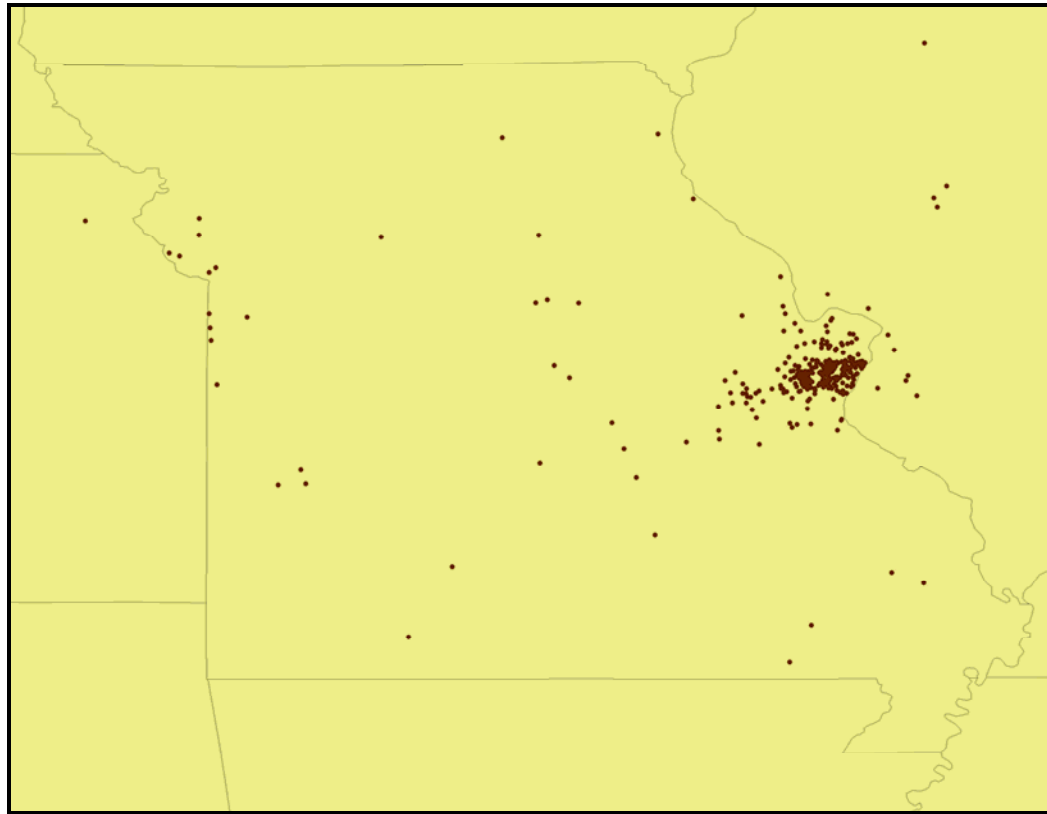
Figure 2e. Thousand Hills ZIP codes
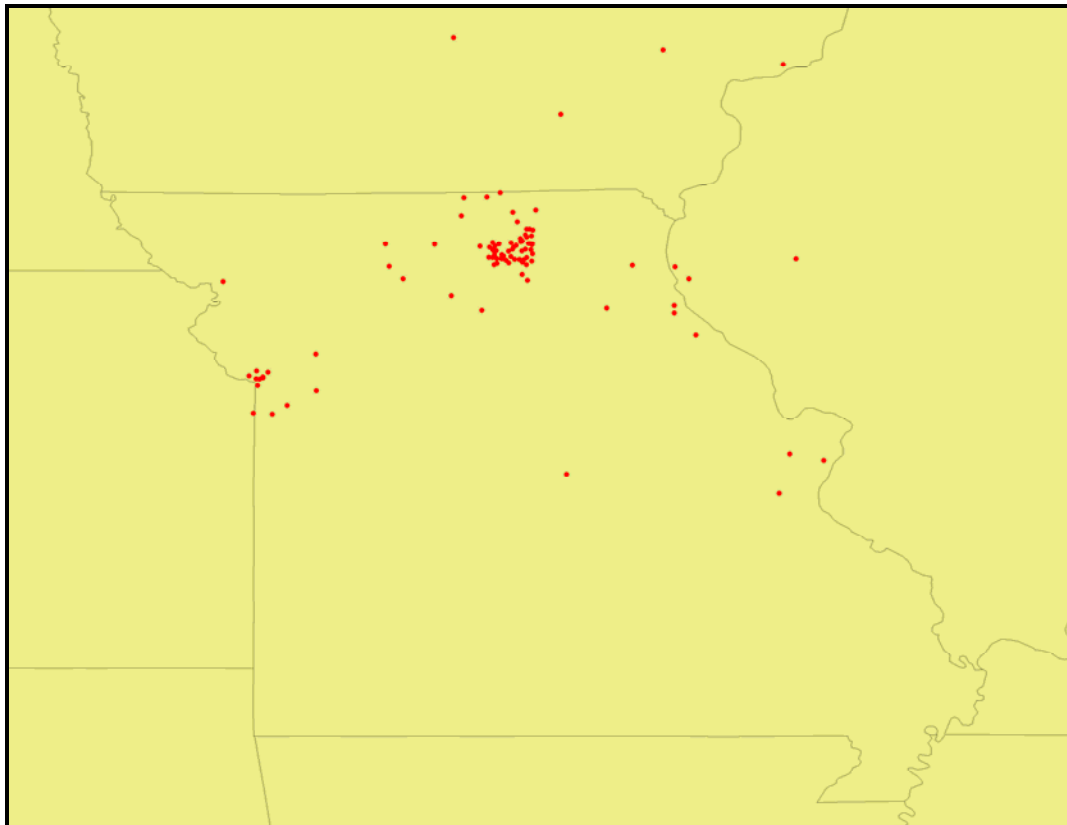
Figure 2f. Felix Valle ZIP codes.
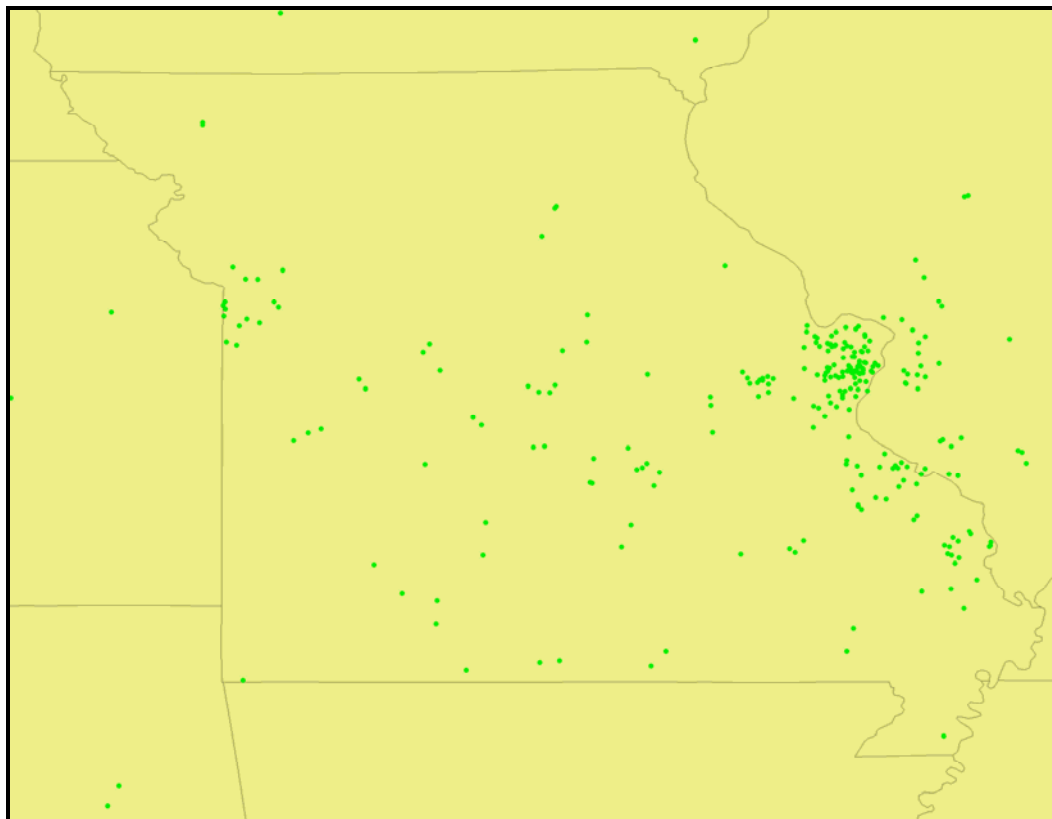
Respondents were asked to indicate the activities in which they engaged during a typical visit to the parks. Because of the various services, facilities, and amenities offered at each park, the lists of activities in which visitors might engage were customized to reflect this variability; visitors' activities are thus reported individually, by park (Tables 17 to 22). Data were coded to reflect participation ("1" = "yes" or "participated"). Accordingly, individuals not specifically indicating that they participated were coded as non-participants.

Predictably, high participation was evident in activities for which parks are noted—hiking at Castlewood, camping at Meramec, fishing at Roaring River, visiting Route 66 nature center, camping at Thousand Hills, and dining in the Felix Valle area. Notable, however, are numbers of participants in the simple activities of walking and viewing wildlife. Relatively high participation in a range of activities revealed the parks' appeal to a wide array of outdoor interests. Other activities were listed (Appendix B, Table B4 to B9).

Table 17. Q: "What activities do you engage in during a typical visit to Castlewood State Park?"

	No	Yes	Total
Fishing?	92%	8%	1810
Picnicking?	80%	20%	1810
Walking?	48%	52%	1810
Hiking?	37%	63%	1810
Bicycling?	54%	46%	1810
Boating?	97%	3%	1810
Walking dog?	74%	26%	1810
Canoeing-kayaking?	93%	7%	1810
Swimming-wading?	84%	16%	1810
Rollerblading?	99%	1%	1810
Running-jogging?	84%	16%	1810
Horseback riding?	99%	1%	1810
Viewing wildlife?	67%	33%	1810
Studying nature?	81%	19%	1810
Naturalist program?	99%	1%	1810
Special event?	96%	4%	1810
WF&P Railroad?	98%	2%	1810
World Bird Sanctuary?	97%	3%	1810
Other activity?	96%	4%	1810

Table 18. Q: "What activities do you engage in during a typical visit to Meramec State Park?"

	No	Yes	Total
Fishing?	69%	31%	210
Camping?	36%	64%	210
Picnicking?	63%	37%	210
Walking?	39%	61%	210
Hiking?	41%	59%	210
Backpacking?	95%	5%	210
Caving?	63%	37%	210
Canoeing-rafting-kayaking?	65%	35%	210
Boating?	96%	4%	210
Swimming-wading?	61%	39%	210
Viewing wildlife?	43%	57%	210
Studying nature?	72%	28%	210
Naturalist program?	85%	15%	210
Visiting nature center?	50%	50%	210
Eating at park grill?	89%	11%	210
Shopping in park store?	69%	31%	210
Special event?	92%	8%	210
Guided tour Fisher Cave?	72%	28%	210
Other activity?	91%	9%	210

Table 19. Q: "What activities do you engage in during a typical visit to Roaring River State Park?"

	No	Yes	Total
Fishing?	20%	80%	325
Camping?	40%	60%	325
Picnicking?	54%	46%	325
Walking?	36%	64%	325
Hiking?	47%	53%	325
Backpacking?	96%	4%	325
Pool swimming?	79%	21%	325
Wading?	80%	20%	325
Viewing wildlife?	52%	48%	325
Studying nature?	73%	27%	325
Naturalist program?	84%	16%	325
Visiting nature center?	62%	38%	325
Horseback riding?	98%	2%	325
Dining in park restaurant?	72%	28%	325
Shopping in park store?	58%	42%	325
Special event?	90%	10%	325
Other activity?	94%	6%	325

Table 20. Q: "What activities do you engage in during a typical visit to Route 66 State Park?"

	No	Yes	Total
Fishing?	88%	12%	494
Picnicking?	75%	25%	494
Walking?	41%	59%	494
Hiking?	73%	27%	494
Bicycling?	69%	31%	494
Walking dog?	86%	14%	494
Canoeing-kayaking?	97%	3%	494
Boating?	96%	4%	494
Swimming-wading?	92%	8%	494
Running-jogging?	96%	4%	494
Horseback riding?	98%	2%	494
Viewing wildlife?	49%	51%	494
Studying nature?	79%	21%	494
Visiting nature center?	46%	54%	494
Special event?	93%	7%	494
Other activity?	92%	8%	494

Table 21. Q: "What activities do you engage in during a typical visit to Thousands Hills State Park?"

	No	Yes	Total
Fishing?	69%	31%	123
Camping?	50%	50%	123
Picnicking?	63%	37%	123
Walking?	25%	75%	123
Hiking?	65%	35%	123
Backpacking?	97%	3%	123
Bicycling?	83%	17%	123
Canoeing-kayaking?	96%	4%	123
Paddleboating?	97%	3%	123
Waterskiing?	94%	6%	123
Boating?	74%	26%	123
Swimming?	70%	30%	123
Ride on houseboat?	96%	4%	123
Viewing wildlife?	49%	51%	123
Studying nature?	82%	18%	123
Naturalist program?	93%	7%	123
Dining in park restaurant?	67%	33%	123
Shopping in marina store?	90%	10%	123
Special event?	99%	1%	123
Other activity?	96%	4%	123

Table 22. Q: "What activities do you engage in during a typical visit to Felix Valle State Historic Site?"

	No	Yes	Total
Shopping?	51%	49%	400
Antique shopping?	51%	49%	400
Restaurant dining?	29%	71%	400
Driving-strolling historic district?	28%	72%	400
Visiting local wineries?	63%	37%	400
Visiting Hawn State Park?	84%	16%	400
Riding Ste Gen Modoc Ferry?	85%	16%	400
Special event?	93%	7%	400
Touring other museums?	60%	40%	400
Touring Bolduc House?	58%	42%	400
Touring La Maison de Guibourd-Valle?	74%	26%	400
Touring Bolduc-LeMeilleur House?	71%	29%	400
Touring Ste Gen Museum?	64%	37%	400
Other activity?	94%	6%	400

Visitors' Expectations and Evaluations

Visitors were asked if other recreational activities should be provided at the parks, and these suggestions are listed by park in Appendix B (Table B10 to Table B14). A wide range of comments and recommendations were offered—for example, from "it's a fine park," to "provide bungee-jumping"—reflecting the personal preferences of a diverse recreating public. No large group of respondents identified an obvious service-oversight, but each of the "other" suggestions is worthy of reflection.

Respondents were asked to express their satisfaction with specific services or amenities. Because the nature of these services varied by park, these were analyzed (and are presented) by park (Table 23 to Table 29).

Table 23. Q: "How satisfied are you with each of the following at Castlewood State Park?"

	Don't know	Very dissatisfied	Dissatisfied	Satisfied	Very satisfied	Total
Park signs?	2%	1%	4%	39%	54%	1648
Picnic areas?	10%	0%	2%	39%	49%	1616
Picnic shelters?	12%	0%	2%	38%	48%	1594
Playground?	18%	1%	3%	35%	43%	1575
River access?	9%	2%	5%	37%	48%	1612

Table 24. Q: "Please indicate how satisfied you are with the trails at Castlewood State Park?"

	Don't know	Very dissatisfied	Dissatisfied	Satisfied	Very satisfied	Total
Maintenance-upkeep of trails?	3%	1%	3%	40%	53%	1625
Trail safety?	4%	1%	3%	44%	49%	1612
Trail signage?	5%	2%	11%	43%	39%	1599
Trailhead facilities?	8%	1%	6%	45%	40%	1571
Other trail concerns?	15%	4%	4%	27%	50%	385

(See Appendix B, Table B15, for "Other trail concerns" of Castlewood respondents).

Table 25. Q: "How satisfied are you with each of the following at Meramec State Park?"

	Don't know	Very dissatisfied	Dissatisfied	Satisfied	Very satisfied	Total
Campgrounds?	9%	1%	3%	30%	57%	180
Park signs?	2%	1%	3%	42%	53%	188
Picnic areas?	22%	0%	0%	36%	43%	181
Park store?	31%	0%	4%	33%	33%	183
Park grill?	54%	2%	2%	23%	19%	163
Hickory Ridge Motel?	80%	1%	1%	8%	11%	161
Rental cabins?	72%	1%	1%	12%	14%	160
Nature Center exhibits?	25%	0%	0%	25%	49%	173
Hiking trails?	26%	0%	1%	28%	45%	181
Boat launches?	61%	1%	2%	16%	19%	165
Playgrounds?	41%	0%	1%	30%	27%	168

Table 26. Q: "How satisfied are you with each of the following at Roaring River State Park?"

	Don't know	Very dissatisfied	Dissatisfied	Satisfied	Very satisfied	Total
Campgrounds	14%	0%	3%	35%	48%	301
Park signs	4%	0%	4%	43%	48%	306
Picnic areas	13%	0%	1%	39%	47%	295
Park store	14%	2%	7%	38%	38%	297
Park restaurant	40%	3%	8%	26%	23%	290
Emory Melton Inn	61%	0%	2%	18%	20%	271
Rental cabins	70%	1%	2%	17%	11%	264
Nature Center exhibits	27%	0%	1%	35%	38%	284
Hiking trails	23%	0%	1%	34%	42%	284
Equestrian trail	81%	2%	2%	8%	8%	258
Swimming pool	64%	0%	1%	22%	13%	267
Playground	43%	0%	0%	30%	27%	270

Table 27. Q: "How satisfied are you with each of the following at Route 66 State Park?"

	Don't know	Very dissatisfied	Dissatisfied	Satisfied	Very satisfied	Total
Park signs?	2%	0%	1%	32%	65%	437
Picnic areas?	13%	0%	1%	31%	55%	409
Boat launch?	40%	0%	0%	22%	37%	361
Multi-use trail?	16%	0%	1%	24%	59%	398
Visitor Center exhibits	3%	0%	1%	29%	66%	408
Visitor Center gift shop	7%	0%	1%	36%	55%	406
Playground	41%	1%	1%	23%	35%	350

Table 28. Q: "How satisfied are you with each of the following at Thousand Hills State Park?"

	Don't know	Very dissatisfied	Dissatisfied	Satisfied	Very satisfied	Total
Campgrounds?	12%	0%	5%	41%	42%	111
Park signs?	1%	1%	2%	52%	45%	114
Picnic areas?	10%	0%	0%	49%	41%	112
Marina?	23%	0%	1%	47%	30%	105
Marina store?	22%	0%	1%	47%	30%	105
Park restaurant?	25%	1%	2%	33%	40%	110
Rental cabins?	67%	0%	0%	21%	13%	96
Petroglyph interpretive shelter?	27%	0%	9%	44%	20%	104
Trails?	17%	1%	9%	41%	32%	102
Swimming beach?	34%	4%	2%	39%	21%	102
Boat launch?	35%	2%	1%	46%	16%	98
Playgrounds?	15%	2%	0%	49%	34%	106

Table 29. Q: "How satisfied are you with each of the following at Felix Valle State Historic Site?"

	Don't know	Very dissatisfied	Dissatisfied	Satisfied	Very satisfied	Total
Site signs?	3%	0%	1%	37%	59%	349
FV house and furnishings?	1%	0%	0%	25%	74%	370
Dr Benjamin Shaw House?	14%	0%	1%	34%	52%	291
Bauvais-Amoureaux House & exhibits?	24%	0%	0%	24%	52%	271
Site gift shop?	9%	0%	1%	42%	48%	311
Tour provided by tour guide?	2%	0%	0%	15%	83%	345

Respondents expressed satisfaction—in many cases, high satisfaction—with the services and facilities of the parks. Generally, the only reason respondents offered any other appraisal than "satisfied" was if they had no familiarity with the service or facility ("don't know").

Visitors to Felix Valle were asked what factors influenced them to visit other house museums in the Ste. Genevieve area (Table 30). Most influential were the home's age, appearance, description, and information provided in the Great River Road Interpretive Center/Tourist Information Office. Other influences were volunteered (Appendix B, Table B16).

Table 30. Q: "If visiting another house museum in Ste. Genevieve, what factor(s) influenced your decision to visit that museum?"

	No	Yes	Total
Home's age?	67%	33%	400
Home's appearance?	73%	27%	400
Home's location?	83%	17%	400
Home's admission cost?	89%	12%	400
Home's description?	69%	32%	400
Great River Office info?	73%	27%	400
Other factor?	94%	7%	400

All respondents were asked if the highway directional signs to the parks were easy to follow (Table 31).

Table 31. Q: "Were the high directional signs to [park] easy to follow?"

	Were highway signs to park easy to follow?		
	Yes	No	Total
Castlewood	88%	12%	1425
Meramec	96%	4%	201
Roaring River	95%	5%	304
Route 66	94%	6%	440
1000 Hills	96%	4%	118
Felix Valle	86%	14%	333
Total	90%	10%	2821

Nine of 10 visitors found the road signage each to follow. A number of respondents offered suggestions for improvement (Appendix B, Table 17).

Visitors were asked to evaluate each park across a variety of service and maintenance categories (Table 32). Most respondents indicated that they were either "satisfied" or "very satisfied" with park services. Perhaps more illuminating, however, is to compute and rank mean scores based on visitors' evaluations (Table 33). By all estimation, visitors' evaluations of DNR facilities and services were outstanding— literally, "excellent" in most cases, and "good" in all others. Particularly gratifying to MDNR should be the finding that "friendly, helpful staff" was the highest-ranking attribute of 4 parks, and ranked a very high 2nd in the other two (Table 33).

Table 32.   Q: "How do you rate [park] on each of the following?"

		Castlewood	Meramec	Roaring River	Route 66	1000 Hills	Felix Valle
Rate park on free of litter and trash?	Don't know	1%	1%	0%	3%	0%	1%
	Poor	1%	0%	0%	0%	0%	0%
	Fair	8%	1%	7%	1%	3%	0%
	Good	37%	30%	33%	20%	33%	9%
	Excellent	52%	67%	59%	77%	64%	90%
Rate park on clean restrooms?	Don't know	24%	11%	8%	9%	7%	41%
	Poor	12%	4%	6%	0%	0%	0%
	Fair	18%	9%	15%	2%	6%	0%
	Good	27%	34%	35%	21%	47%	9%
	Excellent	19%	43%	36%	68%	41%	50%
Rate park on upkeep of facilities?	Don't know	5%	3%	2%	3%	1%	1%
	Poor	2%	1%	3%	0%	0%	0%
	Fair	8%	3%	7%	1%	3%	1%
	Good	45%	36%	43%	23%	42%	19%
	Excellent	40%	58%	45%	72%	54%	79%
Rate park on helpful friendly staff?	Don't know	12%	2%	1%	3%	3%	1%
	Poor	1%	1%	1%	0%	0%	0%
	Fair	3%	3%	2%	1%	2%	1%
	Good	32%	23%	32%	16%	40%	8%
	Excellent	54%	70%	65%	80%	56%	90%
Rate park on disabled accessibility?	Don't know	46%	42%	29%	32%	32%	42%
	Poor	1%	1%	1%	0%	0%	7%
	Fair	4%	1%	1%	1%	3%	7%
	Good	24%	21%	25%	21%	29%	11%
	Excellent	25%	35%	45%	46%	36%	33%
Rate park on care for natural resources?	Don't know	9%	8%	6%	11%	4%	8%
	Poor	0%	1%	0%	0%	0%	0%
	Fair	3%	1%	2%	2%	5%	1%
	Good	40%	33%	39%	22%	45%	18%
	Excellent	48%	58%	52%	65%	46%	73%
Rate park on care for cultural resources?	Don't know	25%	19%	19%	12%	11%	4%
	Poor	1%	0%	0%	0%	1%	0%
	Fair	4%	2%	3%	2%	5%	1%
	Good	33%	27%	36%	23%	42%	18%
	Excellent	38%	51%	42%	63%	41%	77%
Rate park on programs displays?	Don't know	46%	21%	21%	14%	33%	3%
	Poor	1%	1%	1%	0%	4%	0%
	Fair	4%	2%	5%	2%	9%	1%
	Good	23%	30%	32%	25%	24%	20%
	Excellent	25%	47%	41%	59%	30%	75%
Rate park on being safe?	Don't know	9%	5%	3%	7%	3%	2%
	Poor	1%	0%	1%	0%	0%	0%
	Fair	6%	4%	3%	1%	2%	1%
	Good	42%	35%	38%	23%	41%	21%
	Excellent	42%	58%	56%	68%	54%	75%

Table 33. Q: "How do you rate [park] on each of the following?" Means (where 4 = "excellent," 3 = "good," 2 = "fair," 1 = "poor" ("don't know" eliminated for this analysis)), ranked means (1 = highest performance and 9 = lowest performance), and word anchors assigned to means.

	Castlewood	Meramec	Roaring River	Route 66	1000 Hills	Felix Valle
	Mean (Rank) & Word anchor	Mean (Rank) & Word anchor	Mean (Rank) & Word anchor	Mean (Rank) & Word anchor	Mean (Rank) & Word anchor	Mean (Rank) & Word anchor
Rate park on free of litter and trash?	3.42 (4) Good	3.65 (2) Excellent	3.53 (3) Excellent	3.78 (2) Excellent	3.62 (1) Excellent	3.91 (1) Excellent
Rate park on clean restrooms?	2.70 (9) Good	3.29 (9) Good	3.08 (9) Good	3.71 (5) Excellent	3.37 (8) Good	3.85 (3) Excellent
Rate park on upkeep of facilities?	3.31 (8) Good	3.54 (7) Excellent	3.34 (8) Good	3.73 (3) Excellent	3.51 (4) Excellent	3.79 (4) Excellent
Rate park on helpful friendly staff?	3.56 (1) Excellent	3.66 (1) Excellent	3.63 (1) Excellent	3.81 (1) Excellent	3.56 (2) Excellent	3.90 (2) Excellent
Rate park on disabled accessibility?	3.34 (6) Good	3.54 (7) Excellent	3.60 (2) Excellent	3.67 (8) Excellent	3.49 (5) Good	3.21 (9) Good
Rate park on care for natural resources?	3.47 (2) Good	3.60 (4) Excellent	3.52 (5) Excellent	3.71 (5) Excellent	3.42 (6) Good	3.78 (6) Excellent
Rate park on care for cultural resources?	3.44 (3) Good	3.61 (3) Excellent	3.48 (6) Good	3.69 (7) Excellent	3.38 (7) Good	3.79 (4) Excellent
Rate park on programs displays?	3.34 (6) Good	3.55 (6) Excellent	3.42 (7) Good	3.65 (9) Excellent	3.21 (9) Good	3.76 (7) Excellent
Rate park on being safe?	3.36 (5) Good	3.57 (5) Excellent	3.53 (3) Excellent	3.73 (3) Excellent	3.54 (3) Excellent	3.76 (8) Excellent

Visitors were given opportunity to explain any evaluations other than "excellent" or "good." Many respondents chose to comment, even though their evaluations were "excellent" or "good." Most comments related to perennial issues in recreation management—restrooms, trash collection, poor behavior of others, and potentially hazardous conditions observed by recreationists (Appendix B, Table 18).

Respondents were asked to indicate the importance of a variety of services and facilities—actually, the same items comprising Tables 32 and 33 (Table 34). Again, means were calculated for each of these responses, and means were ranked and then assigned word anchors (Table 35).

Table 34. Q: "When visiting any state park, how important is each of the following?"

		Castlewood	Meramec	Roaring River	Route 66	1000 Hills	Felix Valle
Importance of free of litter and trash?	Don't know	0%	0%	0%	0%	0%	0%
	Very unimportant	0%	0%	0%	0%	0%	0%
	Unimportant	0%	0%	0%	0%	0%	0%
	Important	21%	16%	14%	14%	20%	19%
	Very important	78%	84%	86%	86%	80%	81%
Importance of clean restrooms?	Don't know	1%	0%	0%	0%	0%	0%
	Very unimportant	1%	0%	0%	0%	0%	0%
	Unimportant	4%	1%	1%	0%	2%	1%
	Important	32%	16%	12%	13%	18%	19%
	Very important	62%	83%	88%	87%	81%	79%
Importance of upkeep of facilities?	Don't know	1%	0%	0%	0%	0%	0%
	Very unimportant	0%	0%	0%	0%	0%	0%
	Unimportant	1%	0%	0%	0%	0%	0%
	Important	35%	24%	18%	20%	21%	18%
	Very important	63%	76%	81%	80%	79%	82%
Importance of helpful friendly staff?	Don't know	1%	0%	0%	0%	0%	0%
	Very unimportant	1%	0%	0%	0%	0%	0%
	Unimportant	8%	0%	0%	2%	1%	1%
	Important	42%	27%	18%	23%	21%	13%
	Very important	48%	73%	82%	74%	79%	86%
Importance of disabled accessibility?	Don't know	15%	17%	10%	10%	6%	11%
	Very unimportant	5%	2%	1%	2%	3%	2%
	Unimportant	14%	9%	6%	6%	11%	9%
	Important	33%	30%	24%	28%	24%	34%
	Very important	34%	42%	59%	54%	56%	45%
Importance of care for natural resources?	Don't know	1%	2%	1%	0%	2%	1%
	Very unimportant	0%	0%	0%	0%	0%	0%
	Unimportant	1%	0%	0%	0%	0%	1%
	Important	26%	28%	21%	16%	18%	18%
	Very important	72%	70%	78%	84%	80%	81%
Importance of care for cultural resources?	Don't know	6%	5%	5%	1%	3%	1%
	Very unimportant	1%	1%	0%	0%	1%	0%
	Unimportant	7%	4%	5%	1%	2%	1%
	Important	34%	31%	26%	23%	24%	21%
	Very important	52%	61%	65%	75%	70%	78%
Importance of programs displays?	Don't know	6%	4%	4%	1%	4%	0%
	Very unimportant	2%	1%	0%	1%	1%	0%
	Unimportant	17%	6%	5%	5%	6%	2%
	Important	40%	37%	30%	33%	29%	26%
	Very important	35%	53%	61%	60%	59%	72%
Importance of being safe?	Don't know	1%	0%	1%	0%	0%	0%
	Very unimportant	0%	0%	0%	0%	0%	0%
	Unimportant	3%	0%	0%	1%	0%	3%
	Important	27%	19%	14%	14%	21%	22%
	Very important	69%	80%	85%	85%	79%	74%

Table 35. Q: "When visiting any state park, how important is each of the following to you?" Means (where 4 = "Very important," 3 = "Important," 2 = "Unimportant," 1 = "Very unimportant" ("don't know" eliminated for this analysis)), ranked means (1 = highest performance and 9 = lowest performance), and word anchors assigned to means.

	Castlewood	Meramec	Roaring River	Route 66	1000 Hills	Felix Valle
Importance of free of litter and trash?	3.78 (1) Very important	3.84 (1) Very important	3.86 (2) Very important	3.85 (2) Very important	3.80 (2) Very important	3.81 (3) Very important
Importance of clean restrooms?	3.57 (5) Very important	3.82 (2) Very important	3.87 (1) Very important	3.86 (1) Very important	3.79 (4) Very important	3.79 (5) Very important
Importance of upkeep of facilities?	3.62 (4) Very important	3.76 (4) Very important	3.80 (5) Very important	3.80 (5) Very important	3.79 (4) Very important	3.81 (2) Very important
Importance of helpful friendly staff?	3.39 (7) Important	3.72 (5) Very important	3.82 (4) Very important	3.72 (7) Very important	3.78 (6) Very important	3.86 (1) Very important
Importance of disabled accessibility?	3.13 (9) Important	3.35 (9) Important	3.56 (9) Very important	3.47 (9) Important	3.43 (9) Important	3.37 (9) Important
Importance of care for natural resources?	3.71 (2) Very important	3.72 (5) Very important	3.79 (6) Very important	3.83 (4) Very important	3.82 (1) Very important	3.81 (4) Very important
Importance of care for cultural resources?	3.46 (6) Important	3.59 (7) Very important	3.62 (7) Very important	3.75 (6) Very important	3.68 (7) Very important	3.78 (6) Very important
Importance of programs displays?	3.14 (8) Important	3.48 (8) Important	3.58 (8) Very important	3.54 (8) Very important	3.54 (8) Very important	3.71 (7) Very important
Importance of being safe?	3.65 (3) Very important	3.80 (3) Very important	3.85 (3) Very important	3.84 (3) Very important	3.79 (3) Very important	3.71 (8) Very important

In a relative sense (ranking of means), respondents expressed slight variations about the importance of services and facilities at each of the 6 parks—and these differences, intuitively understandable. For example, though visitors at Castlewood, Meramec, Roaring River, and Route 66 placed highest importance on "free of litter and trash" or "clean restrooms," visitors to Thousand Hills placed greatest importance on "care for natural resources," and visitors to Felix Valle, on "helpful friendly staff." However, in an absolute sense, most services were characterized as "very important," and the remainder, "important."

To ascertain some sense of congruence among the importance rankings by respondents at each of the parks, Kendall's coefficient of concordance (*W*) was calculated; *W* expresses the degree of association among sets of rankings (Table 36)— in this case, the degree of relationship or association among the importance rankings given services and facilities by visitors at each of the 6 parks. Kendall's *W* was a notable .731 (chi square = 39.097, p = .000), showing reasonably high agreement among visitors as to the importance of the 9 services/facilities they evaluated (despite slight variations in visitors' rankings of the importance of services and facilities).

Table 36. Kendall's Coefficient of Concordance (Kendall's W) for mean rankings of response to "When visiting any state park, how important is each of the following?"

	Mean Rank
Importance of being free from litter and trash?	1.83
Importance of clean restrooms?	3.08
Importance of upkeep of park facilities?	4.08
Importance of helping and friendly staff?	5.08
Importance of access for persons with disabilities?	9.00
Importance of caring for natural resources?	3.75
Importance of caring for cultural resources?	6.50
Importance of providng nature and history programs?	7.83
Importance of being safe?	3.83

N	6
Kendall's W[a]	.731
Chi-Square	35.097
df	8
Asymp. Sig.	.000

a. Kendall's Coefficient of Concordance

An Importance-Performance (I-P) analysis was conducted to analyze (1) how visitors rank the parks on their performance of specific variables (free of litter/trash, clean restrooms, friendly staff, etc.), and (2) how important those attributes are. An I-P matrix is generated, divided into four quadrants: Higher Importance/Lower Performance, Higher Importance/Higher Performance, Lower Importance/Lower Performance, and Lower Importance/Higher Performance.

The crosshairs of the matrix are set at the overall mean score of the performance variables and the overall mean score of the importance variables. The mean scores of each of the corresponding performance and importance variables are then plotted on the matrix to show the relative importance of the performance variable. So, for instance, if the variable "clean restrooms" falls within the Higher Importance/Lower Performance quadrant, this indicates that this variable is of higher importance to the visitor but did not get as high a performance rating from the visitor. The I-P matrix is useful because it graphically represents those variables in which visitors feel the facility is doing an adequate job and those variables in which they feel the facility should focus more effort.

Figure 3a. Importance-Performance Matrix of park attributes, for Castlewood
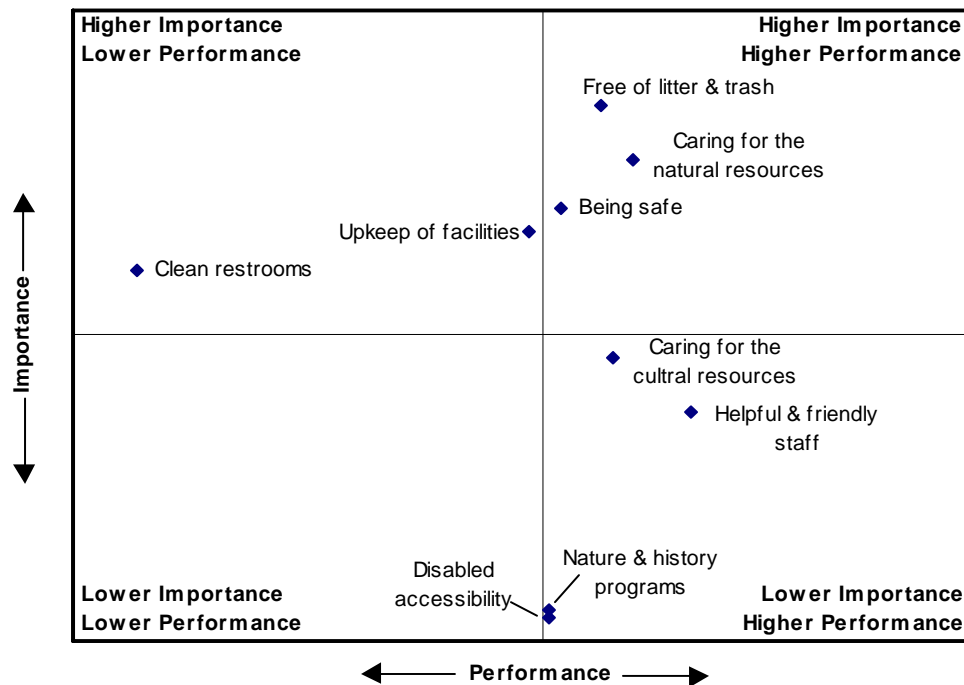
Figure 3b. Importance-Performance Matrix of park attributes, for Meramec
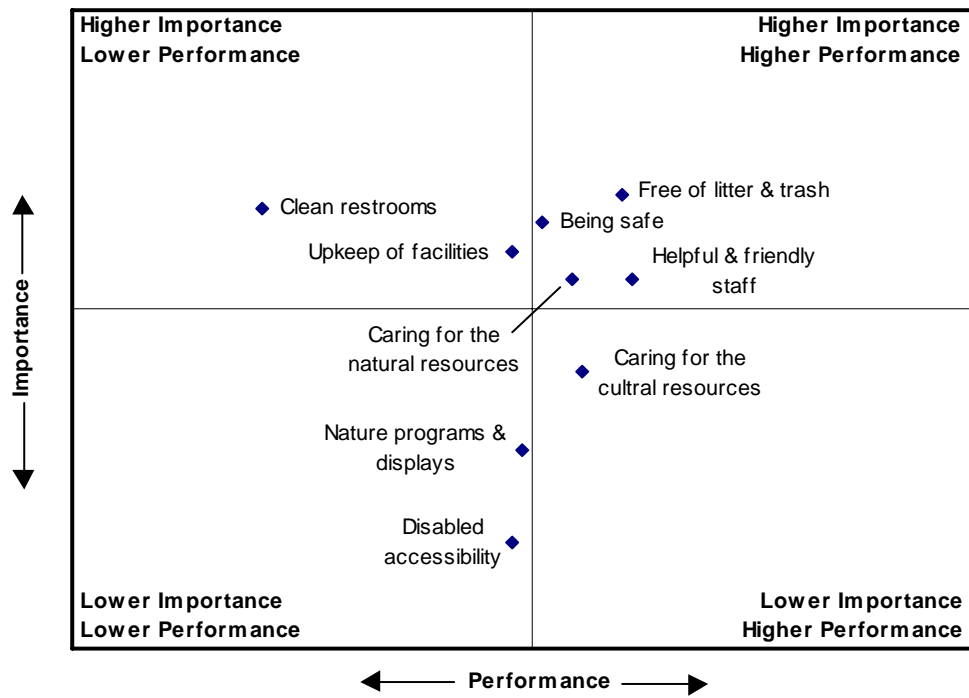
Figure 3c. Importance-Performance Matrix of park attributes, for Roaring River
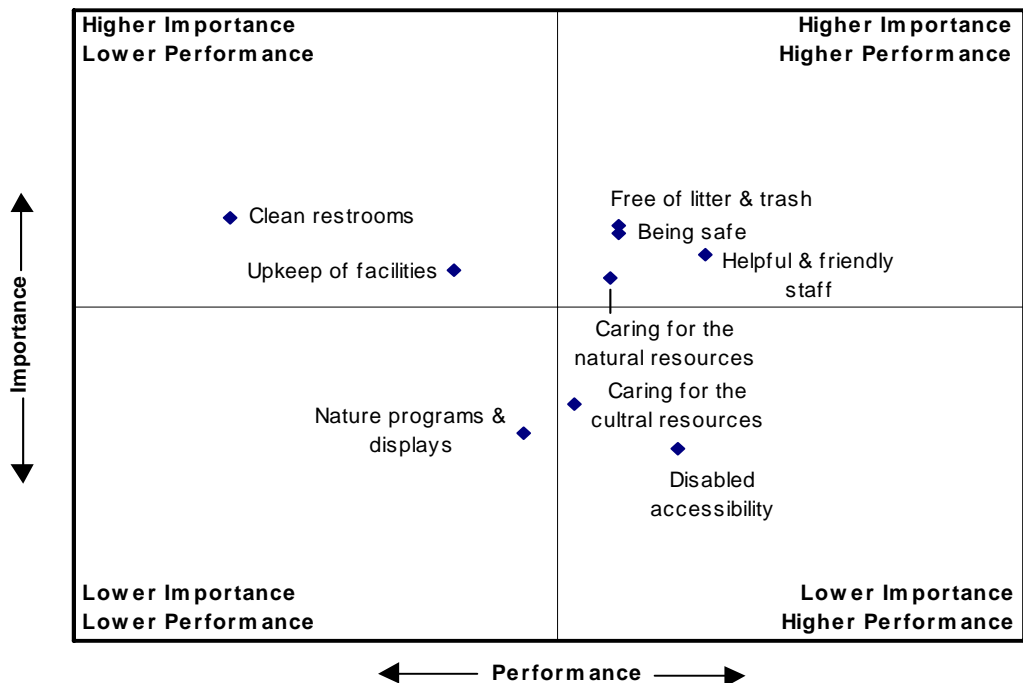
Figure 3d. Importance-Performance Matrix of park attributes, for Route 66
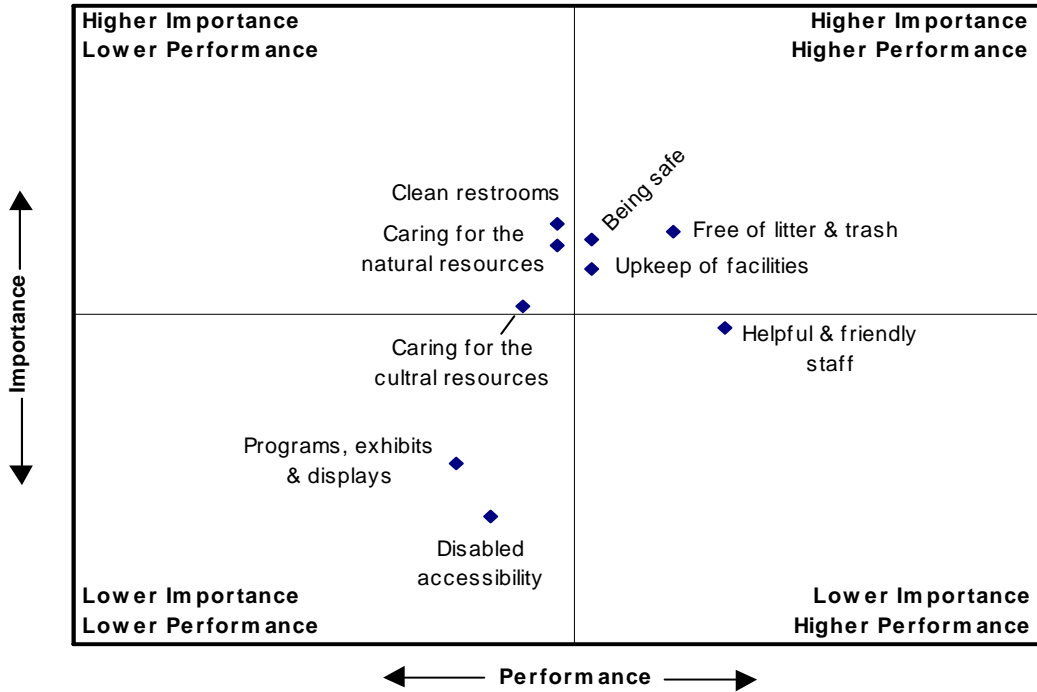
Figure 3e. Importance-Performance Matrix of park attributes, for 1000 Hills
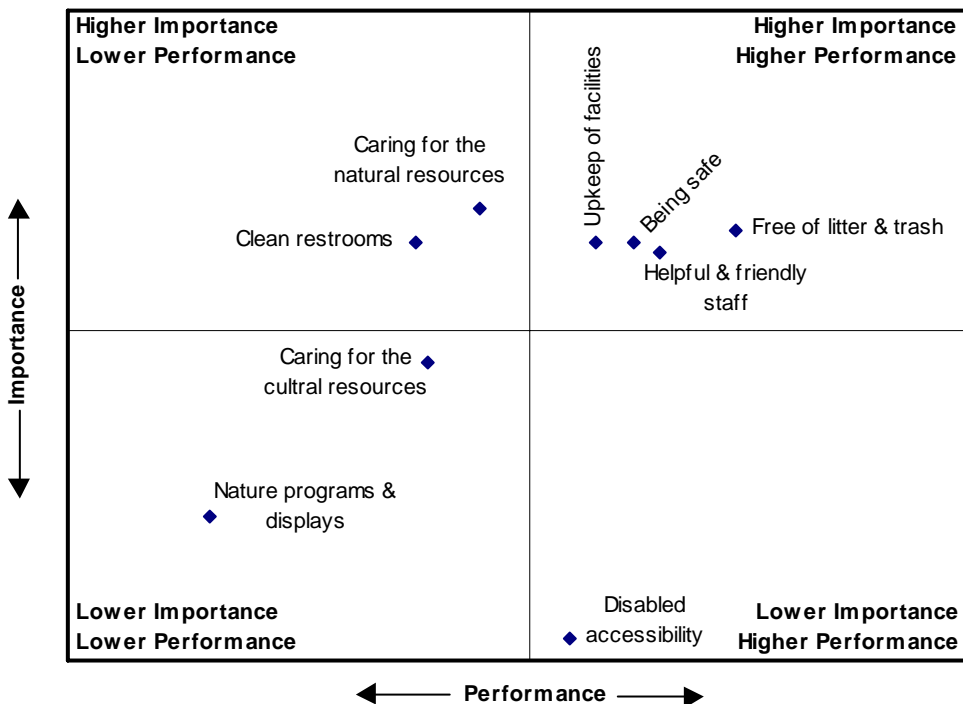
Figure 3f. Importance-Performance Matrix of park attributes, for Felix Valle
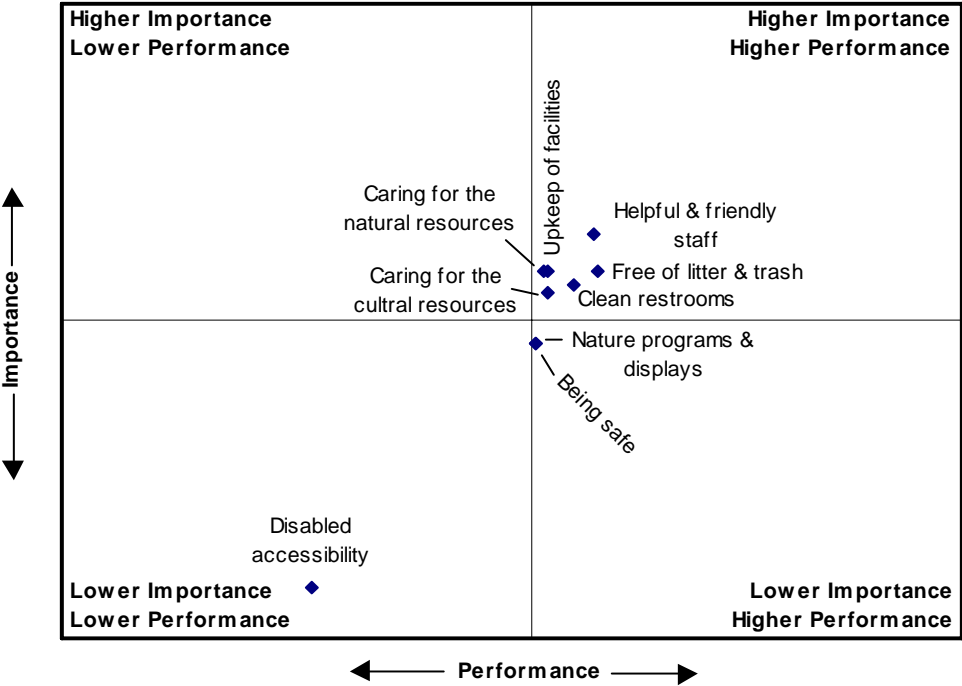
Respondents were asked which of several factors might most increase their feelings of being safe at the parks (Table 37). Though relatively few respondents chose to indicate that safety was an issue, those that did offered suggestions that varied slightly from park to park. For example, Thousand Hills visitors preferred more lighting and increased law enforcement. Castlewood and Meramec respondents had concerns about increased law enforcement, more lighting, improved behavior of others, and some issue with crowding. Route 66 visitors indicated increased visibility of park staff was appropriate. And Felix Valle respondents suggested more lighting. All visitors indicating that "more lighting" was appropriate were asked to offer specific suggestions where that lighting might be most helpful (Appendix B, Table 19). Moreover, respondents were asked to volunteer any other factors or conditions that might increase their feelings of being safe (Appendix B, Table 20).

Table 37. Q: "If safety is an issue, which of the following would most increase your feeling of being safe at [park]?"

		Castlewood	Meramec	Roaring River	Route 66	1000 Hills	Felix Valle
More lighting?	No	96%	94%	97%	99%	91%	93%
	Yes	4%	6%	3%	1%	9%	8%
	Total	1810	210	325	494	123	400
Less crowding?	No	93%	93%	97%	99%	96%	100%
	Yes	7%	7%	3%	1%	4%	0%
	Total	1809	210	325	494	123	400
Improved upkeep of facilities?	No	96%	97%	97%	99%	99%	99%
	Yes	4%	3%	3%	1%	1%	1%
	Total	1810	210	325	494	123	400
Increased law enforcement?	No	92%	90%	94%	95%	86%	100%
	Yes	8%	10%	6%	5%	14%	0%
	Total	1810	210	325	494	123	400
Improved behavior of others?	No	90%	92%	95%	98%	96%	100%
	Yes	10%	8%	5%	2%	4%	0%
	Total	1810	210	325	494	123	400
Increased visibility of park staff?	No	88%	91%	94%	93%	94%	100%
	Yes	12%	9%	6%	7%	6%	0%
	Total	1810	210	325	494	123	400
Less traffic congestion?	No	96%	99%	98%	98%	98%	100%
	Yes	4%	1%	2%	2%	2%	0%
	Total	1810	210	325	494	123	400
Nothing specific	Yes	100%	100%	100%	100%	100%	100%
	Total	227	41	24	89	30	76
Other?	No	94%	94%	95%	98%	98%	99%
	Yes	6%	6%	5%	2%	2%	2%
	Total	1810	210	325	494	123	400

Crowding at recreational settings has been a topic of social scientific inquiry for years—specifically, what levels of visitor concentration trigger the perception of crowding. Respondents were asked to indicate the degree to which they felt crowded on a 9-point continuum, from "not at all crowded" (1) to "extremely crowded" (9) (Table

38). Large pluralities of respondents at all parks indicated "not at all crowded." When means were calculated using the scale values, parks at which visitors indicated they felt "slightly crowded" were Roaring River, Castlewood, and Meramec. On average, visitors to Route 66, Thousand Hills, and Felix Valle indicated they felt "not at all crowded." Respondents indicating they felt crowded on their visits were asked where (at what location) they felt crowded (Appendix B, Table B21).

Table 38. Q: "During this visit to the park, how crowded did you feel?"

	How crowded did you feel on this visit?								
	Not at all	Slightly	Slightly	Slightly	Slightly Moderately	Moderately	Moderately	Moderately	Extremely
Castlewood	40%	18%	17%	8%	4%	6%	4%	1%	1%
Meramec	64%	12%	9%	2%	4%	3%	2%	1%	1%
Roaring River	43%	16%	15%	6%	6%	6%	3%	2%	2%
Route 66	78%	14%	4%	1%	1%	1%	0%	0%	0%
1000 Hills	76%	13%	7%	3%	1%	0%	1%	0%	0%
Felix Valle	91%	5%	1%	1%	1%	1%	0%	0%	0%

Table 39. Q: "During this visit to the park, how crowded did you feel?" Means (where 1 = "Not at all crowded," 2, 3, 4 = "Slightly crowded," 5 = "Slightly/Moderately crowded," 6, 7, 8 = "Moderately crowded," 9 = "Extremely crowded,", and word anchors assigned to means.

	How crowded did you feel on this visit?							
	Valid N	Mean	Median	Mode	Minimum	Maximum	Standard Deviation	Word Anchor (mean)
Castlewood	1615	2.65	2	1	1	9	1.96	Slightly
Meramec	203	2.06	1	1	1	9	1.87	Slightly
Roaring River	315	2.66	2	1	1	9	2.08	Slightly
Route 66	438	1.39	1	1	1	8	.96	Not at all
1000 Hills	119	1.42	1	1	1	7	.94	Not at all
Felix Valle	382	1.18	1	1	1	7	.72	Not at all

Ultimately, perhaps it is the most simple and direct question that yields the most profound and comprehensive insight to visitors' satisfaction with their park visits. Indeed, park visitors were asked to express their overall satisfaction with their park visits (Table 40). Large majorities indicated they were "very satisfied," with highest approval at Route 66 and Felix Valle, and lowest (though over two-thirds "very satisfied") at Thousand Hills.

Table 40. Q: "Overall, how satisfied are you with this visit to [park]?"

	Overall how satisfied are you with your park visit?				
	Very dissatisfied	Dissatisfied	Satisfied	Very satisfied	Total
Castlewood	0%	1%	31%	68%	1658
Meramec	0%	3%	21%	77%	200
Roaring River	0%	0%	27%	73%	319
Route 66	0%	0%	16%	84%	433
1000 Hills	1%	0%	31%	68%	117
Felix Valle	0%	0%	16%	83%	375
Total	0%	1%	26%	73%	3102

Visitors' Expenditures

Overnight accommodations available to respondents varied depending on park; survey items were customized to reflect the varying opportunities (Tables 41a, 42a, 43a, 44a, 45a, 46a). Respondents at each park were asked to indicate their ("...you and your immediate group…") expected total overnight lodging expenses, as well as where they stayed (Table 41b, 42b, 43b, 44b, 45b, 46b).   Only at 3 parks (Roaring River, Route 66, Felix Valle) did respondents indicate lodging arrangements other than those offered in the questionnaire (Appendix B, Table B22 to Table B24).

Table 41a. Castlewood—Q: "If staying overnight, where are you staying…."

	No	Yes	Total
Nearby motel-hotel?	99%	1%	1810
Campground?	100%	0%	1810
Friends-relatives?	98%	2%	1810
Other lodging?	99%	1%	1810

Table 41b. Castlewood—Q: "If staying overnight, …what is the total amount you and your immediate group expect to pay in lodging? (If staying multiple nights, please provide the total lodging amount for the entire stay rather than the cost per night)?"

Castlewood	Valid N	Mean	Median	Mode	Minimum	Maximum	Sum
Motel-hotel expenses?	10	$198	$175	$65	$65	$500	$1,983
Total campground expenses?	2	$20	$20	$15	$15	$25	$40
Total lodging expenses at friends?	2	$150	$150	$100	$100	$200	$300
Other lodging expenses?	0	.	.	.	.	.	.
TOTAL							$2,323

Table 42a. Meramec—Q: "If staying overnight, where are you staying…."

	No	Yes	Total
Campground in Meramec?	39%	61%	210
Hickory Ridge Motel?	99%	1%	210
Meramec cabin?	91%	9%	210
Ground tent area?	100%	0%	210
Nearby motel-hotel?	99%	1%	210
Nearby campground?	99%	1%	210
Friends-relatives?	100%	0%	210
Stay in other lodging?	100%	0%	210

Table 42b. Meramec—Q: "If staying overnight, …what is the total amount you and your immediate group expect to pay in lodging? (If staying multiple nights, please provide the total lodging amount for the entire stay rather than the cost per night)?"

Meramec	Valid N	Mean	Median	Mode	Minimum	Maximum	Sum
Meramec Campground fee?	114	$47	$37	$16	$0	$450	$5,332
Hickory Ridge fee?	2	$182	$182	$63	$63	$300	$363
Cabin fee?	16	$288	$200	$200	$100	$1,000	$4,607
Tent area fee?	0	.	.	.	.	.	.
Motel-hotel fee?	2	$395	$395	$90	$90	$700	$790
Campground fee?	3	$40	$60	$60	$0	$60	$120
Friend-relative fee?	0	.	.	.	.	.	.
Other lodging fee?	0	.	.	.	.	.	.
TOTAL							$11,212

Table 43a. Roaring River—Q: "If staying overnight, where are you staying…."

	No	Yes	Total
Roaring River Campground?	50%	50%	325
Emory Melton Inn?	99%	1%	325
Roaring River cabin?	97%	3%	325
Camp Smokey?	100%	0%	325
Nearby motel-hotel?	96%	4%	325
Nearby campground?	96%	4%	325
Relatives-friends?	97%	3%	325
Stay at other lodging?	99%	1%	325

Table 43b. Roaring River—Q: "If staying overnight, …what is the total amount you and your immediate group expect to pay in lodging? (If staying multiple nights, please provide the total lodging amount for the entire stay rather than the cost per night)?"

Roaring River	Valid N	Mean	Median	Mode	Minimum	Maximum	Sum
Campground fee?	147	$86	$72	$80	$10	$510	$12,705
Inn fee?	2	$227	$227	$180	$180	$274	$454
Cabin fee?	9	$459	$250	$1,200	$109	$1,200	$4,129
Camp Smokey fee?	0	.	.	.	.	.	.
Motel-hotel fee?	11	$157	$72	$40	$40	$600	$1,730
Nearby campground fee?	10	$120	$65	$40	$40	$300	$1,200
Relative-friend fee?	1	$0	$0	$0	$0	$0	$0
Other lodging fee?	2	$183	$183	$90	$90	$275	$365
TOTAL							$20,583

Table 44a. Route 66—Q: "If staying overnight, where are you staying…."

	No	Yes	Total
Motel-hotel?	90%	10%	494
Campground?	92%	8%	494
Staying with relatives-friends?	98%	2%	494
Other lodging?	97%	3%	494

Table 44b. Route 66—Q: "If staying overnight, …what is the total amount you and your immediate group expect to pay in lodging? (If staying multiple nights, please provide the total lodging amount for the entire stay rather than the cost per night)?"

Route 66	Valid N	Mean	Median	Mode	Minimum	Maximum	Sum
Motel-hotel expenses?	40	$143	$80	$50	$40	$500	$5,737
Campground expenses?	33	$108	$54	$34	$8	$500	$3,574
Relative-friend expenses?	0	.	.	.	.	.	.
Other lodging expense?	8	$244	$214	$268	$0	$900	$1,955
TOTAL							$11,266

Table 45a. Thousand Hills—Q: "If staying overnight, where are you staying…."

	No	Yes	Total
Campground?	55%	45%	123
Duplex?	98%	2%	123
Nearby motel-hotel?	100%	0%	123
Nearby campground?	99%	1%	123
Friends-relatives?	98%	2%	123
Other lodging?	100%	0%	123

Table 45b. Thousand Hills—Q: "If staying overnight, …what is the total amount you and your immediate group expect to pay in lodging? (If staying multiple nights, please provide the total lodging amount for the entire stay rather than the cost per night)?"

Thousand Hills	Valid N	Mean	Median	Mode	Minimum	Maximum	Sum
Campground expenses?	47	$43	$36	$28	$16	$140	$2,042
Duplex expenses?	2	$375	$375	$300	$300	$450	$750
Motel-hotel expenses?	0	.	.	.	.	.	.
Campground expenses?	1	$12	$12	$12	$12	$12	$12
Friend-relative expenses?	1	$30	$30	$30	$30	$30	$30
Other lodging expense?	0	.	.	.	.	.	.
TOTAL							$2,834

Table 46a. Felix Valle—Q: "If staying overnight, where are you staying…."

	No	Yes	Total
Nearby motel-hotel?	55%	45%	400
Nearby campground?	93%	7%	400
Friends-relatives?	97%	3%	400
Other lodging?	98%	2%	400

Table 46b. Felix Valle—Q: "If staying overnight, …what is the total amount you and your immediate group expect to pay in lodging? (If staying multiple nights, please provide the total lodging amount for the entire stay rather than the cost per night)?"

Felix Valle	Valid N	Mean	Median	Mode	Minimum	Maximum	Sum
Motel-hotel expense?	169	$155	$114	$100	$0	$1,100	$26,261
Campground expense?	26	$34	$25	$50	$8	$100	$878
Friend-relative expense?	1	$0	$0	$0	$0	$0	$0
Other lodging expense?	2	$174	$174	$90	$90	$258	$348
TOTAL							$27,487

A total of over $75,000 was spent by respondents for lodging at or in the vicinity of the 6 parks. Though lodging arrangements varied widely among the parks—for example, from only 1% of visitors staying overnight in the vicinity of Castlewood, to 61% of respondents staying in the Meramec campground, to 45% of Felix Valle visitors staying in a nearby motel-hotel—one can calculate an average lodging expenditure *per party* ("…you and your immediate group…") by first calculating number of parties (by dividing total number of respondents by average party size (3,362/3.3 = 1,019 parties), then dividing the amount respondents spent on lodging by the total number of parties ($75,705/1,019), to yield an average lodging expenditure by party of about $74.

Additional expenditures (beyond lodging) were estimated by respondents at each of the parks, first for expenditures on-site or at the parks (Tables 47a, 48a, 49a, 50a, 51a, 52a), and second, for expenditures within 60 miles of the park (Tables 47b, 48b, 49b, 50b, 51b, 52b). (Too, respondents were asked if there were any other types of expenditures they incurred during their trips; the amounts of these other expenditures

are included in the following totals, but the actual "type" of expenditure is listed in Appendix B, Table B25 to Table B30).

Table 47a. Castlewood—Q: "During this trip, what is the total amount you and your immediate group expect to spend on…?"

Castlewood	Valid N	Mean	Median	Mode	Minimum	Maximum	Sum
Park admission fees?	25	$21	$10	$5	$1	$150	$527
Auto $$ at park?	236	$7	$5	$5	$1	$100	$1,647
Park transportation $$?	19	$23	$10	$10	$1	$100	$440
Shopping $$ at park?	13	$14	$10	$10	$3	$50	$182
TOTAL							$2,796

Table 47b. Castlewood—Q: "During this trip, what is the total amount you and your immediate group expect to spend on…?"

Castlewood	Valid N	Mean	Median	Mode	Minimum	Maximum	Sum
Fees within 60 miles?	33	$42	$15	$10	$2	$500	$1,373
Restaurant $$ within 60 miles?	184	$54	$20	$10	$1	$1,800	$10,013
Groceries $$ within 60 miles?	98	$44	$20	$20	$1	$1,200	$4,315
Auto $$ within 60 miles?	235	$25	$10	$10	$1	$300	$5,786
Transporation $$ within 60 miles?	19	$204	$50	$50	$3	$1,200	$3,873
Shopping $$ within 60 miles?	32	$63	$45	$100	$2	$300	$2,022
Fishing license $$ within 60 miles?	25	$15	$14	$12	$10	$34	$369
Fishing equipment $$ within 60 miles?	23	$32	$20	$10	$3	$150	$733
Bicycling equipment $$ within 60 miles?	75	$253	$40	$100	$1	$3,000	$18,949
Equestrian equipment $$ within 60 miles?	6	$75	$16	$5	$5	$300	$447
Canoeing-kayaking equipment $$ within 60 miles?	15	$80	$50	$50	$20	$300	$1,200
Other equipment $$ within 60 miles?	46	$145	$50	$100	$2	$1,700	$6,654
Cost of expense?	21	$178	$5	$10	$1	$2,500	$3,733
Cost of expense?	2	$13	$13	$5	$5	$20	$25
TOTAL							$59,492

Table 48a. Meramec—Q: "During this trip, what is the total amount you and your immediate group expect to spend on…?"

Meramec	Valid N	Mean	Median	Mode	Minimum	Maximum	Sum
Meramec admission fees?	81	$46	$30	$20	$3	$450	$3,696
Meramec restaurant dining?	31	$52	$30	$20	$5	$300	$1,599
Meramec groceries?	54	$60	$45	$100	$5	$500	$3,261
Meramec auto expenses?	53	$54	$30	$20	$3	$600	$2,837
Meramec transportation?	5	$65	$45	$10	$10	$200	$325
Meramec shopping-souvenirs?	34	$33	$25	$50	$2	$200	$1,115
Meramec fishing license fees?	7	$16	$15	$10	$10	$25	$115
Meramec fishing equipment?	7	$15	$10	$5	$3	$50	$108
Meramec canoeing-kayaking equipment?	17	$50	$35	$30	$10	$250	$856
Meramec caving equipment?	2	$310	$310	$20	$20	$600	$620
Other Meramec sporting good expenditures?	6	$22	$20	$20	$10	$35	$131
TOTAL							$14,663

Table 48b. Meramec—Q: "During this trip, what is the total amount you and your immediate group expect to spend on…?"

Meramec	Valid N	Mean	Median	Mode	Minimum	Maximum	Sum
Admission $$ within 60 miles?	18	$61	$50	$100	$8	$160	$1,106
Restaurant $$ within 60 miles?	45	$78	$50	$100	$10	$400	$3,507
Groceries $$ within 60 miles?	47	$60	$50	$50	$8	$200	$2,828
Auto $$ within 60 miles?	49	$65	$50	$50	$8	$300	$3,183
Transportation $$ within 60 miles?	7	$119	$75	$26	$26	$350	$831
Shopping-souvenirs $$ within 60 miles?	22	$80	$50	$20	$10	$300	$1,755
Fishing license $$ within 60 miles?	6	$17	$14	$6	$6	$35	$102
Fishing equipment $$ within 60 miles?	4	$16	$18	$3	$3	$25	$63
Hunting license $$ within 60 miles?	0	.	.	.	.	.	.
Canoeing-kayaking $$ within 60 miles?	4	$34	$35	$35	$15	$50	$135
Caving equipment $$ within 60 miles?	1	$20	$20	$20	$20	$20	$20
Other sporting goods $$ within 60 miles?	4	$79	$28	$10	$10	$250	$315
$$ of first other expense?	13	$99	$50	$20	$3	$400	$1,282
$$ of second other expense?	1	$300	$300	$300	$300	$300	$300
TOTAL							$15,427

Table 49a. Roaring River—Q: "During this trip, what is the total amount you and your immediate group expect to spend on…?"

Roaring River	Valid N	Mean	Median	Mode	Minimum	Maximum	Sum
RR admission fees?	49	$71	$50	$40	$3	$256	$3,481
RR restaurant dining?	76	$66	$50	$50	$5	$400	$5,047
RR groceries?	64	$60	$35	$20	$5	$225	$3,832
RR auto expenses?	54	$67	$50	$20	$5	$300	$3,622
RR transportation?	2	$175	$175	$50	$50	$300	$350
RR shopping-souvenirs?	91	$44	$30	$50	$2	$300	$4,019
RR trout tag-fishing license?	159	$42	$30	$50	$3	$230	$6,757
RR fishing equipment?	98	$29	$20	$20	$5	$200	$2,807
RR other sporting goods?	14	$33	$28	$25	$10	$100	$465
TOTAL							$30,380

Table 49b. Roaring River—Q: "During this trip, what is the total amount you and your immediate group expect to spend on…?"

Roaring River	Valid N	Mean	Median	Mode	Minimum	Maximum	Sum
Admission $$ within 60 miles?	14	$102	$45	$16	$10	$400	$1,432
Restaurant $$ within 60 miles?	93	$81	$50	$100	$4	$400	$7,501
Groceries $$ within 60 miles?	100	$85	$68	$100	$3	$400	$8,538
Auto $$ within 60 miles?	157	$75	$50	$50	$5	$500	$11,713
Transportation $$ within 60 miles?	4	$60	$55	$28	$28	$100	$238
Shopping-souvenirs $$ within 60 miles?	65	$91	$50	$50	$5	$500	$5,915
Fishing license $$ within 60 miles?	24	$38	$42	$42	$3	$105	$913
Fishing equipment $$ within 60 miles?	54	$40	$23	$20	$5	$200	$2,146
Sporting goods $$ within 60 miles?	14	$68	$25	$20	$10	$200	$952
First other expense?	15	$252	$60	$50	$20	$1,200	$3,782
Second other expense?	2	$44	$44	$7	$7	$80	$87
TOTAL							$43,217

Table 50a. Route 66—Q: "During this trip, what is the total amount you and your immediate group expect to spend on…?"

Route 66	Valid N	Mean	Median	Mode	Minimum	Maximum	Sum
R66 Admission?	34	$33	$20	$20	$1	$200	$1,117
Restaurant $$ within 60 miles?	134	$64	$30	$20	$5	$1,000	$8,539
R66 auto expenses?	58	$25	$18	$20	$1	$250	$1,456
R66 transporation expenses?	2	$13	$13	$6	$6	$20	$26
R66 shopping-souvenir expenses?	76	$25	$20	$20	$2	$200	$1,886
TOTAL							$13,024

Table 50b. Route66—Q: "During this trip, what is the total amount you and your immediate group expect to spend on…?"

Route 66	Valid N	Mean	Median	Mode	Minimum	Maximum	Sum
Admission $$ within 60 miles?	50	$76	$50	$100	$3	$500	$3,778
Restaurant $$ within 60 miles?	134	$64	$30	$20	$5	$1,000	$8,539
Groceries $$ within 60 miles?	55	$49	$30	$50	$5	$200	$2,690
Auto $$ within 60 miles?	123	$58	$30	$30	$2	$1,000	$7,191
Transportation $$ within 60 miles?	12	$342	$225	$20	$10	$2,000	$4,100
Shopping-souvenir $$ within 60 miles?	85	$61	$30	$20	$1	$600	$5,173
Fishing license $$ within 60 miles?	8	$21	$23	$12	$12	$34	$165
Fishing equipment $$ within 60 miles?	8	$29	$20	$20	$10	$100	$234
Other sporting goods $$ within 60 miles?	10	$73	$73	$100	$10	$150	$725
Amount of first other expense?	10	$116	$53	$20	$1	$300	$1,156
Amount of other type of expense?	0	.	.	.	.	.	.
TOTAL							$33,751

Table 51a. Thousand Hills—Q: "During this trip, what is the total amount you and your immediate group expect to spend on…?"

Thousand Hills	Valid N	Mean	Median	Mode	Minimum	Maximum	Sum
1000hills admission?	23	$71	$25	$20	$3	$580	$1,634
1000hills restaurant dining?	33	$57	$50	$50	$15	$150	$1,870
1000hills groceries?	22	$85	$68	$100	$5	$400	$1,865
1000hills auto expenses?	32	$82	$60	$10	$1	$500	$2,622
1000hills fishing license fees?	7	$23	$15	$15	$12	$50	$162
1000hills fishing equipment?	4	$15	$13	$5	$5	$30	$60
1000hills other sporting goods?	1	$45	$45	$45	$45	$45	$45
TOTAL							$8,258

Table 51b. Thousand Hills—Q: "During this trip, what is the total amount you and your immediate group expect to spend on…?"

Thousand Hills	Valid N	Mean	Median	Mode	Minimum	Maximum	Sum
Admission $$ within 60 miles?	6	$35	$30	$30	$20	$75	$209
Restaurant $$ dining within 60 miles?	15	$59	$50	$50	$20	$120	$885
Groceries $$ within 60 miles?	20	$84	$90	$100	$25	$200	$1,681
Auto $$ within 60 miles?	24	$55	$48	$50	$5	$150	$1,310
Transportation $$ within 60 miles?	2	$62	$62	$60	$60	$63	$123
Shopping-souvenirs $$ within 60 miles?	8	$60	$48	$11	$11	$150	$476
Fishing license $$ within 60 miles?	5	$19	$15	$30	$10	$30	$97
Fishing equipment $$ within 60 miles?	3	$30	$25	$15	$15	$50	$90
Other sporting goods $$ within 60 miles?	0	.	.	.	.	.	.
Expense of first type?	4	$34	$29	$4	$4	$75	$137
Expense of second type?	0	.	.	.	.	.	.
TOTAL							$5,008

Table 52a. Felix Valle—Q: "During this trip, what is the total amount you and your immediate group expect to spend on…?"

Felix Valle	Valid N	Mean	Median	Mode	Minimum	Maximum	Sum
FV admission?	223	$9	$5	$5	$1	$50	$2,045
TOTAL							$2,045

Table 52b. Felix Valle—Q: "During this trip, what is the total amount you and your immediate group expect to spend on…?"

Felix Valle	Valid N	Mean	Median	Mode	Minimum	Maximum	Sum
Admission $$ within 60 miles?	121	$27	$20	$20	$3	$300	$3,250
Dining $$ within 60 miles?	202	$55	$40	$50	$10	$250	$11,115
Groceries $$ within 60 miles?	32	$23	$20	$20	$4	$150	$749
Auto $$ within 60 miles?	159	$42	$30	$30	$5	$500	$6,670
Transportation $$ within 60 miles?	14	$157	$50	$20	$10	$600	$2,200
FV shopping-souvenir expenses?	60	$30	$20	$20	$1	$100	$1,792
Shopping-souvenir $$ within 60 miles?	154	$57	$30	$20	$2	$300	$8,760
Amount of first expense?	26	$73	$30	$20	$0	$500	$1,885
Amount of second expense?	0	.	.	.	.	.	.
TOTAL							$36,421

Total visitor-party expenditures within the 6 park settings (apart from lodging) totaled $71,166; and expenditures within 60 miles of the parks totaled an additional $193,316—for total expenditures on items other than lodging of $264,482.

Adding total lodging expenditures of $75,705 to this amount yielded a grand total of $340,187 for all respondents in the 6 parks.

Among the economic questions of greatest interest is, "How much did each park visitor spend per day?" A prior MDNR visitor survey in 2002 (Cole et al., 2003) estimated that each state park visitor in general spent an average of about $30 per person per day during a trip to Missouri state parks.

To achieve reasonable comparability between that estimate and the present data, the total number of respondents in the present study must be multiplied by average party size (3,362 * 3.3 = 11,095 park visitors), and that number multiplied by the average (median) days in a park visit (11,095 * 1 = 11,095); total expenditures documented in this study are then divided by 11,095 park visitors ($340,187/11,095), yielding an estimated daily expenditure per park visitor of about $31; remarkably similar to the $30 daily expenditure per visitor estimated in the 2002 study.

An "economic impact" assessment is beyond the scope of this analysis; such assessments estimate the economic churn and amounts created in various market segments as a result of "spending a dollar"—because that dollar is re-spent by others, and moreover, actually creates a different economic impact depending on which sector of the economy the dollar is spent.

Commonly, economic multipliers applied to different types of recreational expenditures are in the range of 1.5 to 2.0. Thus, the grand total of $340,187 spent by the visitors-groups in the vicinities of the 6 parks examined in this study is even more impressive when expanded by half-again or double.

Visitors' Background Characteristics

Visitors were asked how they received information about Missouri state parks (Table 53). Respondents were given opportunity to provide sources of information other than those listed (Appendix B, Table B31).

Table 53. Q: "How do you typically receive information about Missouri state parks and/or historic sites? Please indicate how much information you receive from the following sources:"

		Castlewood	Meramec	Roaring	Route 66	1000 Hills	Felix Valle
Typically receive park info--internet?	Don't know	5%	3%	5%	3%	6%	1%
	None	21%	14%	24%	17%	43%	16%
	Some	36%	25%	34%	39%	30%	37%
	Lots	38%	58%	36%	40%	21%	45%
Typically receive park info--eFriends newsletter?	Don't know	14%	21%	24%	11%	18%	20%
	None	70%	60%	68%	65%	68%	63%
	Some	12%	13%	7%	14%	8%	15%
	Lots	4%	6%	2%	9%	5%	2%
Typically receive park info--magazines?	Don't know	8%	9%	10%	4%	5%	4%
	None	42%	44%	48%	23%	42%	23%
	Some	41%	36%	31%	58%	43%	59%
	Lots	9%	11%	10%	15%	11%	14%
Typically receive park info--newspapers?	Don't know	7%	11%	10%	5%	4%	5%
	None	42%	55%	52%	35%	40%	33%
	Some	42%	31%	31%	51%	50%	48%
	Lots	8%	3%	6%	10%	6%	13%
Typically receive park info--direct mail?	Don't know	10%	15%	14%	8%	7%	10%
	None	68%	63%	70%	62%	73%	69%
	Some	17%	18%	14%	22%	18%	17%
	Lots	4%	4%	1%	9%	2%	4%
Typically receive park info--printed materials?	Don't know	6%	4%	6%	2%	4%	1%
	None	32%	24%	31%	14%	25%	11%
	Some	45%	44%	45%	46%	51%	49%
	Lots	16%	28%	17%	38%	21%	39%
Typically receive park info--radio?	Don't know	9%	14%	15%	6%	5%	12%
	None	66%	74%	73%	61%	54%	56%
	Some	21%	10%	11%	29%	37%	29%
	Lots	4%	2%	1%	5%	4%	3%
Typically receive park info--TV?	Don't know	9%	15%	13%	6%	5%	10%
	None	64%	69%	61%	56%	50%	47%
	Some	22%	14%	21%	32%	39%	36%
	Lots	5%	1%	5%	7%	7%	7%
Typically receive park info--word of mouth?	Don't know	3%	3%	2%	2%	3%	2%
	None	11%	13%	12%	12%	7%	10%
	Some	41%	41%	31%	45%	44%	51%
	Lots	45%	43%	56%	40%	46%	37%
Typically receive park info--other?	Don't know	24%	36%	24%	23%	20%	20%
	None	51%	39%	55%	35%	73%	49%
	Some	13%	11%	3%	14%	0%	9%
	Lots	12%	14%	18%	28%	7%	22%

The importance of the internet and "word of mouth" as information sources was obvious in the foregoing frequency distribution. But to better identify the importance of

each possible source, means were calculated for source, then ranked, and word anchors assigned (Table 54).

Table 54. Q: "How do you typically receive information about Missouri state parks and/or historic sites? Please indicate how much information you receive from the following sources:" Means (where 3 = "Lots," 2 = "Some," 1 = "None" ("don't know" eliminated for this analysis)), ranked means (1 = most information and 10 = least information), and word anchors assigned to means.

	MO DNR Park					
	Castlewood	Meramec	Roaring River	Route 66	1000 Hills	Felix Valle
	Mean (Rank) Word anchor	Mean (Rank) Word anchor	Mean (Rank) Word anchor	Mean (Rank) Word anchor	Mean (Rank) Word anchor	Mean (Rank) Word anchor
Typically receive park info--internet?	2.18 (2) Some	2.46 (1) Some	2.13 (2) Some	2.24 (3) Some	1.77 (3) Some	2.30 (1) Some
Typically receive park info--eFriends newsletter?	1.24 (10) None	1.32 (7) None	1.14 (10) None	1.37 (10) None	1.23 (9) None	1.24 (10) None
Typically receive park info--magazines?	1.63 (4) Some	1.64 (4) Some	1.58 (4) Some	1.91(4) Some	1.68 (4) Some	1.91 (4) Some
Typically receive park info--newspapers?	1.63 (4) Some	1.42 (6) None	1.49 (6) None	1.73 (6) Some	1.64 (5) Some	1.79 (5) Some
Typically receive park info--direct mail?	1.29 (9) None	1.30 (8) None	1.20 (8) None	1.42 (8) None	1.24 (8) None	1.28 (9) None
Typically receive park info--printed materials?	1.83 (3) Some	2.04 (3) Some	1.86 (3) Some	2.25 (2) Some	1.96 (2) Some	2.29 (2) Some
Typically receive park info--radio?	1.32 (8) None	1.17 (10) None	1.16 (9) None	1.40 (9) None	1.48 (7) None	1.40 (8) None
Typically receive park info--TV?	1.35 (7) None	1.20 (9) None	1.36 (7) None	1.48 (7) None	1.55 (6) Some	1.56 (7) Some
Typically receive park info--word of mouth?	2.36 (1) Some	2.31 (2) Some	2.44 (1) Some	2.28 (1) Some	2.40 (1) Some	2.27 (3) Some
Typically receive park info--other?	1.48 (6) None	1.61 (5) Some	1.52 (5) Some	1.90 (5) Some	1.17 (10) None	1.67 (6) Some

Respondents were asked how frequently they accessed the internet when planning a trip or vacation (Table 55).

Table 55. Q: "If you have access to the Internet, how often do you use the Internet when planning a trip or vacation?"

	How often do you access internet when planning trip or vacation?				
	Never	Rarely	Frequently	Always	Total
Castlewood	6%	12%	38%	44%	1564
Meramec	7%	13%	39%	40%	193
Roaring River	10%	17%	43%	31%	290
Route 66	7%	11%	47%	35%	410
1000 Hills	13%	16%	38%	33%	104
Felix Valle	6%	11%	42%	40%	357
Total	7%	12%	40%	40%	2918

Large majorities of respondents at each park accessed the internet either "frequently" or "always" when planning a trip/vacation, emphasizing the importance of an easy-to-navigate and thoroughly up-to-date website.

Age of respondent was assessed both as a point estimate (Table 56), and as age categories (Table 57).

Table 56. Q: "What is your age?" (by average)

	Age?						
	Valid N	Mean	Median	Mode	Minimum	Maximum	Standard Deviation
Castlewood	1662	42	42	48	13	83	14
Meramec	200	47	48	50	12	80	14
Roaring River	309	51	53	53	16	85	15
Route 66	441	48	50	53	11	81	13
1000 Hills	117	46	44	27	18	83	18
Felix Valle	380	53	55	50	12	87	14

Table 57. Q: "What is your age?" (by category)

	Age categories								
	Less than 16	16 to 20 yrs	21 to 30 yrs	31 to 40 yrs	41 to 50 yrs	51 to 60 yrs	61 to 70 yrs	Over 70	Total
Castlewood	0%	6%	21%	20%	26%	17%	7%	2%	1664
Meramec	1%	3%	10%	20%	29%	19%	16%	4%	200
Roaring River	0%	1%	10%	13%	22%	27%	20%	8%	309
Route 66	1%	1%	9%	15%	27%	27%	15%	4%	441
1000 Hills	0%	7%	18%	20%	15%	12%	23%	6%	117
Felix Valle	1%	2%	6%	9%	21%	29%	27%	6%	380
Total	0%	4%	15%	17%	25%	21%	13%	4%	3111

Gender, too, was assessed at each park (Table 58), and analyzed by age as well (Table 59).

Table 58. Q: "What is your sex?"

	Gender?		
	Female	Male	Total
Castlewood	38%	62%	1648
Meramec	59%	41%	172
Roaring River	50%	50%	257
Route 66	54%	46%	322
1000 Hills	53%	47%	103
Felix Valle	58%	42%	371
Total	45%	55%	2873

Table 59. Q: Gender by age, all parks.

	Age categories								
	Less than 16	16 to 20	21 to 30	31 to 40	41 to 50	51 to 60	61 to 70	Over 70	Total
Female	1%	4%	15%	17%	26%	23%	12%	3%	1279
Male	0%	4%	17%	18%	24%	18%	13%	5%	1564
Total	0%	4%	16%	18%	25%	20%	13%	4%	2843

Interestingly, the total male-female distribution tilted slightly in favor of males (55 male -45 female), but this was because of the impact of the relatively large sample from Castlewood and predominance of males there. Otherwise, female presence at the parks either equaled male attendance (Roaring River), or exceeded it (all other parks). Some outdoor activities have a preponderance of male participation, but clearly MDNR park services and facilities break that gender stereotype, offering outdoor opportunity appealing to both sexes.

Educational attainment of respondents was assessed (Table 60).

Table 60. Q: "What is the highest level of education you have completed?".

	Education?								
	Grade school	Some high school	HS or equiv	VocaTech	Some college	2-yr college	4-yr college	Grad school	Total
Castlewood	1%	2%	8%	3%	17%	7%	35%	27%	1687
Meramec	1%	4%	15%	5%	26%	7%	24%	18%	205
Roaring River	1%	3%	23%	6%	25%	7%	22%	13%	314
Route 66	2%	3%	16%	6%	19%	11%	25%	18%	445
1000 Hills	2%	4%	25%	8%	19%	8%	15%	19%	120
Felix Valle	1%	2%	11%	5%	18%	5%	31%	27%	381
Total	1%	2%	12%	4%	19%	8%	30%	24%	3152

Clearly, MDNR parks appeal to a clientele with educational levels higher than that of the general citizenry, with nearly a quarter of all respondents having attended graduate school.

Work status (Table 61) and household composition (Table 62) offered significant insights to the family stage of park visitors. (See "other" work status and household composition, Appendix B, Table B32 and Table B33.)

Table 61. Q: "Please indicate your work status."

	Work status?						
	Full-time	Part-time	Stay at home	Student	Retired	Other	Total
Castlewood	70%	9%	5%	6%	9%	2%	1689
Meramec	60%	8%	7%	2%	22%	1%	207
Roaring River	54%	8%	4%	2%	28%	3%	313
Route 66	58%	10%	8%	2%	19%	2%	445
1000 Hills	50%	12%	4%	11%	22%	2%	120
Felix Valle	55%	11%	3%	2%	26%	3%	383
Total	63%	9%	5%	4%	16%	2%	3157

Table 62. Q: "What is your household composition?"

	HH composition?						
	Single w no children	Single w children	Married & no children	Married & kids at home	Married & grown kids	Other	Total
Castlewood	30%	7%	13%	33%	14%	4%	1675
Meramec	9%	4%	16%	37%	30%	4%	206
Roaring River	6%	6%	12%	32%	42%	3%	314
Route 66	20%	7%	15%	29%	24%	6%	445
1000 Hills	22%	5%	13%	29%	29%	3%	119
Felix Valle	15%	2%	15%	21%	42%	5%	384
Total	23%	6%	14%	31%	23%	4%	3143

Work status revealed intuitively reasonable results: for example, notable numbers of retirees at Roaring River, Felix Valle, Meramec, and Thousand Hills; and similarly notable number of students at 1000 Hills (Truman University). Household composition, too, revealed similar age and life stage findings; for example, plural categories of respondents who are "married with children grown" at Roaring River and Felix Valle.

Ancestry/origin of respondents revealed a pattern of usage that continues to represent a significant challenge to park/outdoor recreation managers (Table 63). (See "other" ancestry/ethnic origin, Appendix B, Table B34.)

Table 63. Q: "What is your ancestry or ethnic origin?"

		Castlewood	Meramec	Roaring River	Route 66	1000 Hills	Felix Valle	Total
African-American	Count	12	0	1	4	1	1	19
	% within park	.7%	.0%	.3%	.9%	.8%	.3%	
	% of Total	.4%	.0%	.0%	.1%	.0%	.0%	.6%
American Indian	Count	18	4	23	14	2	7	68
	% within park	1.1%	2.0%	7.3%	3.1%	1.7%	1.8%	
	% of Total	.6%	.1%	.7%	.5%	.1%	.2%	2.2%
Asian	Count	23	3	0	5	2	5	38
	% within park	1.4%	1.5%	.0%	1.1%	1.7%	1.3%	
	% of Total	.7%	.1%	.0%	.2%	.1%	.2%	1.2%
Hispanic	Count	27	3	1	4	1	3	39
	% within park	1.6%	1.5%	.3%	.9%	.8%	.8%	
	% of Total	.9%	.1%	.0%	.1%	.0%	.1%	1.3%
White	Count	1560	196	294	420	112	356	2938
	% within park	94.7%	96.6%	93.9%	94.0%	94.9%	93.7%	
	% of Total	50.2%	6.3%	9.5%	13.5%	3.6%	11.5%	94.5%
Other ancestry?	Count	19	4	3	6	2	12	46
	% within park	1.2%	2.0%	1.0%	1.3%	1.7%	3.2%	
	% of Total	.6%	.1%	.1%	.2%	.1%	.4%	1.5%
Total	Count	1648	203	313	447	118	380	3109
	% of Total	53.0%	6.5%	10.1%	14.4%	3.8%	12.2%	100.0%

Large majorities of respondents were white, with small percentages indicating "African-American," "American-Indian," "Hispanic," "Asian," and "other." In Missouri, about 85% of Missourians are "white," 11% are African-American, 1% are Asian, and the balance, "other races" (Office of Social and Economic Data Analysis, http://www.oseda.missouri.edu/regional_profiles/mopop_chg_race_1990_2000.shtml) A laudable goal for outdoor/cultural service providers in the public sector would be to strive for attendance and participation among minority populations in numbers at least equal to the proportion that these minorities represent in the general population.

An interesting addendum to the cultural diversity among survey respondents was the question inquiring if a language other than English was spoken in their homes (Table 64).

Table 64. Q: "When at home, do you speak a language other than English?"

		Other language at home?		
		Yes	No	Total
MO DNR Park	Castlewood	9%	91%	1657
	Meramec	8%	92%	203
	Roaring River	5%	95%	315
	Route 66	5%	95%	439
	1000 Hills	9%	91%	115
	Felix Valle	4%	96%	381
	Total	7%	93%	3110

Overall, about 4% of Missouri households speak a language other than English; but these percentages vary significantly by county (Missouri Economic Research and Information Center, http://www.ded.missouri.gov/researchandplanning/indicators/population/mo_lang.stm)

For example, counties with notable percentages of non-English speaking households include Pulaski (8%), Daviess (8%), Morgan (7%), Perry (6%), Boone (6%), and Jackson (5%). Thus, the percentages of non-English speaking households revealed in the survey (ranging from a low of 4% at Felix Valle to a high of 9% at Castlewood) perhaps are indeed more representative of the general public than might be expected. In the general public, the 5 most common languages spoken in Missouri homes (other than English) are Spanish (and Spanish Creole), German, French (and French Creole), Italian, and Chinese; these, too, were the most common languages listed by survey respondents (Appendix B, Table B35).

Respondents were asked to indicate household income (Table 65).

Table 65. Q: "What is your annual household income?"

	Castlewood	Meramec	Roaring River	Route 66	1000 Hills	Felix Valle	Total
Less than $20,000	7%	3%	7%	6%	21%	4%	7%
$20,000-$30,000	6%	8%	12%	10%	16%	6%	8%
$30,001-$40,000	9%	12%	14%	14%	7%	9%	10%
$40,001-$50,000	9%	13%	14%	13%	10%	9%	10%
$50,001-$60,000	10%	18%	17%	18%	12%	12%	13%
$60,001-$70,000	9%	12%	6%	11%	11%	13%	10%
$70,001-$80,000	9%	9%	5%	9%	4%	12%	9%
$80,001-$90,000	8%	11%	6%	6%	9%	8%	7%
$90,001-$100,000	6%	3%	7%	4%	3%	7%	6%
Over $100,000	28%	12%	12%	10%	9%	18%	21%
Total	1454	175	276	388	112	299	2704

Income distribution was similar across parks, with some notable differences, such as the plural categories of "over $100,0000" at Castlewood (28%) and Felix Valle (18%), and plural category (21%) of "less than $20,000" at Thousand Hills. Income of visitors at other parks tended to be grouped in middle-income categories.

Respondents were given opportunity to make any final comments or suggestions about improving the parks they visited, or MDNR state parks and historic sites generally (Appendix B, Table B36).

Implications for Future Research

Though there is understandable desire to customize visitor-survey questionnaires for each MDNR park, as was done in this study, based on unique features or services at those parks (including historic sites), a methodological adjustment that would cut costs, speed data analysis, and improve data comparability is development of a standard visitor-survey form to be administered at all parks (or rather, at the several parks

selected each year for study). Current questions are well designed, and provide a thorough item pool from which the "key questions" for a new standard form could be extracted (and revised, if necessary). The resulting database ("MDNR Park Visitor Monitor" or "Park Visitor Profile") would not only be consistent across questions, but would be consistent across years of study, providing a tremendously insightful longitudinal portrayal of park visitors over time.

Serious consideration should be given to the contribution of open-ended questions in the survey, given both the expense in time and effort to enter and then analyze these data. Though the "color commentary" that these items lend to the forced-choice items may seem useful at the surface, they often give life to the extremes of the response distribution—again, perhaps a useful insight, but costly nonetheless. In any case, the sheer number of open-ended questions should be considered for reduction.

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